Before driving the ATV, be sure to read this User Manual thoroughly

Drive only within areas permitted by local driving regulations
The driver must be at least 16 years old
The occupant must be at least 12 years old

Original user manual (the original user manual of the ATV is in Chinese, and versions in other languages are translated versions of the original user manual)

⚠ NOTE

The content of this manual is limited. In order to ensure your personal safety and improve your driving skills, it is strongly recommended that you participate in formal driving training courses. Exercising caution while driving,accumulating experience, and continuously improving your driving skills are always the core principles for preventing driving hazards. No matter how much driving experience you have, these basic guidelines shall not be ignored.

⚠ NOTE

Remove the spare key card and then place them in a safe place. If all the ignition keys are lost, the whole set of locks must be replaced.

⚠ CAUTION

1. Do not operate the ATV without proper training or guidance.
2. This all-terrain vehicle and any other all-terrain vehicle with an engine displacement of over 90cc shall not be driven by individuals under the age of 16.
3. The ATV may be different from other vehicles you have driven before. 3. The ATV may be different from other vehicles you have driven before.
4. Exercise caution when selecting non-OEM accessories to avoid property damage and personal injury.
5. Please consult the local relevant laws and regulations before operating the ATV.

Foreword

Congratulations on becoming the owner of a BENDA motorcycle. Thank you for choosing our products. We hope that our products will bring you a wonderful experience.
Before driving the ATV, be sure to read this manual thoroughly to ensure that you can make full use of this product's functions and operate it safely.
This manual contains information on the main specifications, usage methods, maintenance methods, simple fault diagnosis, etc. of the ATV. Major maintenance items are detailed in the BENDA Maintenance Manual.
Please note that this manual is applicable to all models of this series. Therefore, your ATV may differ slightly from
the descriptions in this manual. The illustrations in this manual are for demonstration purposes only, so please refer
to the actual product. The instructions in this manual have been verified at the time of printing, but improvements or
other changes may be made to this model, which could result in slight differences between this manual and the actual situation. Please refer to the contents of this user manual selectively according to the actual situation. Our company
reserves the right to make changes at any time. Please pay attention to the announcements on our official account and official website in time. No separate notice will be given.
If you have any questions during use, please consult the dealers.

BENDA

Vehicle information

To ensure that you receive accurate service and support during future maintenance or service, it is recommended that you record the vehicle identification number and engine serial number in the corresponding position.

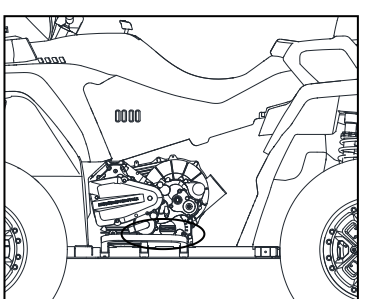
Model ：_____

Color code：_____

VIN Number：_____

Engine number _____

VIN No.



Engine No.

Dealer information

When selling products, the dealer shall give its contact information to the customer in time, so as to provide better services.

Dealer name:

_____

After-sales service contact:

_____

Service hotline:

_____

Dealer address/official seal:

_____

⚠ NOTE

If you want to contact the nearest BENDA dealer, please call 400-1140 -110 or visit the website www.bendamoto.com for inquiry.

Table of Contents

Important reminders

Signal word

Pay close attention to the following labels. These labels indicate important information that may pose a threat to your safety and the safety of others, or provide essential guidance on the operation and maintenance of the ATV.

When you see these labels, be sure to read the relevant contents carefully and make sure you fully understand what they mean. If you have any question or are unsure about any content, please contact the dealer or professional maintenance personnel in time to ensure that you can operate and maintain your ATV safely and correctly.

⚠ WARNING
It indicates a situation which, if not avoided, may result in equipment or property loss.

⚠ CAUTION
It indicates a situation which, if not avoided, may result in serious personal injury or death.

⚠ NOTE
It prompts important information or instructions.

Important reminders

Spare parts and accessories

In order to ensure your personal safety, please use spare parts or accessories approved or recommended by BENDA manufacturer, and have them installed at after-sales service center authorized by BENDA. BENDA assumes no responsibility for other products or any losses incurred by their use.

Quality assurance and warranty

All operations specified in the maintenance plan must be strictly performed at after-sales service centers authorized by BENDA. Failure to do so will automatically void your right to apply for quality assurance and warranty. In addition, any damage and subsequent problems caused by incorrect operation or unauthorized modification of the ATV will not be covered by the warranty.

In order to ensure that your rights and interests are fully protected, it is recommended that you always choose an after-sales service center authorized by BENDA for the maintenance and repair of the ATV. Please be sure to read the maintenance and warranty manual for a more comprehensive understanding of your rights and the relevant provisions.

Important reminders

Illustration

The illustrations in this manual may contain some optional equipment to provide more comprehensive explanations.
In some cases, we may have disassembled some parts or not drawn all components in the illustration, in order to show a particular part or function more clearly. However, this does not mean that all descriptions need to be presented with disassembled components.
Therefore, when viewing the illustrations, be sure to read the text description carefully and ensure that you correctly understand the contents described.

Dimension parameters of the ATV

Item	BD1000AU
Length × width × height (mm)	2370×1280×1520
Wheelbase (mm)	1500
Seat cushion height (mm)	580
Minimum ground clearance (mm)	300-320
Minimum turning diameter (m)	7.2
Front wheel track (mm)	1020
Rear wheel track (mm)	965
Fuel tank volume (L)	30L
Storage box volume (L)	9L

Maximum load capacity

Item	BD1000AU
Maximum load capacity (kg)	285
Front rack load (kg)	45
Rear rack load (kg)	90
Trailing and towing load (kg)	980 (trailer with brake)
Vertical trailing load (kg)	98
Towing load (kg)	320

Engine parameters

Item	BD1000AU
Engine type	V-type, double-cylinder, water-cooled, four-stroke, double-camshaft, continuously variable transmission (CVT), shaft-driven, and EFI
Engine model	BD2V92Y0
Displacement	997CC
Cooling mode	Liquid cooling
Number of cylinders	2
Engine material	Aluminum
Cylinder bore × stroke	92mm×75mm
Compression ratio	11.5:1
Fuel supply mode	EFI (electronic fuel injection) + electronic throttle
Maximum horsepower	102hp/7500rpm
Maximum torque	98.3N.m/6500rpm
Maximum net power	75kW/7500rpm
Starting mode	ECU electric start

Chassis structure

Item	BD1000AU	
Driving mode	Optional 2-WD/4-WD, lockable the front axle differential (optional rear axle differential lock)	
Front suspension	Double wishbone suspension	
Rear suspension	Single trailing arm type suspension	
Shock absorber	Airbag shock absorption	
Standard tire pressure	7PSI±0.3	
Front wheel specification	26×9×14	27x9x14 (optional)
Rear wheel specification	26×11×14	27×11×14 (optional)
Hub size	14	
Hub structure type	Multi-spoke aluminum alloy (with anti-release ring)	
Hub bolt reference circle	4×136mm	

Control system

Item	BD1000AU
Steering form	Handlebar
Power steering	Optional: switching among multiple modes (comfort/standard/sport)
Gear shifting structure	Center-mounted, mechanical
Parking mechanism	Rear wheel mechanical disc brake (optional: EPB)

Transmission parameters

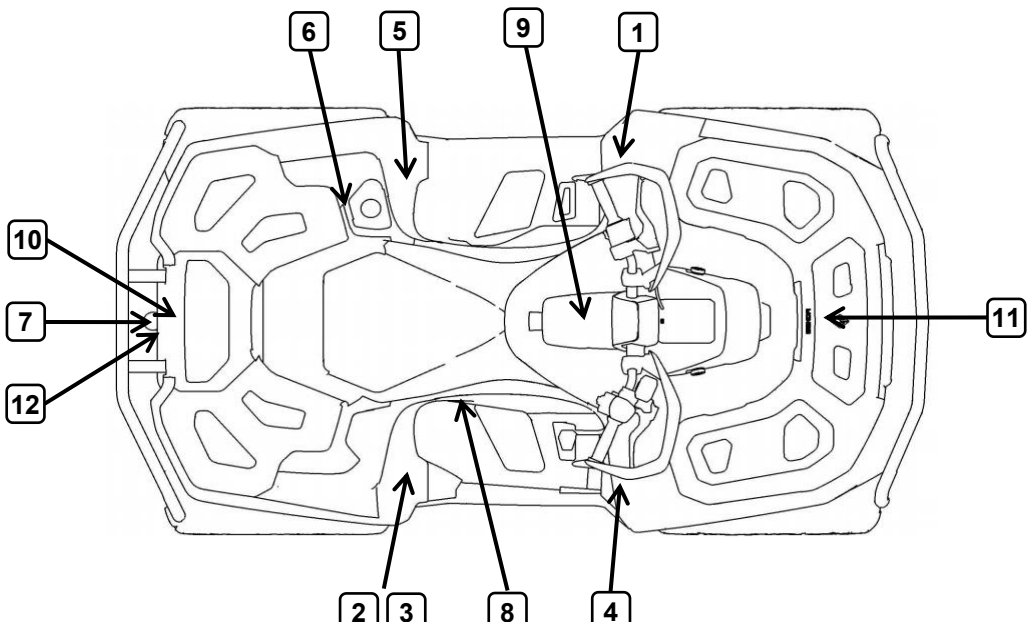
Item	BD1000AU
Type	Continuously variable
Gear	L H N R P
L gear ratio	6.58
H gear ratio	2.98
Reverse gear ratio	5.81

Main liquid parameters

Item	Model	Unit	BD1000AU
Fuel tank volume	92# or equivalent and above	L	30
Engine oil (replacing the filter element)	SAE SN/ 15W-50	L	2.8
Engine (without replacing the filter element)	SAE SN/ 15W-50	L	2.7
Transmission oil	SAE 80W-90 or GL-5	mL	600
Front axle lubricating fluid	SAE 80W-90 or GL-5	mL	200
Rear axle lubricating fluid (differential and non-differential)	SAE 80W-90 or GL-5	mL	330 (differential) 360 (non-differential)

Safety warning sticker (to be replaced when necessary)

The ATV has been pasted with safety warning stickers at the corresponding positions. Please read and abide by them carefully, and do not remove the stickers. If any sticker becomes blurred or falls off, please contact the dealer for a new sticker and replace it with a new one in time.



Safety warning stickers

1

Safety warning stickers

2

⚠ WARNING

Improper tire pressure or overloading can cause loss of control.
Loss of control can result in severe injury or death.
Cold tire pressure:
Front : 7 psi (48 kPa)
Rear : 7 psi (48 kPa)

40M00. 540004. 001

3

⚠ WARNING

Never carry more than one passenger!
Never drive with a passenger unless passenger seat is securely in place!
passenger must hold firmly the handgrips during riding!

40M00. 540015. 001

4

⚠ WARNING

PASSENGER SAFETY

To reduce the risk of SEVERE INJURY or DEATH.

NEVER CARRY MORE THAN ONE PASSENGER

NEVER RIDE AFTER USING DRUGS OR ALCOHOL

NEVER carry a passenger too small to firmly plant feet on footrests and securely grasp hand holds.

THE PASSENGER MUST ALWAYS:
use an approved helmet and protective gear.
securely grasp hand holds and plant feet firmly on footrests while seated in the passenger seat.
tell operator to slow down or stop if uncomfortable - get off and walk if conditions require.

40M00. 540003. 001

Safety warning stickers

5

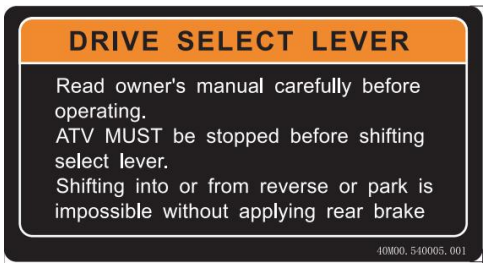
6

7

8

Safety warning stickers

9



10

11

12

Safety information

Safety warning

- The ATV is a high-performance and high-risk vehicle, which requires the driver to possess high driving skills and emergency response capabilities.
- This all-terrain vehicle and any other all-terrain vehicle with an engine displacement of over 90cc shall not be driven by individuals under the age of 16.
- Beginners and inexperienced drivers are more prone to emergencies and accidents due to their lack of relevant skills and experience. In order to ensure the safety of drivers and reduce the risk of accidents, it is necessary to receive the relevant training before driving, master basic driving skills, cultivate safety awareness and psychological quality, understand and abide by traffic rules, and improve driving skills and emergency response capabilities. Otherwise, driving is prohibited.

⚠ CAUTION

Before driving the ATV, please carefully read and strictly adhere to this manual. Improper operation may result in injury or death.
The ATV can only be driven by adults, and minors are prohibited from driving the ATV.
It is prohibited to carry passengers on single-seat models; As for double-seat models, the passengers must be at least 12 years old and be able to sit safely and securely on the seat.
Beginners and inexperienced drivers shall undergo the relevant training before driving.

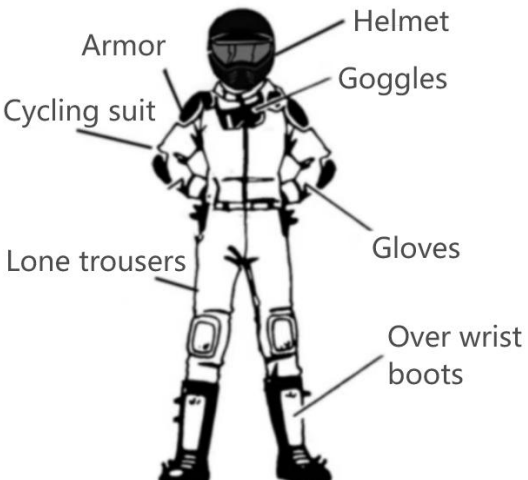
⚠ CAUTION

Failure to follow the instructions and procedures described below may result in serious injury or death.

Safety information

Protective equipment

The drivers and passengers must always wear appropriate protective equipment when driving the all-terrain vehicle (ATV) to ensure their own safety. These protective equipment not only provide additional protection and support, but also reduce the risk of injury from accidental fall or impact. When driving, be sure to wear off-road helmets, gloves, over-the-ankle boots, goggles, armor, elbow guards, cycling clothes and other protective equipment. It is recommended to use the cervical spine protector. You shall add riding equipment such as raincoats, thermal clothing and colored goggles according to the changes in weather. It is forbidden to wear loose clothing that may entangle the ATV or be hooked by trees.



Safety information

- The off-road helmet is a key piece of equipment to protect your head from potential injury. During the ATV driving process, the driver and passengers may encounter bumps, falls or other unexpected situations, and the helmets can provide solid protection by effectively reducing the impact and collision on the head.
- Gloves can protect the hands of the driver and passengers from friction, scratches and collisions. During the driving process, our hands will frequently contact with vehicle handles, control levers and other components. In such cases, the gloves can provide additional grip and stability, while reducing the risk of hand injury.
- The ATV usually travels in a variety of complex terrains and environments, and over-the-ankle boots can provide solid support and protection to protect our feet from stabbing and collision by sharp objects such as stones and tree branches. At the same time, the over-the-ankle boots can also provide good ground grip and stability, which helps the driver to better control the ATV. Avoid using long shoelaces to prevent them from getting entangled in the ATV.
- The goggles can effectively prevent dust, sand and other flying debris from entering the eyes and protect the eyes from irritation and injury. In an off-road environment, the goggles can also provide additional protection against insects or other small objects.
- The armor covers key parts of the body, such as the chest, back, and abdomen, thus reducing injuries caused by accidental falls or impacts. The elbow guards can protect the elbows from friction and collision, thus reducing injuries caused by falling or impact.

Safety information

- Cycling clothes can protect the body of the driver and passengers from scratches and collisions by sharp objects such as tree branches and stones. At the same time, they offer good breathability and comfort, so the driver can stay comfortable and dry during long rides.
- The cervical spine protector can provide stable support for the neck. In the event of an accident, it can limit excessive bending or distortion of the neck, thus avoiding serious injuries such as cervical spine injury or cervical spine fracture.
- On sunny days with strong sunlight, the cyclist can wear dark or colored goggles with UV protection to reduce the irritation of sunlight. On rainy days, the cyclist can wear waterproof and fog-proof colored goggles to keep their vision clear.

Safety information

Prohibition on illegal modification

To ensure the safety and compliance of ATVs and protect the lives of drivers and other road users, BENDA firmly prohibits the illegal modification of ATVs. Illegal modification includes but is not limited to changes to the appearance, power system, brake system, chassis structure, etc. of ATVs, which may seriously affect the performance and stability of ATVs and increase the risk of accidents. All accessories added to the ATV shall be approved by BENDA.

If any unauthorized accessories are added or modified onto the ATV, our warranty for your ATV will be terminated immediately.

Safety information

Prohibition on carrying passengers or animals on the rack

The ATV is designed and manufactured mainly to meet the needs of goods transportation or off-road driving. Cargo boxes or racks are not specially designed to carry passengers or animals, and are not equipped with necessary safety protection measures such as seats, seat belt and guardrails. Therefore, these positions are not suitable for carrying passengers safely.

Carrying passengers or animals on cargo boxes or racks will change the distribution of the center of gravity of the ATV and thus increase the risk of rollover or loss of control. Especially when encountering bumps, sharp turns or emergency braking during the driving process, the instability of the center of gravity may lead to serious safety accidents.

Passengers or animals carried on cargo boxes or racks may interfere with the driver's vision and thus affect his/her accurate judgment of the surrounding environment and road conditions. With an obstructed vision, the driver may not be able to detect and respond to potential hazards in a timely manner. In case of emergency, such as loss of control, rollover or collision of the ATV, passengers or animals on the rack may be injured or even killed due to collision, squeezing or throwing out of the ATV.

Safety information

ATV and environmental safety

Check the ATV conditions and the surrounding environment before getting on the ATV, and ensure that the ATV is in a safe state to avoid faults or accidents during the driving process. At the same time, check the surrounding environment and observe people or animals around the ATV.

Driving under severe conditions requires high performance of ATV and causes great damage to the ATV. Before and after driving under harsh working conditions, be sure to check the ATV and evaluate whether it can continue to be driven. After driving, check whether there is any damage, and solve the problems that may be caused by severe conditions in time.

Prevention of carbon monoxide poisoning

Carbon monoxide is a colorless, odorless, non-irritating toxic gas that is often generated by incomplete combustion. If incomplete combustion occurs in the engine or the ventilation is poor during the driving process, carbon monoxide will be generated, which will threaten the life safety of occupants in the ATV. Therefore, when driving the ATV in a poorly ventilated space, you must be particularly alert to the risk of carbon monoxide poisoning.

To prevent carbon monoxide poisoning, never run the ATV in a poorly ventilated or relatively closed environment. It is prohibited to operate the ATV in a place where exhaust fumes can be directed into sealed indoor spaces.

Safety information

Prohibition on driving the ATV after drinking, taking medicine or using drugs

Alcohol will paralyze the driver's nervous system, slows reaction speed, impairs judgment, and increases the likelihood of operational errors.

Some medicines may affect the driver's attention, reaction speed, judgment and coordination, thus resulting in driving errors. Therefore, drivers shall avoid driving as far as possible during drug administration. If driving is necessary,consult a doctor or pharmacist first about whether the medicine will affect driving ability, and determine whether it is suitable for driving according to the medicine's user manual and the doctor's advice.

Drugs can have a strong stimulating effect on the driver's central nervous system, resulting in hallucinations, delusions and other symptoms, so that the driver completely loses control of the ATV.

Safety information

Fire warning

Gasoline is an extremely flammable liquid with a low flash point (a volatility index of combustible liquid). It evaporates easily at room temperature, forming a combustible gas that can ignite rapidly upon contact with a source of ignition or overheated components. The engine, electrical system or fuel system of the ATV may fail, resulting in overheating, short circuit or fuel leakage; During the driving process, collision with other objects or accidents may occur, resulting in ATV damage, fuel leakage or component damage; During the refueling process, the friction between gasoline and metal parts such as fuel tank and fuel pipe may generate static spark; Improper modification or use of non-conforming parts and components may lead to failure of the electrical system or fuel system, which will increase the risk of fire.

In order to prevent fire, we shall regularly check the fuel system and electrical system of the ATV to ensure their normal operation. At the same time, when refueling, avoid operating in an electrostatic environment, and ensure that the fuel tank, fuel pipe and other components are well sealed. In addition, when parking in a high-temperature environment, a cool and well-ventilated place shall be selected to reduce the risk of fire.

Safety information

Loaded driving

When loading and unloading the goods, make sure that the ATV is in the parking gear, and try to load and unload the goods on a flat ground.
When transporting goods, the low gear must be applied to avoid CVT wear and belt failure.
When goods are loaded on the rack of the ATV, the maneuverability, stability and brake distance will be significantly affected during the driving process of the ATV. Before operating the ATV, it is necessary to ensure that all goods have been firmly fixed on the rack. In order to reduce the impact of a high center of gravity, the goods shall be fixed at a low position of the rack as far as possible. Goods with a high center of gravity may cause the ATV to become more unstable during driving.
During the driving process, slow down appropriately according to terrain conditions, and try to avoid driving on hillsides and rugged terrain. Due to the influence of load and terrain, the brake distance may increase, so please slow down in advance and leave enough braking space.

Safety information

Prohibition on leaving the key card in the ATV

Leaving the key card on the ATV, especially in a conspicuous position, will greatly increase the risk of ATV theft. Thieves may easily find the key card and then steal the ATV, which not only causes property loss, but also may bring other safety problems.

When the ATV is parked on a slope or unstable ground, leaving the key card in the ATV may cause the ATV to start and move unexpectedly, which may result in property loss and even injury to nearby people or animals.

In some cases, leaving the key card in the ATV may give other malicious people the opportunity to illegally modify or damage the ATV, which not only increases economic losses, but may also affect the safety and use performance of the ATV.

Prohibition on resting under the ATV

The ATV emits exhaust gases during operation, including carbon monoxide and other harmful gases. When resting under the ATV, personnel may inhale these harmful gases, resulting in an increased risk of poisoning or suffocation. If the ATV moves suddenly, people under the ATV may be injured or even crushed.

Safety information

Prohibition on overload

Overload will not only increase the operating difficulty of ATV, reduce the braking performance, and increase the risk of accidents, but also may lead to mechanical fault or damage, and even endanger the lives of the driver and other passengers. Please strictly abide by the load capacity indicated in this User Manual and do not overload the ATV. Short ATV is prohibited from carrying passengers. Long ATV is prohibited from carrying more than one passenger. As for double-seat models, the passengers must be at least 12 years old and be able to sit safely and securely on the seat.

Safety information

Tire

Using improper tires on the ATV, or operating the ATV with incorrect or uneven tire pressure may lead to loss of control, tire burst, slipping, etc., thus increasing the risk of accidents. Select the appropriate tire according to the actual driving environment and needs, and observe the tire pressure and damage frequently.

Snow tires typically have deep and wide tread patterns, which help displace snow and moisture, thus providing large traction and ground grip on snow and ice. They can offer better braking and acceleration performance, but its performance on dry roads may be inferior to that of ordinary tires. Rain tires (also known as wet tires) are designed to provide better ground grip and maneuverability on slippery or wet roads.

Their tread material and pattern design can more effectively disperse water and reduce hydroplaning, thus increasing the friction between the tire and the road surface.

Mud tires tend to have wider treads than tires with other performances, thereby reducing the likelihood of getting stuck in the mud. The embedment angle and mode of mud tire tread use centrifugal force to push other substances away from the tire surface when the ATV is running to prevent blocking the tire.

When replacing tires, tires with the same size as the original ATV tires shall be selected. Tires with different sizes may affect the maneuverability, stability and brake performance of the ATV. The use of tires with the same size ensures that the performance and safety of the ATV are not affected.

⚠ NOTE

For the ATV, be sure to observe the tire size and type specified in this User Manual. Maintain the proper tire pressure as described in this User Manual. Replace the damaged tire in time.

Safety information

Scald warning

After the ATV has been running or driving for a period of time, the engine, exhaust system and other working parts will generate high temperatures. These hot parts may cause scalds. Therefore, please contact the ATV after it cools down. If it is unavoidable, pay attention to protection. Rinse the scalded area with cold water immediately after scalding to reduce pain and tissue injury. Gently cover the scalded area with a clean cloth or gauze to avoid contamination and further injury. If the scald is serious or requires further treatment, seek medical attention from a professional doctor immediately.

Safety information

Inspection before driving

It is necessary to check the ATV before driving. By checking all parts of the ATV, potential safety hazards and mechanical fault can be detected and solved in time, so as to ensure that the ATV is in good working conditions,improve the driving safety and protect the safety of the driver and other road users. If you have any questions, please refer to the chapter "Simple troubleshooting", or contact the dealer. Be sure to carefully check the following items before driving:

Item	Requirement
Tire	Normal air pressure, normal tire tread depth, no cracks or other damage, no damage to the hub, and properly tightened wheel nuts
Steering	Flexible steering (if equipped with power steering, test after powering on)
Gear	Flexible gear shifting
Brake	The brake lever and pedal operate normally, the brake fluid level in the cylinder is above the lower line, there is no dragging feeling when releasing the brake for movement, the brake disc and brake pad are within the limit of use, there is no brake fluid leakage, and the braking force is sufficient
Parking	The handle operates normally and parking can be realized (the EPB needs to be used after powering on, and it will automatically park after powering off)
Shock absorption	Smooth and flexible operation during the driving process
Fuel	Sufficient fuel level

Safety information

Item	Requirement	
Transmission	No abnormal noise, normal driving, and intact shaft sleeve without damage	
Throttle	Smooth operation, and returning to the original position when released	
Engine oil	Level the ATV, observe the engine oil window, and ensure that the engine oil is at the normal oil level	
Cooling	The liquid level in the coolant expansion tank is between the MAX and MIN marks	
Light	All lights can be switched on and off normally, and the light height is normal	
Indicator light	Instrument indicator light	
Horn	Able to make sound which is loud enough	
Ignition switch	Start the engine normally	
Shutdown	Normally shut down the engine	
Throttle	The engine works normally after throttle application	
Load	Rack	The load does not exceed the maximum load capacity, and the goods are evenly distributed and fixed firmly
	Trailer	The maximum load capacity of the trailer is not exceeded, and the trailer connection device is securely fastened
2-WD/4-WD switch	Normal switching between 2-WD and 4-WD, and 4-WD locking	
Passengers and drivers	Meet the driving and riding requirements and wear protective equipment	

Safe driving

Riding posture

In order to maintain stable control, it is strongly recommended that you always hold the handle tightly with both hands and ensure that your feet are firmly placed on the foot pedal. This not only helps you respond quickly to various unexpected situations but also significantly reduces the risk of injury to your legs or feet. Please avoid extending your toes out of the foot pedal, as this could cause your feet to be struck or caught by passing obstacles or come into contact with the wheels, resulting in unnecessary injury. Maintaining the correct riding posture at all times is the best way to ensure your safety.

Driving steps

- Before driving, check the ATV conditions and observe the surrounding environment;
- Sit on the driver's seat with correct riding posture, hold the handle tightly with both hands, and step on the pedal firmly;
- Step on the brake pedal and shift the gear to N gear or P gear;
- Start the engine;
- Shift the gear to L gear or H gear;
- Release the brake while gradually applying the throttle;
- When you need to stop, release the throttle while depressing the foot pedal, and shift the ATV to P gear.

Safe driving

Crossing or turning on a hillside

If it is not absolutely necessary, avoid crossing or turning on slopes whenever possible.

- Maintain your center of gravity: If it is indeed necessary to do so, make sure that your center of gravity is always towards the uphill side. This helps to maintain the balance of the ATV;
- Be prepared to get off: When you feel that the ATV is starting to become unstable or tipping over, be ready to get off quickly from the uphill side;
- Do not protect the ATV: In case of emergency, do not attempt to stop the ATV or take other measures to protect the ATV from damage. Your safety is paramount;
- Avoid obstacles and depressions: Pay special attention to avoid objects or depressions that may cause one side of the ATV to be higher than the other, as this will greatly increase the risk of rollover.

Safe driving

Prohibition on speeding

The ATV is designed for off-road or complex terrain, so it may not have the same stability or safety measures as cars on highway. Therefore, even in seemingly flat or open areas, the speed shall always be controlled to ensure sufficient reaction time and control capability in various emergencies. When riding an ATV, be sure to:

- Comply with all applicable traffic laws and speed limit signs;
- Be familiar with the performance and limitations of the ATV you are driving;
- Adjust the ATV speed according to the terrain, weather and visibility conditions;
- When going downhill, do not rely too much on the inertia of the ATV for coasting, but use the brake properly to control the speed;
- Avoid driving at high speeds on rough, slippery or muddy roads, where the maneuverability of the ATV will be affected.

Prohibition on wheelie, jumping and other stunt driving

High-speed and high-difficulty maneuvers are very likely to cause the driver to lose control or balance, resulting in serious safety accidents. Stunt driving may also result in injury or death of the driver, and may also pose a threat to surrounding pedestrians, vehicles and other road users.

During stunt driving, the ATV will be subjected to huge impact and distortion force, which may cause damage to key components such as suspension system, engine and frame of the ATV.

Safe driving

Prohibition on operating the gear shift lever when the ATV is running

If the gear shift lever is operated suddenly when the ATV is running, the gears in the transmission may be subject to unexpected impact. This impact may lead to increased wear of the gear, and even possible fracture of the gear, resulting in transmission damage.
Upon gear shifting, please stop the ATV first, and then depress the brake pedal before gear shifting.

Stalling and rolling when driving uphill

Treatment in case of stalling: If the ATV stalls when driving uphill, don't panic first of all. Immediately use the service brake (foot brake) and the parking brake (hand brake) to stop the ATV forcibly, thereby preventing the ATV from rolling backward. Then restart the ATV and try to drive uphill again.
Prevent rolling: When parking on a slope, make sure that the parking brake has been pulled up. If you need to start,put your right foot on the brake pedal first, apply the throttle appropriately, and release the brake at the same time. This will prevent the ATV from rolling backward.

Safe driving

Steering

Before attempting to make a turn during the acceleration process, practice turning at low speeds first to ensure that you are familiar with the ATV's response and turning skills.

During driving, be sure to tightly hold the handle with both hands and place your feet firmly on the foot pedal, which will help you better control the ATV. When making a turn, it is recommended to keep a constant speed or apply slight acceleration to maintain stability and control. In order to significantly reduce the risk of rollover, take special care when making a turn to avoid excessive turning of the handlebars or sudden changes in speed. Adjust the steering amplitude appropriately according to the current speed and environmental conditions to maintain a smooth turning process. Be sure to slow down in advance before entering a curve and avoid harsh braking during the turning process.

Please avoid sudden or sharp acceleration during the turning process, especially when starting from a stop or low speed. Do not attempt to perform high-risk stunt maneuvers such as circling, coasting, slipping, drift, jumping, etc.

If the ATV shows signs of coasting or slipping, please make a turn slightly in the direction of coasting or slipping immediately and avoid harsh braking to prevent loss of control.

The ATV is not suitable for operation on paved roads, as this may increase the risk of rollover. If you have to drive on paved roads, be sure to drive carefully, make a turn gradually, keep a low speed, and avoid sharp acceleration and braking.

Uphill

The ATV has excellent gradeability, but special attention must be paid as it may tip over when approaching or reaching the limits of ATV stability. For example, at a heavily eroded hilltop, the terrain may become steep. Although the ATV is capable of traversing such terrain, there is a risk of rollover when the front of the ATV is driven to the point where its balance point shifts backward.

A similar situation can occur if an obstacle ahead causes the front of the ATV to rise excessively. In these cases,alternative routes are recommended. When assessing a route, always be aware of the risks of side slopes and understand the terrain conditions on the other side of the hill to avoid encountering an impassable or excessively steep descent.

Make sure that you are fully prepared before attempting to drive uphill. It is recommended that such attempts be made by experienced operators, starting with a relatively gentle grade.

When driving uphill, please keep going straight, with the center of gravity towards the hilltop, and place your feet firmly on the foot pedal. Shift the ATV to a low gear and make proper acceleration before driving uphill. When driving uphill, try to keep a constant speed and avoid sudden acceleration to maintain the stability of the ATV. In case of sudden slope change or terrain obstacle, please release the throttle to avoid affecting the stability.

When going uphill, keep going straight and maintain your center of gravity towards the hilltop, which helps to maintain the stability of the ATV. At the same time, put your feet on the foot pedal, shift the ATV to a low gear, and make proper acceleration before climbing the hill.

When driving uphill, the key is to maintain a stable speed. Sudden gradient changes or terrain obstacles, such as rolling the wheels over stones or tree roots, may cause the front of the ATV to lift, increasing the risk of rollover.

Therefore, this situation shall be avoided as far as possible.

Some hills may be excessively steep. If a climbing attempt fails, it may become unsafe to either bring the vehicle to a stop or regain control. In such case, the best option is to avoid these steep slopes. When driving uphill, if you encounter problems (for example, the ATV cannot continue to run or begins to roll backward), you shall quickly apply the brake and ensure that the ATV does not slip, and then apply the parking brake.

Safe driving

Downhill

Before attempting to drive uphill, make sure that a safe downhill route has been planned. Steep slopes without safe downhill routes may bring serious risks. Therefore, when planning your trip, you should understand and confirm a safe uphill and downhill route in advance.

When passing a steep and slippery downhill, slowing down is common practice, but excessive slowing down may result in "coasting" of the ATV. If this happens, stay calm and try to regain control by maintaining a stable speed or making slight acceleration. Make sure that your center of gravity is backward, which helps to maintain the balance of the ATV.

Gradual application of the brake is the key to preventing slipping. Avoid relying solely on engine compression or "coasting" in neutral gear along a slope, as this may increase the risk of loss of control. Please always use the brake carefully and adjust it according to the slope and ATV speed. When encountering steep slopes, try to avoid them to reduce the risk. If it is unavoidable, be sure to remain highly vigilant, as the risk of rollover will increase when the ATV goes downhill.

Safe driving

Crossing water

Water poses a particular hazard for ATV riding. Deep water or rapid currents can cause the ATV to lose control, and may even make the ATV float and tip over, thereby posing a serious threat to the driver. Care must be taken to assess the risks and take appropriate preventive measures before attempting to cross water. Safety always comes first. Do not risk driving in unsafe water.

- Checking the water depth and current: Check the water depth and current before deciding to cross the water.Ideally, the water surface shall not be higher than the foot pedal of the ATV, so as to ensure that the ATV has enough buoyancy.
- Beware of obstacles on the bottom of the water and on the shore: rocks, grassland, wood and other objects in the water and on the shore may have smooth surfaces, which may cause the tires of the ATV to lose traction, thus increasing the risk of loss of control.

Safe driving

Driving on sand

When riding in wet and deep sand, fine sand or snow, special care is required as the ATV may lose traction, causing slipping, sliding or sinking into the mud. In case of these special terrains, it is recommended to prioritize more solid roads for travel whenever possible to ensure safety. In addition, be sure to reduce the driving speed and remain highly alert to the surrounding environment, so as to respond to possible emergencies in a timely manner.

When driving in sand dune, it is recommended to equip the ATV with antenna-type safety flags. This will enable other drivers on the sand dune to more clearly identify the position of your ATV, thus effectively avoiding potential collisions. When you find a ATV in front of you using a safety flag, you should be extra careful to ensure safe passage and avoid accidents.

Please note that when using antenna-type safety flags, avoid using them in areas with low-hanging tree branches or obstacles. Because once the flag is stuck and bounced by these obstacles, it may hit your body directly and cause accidental injury. Therefore, be sure to use safety flags in appropriate site and environmental conditions, thereby ensuring personal safety.

Safe driving

Driving and getting on and off the ATV on unfamiliar terrain

When driving uphill and on unfamiliar terrain, always pay attention to the ATV conditions and environmental changes, and take necessary preventive measures. In case of emergency, keep calm and take appropriate measures to ensure the safety of yourself and others.

When driving in unfamiliar terrain, if you need to get out of the ATV to check the road conditions or perform other operations, first make sure that the ATV is in a safe state, such as using the parking brake to immobilize the ATV.

Before getting off, observe the surrounding environment and ensure it is safe before getting off. At the same time, wear appropriate protective equipment such as helmets, safety shoes, etc.

It is very important to stay calm in case of emergencies. Do not panic or take excessive actions, which may lead to greater danger. Depending on the circumstances, take appropriate measures to ensure the safety of yourself and others.

Safe driving

Crossing obstacles

Always remain highly vigilant when crossing obstacles on the "path". These obstacles may include loose rocks,fallen trees, slippery surfaces, fences, posts, embankments and depressions. For your safety, avoid these obstacles whenever possible. Some obstacles may be too large or dangerous to cross, so please make a detour.

For small rocks or fallen trees, you can choose to cross safely at a vertical angle. When crossing, stand on the foot pedal and keep your knees slightly bent. To maintain stability, you need to adjust the speed of the ATV without losing power and avoid sudden acceleration. Grasp the handlebars firmly for stability and adjust your center of gravity backward. Do not try to lift the front wheel of the ATV during the whole process. Please note that the obstacle surface may be slippery or move, which may increase the difficulty and risk of crossing.

When performing such operations, make sure that your skills and experience are adequate for the challenges that may arise to ensure the safety of yourself and others.

Safe driving

Crossing water

Speed control: Do not attempt to drive into water at a high speed. The resistance of water will act as a brake, so if the ATV runs into water at a high speed, the rider may fly out of the seat and suffer from serious injury. Water splashed too high can cause the engine to stall.

Avoiding deep water or rapid currents: If possible, avoid crossing deep water or rapid currents. Deep water may make the ATV float and lose stability, while rapid currents may produce strong water force, thus causing the ATV to lose control.

Wearing appropriate equipment: Wearing a life jacket or other buoyancy equipment can increase the safety in water. At the same time, ensure that helmets, knee pads, elbow guards and other safety equipment are complete.

Paying attention to terrain changes: Near water areas, the ground may have soft terrain such as silt and swamp, which may cause sudden "sag" or depth change of the ATV. Therefore, the driver shall pay close attention to terrain changes during the driving process and make preparations in advance.

Brake testing: Moisture or water will reduce the brake performance. Therefore, please use the brake several times after leaving the water, so as to dry the brake pad by friction.

Safe driving

⚠ WARNING
If the ATV breaks down or is flooded when crossing water, please do not start the engine and move it away from water through external force in time. At this time, water may have been sucked into the cylinder, and starting the engine will cause internal damage to the engine.

⚠ NOTE
After crossing water, the ATV must be thoroughly inspected, with special attention paid to the following items: engine oil, front and rear axles, air filter and various lubrication points. Failure to do so may result in engine fault.

Safe driving

Driving on snow-covered roads

Be sure to carefully check whether there is snow or ice on the ATV before driving. These ice and snow may interfere with multiple key parts of the ATV and thus affect driving safety. For example, they may obscure taillight and reflective strips, reducing their visibility at night or in bad weather conditions and thus affecting the judgment of other drivers.

At the same time, ice and snow may accumulate at the vents, hindering the normal operation of the radiator and fan and thus causing the ATV to overheat. Ice and snow may also jam the control lever, switch and brake pedal, making it impossible for the driver to operate the ATV accurately and quickly.

Make sure that the handlebar, throttle, brake lever and pedal are free and smooth to operate, and are not interfered by ice and snow. Use the brake frequently during the driving process to ensure that the brake pad remains dry.

When driving on snow-covered roads, the snow will reduce the ground grip of tires. Drive at a decreased speed and avoid excessive throttle application and harsh braking.

Safe driving

Driving in mud

When driving on terrain other than ATV-dedicated lanes, it is strongly recommended to apply low gear, thus ensuring optimum driving control and ATV performance. Although the ATV is designed to handle a variety of rugged terrain and extreme conditions, failure to operate in accordance with specifications may cause premature wear and even failure of ATV components.

Especially when it is necessary to increase the throttle, such as driving through deep mud, please pay special attention to avoid sudden steering or starting with the wheels turned to full lock. This driving method may not only damage the ATV, but also increase the risk of rollover, thereby posing a threat to the safety of the driver.

Safe driving

Driving on frozen water surface

Icing will affect the ATV's control performance. Therefore, be sure to slow down, avoid sudden acceleration or "flooring" the throttle, as this may cause the tires to spin and increase the risk of rollover. Similarly, harsh braking may also cause the ATV to slide out of control or roll over.
If you plan to drive across frozen waterways, safety is paramount. Make sure that the ice layer is thick and firm enough to support the total weight of you, your ATV and its load. A reliable method is to look for open water and then judge its safety by observing changes in the thickness of the ice layer.

Brake

Braking in advance: When it is necessary to decelerate or stop the ATV, brake in advance to avoid harsh braking. Harsh braking may cause the ATV to lose control or sideslip, increasing the risk of accidents.
Smooth braking: The braking force shall be applied smoothly during braking to avoid sudden and strong braking.
Smooth braking can reduce the likelihood of sudden deceleration or sideslip of the ATV, thereby making driving safer. Avoiding long-time braking: Continuous braking for a long time will overheat the brake disc and cause brake failure.

Safe driving

Slipping

In the event of slipping or coasting, the first priority is to reduce the speed. By reducing the throttle, the friction between tires and the ground can be decreased, thereby lowering the risk of slipping. Excessive steering may cause the ATV to lose control in case of slipping or coasting. Therefore, the driver shall keep a stable steering angle to avoid sudden steering or sharp turn. If necessary, the brake can be used to control slipping or coasting. However, it should be noted that the brake pedal shall be gently pressed during braking to avoid losing control of the ATV due to excessive braking.

Reversing

Ensuring that the ATV is parked stably: Before starting reversing, ensure that the ATV is parked stably and there are no obstacles or other dangerous objects around;
Observing the surrounding environment: Always observe the surrounding environment during reversing, especially the rear and sides of the ATV, and ensure that no pedestrians, obstacles or other vehicles are approaching, so as to avoid accidents;
Engaging the reverse gear: Shift the gear shift lever to R gear;
Reversing slowly: Slowly release the brake and gently step on the throttle to make the ATV start to reverse;
Speed control and steering: Use the throttle and brake to control the speed of the ATV when necessary. If steering is required, the handlebar or steering lever can be used to adjust the driving direction of the ATV.

Safe driving

Driving on loose gravel

Driving on loose stones or gravel is similar to driving on ice, which will affect the maneuverability of the ATV. Especially when the ATV runs at a high speed, these surfaces may lead to slipping or rollover of the ATV since the friction between tires and these unstable surfaces is reduced. At the same time, the brake distance may also increase, because the tires need a longer distance to slow down and stop.

It is important to realize that "flooring" the throttle or performing a coasting maneuver on this type of road may cause stones to bounce up and fly backwards, which may pose a threat to other cyclists. Therefore, please avoid this dangerous behavior and always put safety first. During the driving process, try to maintain a stable driving speed and operate carefully to ensure the safety of yourself and others.

Using the winch for towing purpose

Vehicle stability: Before using the winch, ensure that the ATV is stable. Park the ATV on a flat and solid ground and firmly apply the parking brake. If possible, use wheel chocks or stones to secure the wheels and thus prevent the ATV from moving.

Checking the winch: Before use, carefully check the winch and its accessories to ensure that there is no damage or wear. Check whether the wire rope or synthetic rope is broken, worn or knotted. Ensure that the power supply of the winch is connected properly and the control switch functions normally.

Safe driving

Correct connection: Connect the winch rope correctly to the object that needs to be towed. Use suitable connecting devices, such as a D-shaped rings or towing hooks, thus ensuring that the connection is secure. Avoid using any connecting device that may be damaged or broken.

Keeping distance: When operating the winch, ensure that all personnel stay away from the winch rope and the towing path. The winch rope may break under tension, further causing serious injury. Therefore, please keep a safe distance and avoid standing directly in front of or on either side of the winch rope.

Slow operation: Operate slowly and smoothly when starting the winch. Avoid sudden start or stop to reduce the impact on the ATV and winch. During the towing process, maintain a constant speed, which shall be neither too fast nor too slow.

Monitoring the tension: Closely monitor the tension of the winch rope during the towing process. If the winch rope is found to be overstretched or shows signs of breakage, stop the operation immediately and check it. Ensure that the winch rope works within the safe range.

Avoiding overload: Do not exceed the maximum load capacity of the winch. Overload will result in winch damage or rope breakage. Before use, confirm the load capacity of the winch and ensure that the weight of the towed object is within the safe range.

Wearing gloves: Wear suitable gloves to protect your hands when operating the winch. The winch rope under tension may cause cuts or bruises, and gloves can provide additional protection.

Safe driving

Steering on a slope (K-shaped steering)

When steering on a slope, please adopt the K-shaped steering mode. Specifically, you should stand close to the uphill side of the ATV, hold the brake lever with one hand while walking backward, slowly move the ATV so that the rear of the ATV faces the hilltop, and then drive downhill safely. During this process, be sure to walk or get off on the uphill side and keep a safe distance from the ATV and its rotating wheels. If the ATV starts to tip over, do not try to catch the ATV; otherwise, you may get injured.

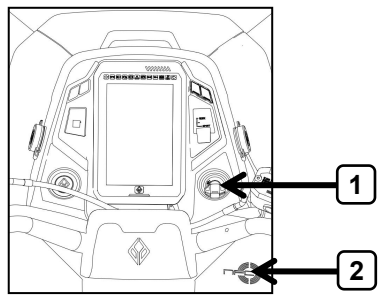
For more information on safe riding of ATV, please contact the dealer.

Controls and operation

Main switch (mechanical key)

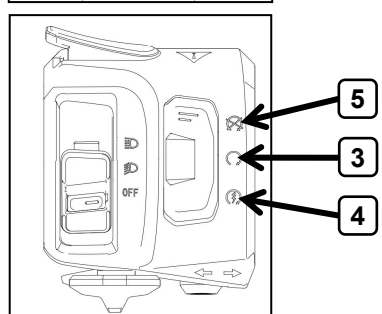
1 When the main switch is on the right side of the instrument panel and the key is turned to different positions:

	The ATV is powered on and self-checked. At this time, the engine can be started.
	The ATV is powered off. At this time, the engine cannot be started.



⚠ NOTE

The ATV comes with two keys. Please keep one of them in a safe place.
When one of the keys is lost, it can be promptly duplicated. If both keys are lost, the whole set of locks needs to be replaced.



Starting the engine

- Use the mechanical key to turn to the '  " (on) position
- to ensure that the ATV is powered on.
- Ensure that the gear shift lever is in P gear or N gear.
- Step on the brake pedal or apply the parking brake.
- Press and hold the 4 start switch on the left handle to start the engine.
- After startup, please warm up the engine before operating the ATV.

Controls and operation

Stopping the engine

(Ensure that the gear shift lever is in P gear or N gear)

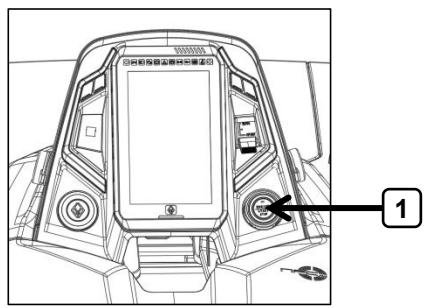
- Shutdown in normal situation:
  Press the left handle start switch to [5] "  " shutdown position.
  At this time, only the engine is shut down, and the ATV is not powered off.
- Emergency:
  Turn the mechanical key to "OFF" position, and then the ATV is powered off and the engine is shut down.

⚠ WARNING
Do not start the engine for more than ten seconds during each starting attempt; If the engine fails to start, wait at least five seconds before attempting to start again. After startup, please warm up the engine before operating the ATV. Otherwise, the engine may be damaged.

Control components and operations

Main switch (Push-button start)

The main switch [1] is located on the right side of the instrument panel.
Note: The effective distance of the remote control key may change due to interference from surrounding environmental factors!
Power on/off via the one-button start switch:
Power on: Bring the remote control key within 2m of the vehicle and press the one-button start switch briefly.
Power off: After the vehicle stops moving and the engine stalls,press the one-button start switch briefly.
Power on/off via the remote control key:
Bring the remote control key within 30m of the vehicle, press the unlock button briefly to power on the vehicle; press the lock button briefly to power off the vehicle.



⚠ATTENTION
The vehicle is equipped with two remote control keys. Please keep one of them in a safe place. If one key is lost, it can be duplicated in a timely manner; if both keys are lost, the remote control keys need to be re-matched.

Control components and operations

Start the Engine (Push-button start)

When the whole vehicle is powered on or not powered on (with the key within 2m of the vehicle), the engine can be started if the following conditions are met:

- Ensure the gear shift lever is in P (Park) or N (Neutral) gear.
- Press the brake pedal or pull the handbrake tightly.
- Press the one-button start switch briefly to start the engine.
- After starting, warm up the engine first before operating the vehicle.

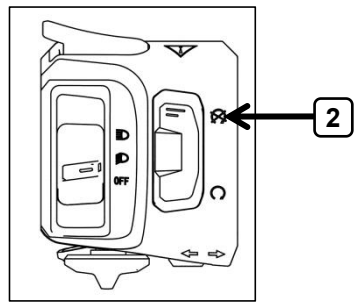
Control components and operations

Stop the engine (Push-button start)

- Under normal circumstances:

Note: The vehicle must stop moving and be in idle state at this time!

Press the one-button start switch briefly; only the engine will stall and the whole vehicle will not lose power.



- Emergency:

(1) Press the left handle start switch to [2] the "" flame-out position; only the engine will stall, and the whole vehicle will not lose power.

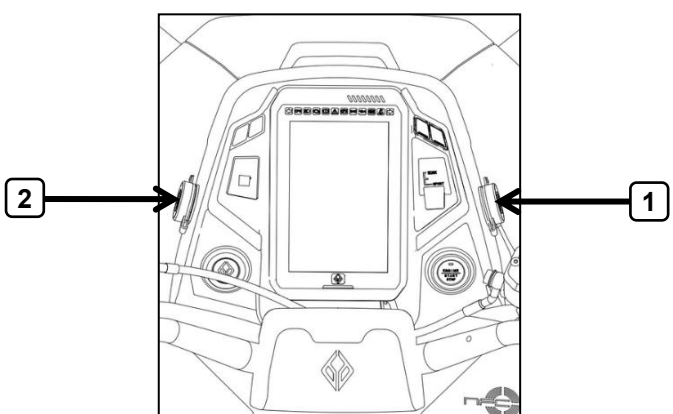
(2) Press and hold the one-button start switch for more than 6 seconds; the whole vehicle will lose power and the engine will stall at the same time.

⚠WARNING
Do not crank the engine for more than ten seconds each time you start it. If the ignition fails and you need to start it again, be sure to pause for more than five seconds. Warm up the engine first after starting before operating the vehicle. Otherwise, the engine may be damaged.

Power outlet and USB port

The ATV's windshield area is equipped with a 12V DC power outlet and USB & Type-C ports for charging your electronic devices.
The USB & Type C ports are on the left [1], and the 12V DC power outlet is on the right [2].

⚠ WARNING
Improper use or insertion of an incompatible charger/device may result in short circuit, device damage or fire. Be sure to use chargers and cables that are compatible with the outlet and of acceptable quality.



Winch

The ATV is equipped with a winch and its controller. For a more detailed winch manual, please contact the dealer.

⚠ NOTE
The winch will consume a lot of electric power when it is operating. Therefore, during the operation of the winch, please keep the engine running continuously and pay close attention to the battery level.

Winch

⚠ WARNING

- Never engage or disengage the winch clutch when the winch is under load, the wire rope is under tension, or the rope drum is operating. Ensure that the ATV is in sight during the operation of the winch.
- Do not attach recovery straps to the winch hook for increasing the pulling force.
- Do not operate the winch when there are less than 5 turns of rope on the drum. The rope may fall off the drum because the rope is attached to the drum and is not used to carry heavy loads.
- Do not use the winch as a lifting device.
- Do not attempt to disengage the winch clutch when the rope is under tension. Do not engage the winch clutch when the drum is rotating. Ensure that the winch clutch is fully engaged or disengaged.
- Keep your hands and clothing away from the rope, hook and fairlead openings during the operation or retraction process. Do not use the hook to pull the rope back, as this will damage the rope.
- To prevent the winch motor from overheating, pause operation at reasonable intervals, thus allowing the winch motor to cool down.
- At any time, avoid continuous unilateral towing that causes the rope to pile up on one side of the drum, as this will damage the rope or winch.
- Carefully check the rope for wear, damage and knots. Replace the rope if any damage is found.

Left-hand handlebar

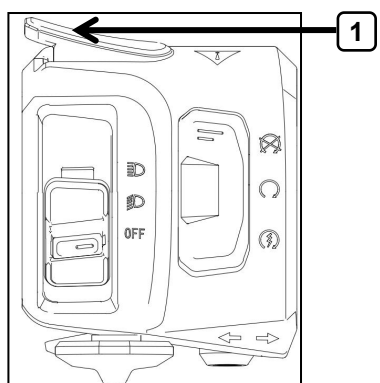
Booster switch 1

In the 4-WD locking state, the ATV is subject to a speed limit. If more engine power is required:

Release the throttle and press the booster switch simultaneously. At this time, the booster switch indicator light goes on.

Continue to press the switch, and then press the throttle (right handlebar). At this time, the engine speed limit is released.

Release the button of the force switch to restore the speed limit.



⚠ WARNING

When the ATV is subject to speed limit, be sure to release the throttle before pressing the booster switch, otherwise sudden acceleration and out of control may be caused, which may lead to serious casualties.

⚠ NOTE

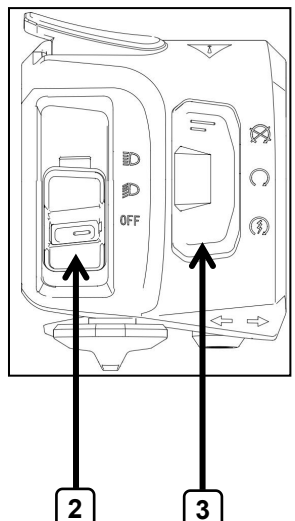
The booster switch is inactive in the 4-WD locking state.

Left-hand handlebar

Headlight switch 2

Move the switch button up and down to change its position.

	High beam		The high beam, front and rear position lamps, taillight and license plate light are on
	Low beam		The low beam, front and rear Position lamps, taillight and license plate light are on
OFF	OFF	Engine shutdown	All the lights are off
		Engine start	The low beam, front and rear Position lamps, taillight and license plate light are on



⚠ NOTE

After engine shutdown, please turn off the headlight in time, otherwise the battery may be short of power and the ATV cannot be started.

Ignition switch 3

Press the switch to place it in different positions

	Shutdown switch	Engine stop
	Ignition self-resetting button	
	Ignition	Starting the engine

Left-hand handlebar

Steering switch 4

Move the steering switch horizontally to make it in different positions.

	Left turn signal	The left turn signal flashes
Middle	Neutral gear	
	Right turn signal	The right turn signal flashes

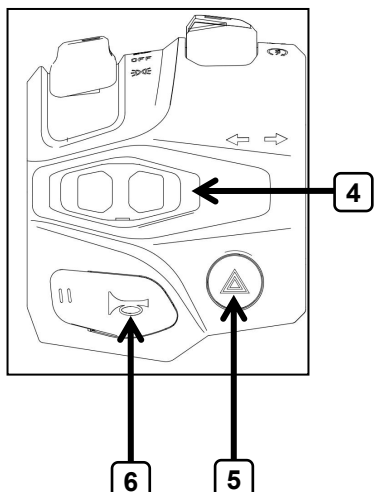
Warning switch 5

Press the switch to set it in the high position and press the switch again to set it in the low position.

High position	The relevant lights don't flash
Low position	The front and rear turn signals and the instrument turn signal start flashing at the same time

Horn button 6

	Horn	Short press this button, and the horn will sound

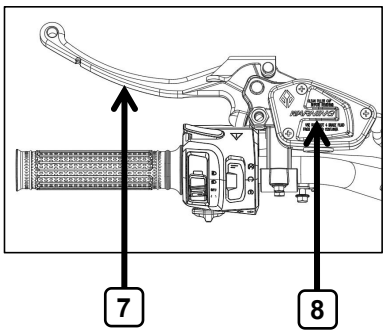


Left-hand handlebar

Front brake

Front brake lever [7]

The front brake lever is located in front of the right handlebar and only brakes the front wheel. When being tightly held, it provides braking force. The braking force increases when the handle travel increases.



⚠ NOTE
When being tightly held, the handle shall offer a strong force feedback rather than a soft state.

Front brake master cylinder [8]

The front brake master cylinder is located above the right handlebar and connected to the brake lever. Before using the ATV, please check the oil level window on the side of the brake master cylinder. If the fluid level is below the minimum mark, brake fluid needs to be added.

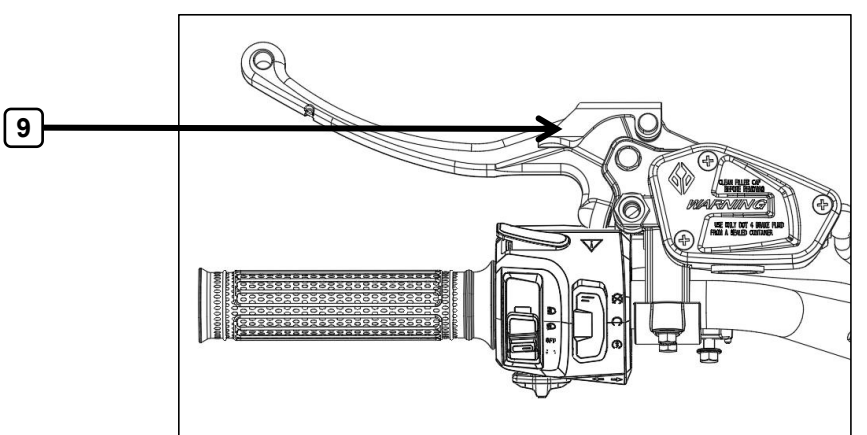
⚠ NOTE
Lack of brake fluid will lead to poor braking force; Overfilled brake fluid will result in excessive braking resistance or locking. Please keep the brake fluid within the recommended oil level, neither too little nor too much.

Left-hand handlebar

Hydraulic parking brake 9

For the hydraulic parking brake system, if it is installed on the right-hand brake and the parking brake is triggered according to the described operation process, the correct steps to trigger the parking brake is as follows:

To activate the hydraulic parking brake, first step on the foot brake to ensure that the ATV is stable, and then hold the right-hand brake lever with your right hand. While holding the right-hand brake lever, use the left hand to rotate 9 the hydraulic parking switch outward, and the hydraulic parking brake will be activated to effectively immobilize the ATV.

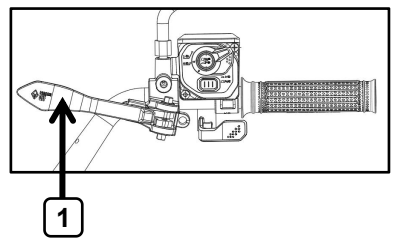


Right-hand handlebar

Mechanical parking 1

Pull the mechanical parking handle backward until it is locked in place.

⚠ WARNING
Before operating the ATV, it is crucial to ensure that the parking brake is completely unlocked, as operating the ATV with the parking brake engaged (i.e., locked) will most likely cause serious safety accidents. Before driving, make sure that the parking brake has been released to ensure the safety of yourself and others.



Important safety protection

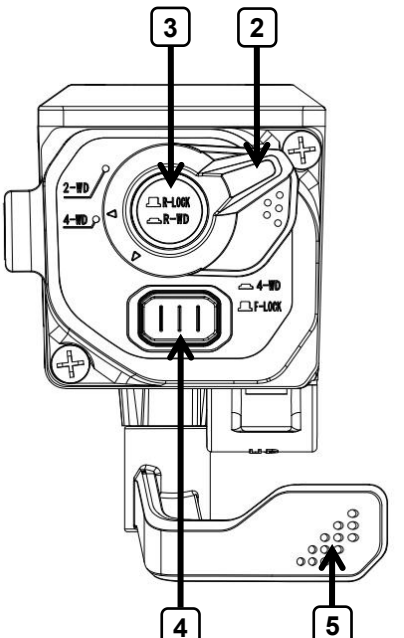
During prolonged parking, the parking brake system may gradually loosen due to natural factors, increasing the risk of accidental ATV movement. To ensure safety, it is recommended to take the following preventive measures:

1. Placing blocks under the wheels: Place bricks or other solid obstacles securely under the wheels to prevent the ATV from rolling unexpectedly due to parking brake failure.
2. Paying special attention to parking on a hillside: When it is necessary to park on a hillside, parking brake alone may not be enough to prevent the ATV from sliding down due to gravity. At this time, additional stones or solid barriers shall be placed under the side wheels in the downhill direction to enhance the safety level.
3. Choosing a safer parking position: If possible, try to avoid parking for a long time on a steep or unstable hillside. Finding a flat and stable ground as the parking place can significantly reduce the risk of accidental ATV movement.

⚠ CAUTION
The parking brake system shall not be used for braking during the driving process.

Right-hand handlebar

Drive switch handle



2-WD/4-WD changeover switch [2]

Toggle the changeover switch " [2] " to switch between 2-WD and 4-WD.

In the 2-WD mode, only two rear wheels are powered. This mode is suitable for general flat roads or high-speed driving, which helps to save fuel and reduce tire wear.

In the 4-WD mode, all the four wheels are powered. This mode is suitable for complex road conditions, such as muddy, rough or downhill, which helps to provide better traction and stability.

Rear wheel differential lock switch (optional) [3]

Press the switch " [3] " to realize the switching of the rear axle drive differential lock switch.

In the low position, it is R-WD (i.e., the rear axle differential mode), in which the differential distributes rotational speed through planetary gear, thereby distributing power to the axle requiring more power, while reducing or limiting the power of the other axle to achieve the required rotational speed difference.

In the high position, it is R-Lock (i.e., the rear axle locking mode), in which the rear axle is locked, both sides run at the same speed, and the differential can be engaged only after the axle shaft rotates.

Right-hand handlebar

4-WD locking changeover switch 4

Press the " 4 " button to complete the switching of the "4-WD locking" switch (inoperable in the 2-WD mode).
When the button is in the low position, it is in the "4-WD" state (i.e., the front axle differential mode).
When the button is in the high position, it is in the "F-lock" state, in which the front axles are locked and the two front axles rotate at the same speed, so that the ATV can obtain better traction on roads with low adhesion or high resistance. Since the differential is locked, the rotational speed difference between the front axles is eliminated, which requires greater force during the steering process. The differential can be engaged only after the axle shaft rotates. In the F-lock state, the maximum speed limit is 30km/h. When the differential is fully engaged and more power is required, press the booster switch on the left handlebar to release the speed limit.

Throttle button 5

When the engine is operating, pressing the throttle handle will increase the engine speed, which in turn changes the ATV speed. The throttle handle is pressurized by the spring. When the driver stops applying force, the throttle handle automatically returns to its original position and the engine speed returns to the idling state.

Right-hand handlebar

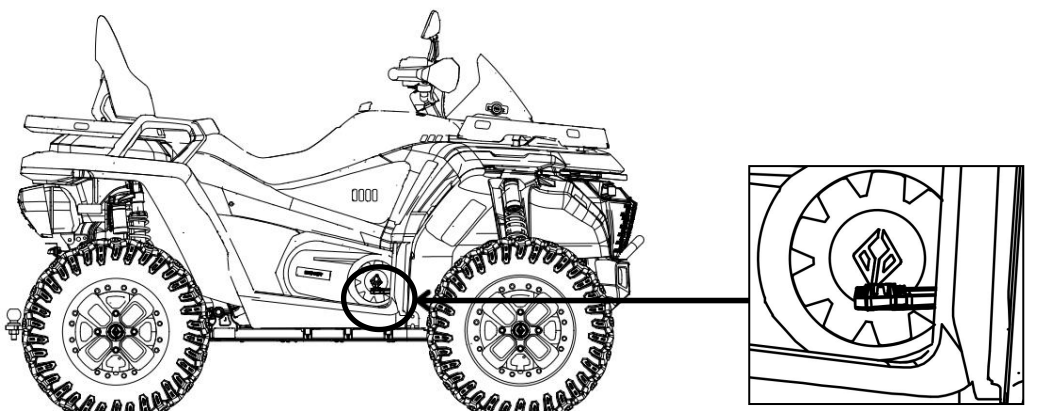
⚠ NOTE
Before starting the engine, check whether the throttle handle can be operated smoothly and whether it is in the initial position of the stroke.

⚠ WARNING
Press the throttle handle smoothly and avoid increasing the force suddenly to reduce the risks brought by sudden acceleration of the ATV. It is necessary to adjust the throttle force appropriately to keep the speed of the ATV within a controllable range. When deceleration or parking is required, release the throttle handle in time and thus let the engine speed naturally fall back to the idling state.

Foot brake

The brake pedal is located on the right foot pedal floor. When the pedal is depressed, the front and rear brakes start to work at the same time.

⚠ WARNING
Before operating the ATV, it is necessary to check the foot brake. The foot brake pedal shall offer strong force feedback, otherwise the braking force may be insufficient and accidents may occur. Please correct it before use.

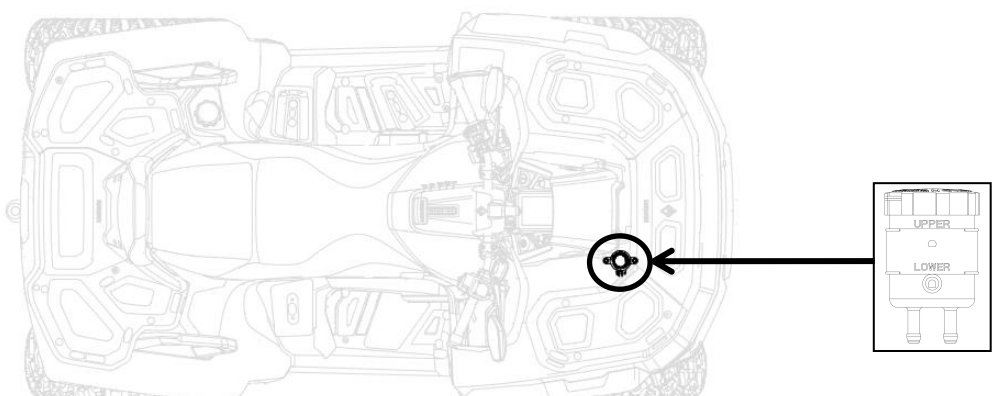


Foot brake

Foot pedal brake reservoir and liquid inspection

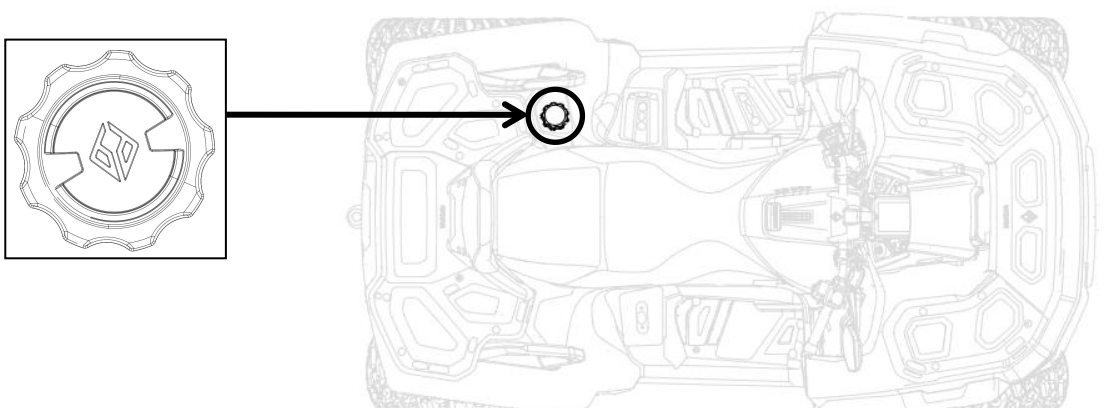
Remove the front upper maintenance cover and check the brake fluid level.
When the brake fluid is lower than the LOWER mark, please add DOT4 brake fluid in time until the fluid level is between the UPPER and LOWER marks.

⚠ WARNING
Do not use brake fluid that has been stored for a long time after opening. The brake fluid will absorb a large amount of moisture in the air, which weakens its braking effect.



Fuel tank and gasoline grade

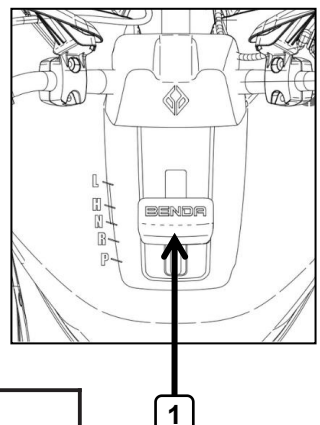
The fuel tank port is located at the left rear of the ATV. Turn the fuel tank cap counterclockwise to open the fuel tank. It is required to use unleaded fuel with an octane rating of 92# and above (permissible maximum ethanol content of 10%). Non-oxidizing and ethanol-free fuel is recommended.



Gear shift lever

The gear shift lever [1] is located in the middle of the ATV. During the gear shifting process, stop the ATV, depress the brake foot pedal, and then shift to the appropriate gear as required.

L gear	Low gear	Low speed range of the gear box, and large wheel torque
H gear	High gear	High speed range of the gear box (at this time, the ATV will reach the highest speed)
N gear	Neutral gear	The engine power output is disconnected from the transmission system
R gear	Reverse gear	The ATV runs backward with a speed limit of 30km/h.
P gear	Parking gear	The gear box is locked to prevent the ATV from moving

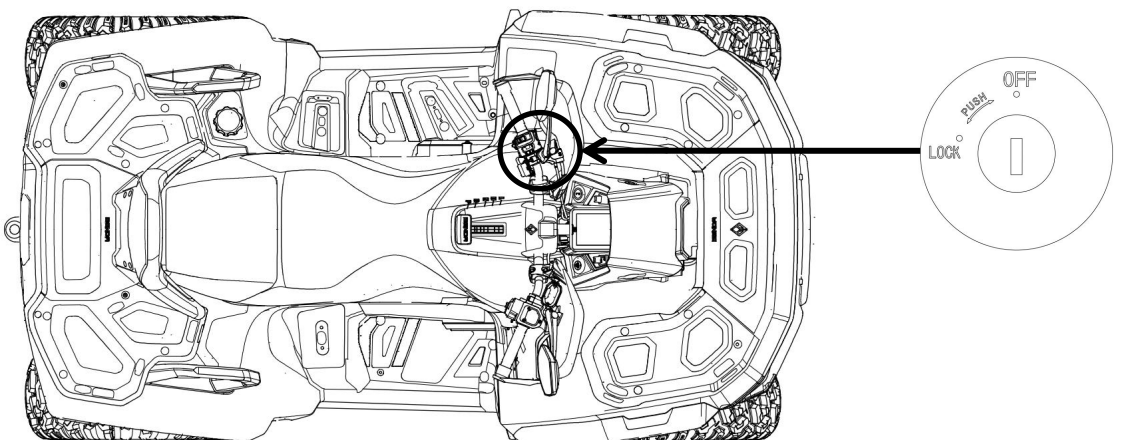


⚠ WARNING

- Do not engage the P gear when the ATV is running, otherwise the drive shaft may be damaged.
- When it is necessary to engage the P gear, please shake the ATV back and forth to ensure that the gear box is fully engaged.
- When parking on a slope, if conditions allow, utilize other external measures to prevent the ATV from rolling.
- To avoid damaging the CVT, please engage the L gear in case of driving at a low speed for a long time, towing, carrying heavy objects, crossing obstacles and other situations that require large torque.

Gear lock

The gear lock is located on the upper left front of the ATV and is used to lock the gear. After moving the gear shift lever to the P gear, engage the gear lock to lock the gear lever.



CVT

The ATV is equipped with a continuously variable transmission (CVT) system, which allows the ATV to achieve a continuously variable speed between the maximum and minimum speeds without manual gear shifting during the driving process.

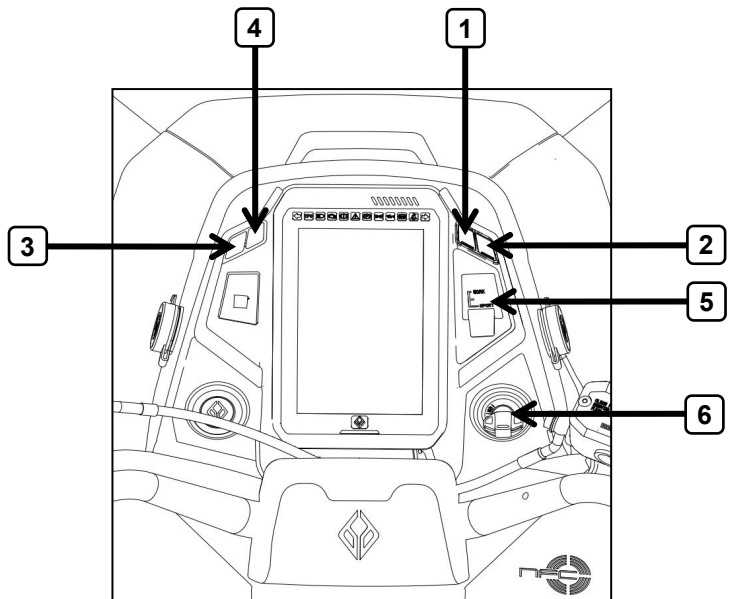
⚠ NOTE

In order to extended the belt life of ATVs equipped with continuously variable transmission (CVT) system in use, the following driving and maintenance guidelines are recommended:

- l Using the low gear when carrying heavy goods: When the ATV needs to carry heavy goods or transport heavy goods, especially at a low speed, using the low gear can reduce the pressure between the belt and the clutch pulley, thereby prolonging their life.
- l When the ATV is running at low speed, especially when making a turn, driving uphill or parking at low speed, it is recommended to apply low gear. This also reduces the pressure and wear on the belt, as the CVT system may experience greater pressure at a low speed.
- l Precautions for towing the ATV: If the ATV needs to be towed, the transmission shall be set in the neutral gear. This is because when the ATV is towed, the engine usually does not operate, so the transmission system (including the CVT belt) shall not be subjected to any mechanical stress. Engaging the neutral gear ensures that the components in the CVT system won't be damaged by external forces.
- l Regular inspection and maintenance: including checking the wear of belts, cleaning and lubricating the related parts.

Instrument button

1 OK
2 BACK
3 UP
4 DOWN
5 Mode switching
6 EPB switch (optional)



EPB

I. Static parking

When the ATV is static, manually press [6] the EPB switch, and the EPB will output the maximum clamping force.

II. Static release

Ensure that the ATV has come to a complete stop; Depress the brake pedal; Press the EPB switch; The EPB will normally release the parking state.

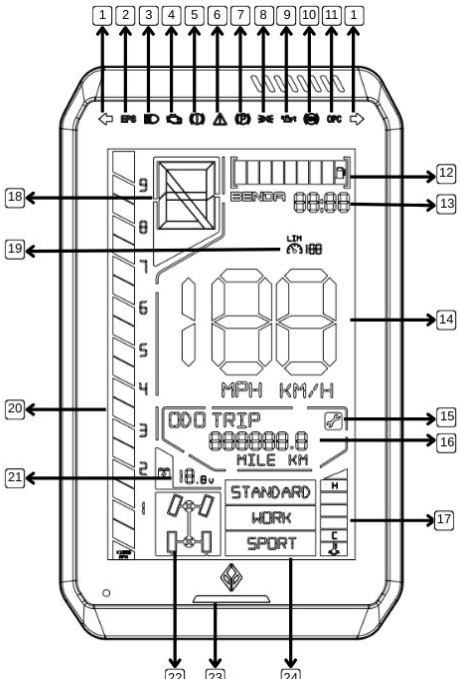
III. Drive away assist

When the ATV starts, the EPB system will automatically release the parking brake; For starting on a downhill slope,
press the throttle acceleration handle; For starting on an uphill slope, when the traction torque reaches the resistance torque, the EPB system will automatically release the parking brake to ensure a smooth start of the ATV.

IV. Emergency braking

When the ATV speed exceeds 5km/h, pressing the EPB switch will trigger emergency braking.

Instrument (LCD)

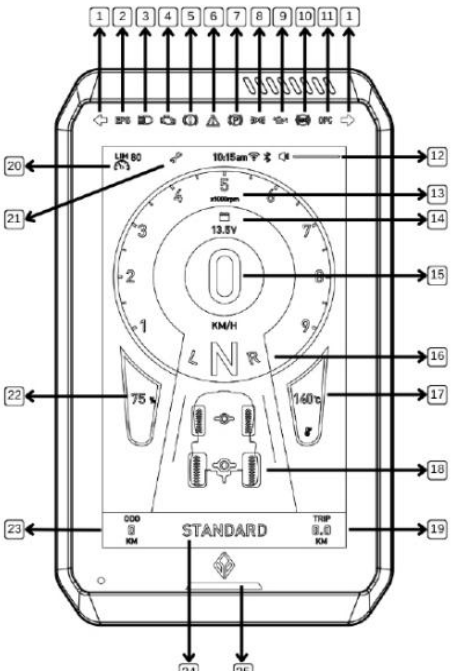


1	Turn signal	13	Time
2	EPS fault indicator light	14	Speed
3	High beam indicator light	15	Maintenance reminder
4	Engine fault indicator light	16	Mileage
5	Brake system fault/low brake fluid level	17	Coolant temperature
6	Overtaking speed limit release indicator light	18	Gear
7	Parking indicator light	19	Maximum speed
8	Width lamp	20	Engine speed
9	Engine oil pressure warning indicator light	21	Voltage
10	ABS indicator light	22	Switching between 2-WD and 4-WD/rear axle differential
11	OPC indicator light	23	Reverse/neutral gear indicator light
12	Fuel capacity	24	Mode

Instrument operation

Operation interface	ODO interface	TRIP interface	Time setting	ABS maximum speed setting
Short press the UP button	Switching between PDP/TRIP		Value +1	Value -5
Press and hold the UP button	Press and hold the button for ≥3 seconds to increase the backlight level by 1		Accumulative increase of numerical value	/
Short press the DOWN button	Switching between ODO/Trip		Value -1	Value +5
Press and hold the DOWN button	Press and hold the button for ≥3 seconds to decrease the backlight level by 1		Accumulative decrease of numerical value	/
Short press the OK button	/		Set the next digit, save and exit when the last digit is reached	Save and exit
Press and hold the OK button	Press and hold the Button for ≥5 seconds to set the time	Press and hold the button for ≥ 5 seconds to clear TRIP	/	/
Short press the BACK button	/		Exit	Exit
Press and hold the BACK button	Press and hold the button for ≥5 seconds to set the maximum speed	Press and hold the button for ≥5 seconds to switch between metric and imperial system	/	/

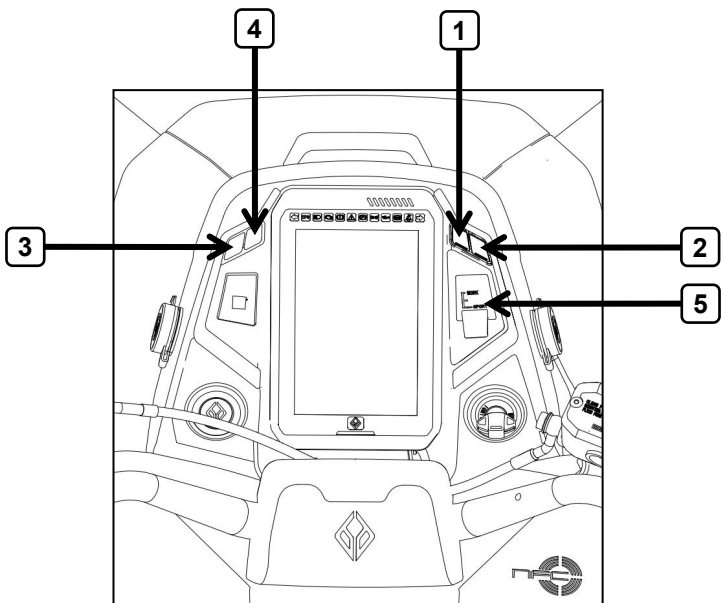
Instrument (TFT optional)



1	Turn signal	14	Voltage
2	EPS fault indicator light	15	Speed
3	High beam indicator light	16	Gear
4	Engine fault indicator light	17	Coolant temperature
5	Brake system fault/ low brake fluid level	18	Switching between 2-WD and 4-WD/rear axle differential
6	Overtaking speed limit release indicator light	19	TPIP mileage
7	Parking indicator light	20	Maximum speed
8	Width lamp	21	Total mileage
9	Engine oil pressure warning indicator light	22	Fuel quantity
10	ABS indicator light	23	Engine maintenance indicator light
11	OPC indicator light	24	Driving mode function
12	Time/WIFI/Bluetooth	25	Reverse/neutral gear indicator light
13	Rotational speed		

Instrument operation

1 OK
2 BACK
3 UP
4 DOWN
5 Mode switching



Instrument operation

Operation interface	Main interface	Level I menu, level II menu and lower-level menus	Incoming call	On call	Music	ABS maximum speed setting
Short press the UP button	/	Upward switching	/	Volume +	Previous track	Value -5
Press and hold the UP button	/	/	/	/	Bring up the volume bar	/
Short press the DOWN button	/	Downward switching	/	Volume -	Next track	Value +5
Press and hold the DOWN button	/	/	/	/	Bring up the volume bar	/
Short press the OK button	Adjust the backlight +1	Enter the next-level menu/confirm	Answer (priority over menu selection)	/	/	Save and exit
Press and hold the OK button	Enter the setting menu	/	/	/	Pause/Play	/
Short press the BACK button	Invalid	Return to the previous level (in case of a level-I menu, it returns to the main interface)	Hang up (priority over menu selection)	Hang up	/	Exit
Press and hold the BACK button	Invalid	/	/	/	/	/

Instrument

Bluetooth signal

1. The Bluetooth is turned on by default with the instrument, and enters the pairing mode. The Bluetooth is turned off after shutdown;
2. When not connected, the Bluetooth symbol is not displayed;
3. During connection, the Bluetooth symbol flashes;

Gear display

Display range: L/H/ N/R/P

Driving mode

Display range: 3 types (standard mode, sport mode, and working mode);

2-WD/4-WD display

Display range: 2-WD, 4-WD and 4-WD locking;

Music

1. The song information is indicated in the main interface and the projection list (the menu interface does not need to be displayed);
2. It is displayed in the form of a pop-up window, with the contents of: singer name + song name;
3. It is no longer displayed after exiting music playback.

Bluetooth settings

1. The default name of the phone Bluetooth is "BENDA-xxxx";
2. The phone Bluetooth and music Bluetooth are enabled by default
3. After turning off and then turning on the power supply, the configuration remains unchanged;
4. Support adjustment through instrument buttons;

Instrument

Brightness setting

Light brightness level: level 1, level 2, and level 3; The backlight is at level 3 during the startup animation;
The factory default level is level 2;

⚠ NOTE

- After turning off and then turning on the power supply, the backlight level remains unchanged;
- The backlight brightness can be adjusted automatically or manually through the handlebar switch;

Call

Short press the OK button to answer the call;
Short press the BACK button to hang up;
During the call, press and hold to bring up the volume adjustment interface, and then short press the up and down buttons to adjust the volume;

Mileage unit setting

Unit of mileage: metric and imperial systems; The factory default unit is metric system;
After turning off and then turning on the power supply, the unit remains unchanged;
The mileage unit can be adjusted through instrument buttons;

Language setting

Language type: Chinese, English, Italian, German, French, Russian, Spanish, and Portuguese; The factory default language is English;

EPS setting (optional)

The EPS has three modes: LOW/MODERATE/FAST;
Each time you enter the settings, the mode is MODRTATE by default.

⚠ NOTE
The adjustable speed limit function only takes effect when the ATV is equipped with ABS, and works in conjunction with ABS to guarantee the safety performance. For the ATV with the ABS function, adjusting the speed limit does not affect the speed limits of L gear, R gear and front differential lock. Adjustment range: 20km/h-100km/h. After adjusting the maximum speed limit, the current maximum speed is displayed in the instrument: LIM (20~100). When the actual speed exceeds the maximum speed limit, the LIM indicator icon flashes and the buzzer sounds continuously. Note: Press and hold the booster switch to release the speed limit under ABS at the same time, and release this switch to restore the previous speed limit.

Adjustable speed limit function (TFT)

In the main interface, the speed is ≤ 5km/h and the rotational speed is ≤ 1500rpm;
Press and hold the BACK button for more than 5s to enter the maximum speed setting mode. At this time, the value at the speed position flashes. Short press the DOWN button to increase the value by 5. Short press the UP button to decrease the value by 5. Short press the OK button, and the number always displayed indicates that the current value is the limit value. After entering the maximum speed limit setting mode, if there is no button operation, the system will automatically exit the setting mode after 10s without saving, or short press the BACK button to exit the setting mode.

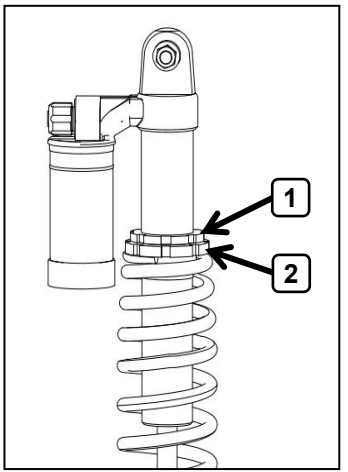
Instrument

Adjustable speed limit function (LCD)

As displayed in the 0D0 interface, the speed is < 5km/h, and the rotational speed is < 1500 rpm;

Press and hold the BACK button for more than 5s; The instrument speed flashes to display the currently limited maximum speed value. Short press the DOWN button to increase the value by 5, and short press the UP button to decrease the value by 5; Short press the OK button, and the number always displayed indicates that the current value is the limit value. After entering the maximum speed limit setting mode, if there is no button operation, the system will automatically exit the setting mode after 10s without saving, or short press the BACK button to exit the setting mode.

Shock absorption (airbag shock absorption)



To ensure the safety and comfort of the cyclist, the spring preload of standard shock absorber can be adjusted according to the cyclist's weight and the riding conditions. The following are the official guidelines for adjusting the spring preload of shock absorber:

1. Removing the rear wheel: park the ATV in a flat and safe position,turn off the engine, confirm that the ATV has stopped stably, lift the ATV with a jack to ensure that the ATV is off the ground, remove the tire according to the instructions in the ATV manual, and ensure that no parts are damaged during the process.

2. Using a dedicated tool, lock components [1] and [2], then rotate them clockwise or counterclockwise accordingly. First, rotate component [1] counterclockwise to loosen it, then adjust component [2]. Rotating component [2] clockwise reduces the spring preload, while rotating it counterclockwise increases the spring preload. Once the appropriate height is achieved, securely tighten both [1] and [2] to ensure they are firmly seated.

3. Inspection and test: After the adjustment, please carefully check the installation of the shock absorber and rear wheel to ensure that all parts have been properly installed and fastened. Subsequently, a ride test is carried out to verify the adjustment effect.

⚠ NOTE
Select an appropriate spring preload according to the cyclist's weight and the riding conditions. Generally speaking, when the cyclist is heavy or the riding conditions are harsh, a larger spring preload shall be selected; Otherwise, a smaller spring preload shall be selected.

Running-in

For the new ATV, the running-in period shall be 20 operating hours or 350km. Proper running-in of a new ATV can prolong the service life of the ATV, effectively reduce the failure and damage of the ATV in the future use, and give full play to the performance of the new ATV.

⚠ WARNING

In the running-in period:

- During the first 10 hours, do not open the throttle beyond the 1/2 throttle position.
- During the first 10 to 20 hours, do not open the throttle beyond 3/4 throttle position.
- Avoid overheating the engine.
- Avoid driving continuously for a long time.
- Avoid overheating the engine.
- Do not tow or carry heavy objects.

⚠ NOTE

Regular maintenance is very important. If you are not familiar with the maintenance process, please contact a qualified dealer for professional maintenance.

First routine overhaul

The overhaul conducted when the initial millage reaches 350km is critical. During this period, all engine parts and components and ATV parts have experienced the running-in process. Please complete this overhaul carefully, which will ensure that your ATV has excellent performance and a prolonged service life.
Please operate in strict accordance with the maintenance procedures in this manual.

Running-in

Running-in of new tires

The tread pattern of new tires is usually deep, and the part of the tire in contact with the ground has not undergone the running-in process fully, which means that the ground grip of the tire may be insufficient. Through running-in, the tread pattern of the tire will gradually adapt to the ground, which improves the ground grip and thus enhances the maneuverability and safety of the ATV.

- In the first 100km, try to avoid driving at high speed for a long time.
- Check the tire pressure regularly to ensure that the pressure is even and appropriate, thereby guaranteeing the uniform running-in of tires.
- During the running-in period, try to avoid excessive sharp turn and sharp acceleration, thereby preventing the tires from unnecessary wear.
- During the running-in period, try to avoid driving on rugged roads, thereby preventing the tires from additional wear.

⚠ NOTE
As the only part of the ATV in contact with the ground, tires are crucial to the performance and safety of the ATV. If the tire doesn't undergo the running-in process, the maneuverability, stability and brake performance of the ATV may be affected, thus increasing the risk of driving.

Maintenance procedures

General description

This section mainly introduces the maintenance of the ATV, which is necessary to ensure the normal operation of the ATV. Maintenance is important to maintain the ATV performance, prevent potential faults, prolong the service life,ensure riding safety and save maintenance costs. It is your responsibility to carry out regular maintenance according to the provisions of this manual. For ATVs that are frequently used under harsh working conditions, more frequent maintenance and servicing must be carried out to ensure that the ATV is always in the best conditions.

Check the status, clean the surface, replace the quick-wear parts, lubricate the key parts, adjust the parameters, test the performance, and record the maintenance log. When replacing the quick-wear parts, please replace them with genuine parts from the dealer. If the quick-wear parts are not replaced with parts and components recommended by the factory, the warranty terms for the ATV will become invalid.

⚠ NOTE

Please strictly follow this manual for maintenance and adjustment procedures. If you are not familiar with the maintenance procedures or are inconvenient to carry out maintenance, please contact a qualified dealer for professional maintenance.

Unless otherwise specified, the ignition switch must be turned off and the engine must be stopped before performing any operations.

For parts that cannot be reused, such as seals, cotter pins, etc., they must be replaced with new parts after assembly.

Thread glue is required for some bolts. Please follow the specific instructions of the manufacturer when using it.

Maintenance procedures

Definition of harsh working conditions

1. Extreme environment:

① High-temperature or low-temperature environment: Under extreme temperatures, key components such as engine, tires, and battery may be affected.

② Humid or rainy areas: Continuous humidity may lead to electrical system corrosion, ATV rusting and lubrication performance degradation.

③ Acidic or alkaline environment: Acidic or alkaline structures may accelerate the corrosion process and thus affect the structure and components of the ATV.

2. Rugged and unstable terrain:

① Rugged mountainous or rocky areas: In these areas, the ATV needs to cope with unstable ground and stronger impact.

② Mud, marsh, or sandbeach: These terrains may cause the ATV to get stuck and put higher requirements for the tires and power system.

3. High-frequency or high-intensity use:

① Long-time or continuous operation: Long-time or continuous operation may result in overheating, increased wear and fatigue of ATV.

② High-intensity off-road racing or activities: In these cases, the ATV needs to withstand frequent acceleration, braking and high-speed turning.

4. Heavy load or improper use:

① Goods exceeding the bearing capacity of the ATV: It may cause structural damage, suspension excessive wear or brake failure of the ATV.

② Improper operation or driving: High-speed collision with obstacles, sharp turns or jumping may cause serious damage to the ATV's suspension, frame and power system.

③ Long-time idling or low-speed driving: During idling or low-speed driving, the engine has a low rotational speed, resulting in insufficient combustion of air-fuel mixture in the engine, which is prone to carbon deposit. The load on the engine is relatively light and the engine oil circulation slows down, which may lead to increased wear in the engine.

⚠ NOTE
If the usage of your ATV matches any of the above criteria, please reduce the maintenance interval by 50%.

In cold environment, special attention shall be paid to the oil level in the engine oil window. If the oil level rises abnormally, there may be pollutants accumulated in the oil storage tank or crankcase. Please change the engine oil immediately and pay attention to detection. If the oil level continues to rise, please stop starting the ATV and find the causes. If the problem cannot be solved, please contact the dealer in time.

⚠ NOTE
► = Severe usage scenarios: When the ATV is subjected to severe usage scenarios, reduce the maintenance interval by 50% ■ = Components or systems requiring repair by an authorized dealer ● = Emission-related components. Repair of these components or systems shall be carried out by authorized dealers.

Maintenance procedures

List of maintenance items during the running-in period

Perform the following maintenance items at the expiration of 20 hours or the specified mileage interval, whichever comes first.

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule	Kilometers	
	Conventional lubrication	Every 20 hours	--	320 km	Lubricate all grease points, oil nipples,cables, etc.
	Engine oil/engine oil filter element/engine oil coarse strainer	Every 20 hours	--	320 km	Replace the engine oil and filter element. Clean the coarse strainer.
►	Engine air filter element	Every 20 hours	--	320 km	Check, and if it is dirty, replace it instead of cleaning
●	Engine valve clearance	Every 20 hours	--	320 km	Check and make adjustment when necessary
	Front and rear axle oil	Every 20 hours	--	320 km	Check the oil level and detect whether there is oil leakage
	★Coolant	Every 20 hours	--	320 km	Check the fluid level and detect whether there is leakage
►	Brake pad	Every 20 hours	--	320 km	Check the brake pad thickness
	★Battery	Every 20 hours	--	320 km	Check and clean the terminal and test the battery if necessary

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule	Kilometers	
	Idling conditions	Every 20 hours	--	320 km	Check if the rotational speed is appropriate. If it does not meet the specified parameters or is unstable, please contact the dealer for repair.
	Steering/wheel calibration	Every 20 hours	--	320 km	Check the steering system and contact the dealer for wheel calibration when necessary.
►	Foot brake/hand brake	Every 20 hours	--	320 km	Check the function and make adjustment when necessary.
	Axle body, constant -velocity half shaft, and transmission shaft	Every 20 hours	--	320 km	Check for oil leakage.
	Engine oil pipes, gaskets and seals	Every 20 hours	--	320 km	Check for leakage.

Maintenance procedures

Periodic maintenance plan

After the 20h running-in period, perform maintenance according to the interval specified in the maintenance plan, taking the first item due.

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer (mile)	
►	Brake pad	10 hours	Monthly	160 (100)	Check the brake disc thickness
	★Battery	20 hours	--	320 (200)	Check the terminal. Clean and test the battery if necessary.
	Engine oil pipes, gaskets and seals	25 hours	--	320 (200)	Check for leakage
►	Air filter element	50 hours	--	800 (500)	Be sure to check before riding, and increase the inspection frequency under severe operating conditions.If it is dirty, replace it in time,instead of cleaning
►	CVT air intake strainer/filter element	50 hours	--	800 (500)	Clean the strainer or filter element,and replace the strainer or filter element when necessary.
►	Conventional lubrication	50 hours	Every 3 months	800 (500)	Lubricate all the oil filling points, cables, etc.

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer (mile)	
►	Front axle oil	100 hours	Every 12 months	1600 (1000)	Check the oil level and replace it every year if the specified hour or distance reading is not reached.
►	Rear axle oil	100 hours	Every 12 months	1600 (1000)	Check the oil level and replace it every year if the specified hour and distance reading is not reached.
►	Engine oil/ filter element replacement/ Engine oil coarse strainer	100 hours	Every 12 months	1600 (1000)	Check for color change. If it is dirty, replace it and clean the coarse strainer. If the hour or distance interval is not reached, replace it every year.
►	Radiator	Every 50 hours	Every 6 months	800 (500)	Inspect and clean the external surfaces. Cleaning shall be more frequent if the ATV is subjected to severe usage scenarios
	Steering system	Every 50 hours	Every 6 months	800 (500)	Check and lubricate
►	Front suspension	Every 50 hours	Every 6 months	800 (500)	Lubricate and check the fasteners
►	Rear suspension	Every 50 hours	Every 6 months	800 (500)	Lubricate and check the fasteners

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer (mile)	
	Cooling system	50 hours	Every 6 months	800 (500)	Test the strength of the coolant and carry out pressure test for the system annually.
►	Gear shifting	Every 50 hours	Monthly	800 (500)	Check, lubricate and adjust if necessary.
►■	Throttle valve body and throttle cable	Every 50 hours	Every 6 months	800 (500)	Check and remove the carbon deposit. Check the cable, and lubricate it more frequently if the ATV is subjected to severe usage scenarios
►■	★CVT drive belt	100 hours	Every 12 months	1600 (1000)	Check and replace it when necessary, and contact the dealer for maintenance
■	CVT driving and driven wheels	100 hours	Every 12 months	1600 (1000)	Clean and check the pulley, replace the worn parts, and contact the dealer for maintenance
	Fuel filter element and fuel pipe	100 hours	Every 24 months	3200 (2000)	Check the line conditions, and replace the filter element and high-pressure fuel pipe every four years
	Cooling pipe	100 hours	--	1600 (1000)	Check the wiring and actual conditions

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer (mile)	
▶	★★Valve clearance	100 hours	--	3200 (2000)	Check and adjust it when necessary, and contact the dealer for maintenance
●	Fuel system	Every 100 hours	Annually	800 (500)	Check the fuel tank, fuel tank cap, fuel pump and fuel pump relay
	Spark plug	Every 100 hours	Every 2 years	3200 (2000)	Check, and replace it if worn or contaminated
■	Engine mounting bracket	Every 100 hours	Annually	2400 (1500)	Check the conditions
▶	Electric circuit, fuse, connector, relay and cable	Every 100 hours	Annually	1600 (1000)	Check the line for wear, ensure safety, and apply necessary non-conductive grease to connectors exposed to water, mud, etc.
▶■	Bearings of the ATV	Every 100 hours	Annually	2400 (1500)	Check for noise and looseness, and replace it if necessary
▶	Seat belt	Every 100 hours	Annually	3200 (2000)	Visually inspect the seat belt and test the latch. When the ATV is subjected to severe usage scenarios, the latch mechanism shall be cleaned more frequently and replaced when necessary.

Maintenance procedures

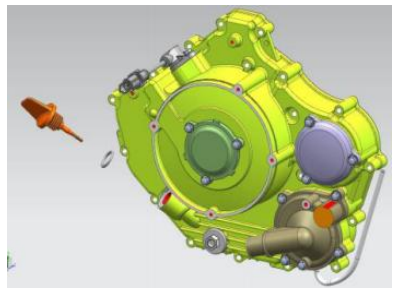
Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer (mile)	
	Exhaust pipe and spark collector	Every 100 hours	Annually	800 (500)	Check and clean the spark collector
	★Coolant	Every 100 hours	Every 2 years	6400 (4000)	If the hour or distance interval is not reached, change the coolant every two years.
▶	Brake fluid	Every 100 hours	Every 2 years	1600 (1000)	Check the changes in the color of the brake fluid and replace the brake fluid every two years.
■	Engine mounting bracket	Every 100 hours	Annually	2400 (1500)	Check the conditions
	Exhaust pipe and spark collector	Every 100 hours	Annually	800 (500)	Check and clean the spark collector
▶	Electric circuit, fuse, connector, relay and cable	Every 100 hours	Annually	1600 (1000)	Check the line for wear, ensure safety, and apply necessary non-conductive grease to connectors exposed to water, mud, etc.

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer (mile)	
▶■	Bearings of the ATV	Every 100 hours	Annually	2400 (1500)	Check for noise and looseness, and replace it if necessary
▶	Seat belt	Every 100 hours	Annually	3200 (2000)	Visually inspect the seat belt and test the latch. When the ATV is subjected to severe usage scenarios, the latch mechanism shall be cleaned more frequently and replaced when necessary.
▶	Brake fluid	Every 100 hours	Every 2 years	1600 (1000)	Check the changes in the color of the brake fluid and replace the brake fluid every two years.
	Idling conditions	--	Annually	--	Check whether the rotational speed is correct. If it does not meet the specified parameters or is unstable, please contact the dealer for maintenance
	Steering/wheel calibration	--	Annually	--	Check the steering system. If certain steering accessories are required or wheel calibration needs to be conducted, please contact the dealer for maintenance
▶	Foot brake eight	--	Annually	--	Check and replace the brake pad or adjust its height when necessary

Maintenance procedures

Checking the engine oil level



1. Parking the ATV on a flat ground: Park the ATV on a flat ground and ensure that the ATV is in the parked state to guarantee the measurement accuracy.
2. Starting the engine: Start the ATV engine and let it run at idling for 30 seconds, which helps the engine oil to circulate to the oil pan.
3. Idling and cooling: Shut down the engine after idling for 30 seconds. Then wait a few minutes to allow the engine oil to flow back into the oil pan and ensure that the engine is fully cooled.
4. Opening the access cover: Remove the expansion buckle and remove the access cover.
5. Taking out the oil dipstick: Pull out the oil dipstick from the oil dipstick hole and wipe it with a clean cloth or paper towel.
6. Reinstalling the oil dipstick: Reinsert the cleaned oil dipstick into the oil dipstick hole, but do not tighten it completely.
7. Checking the oil level: Pull out the oil dipstick gently again and check the oil level. The oil level shall be between the two marks on the dipstick, i.e. between the upper and lower limits. If the oil level is below the lower limit, engine oil needs to be added.
8. Reset: Insert the oil dipstick back into the oil dipstick hole and ensure that it is securely tightened. Install the engine access cover and the expansion buckle (check the expansion buckle and replace it in time if it is damaged).

Maintenance procedures

Changing the engine oil

1. Preparation and parking: Park the ATV on a flat and hard ground, and firmly apply the parking brake for parking.
2. Engine warm-up: Start the engine and let it run for 2-3 minutes to warm up the engine oil. Turn off the engine and ensure that the ATV is completely shut down.
3. Preparation for oil draining: Place a suitable engine oil pan (it is recommended to use a collection device with scale marks) under the oil drain port of the engine to collect the used engine oil drained.
4. Draining the used engine oil: Remove the crankcase magnetic oil drain bolt and its washer, and allow the used engine oil to flow into the engine oil pan. Verify that the engine oil in the crankcase has been completely drained.
5. Checking the oil dipstick: Take out the oil dipstick and wipe it with a clean cloth or paper towel.
6. Replacing the oil filter: Remove the three bolts on the oil filter cover with a T-shaped sleeve. Carefully remove the oil filter cover. Check the conditions of the O-ring. If the O-ring is damaged, replace it with a new one. Apply a layer of fresh engine oil onto the new O-ring for lubrication. Install a new oil filter element.
7. Reinstalling the oil filter cover: Put the oil filter cover back in place and fasten the bolts with a T-shaped sleeve according to the specified torque (10 N.m).
8. Cleaning of drain bolt: Clean the debris and dirt adsorbed on the magnetic drain bolt. If the washer is damaged, replace it with a new one.
9. Reinstalling the drain bolt: Reinstall the cleaned magnetic drain bolt and its washer on the engine.

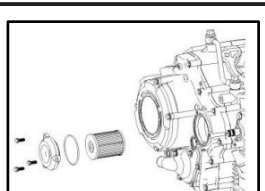
10. Wiping dry the oil drain area: Use a clean and dry rag to thoroughly wipe dry the magnetic drain bolt and its surrounding areas.
11. Engine oil filling: Use a funnel and an appropriate extension pipe to add the recommended engine oil via the engine oil filling hole until the specified oil level is reached.
12. Checking the oil level: Take out the oil dipstick again and check whether the oil level is within the recommended range. If the engine oil is insufficient, please add an appropriate amount of new engine oil.
13. Completion and inspection: Start the engine and check for oil leakage or abnormal noise. After making sure everything is OK, shut down the engine. After shutdown, immediately check the engine and oil drain area for oil leakage. Contact the dealer immediately if you notice any abnormalities.

⚠ WARNING

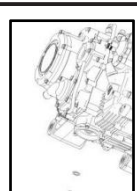
When changing the engine oil, ensure that the ATV is shut down and in the parking state.

⚠ NOTE

Oil filter cover bolt torque: 10 N*m
Drain bolt fastening torque: 25 N*m



Oil filter



Drain bolt

Maintenance procedures

Adjustment of engine throttle valve clearance

The air intake and exhaust valve clearance of the engine may change with the use of the ATV. Because the valve and its transmission parts will be worn during long-term operation, resulting in an increase or decrease in the valve clearance. These changes may cause a series of negative effects, including incorrect fuel/air supply or louder engine noise. In order to ensure the performance and safety of the ATV, it is recommended that the owner contact the dealer for maintenance on a regular basis. The professional maintenance engineer of the dealer will carry out the corresponding inspection and adjustment according to the actual situation of the ATV and the maintenance schedule, so as to ensure that the ATV is always in good conditions.

Engine idling

The ATV adopts an EFI (electronic fuel injection) system. In order to ensure the best engine performance and fuel efficiency, it has been professionally adjusted before leaving the factory, including the setting of engine idling.Consumers shall not try to adjust the engine idling by themselves. As an important part of the fuel system, the adjustment of throttle valve body requires professional knowledge and technology. Improper adjustment of the throttle valve body may cause degraded performance of the engine, increased fuel consumption, and even engine fault.In order to ensure the stability of engine idling, it is recommended to check the engine regularly. If you notice any abnormal engine idling conditions, such as instability, excessively high speed or excessively low speed, please immediately contact the ATV dealer or a professional service station for professional inspection and maintenance.

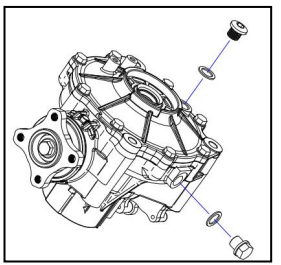
Engine intake valve clearance (engine in cold state)	0.10mm~0.15mm
Engine exhaust valve clearance (engine in cold state)	0.15mm~0.20mm
Engine idling (at operating temperature)	1400±150 rpm

Maintenance procedures

Front and rear axles

⚠ WARNING

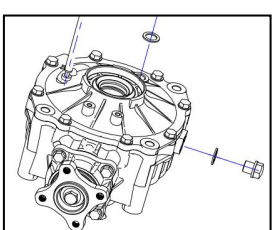
In order to ensure riding safety, it is recommended to carefully check the front and rear axles for oil leakage before each ride. Once any signs of oil leakage are found, it is recommended that you contact the dealer immediately, so that they can arrange for a professional inspection and repair the ATV promptly.



Rear axle, oil filling bolt and drain bolt

Replacement of front and rear axle oil:

1. Place the ATV on a level ground;
2. Place an engine oil pan under the axle to collect the used axle oil;
3. Remove the oil filling bolt and the drain bolt at the bottom of the rear axle and drain the axle oil;
4. Install the drain bolt and tighten it to the specified torque;
Tightening torque of drain bolt: 25 N.m
5. Add the axle oil;
6. Install the oil filling bolt and tighten it to the specified torque;
Tightening torque of oil filling bolt: 25 N.m
7. Check the axle for oil leakage. If oil leakage is found, find out the causes.



Rear axle, oil filling bolt and drain bolt

⚠ WARNING

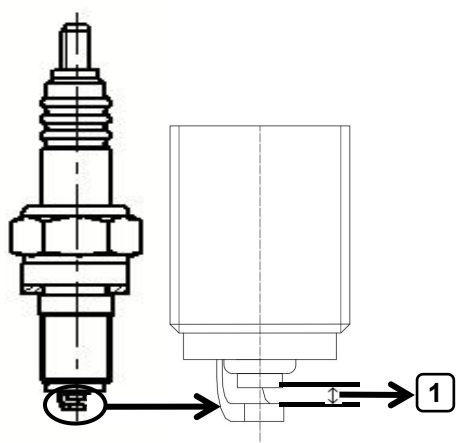
Prevent foreign matters from falling into the axle body when adding the axle oil.

Maintenance procedures

Spark plug

⚠ NOTE
Spark plug model: CPR8EA Spark plug removal tool: 16MM long s Spark plug clearance: 0.8~0.9MM 1

The spark plug is a core component of the engine, and its state directly affects the performance of the engine.
For a normally operating engine, the electrical insulator around the spark plug center electrode usually has an ideal color of medium to light brown. However, if the electrode is excessively corroded or too much carbon and other deposits have accumulated here, this indicates that the spark plug needs to be replaced. To ensure the continuous healthy operation of the engine, it is recommended to replace the spark plug with a designated new spark plug.
Overheating or accumulation of deposits may still Cause engine fault and spark plug corrosion.Therefore, it is strongly recommended that the owners do not attempt to make diagnosis and judge the color of the spark plug or the engine problems by themselves, but to have the ATV repaired by a professional dealer.
When removing and checking the spark plug, be sure to use the spark plug wrench in the driver's tool kit to ensure the accuracy and safety of operation.



Maintenance procedures

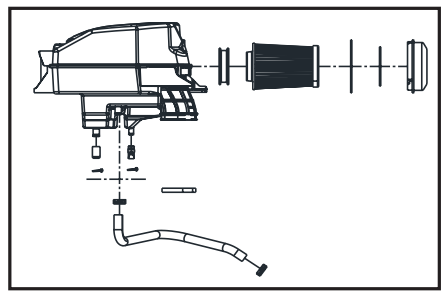
Inspection and installation of spark plug

1. Remove the spark plug with the spark plug wrench in the driver's tool kit;
2. After removal, observe the color of the spark plug surface and check the electrode clearance with a thickness gauge. If necessary, adjust the spark plug clearance or replace the spark plug;
3. Clean the gasket surface and wipe the thread;
4. Install the spark plug and tighten it to the specified torque of 20 N*m.

Location of spark plug

Maintenance procedures

Replacement of air filter



There is an inspection hose at the bottom of the air filter chamber. When dust or water is found in this hose, drain the hose and clean the air filter chamber thoroughly. If the ATV has been trapped in water, contact the local dealer to check for the presence of water in the engine crankcase.

Air filter maintenance:

1.Remove the seat cushion;
2.Remove the air filter maintenance housing (fixed with four self-tapping screws);
3.Rotate the air filter screw cap counterclockwise;
4.Take out the filter element from the air filter;
5.Check the filter element, ensure that it still can be used, and brush off accumulated dust; If necessary, replace the filter element with a new one;
6.Install the pre-filter element onto the air filter
7.Apply a layer of lubricating oil film along the inner diameter of the air filter rubber seal ring;
8.Reinstall the air filter screw cap and the maintenance housing.

⚠ WARNING
It is strictly forbidden to start the engine without installing or replacing with a new air filter element.

Maintenance procedures

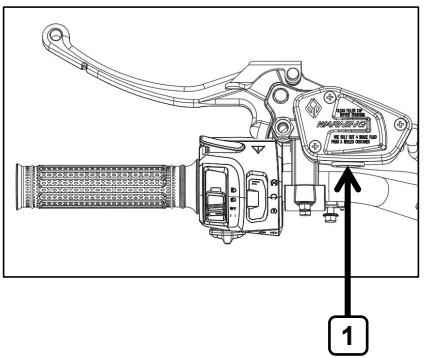
Brake system

Inspection of brake fluid level

Check whether the brake fluid level is between the upper and lower limit scales.

Insufficient brake fluid can cause air to enter the brake system, which may cause the brakes to be ineffective.

Before riding, check that the brake fluid is above the minimum fluid level and add the brake fluid if necessary. The front brake fluid main pump reservoir is located on the right handlebar.



⚠ NOTE
The front brake fluid main pump reservoir is located on the right handlebar. The main pump of the foot brake fluid is located in the front compartment of the ATV.

Maintenance procedures

⚠ WARNING

When checking the front brake fluid level, follow the following steps to ensure accuracy and safety:

1. Parking the ATV correctly: park the ATV on a flat ground, ensure that the wheels are pointing straight ahead, and center the handlebars, which helps to position the brake fluid reservoir (main pump reservoir) horizontally, so that the fluid level can be read accurately.
2. Checking the quality and type of brake fluid: only use DOT4 brake fluid recommended or specified by the manufacturer. The use of brake fluid not meeting the specified quality requirements may accelerate the aging of rubber seal rings, potentially causing leakage and reducing the performance of the brake system.
3. Avoid mixing the brake fluid: Do not mix brake fluid of different models; otherwise, harmful chemical reactions may be caused, which may affect the braking effect and even cause the brake system to fail.
4. Precautions during filling:During filling, care shall be taken to prevent moisture or other impurities from entering the brake fluid reservoir.Moisture can significantly reduce the boiling point of the brake fluid, increase the risk of air resistance, and seriously affect the brake performance.Use special filling tools or funnels to reduce the risk of spillage and contamination.
5. Cleaning spilled brake fluid: The brake fluid is corrosive and may damage the paint surface or plastic parts of the ATV. Once the brake fluid is found to spill, the affected areas shall be thoroughly cleaned with water and soap.
6. Countermeasures in case of fluid level drop: If the brake fluid level drops abnormally, please contact a professional dealer or maintenance station immediately for inspection. Brake fluid reduction may be caused by leakage, worn parts or other potential problems, which require diagnosis and repair by professional personnel.By following the above steps, ensure that the brake system of your ATV is in good working conditions, and thus improve the driving safety.

Maintenance procedures

Inspection of brake pad

Check the status and wear of the brake pad:

In order to ensure driving safety, it is very important to check the status of the brake pad regularly. During the inspection, special attention shall be paid to the thickness of the brake pad and the thickness of the brake disc.

Brake pad thickness inspection: use professional tools or visual inspection method to measure the remaining thickness of the brake pad. When the brake pad thickness is less than 1.5mm, it indicates that the brake pad has reached its service life limit, and its performance may be significantly reduced, which will affect the brake performance and the normal operation of the brake pad. There is a safety hazard, so the brake pad needs to be replaced in time.

Brake disc thickness inspection: use professional tools or visual inspection method to measure the remaining thickness of the brake disc. When the brake disc thickness is less than 4.0mm, it indicates that the brake disc has reached its service life limit, and its performance may be significantly reduced, which will affect the brake performance and the normal operation of the brake disc. There is a safety hazard, so the brake disc needs to be replaced in time.

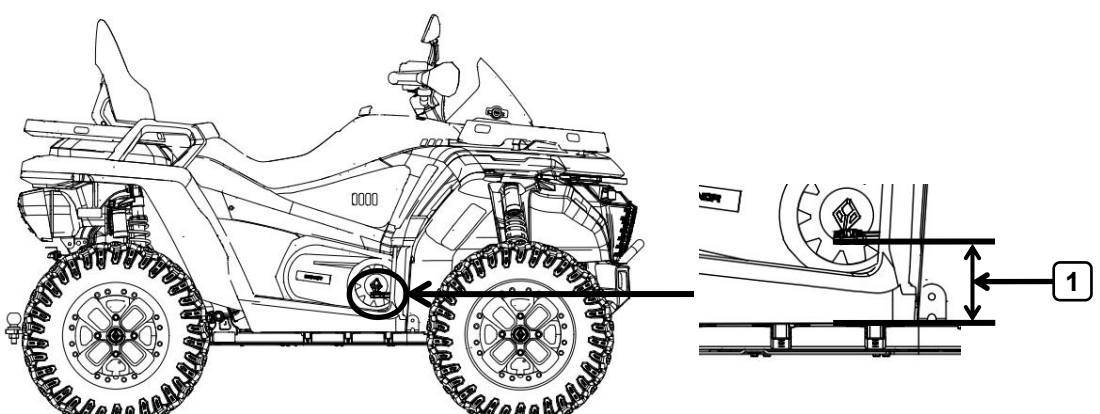
Maintenance procedures

⚠ NOTE
During the brake pad inspection process, it is necessary to remove the wheels in order to more thoroughly and accurately evaluate the wear of the brake pad. This step is to ensure that the brake pad and brake disc can be directly accessed and the thickness can be accurately measured with professional measuring tools. After removing the wheels, the technicians can remove the dust and dirt from the brake system, so that the remaining thickness of the brake pad and the conditions of the brake disc can be observed more clearly. Once the brake pad or brake disc meets the above replacement criteria, it is recommended to contact the official authorized dealer or professional maintenance center immediately for replacement. Replacing brake parts is a highly technical operation that requires professional knowledge and experience to ensure safety and quality. Incorrect replacement may cause performance degradation or failure of the brake system, and even lead to safety accidents. Do not attempt to replace the brake parts by yourself, so as to avoid unnecessary losses and safety hazards.

Maintenance procedures

Brake pedal height

In order to ensure the comfort of driving and the effectiveness of the brake system, the top of the brake pedal shall be located [1] 55~65mm above the top of the foot pedal. If it is found that the height of the brake pedal does not meet this standard range after inspection, it is recommended to contact the authorized dealer or professional automobile maintenance service center immediately for necessary adjustment. Correct adjustment can ensure that the position of the brake pedal is suitable for the driver's operating habits and can give full play to the performance of the brake system, thus ensuring driving safety.



Maintenance procedures

⚠ CAUTION

During maintenance of the ATV, the following key steps must be strictly observed to ensure the safety and effectiveness of the brake system:

1. Ensuring smooth brake operation and accurate free stroke: Ensure smooth and unimpeded operation of the brake pedal, and adjust the free stroke (i.e. the distance that the pedal can move freely before being fully depressed) to the standard range specified by the manufacturer, so as to ensure that the brake reaction is rapid and not too sensitive.
2. Preventing brake dragging: Inspect and ensure that the brake system does not continue to apply braking force unnecessarily wen the ATV is running, thereby eliminating brake dragging.
3. Completely removing the air from the brake system: After replacing the brake fluid or performing any maintenance that may affect the brake hydraulic system, relevant personnel must ensure that the air is completely removed.

Otherwise, the remaining air will cause brake failure or performance degradation.

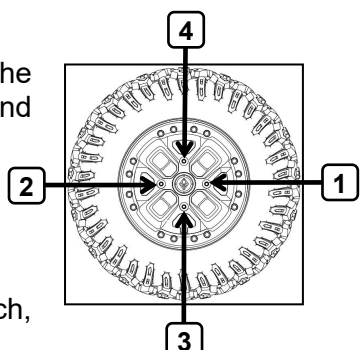
4. Replacement of brake parts by professional personnel: In view of the importance of the brake system to driving safety, the replacement of any brake parts, such as brake pad, brake disc or hydraulic components, requires professional knowledge and skills. It is strongly recommended that these operations be completed by authorized dealers or qualified maintenance technicians, so as to ensure the adaptability of components, the accuracy of installation and the overall performance of the system.

Maintenance procedures

Brake light switch

In case of brake light failure, first check whether the switch assembly and connecting cables of the brake light are installed correctly and are not damaged. If the brake light still fails to display normally after self-inspection, it is recommended to contact the local authorized dealer or professional automobile maintenance center immediately for further troubleshooting and repair. This can ensure that the brake light system quickly returns to normal operation and guarantees driving safety.

Tire removal and installation



When using a jack to repair the ATV, especially when replacing the wheel, please follow the detailed steps below to ensure safe and effective operation:

1. Preparations:

Ensure that the ATV is parked on a flat and stable ground away from traffic. Firmly apply the parking brake and set the transmission in the parking gear to prevent the ATV from moving during operation.

Prepare the required tools and spare parts, including jack, wrench, wheel bolt sleeve, and new tire (or repaired tire).

2. Lifting the ATV with a jack:

Ensure that the jack is in good contact with the bottom of the ATV and remains stable.

Slowly operate the jack handle to raise the ATV smoothly to a sufficient height so that the wheel can be easily removed.

3. Removing the wheel bolts:

Remove the four tire [1] [2] [3] [4] mounting bolts in turn.After the wheel is slightly loosened, completely unscrew all the bolts and place them properly to avoid loss.

4. Removing the wheel:
Gently remove the wheel from the hub. If the wheel is stuck tightly, you can tap the edge of the tire gently to help it loosen.
Check the hub and brake system for abnormal wear or damage, and repair them if necessary.
5. Replacement:
Align the new tire (or repaired tire) with the hub to ensure that the valve of the tire is in the correct position.
Carefully install the wheel back onto the hub, making sure that there are no foreign objects between the tire and the hub.
Reinstall and tighten all the wheel bolts to the torque specified by the ATV manufacturer. Use cross-tightening (i.e., diagonal tightening) method to ensure that the bolts are evenly stressed.
6. Lowering the ATV:
Slowly lower the ATV to the ground with the jack handle, making sure that the wheels are fully in contact with the ground.
Use a wrench again to check whether the wheel bolts are fully tightened.
Wheel nut torque: 70N·m~80N·m
7. Cleaning the site:
Put away the jack and other tools, and dispose of the used tire properly (e.g. recycle it or use it as a spare tire).
Check whether there are any tools or parts left around the ATV and ensure that there is no safety hazard.

8. Test drive:
Conduct a short test drive in a safe area to check the performance of the new tire and the stability of the ATV.
Listen for any unusual noise or vibration and be ready to take necessary measures at any time.
Through the above steps, you can safely complete the replacement of wheels. If you encounter any difficulty or uncertainty during operation, be sure to contact a professional automobile maintenance technician for help.

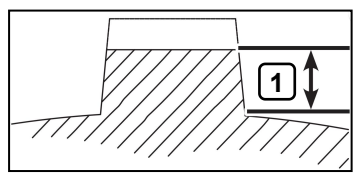
⚠ NOTE
When installing the conical nut, the conical surface shall face the wheel.

Maintenance procedures

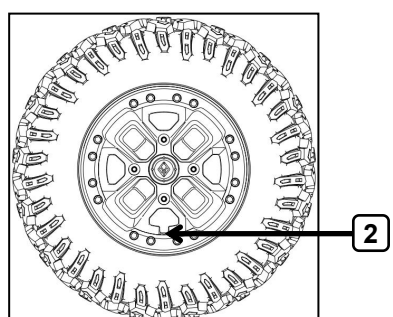
Tire inspection

⚠ NOTE
Recommended front and rear wheel tire pressure: 7PSI±0.3 Minimum tire tread depth: 3.0mm

1. Visual inspection of tires
Visual inspection: Perform a preliminary visual inspection of the tire before using the air pressure gauge. Observe the tire surface for signs of damage, crack, embedded foreign objects, or obvious uneven wear. Tire tread depth: Check and measure the wear of the tire tread pattern to ensure that the remaining depth [1] is sufficient to offer sufficient ground grip.



2. Measurement of front and rear wheel air pressure
Position confirmation: Make sure that the front wheel is in a stable state, and connect the valve interface of the air pressure gauge [2] tightly with the tire valve.
Reading record: Read and record the current air pressure value.



3. Checking the valve seal
After measuring the air pressure, gently pull out the air pressure gauge and observe whether there is air leakage at the valve. If air leakage is found, the valve may be poorly sealed and needs to be replaced in time.
4. Adjusting the tire pressure to the standard value
Inflating or deflating the tire: Compare the measured tire pressure with the recommended tire pressure standard. If necessary, inflate the tire with an inflator or fine-tune it with a deflation needle until the recommended tire pressure value is reached or approached.

Maintenance procedures

Battery maintenance

Treatment for long-term parking

If the ATV will be parked and not used for one month or longer, it is recommended to remove the battery and store it in a cool, dry and well-ventilated place. Before reinstalling the battery into the ATV, make sure that it is fully charged to maintain optimum performance.

Charging requirements:

For low-maintenance battery, it is recommended to use a dedicated constant-voltage/constant-current charger to ensure a stable charging process without damaging the internal structure of the battery. Using a common battery charger may accelerate the aging of battery due to mismatched charging parameters, thereby shortening its service life.

Cleaning and maintenance

The ATV is equipped with a maintenance-free battery, which is located under the front access cover. Therefore, there is no need to check the electrolyte or add distilled water into the battery. If corrosion is found at the battery connection, a solution made by mixing an appropriate amount of baking soda and water can be used to gently wipe the corroded areas. Baking soda has the effect of neutralizing acidic substances, which can effectively remove corrosive substances and restore good electrical conductivity at the connections. However, please note that the connections shall be thoroughly wiped dry after cleaning to avoid new problems caused by residual moisture. If the battery has electric leakage problem during use, it is recommended to contact the official authorized dealer immediately for troubleshooting and repair to ensure driving safety and battery performance.

Following the above guidelines can effectively extend the service life of the battery and ensure the normal operation of the ATV's electrical system.

Battery specifications: 12V 32Ah

Maintenance procedures

⚠ WARNING
Do not remove the sealing cover of the battery cell at will; otherwise, the battery will be damaged.

⚠ CAUTION
Avoid contact of electrolyte with skin, eyes or clothing. Protect your eyes when working near the battery. Keep out of reach of children. In case of accidental contact with electrolyte, externally: rinse immediately with water. Internally: seek medical attention immediately. Eyes: flush with water for 15 minutes, then seek medical attention immediately. Keep the battery away from spark, flames, smoke, or other ignition sources. Ensure adequate ventilation when charging or using the battery in an enclosed area.

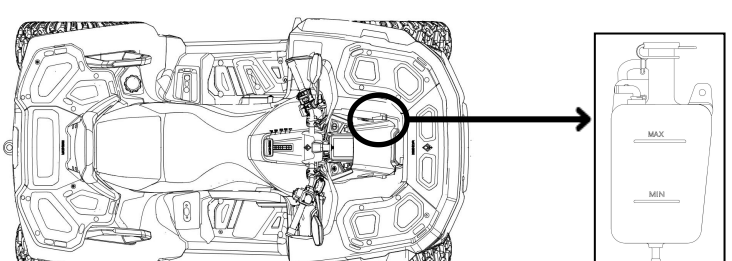
⚠ NOTE
Precautions for installation and removal: During installation: please ensure that the positive and negative terminal cables of the battery are connected correctly. The red wire represents the positive terminal (+), which shall be connected to the positive post of the battery; The black wire represents the negative terminal (-), which shall be connected to the negative post of the battery. During the connection process, the positive wire shall be connected first to reduce the risk of accidental short circuit. During the removal process: to avoid damage due to short circuit, disconnect the negative wire (black wire) first, and then disconnect the positive wire (red wire) when removing the battery. Ensure that the line remains disconnected and insulated throughout the process.

Maintenance procedures

Cooling system

Coolant level inspection and coolant adding:

(1) Ensuring that the ATV is parked horizontally: park the ATV on a flat ground to ensure that the front, rear, left and right of the ATV are kept horizontal, so that the most accurate results can be obtained when checking the fluid level.
(2) Locating the expansion tank: Open the front upper maintenance cover. The expansion tank is located on the left side of the front.
(3) Checking the coolant level: Check the coolant level in the expansion tank. Please note that the coolant level will vary due to the operating temperature of the engine. Make sure you check after the engine cools down.
(4) Confirming the fluid level range: Check the mark on the expansion tank. The coolant level shall be between the maximum and minimum marks. If the fluid level is too low, you need to add coolant.
(5) Adding coolant: When the coolant level reaches or is below the minimum mark, please carefully remove the expansion tank cover and slowly add coolant until the fluid level reaches the maximum mark. Then, reinstall the expansion tank cover and any external covers.



Maintenance procedures

Changing the coolant

1. Draining the coolant

Ensure that the ATV is parked on a level ground and the engine is completely cooled to prevent scalds.

(1) Remove the front maintenance cover.

(2) Removing the radiator cap: carefully unscrew the radiator cap slowly to avoid sudden ejection of coolant. Remove the coolant expansion tank cover: Unscrew the expansion tank cover and put it aside.

(3) Removing the maintenance cover on the left side of the engine and the left cover: remove the maintenance cover on the left side of the engine and the left cover as required to provide better access to the cooling system.

(4) Placing a container: place a suitable container under the drain bolt at the lower part of the engine to collect the drained coolant.

(5) Removing the drain bolt and washer: use appropriate tools to remove the drain bolt and its washer, so that the coolant can flow into the container below.

(6) Draining the coolant: drain the coolant completely.

(7) Disconnecting the coolant pipe: Disconnect the coolant pipe from the expansion tank to ensure that all the remaining coolant is drained.

(8) Flushing the cooling system: use clean tap water to flush the entire cooling system through the orifice of the drain bolt previously removed until the discharged water is clear.

Maintenance procedures

2. Filling the coolant

(1) Checking the coolant system components: carefully check whether the coolant drain bolt and its washer are damaged. Once any damaged part is found, replace it with a new one immediately.

(2) Preliminary installation of drain bolt: install a new drain bolt at its original position, without fully tightening it.

(3) Reinstalling the expansion tank water pipe: Reinstall the expansion tank water pipe and ensure that it is firmly connected.

(4) Filling the coolant: fill the coolant to the upper limit of the filler.

(5) Draining and circulating the coolant: first loosen the drain bolt to allow the coolant to drain naturally until there are no bubbles in the drained liquid.

(6) Tightening the drain bolt: use suitable tools to tighten the drain bolt to the specified torque (10 N.m).

(7) Filling the coolant again: the coolant may be reduced due to the previous discharge process, so it's necessary to fill the coolant again to the upper limit.

(8) Installing the radiator cap: install the radiator cap correctly at its position.

(9) Engine idling and inspection: start the engine, run it in the idling state for a few minutes, and then shut it down. After the engine cools down, check the coolant level in the radiator and adjust it to the top of the radiator as needed. Repeat this step until the coolant level is stable and does not change.

(10) Filling the expansion tank with coolant: Fill the coolant expansion tank with coolant to the maximum mark.

(11) Installing the expansion tank cover: Install the expansion tank cover to its position correctly.

(12) Checking the cooling system for leakage: start the engine and let it run for a period of time before shutdown. After cooling, carefully check the entire cooling system for any signs of leakage. If leakage is found, please contact the
authorized dealer immediately for inspection and repair.
(13) Reinstalling the peripheral covers of the engine: reinstall the maintenance cover on the left side of the engine, the left side cover of the engine and the front maintenance cover to ensure that all components are installed in place and fastened.

⚠ NOTE

It is recommended to use high-quality glycol antifreeze containing corrosion inhibitor, which is suitable for aluminum engine.
Coolant anti-freezing level: -35 °C
Total coolant capacity (excluding expansion tank): 3.5L
Expansion tank capacity: 0.45~0.56L

⚠ WARNING

When changing the brand or type of coolant, to ensure the engine performance and safety, be sure to contact the ATV dealer and ask professional personnel to help you completely drain and remove the residual coolant. Because the use of different coolants together may lead to engine fault and affect the normal operation of the ATV. Please follow professional guidance to ensure that your ATV receives the best maintenance.

Fault diagnosis

The fault diagnosis in this chapter is for reference only. Please contact the dealer immediately if you have any questions.

Engine fault

1. Indicator light meaning

When the engine fault indicator light is on, it indicates that the engine management system has detected an abnormality or potential problem in the engine operation process. This may be caused by various reasons, such as sensor fault, actuator fault, line problems, or mechanical fault of the engine itself.

2. Possible causes

(1) Sensor fault: If the oxygen sensor, air mass flow meter, crankshaft position sensor, etc. are faulty, the engine management system's accurate judgment over the engine operation status will be affected.

(2) Actuator fault: If the ignition coil, injector, throttle actuator, etc. are faulty, the engine will not work normally.

(3) Line problem: Short circuit, open circuit or poor contact of the line in the engine management system will affect the transmission of signals and the execution of commands.

Engine mechanical fault: such as insufficient cylinder pressure, valve fault, piston ring wear, etc., which will affect the performance and emission of the engine.

Fault diagnosis

3. Countermeasures

(1) When the engine fault indicator light is on, the driver shall send the ATV to a professional dealer shop for inspection and maintenance as soon as possible.

(2) During driving, if the ATV does not have obvious abnormal phenomena (such as powerless acceleration, jitter, abnormal noise, etc.), you can drive carefully to a maintenance shop. However, if the ATV is abnormal, stop the ATV immediately and seek help.

(3) The maintenance technician will use professional diagnostic equipment to conduct a comprehensive inspection of the engine management system, so as to determine the specific cause and location of the fault and carry out the corresponding maintenance and replacement.

⚠ NOTE

1. When the EFI fault indicator light is on, it does not mean that the engine will stop working immediately, but the driver should take prompt actions to avoid potential fault escalation and damage.
2. In daily use, the driver shall regularly maintain the ATV, such as replacing the engine oil, cleaning the throttle, etc., to reduce the occurrence of engine faults.

The EFI fault indicator light is an important indicator light on the ATV's instrument panel, which is used to remind the driver of possible faults in the engine system. When the indicator light is on, the driver shall send the ATV to a professional dealer maintenance shop for inspection and maintenance as soon as possible to ensure the safety and performance of the ATV.

Fault diagnosis

Engine system fault diagnosis and solutions

Fault symptom	Fault range	Possible causes	Measures
The engine cannot be started	Operating system	Wrong operation steps of the startup process	Refer to the operation steps of the startup process
	Electrical system	Low battery	Check whether the battery power is sufficient. If the battery is low, charge or replace the battery in time;
		Fuse blown	Check whether the relevant fuses are in good conditions. If damaged,replace the blown fuse with a new one.
		Abnormal connection of battery post	Check the connection of battery post for looseness, rust, damage, etc.If any, please make the corresponding adjustment and measure the conducting state. Restore the connection of battery post to ensure good contact.
		Ignition switch fault	Check the ignition switch for damage or poor contact that may prevent the electrical circuit from closing.If necessary, replace the ignition switch or repair the faulty wire harness;
		Start relay or electromagnetic wire	Check the start relay for coil open circuit or burnt contacts, and check the solenoid coil for open circuit or contact disk poor contact. If any issues are found, please replace the faulty relay or solenoid coil.

Fault diagnosis

Fault symptom	Fault range	Possible causes	Measures
The engine cannot be started	Electrical system	Abnormal line connection	Check the connection of various connectors in the line for looseness, rust,open circuit, open circuit or other damage. If any, please adjust, repair or replace the corresponding faulty wire harness;
	Fuel system	Fuel in the fuel tank is used up	There is too little fuel in the fuel tank to meet the engine start-up requirements. Please add fuel to the specified fluid level;
		Water ingress in fuel/use of non-recommended gasoline	Check whether there is water in the fuel tank. If any, please replace it with gasoline with a grade and above;
		Fuel pump fault	Check whether the fuel pump is damaged or the pressure is insufficient to deliver fuel to the engine. If any, replace the fuel pump;
		Fuel filter blocking	Check whether the fuel filter is blocked, which may affect the supply of fuel. If any, please clean or replace the fuel filter element.
		Injector fault	Check whether the injector is blocked or damaged, resulting in incorrect fuel injection. If so, please clean or replace the injector.

Fault diagnosis

Fault symptom	Fault range	Possible causes	Measures
The engine cannot be started	Fuel system	Fuel pipeline fault	Check whether the fuel pipeline is damaged, leaking or blocked, which will affect the supply of fuel. If any, please clean or replace the fuel pipeline.
		Fault of related electrical line	Use the decoder to read the relevant DTC and check the relevant control electric circuit. Check whether the power supply electric circuit is connected normally and whether there are open circuit, short circuit and other faults. If any, please adjust, repair or replace the relevant wire harness;
	Ignition system	Spark plug fault	Check the spark plug for damage, carbon deposit or excessive clearance, which may cause poor ignition. If any, please replace the spark plug.
		Ignition high-voltage line fault	Check whether the high-voltage ignition wire and spark plug cap are damaged and aged, and measure the resistance to determine whether there is an open circuit. If any, please replace the high-voltage ignition wire and spark plug cap;
		Fault of related electrical line	Use the decoder to read the relevant DTC and check the relevant control electric circuit. Check whether the power supply electric circuit is connected normally and whether there are open circuit, short circuit and other faults. If any, please adjust, repair or replace the relevant wire harness;

Fault diagnosis

Fault symptom	Fault range	Possible causes	Measures
The engine cannot be started	Ignition system	Ignition coil fault	Check whether the ignition coil is damaged and cannot produce enough voltage to ignite the spark plug. If so, please replace the ignition coil.
	Mechanical fault	Poor sealing of intake and exhaust valves	Check whether the engine valve clearance is normal, whether there is excessive carbon deposition around the valve, whether the valve seat ring has deformation, whether the valve spring fails, whether the valve or valve rocker has deformation, and whether there is abnormal wear,resulting in insufficient cylinder pressure, so the starting conditions cannot be met. If any, please adjust or replace the faulty components related to the intake and exhaust valves, and measure the cylinder pressure;
		Valve timing fault	Check whether the position of each mark of the engine valve timing is correct and whether there is any tooth skipping. If any, please adjust or replace the timing mechanism;
		Fault of cylinder, piston, or piston ring	Check whether the inner wall of the cylinder is scratched, the piston is damaged or abnormally worn, and the piston ring has seizure. If any,please adjust or replace the relevant faulty components;

Fault diagnosis

Fault symptom	Fault range	Possible causes	Measures
The engine cannot be started	Mechanical fault	Air intake pipeline fault	Check the air intake manifold for aging, damage or crack. Check whether there is any looseness at each connection, which may cause abnormal effects such as air leakage of air intake pipe.
Insufficient engine power	Fuel system (insufficient fuel supply)	Insufficient fuel supply pressure	Check whether the fuel pump has insufficient pressure fault, resulting in insufficient fuel supply to the engine; If any, please adjust and replace the relevant faulty components; If any, please adjust and replace the relevant faulty components;
		Fuel filter blocking	Check whether the fuel filter is blocked, which may affect the smooth flow of fuel. If any, please adjust and replace the relevant faulty components;
		Injector fault	Check whether the fuel injector is blocked, resulting in uneven or insufficient fuel injection. If any, please adjust and replace the relevant faulty components;
		Abnormal concentration of air-fuel mixture	Check and read the engine data stream to see if the change of engine air-fuel ratio data is abnormal, and the fuel line is not smooth or the air intake pipe is blocked, resulting in excessively thin or thick fuel-air mixture,which affects the combustion efficiency. If any, please adjust and replace the relevant faulty components;

Fault diagnosis

Fault symptom	Fault range	Possible causes	Measures
Insufficient engine power	Fuel system	Fault of related electrical line	Use the decoder to read the relevant DTC and check the relevant control electric circuit. Check whether the power supply electric circuit is connected normally and whether there are open circuit, short circuit and other faults. If any, please adjust, repair or replace the relevant wire harness;
	Intake system	Air filter is dirty and blocked	Check whether the air filter is blocked. If the air filter is not replaced or cleaned after long-term use, the air intake pipe will be blocked, which will affect the power output of the engine. If any, please adjust and replace the relevant faulty components;
		Air leakage fault of air intake pipe	Check whether the air intake pipe is aged, damaged or leaking. If the air intake pipe is not sealed tightly, the air will enter the engine without passing through the air flow meter, which will affect the actual air-fuel ratio and combustion efficiency. If any, please adjust and replace the relevant faulty components;
		Fault of air flow meter and related electrical line	Use the decoder to read the relevant DTC and check the relevant control electric circuit. Check whether the power supply electric circuit is connected normally and whether there are open circuit, short circuit and other faults. If any, please adjust, repair or replace the relevant wire harness or components;

Fault diagnosis

Fault symptom	Fault range	Possible causes	Measures
Insufficient engine power	Exhaust system	Exhaust pipe blockage	Check whether there is excessive carbon deposit or foreign matter blockage inside the exhaust pipe, which may prevent exhaust gas from discharging smoothly and affect engine performance. If any, please adjust and replace the relevant faulty components;
		Oxygen sensor fault	Use the decoder to read the engine data stream and check whether the working state of the oxygen sensor is normal. The oxygen sensor monitors the oxygen content in the exhaust gas to adjust the air-fuel ratio.The fault of oxygen sensor fault will lead to an air-fuel ratio imbalance and affect the engine power. If any, please adjust, repair or replace the relevant wire harness or components;
	Mechanical fault	Engine over temperature	Check whether the engine coolant temperature is normal. If abnormal,check the following: operating condition of the water pump and thermostat, whether the belt is slipping, and whether there is excessive scale buildup in the cooling system. These issues can cause the engine over temperature, there by affecting engine performance. If any, please adjust, repair or replace the relevant wire harness or components;

Fault diagnosis

Fault symptom	Fault range	Possible causes	Measures
Insufficient engine power	Mechanical fault	Insufficient cylinder pressure	Check the cylinder pressure with a cylinder pressure gauge, and if it is abnormal, check the following: sealing condition and any burning of the cylinder head gasket, burning, poor sealing, or looseness of the valve seat ring, valve spring weakness or malfunction, piston ring seizure or end gap alignment, and excessive piston-to-cylinder clearance. These issues can cause a drop in cylinder pressure and affect engine power. If any, please adjust and repair or replace the relevant components;
		Engine components are aged or damaged	Aging or damage of crankshaft, connecting rod, valve and other components will increase the internal friction of the engine and the power loss. If any, please adjust, repair or replace the relevant wire harness or components;
		Valve timing fault	Check whether the position of each mark of the engine valve timing is correct and whether there is any tooth skipping. If any, please adjust or replace the timing mechanism;

Fault diagnosis

Fault symptom	Fault range	Possible causes	Measures
Insufficient engine power	Ignition system	Spark plug fault	Check whether the spark plug has excessive clearance, aging or excessive carbon deposit, resulting in poor ignition. If any, please adjust, repair or replace the relevant wire harness or components;
		Ignition coil fault	Carry out the ignition test, observe the spark state of the spark plug and measure the ignition voltage to determine whether sufficient voltage can be generated to ignite the fuel-air mixture. If any, please adjust, repair or replace the relevant wire harness or components;
		Ignition timing	Read the data stream to check whether the engine ignition timing is correct. If the ignition time is too late or the contact clearance is too small or too large, the ignition timing will be affected. If any, please adjust, repair or replace the relevant wire harness or components;

Fault diagnosis

The fault diagnosis in this chapter is for reference only. Please contact the dealer immediately if you have any questions.

Electronic power steering (EPS) fault

1. Indicator light meaning

When the EPS fault indicator light is on, it indicates that there is a problem with the electronic power steering system of vehicle. This may be due to the fault of the mechanical parts of the sensor, controller and power steering pump.

2. II. Symptoms

When the EPS fault indicator light is on, the vehicle may have symptoms such as heavy steering, abnormal steering, handlebar jitter, poor centering ability of handlebar, etc. These symptoms will affect the maneuverability and safety of the vehicle.

3. III. Countermeasures

- If the EPS fault indicator light is on, the driver shall stop the vehicle immediately and check the steering system for any abnormality. If obvious problems are found in the steering system, such as heavy steering or inability to steer, seek professional assistance immediately.
- During driving, if the EPS fault indicator light suddenly becomes on, accompanied by symptoms such as steering difficulties, the driver shall drive carefully and send the vehicle to the dealer for inspection and repair as soon as possible.

⚠ NOTE
If the EPS fault indicator light is on, it does not mean that the vehicle cannot be driven immediately, but the driver should take prompt actions to avoid potential fault escalation and damage.

Fault diagnosis

Steering system fault diagnosis and solutions

Fault symptom	Possible causes	Measures
Electronic power steering failure	Power and battery fault: Insufficient battery power or damaged battery may cause the electric power steering system to fail to work properly;	Check the power supply and battery: Ensure that the battery voltage is normal and the battery power is sufficient. If the battery power is insufficient, charge or replace the battery in time;
	Fault of control line and related components: Looseness, virtual connection, short circuit, fuse blowout, etc. of the connector related to the control line will cause the electric power steering system to fail to work normally;	Check whether the control line and related components are normal: Check whether the relevant connector is installed in place, and check whether the relevant line and fuse are connected normally;
	Power assist motor fault: The power assist motor is the key component of the electronic power steering system. The power assist motor fault (such as damage, overheating, etc.) may lead to the power assistance failure;	Check the power assist motor: Check whether the power assist motor works normally and whether there is abnormal sound or overheating. If there is any abnormality, replace the power assist motor in time;

Fault diagnosis

Fault symptom	Possible causes	Measures
Electronic power steering failure	Control system fault: The fault of the sensor, actuator and controller in the control system may affect the normal control of the power steering system;	Check the control system: Use the diagnostic tool to check whether the sensor, actuator, controller and other components in the control system work normally. If there is any problem, repair or replace it in time;
	Steering gear fault: If the gear, bearing and other components of the steering gear are worn or damaged, the steering power will be reduced or fail;	Check the steering gear: Check the gear, bearing and other components of the steering gear for wear or damage. If there is wear or damage, replace the relevant components in time;
	Software fault: When the EPS is adopted, the software fault may also cause the power steering failure;	Check the software: If it is suspected that the power steering failure is caused by software fault, you can try to diagnose and upgrade the relevant software;
Power steering imbalance	Inconsistent tire pressure: Inconsistent tire pressure of front wheels may directly affect the balance of steering power;	Adjust the tire pressure: Use a tire pressure gauge to check the tire pressure of front wheels and adjust it to the standard value;

Fault diagnosis

Fault symptom	Possible causes	Measures
Power steering imbalance	Problems with front wheel hub bearing: If the front wheel hub bearing is tight on one side and loose on the other, it may also lead to uneven steering power;	Check and repair the front wheel hub bearing: If necessary, go to the authorized dealer shop for disassembly, inspection and adjustment;
	Front wheel brake seizure: Unilateral seizure of the front axle brake cylinder may also lead to uneven steering power;	Check and repair the front axle brake system: If necessary, go to the authorized dealer shop for disassembly, inspection and adjustment;
	EPS fault: In the case of EPS, the steering angle sensor may be damaged or improperly installed, resulting in the driver's steering instructions not being effectively transmitted to the power assistance computer,causing an imbalance in the left and right power assistance;	Check the EPS: - Check whether the steering angle sensor is damaged or improperly installed, and clean it if there is dust; If the sensor is faulty, replace it. - Check the thermal stability and data accuracy of the steering computer CPU, and replace or reprogram it if necessary. - If there is no DTC but the steering angle is mismatched, the steering angle matching operation can be carried out.

Fault diagnosis

Fault symptom	Possible causes	Measures
Steering swing	Looseness of steering mechanism: Excessive wear or looseness of the steering mechanism mating parts, or excessive clearances in the ball joints, may reduce the damping effect of the steering transmission system, increase vibration and displacement, and decrease the stability of the front wheels, there by causing the handlebar wobble;	Check the steering mechanism: Check and tighten all mating parts of the steering mechanism to ensure that all components are free from looseness and wear. If seriously worn components are found, they shall be replaced in time;
	Suspension system fault: Aging or damage of suspension system: Aging or damage of spring, shock absorber and other components of the suspension system may reduce the stability of the body during driving and affect the stability of steering, resulting in heightened sensitivity to vehicle body shaking and a longer time required to stabilize the vehicle. Aging and looseness of suspension parts and components may also cause the steering deviation of vehicle.	Check the suspension system: Check and adjust the components of the suspension system to ensure that the suspension system works properly. If the suspension system is found to be faulty or worn, it shall be repaired or replaced in time;

Fault diagnosis

Fault symptom	Possible causes	Measures
Steering swing	The front wheel alignment is inaccurate: If the front wheel alignment parameters such as incorrect caster angle, kingpin inclination angle, front wheel camber angle and front wheel toe-in, it will lead to unstable factors in the front wheel during driving, resulting in handlebar wobble;	Check the front wheel alignment: Check and adjust the front wheel alignment parameters with professional equipment to ensure the front wheel alignment is correct;
	Tire factor: - Uneven tire wear: Tire wear may directly affect the balance and ground grip of wheels, thereby affecting the steering stability. - Abnormal tire pressure: Either too high or too low air pressure may decrease the tire stability during driving, resulting in handlebar wobble.	Check the tire condition: Check the tire for wear, air pressure and correct installation. If uneven tire wear, insufficient air pressure or improper installation are found, they shall be handled in time; Check the front wheel balance: Check the mass balance of the front wheel with a tire balancer. If imbalance is found, timely actions such as tire rotation or installation of balancing weights shall be performed

Fault diagnosis

Fault symptom	Possible causes	Measures
Steering swing	System software fault: Vehicle software version of vehicle is outdated: Sometimes, an outdated vehicle software version may also cause abnormal handlebar wobble. - Handlebar sensor fault: The handlebar sensor fault may also lead to handlebar wobble or seizure.	Upgrade software or replace components: If the handlebar wobble is caused by the outdated software version or component fault, you may contact the dealer for software upgrade or replacement of relevant components.
	Vehicle loading: Uneven loading or overloading of vehicle: This may increase the difficulty of stabilizing the front wheels, leading to handlebar wobble during driving. Especially when the rear wheel is overloaded or the rear tire pressure is insufficient, it is easy to cause excessive side deviation of the rear axle and lead to side-to-side deviation of the driving direction of the vehicle when encountering uneven road surface;	Pay attention to vehicle loading: Ensure that the vehicle is evenly loaded and does not exceed the specified load limit. Reduce rear wheel overload or ensure sufficient rear tire pressure;

Fault diagnosis

Fault symptom	Possible causes	Measures
Insufficient steering power	* Problems with EPS: - Power supply or electric circuit fault: EPS relies on power supply and electric circuit to work normally. Insufficient power supply or faulty electric circuit may lead to power assistance reduction or failure; - Sensor fault: The sensor in the EPS monitors the steering angle, speed and other information. If the sensor is faulty, the system will not be able to accurately determine the required power assistance; - Control unit fault: The control unit is the core component of the EPS, which processes the sensor signals and controls the operation of power assist motor. The fault of control unit may reduce the power assistance effect;	Check and repair the EPS: For the EPS, check whether the power supply and electric circuit are normal, and repair them in time if there is any fault. At the same time, check whether the sensor and control unit work normally, and replace the faulty components if necessary

Fault diagnosis

Fault symptom	Possible causes	Measures
Insufficient steering power	Other factors: - Suspension system fault of vehicle: The state of the suspension system also affects the effect of steering power, such as shock absorber failure, suspension spring aging, etc. - Uneven loading or overloading of vehicle: Uneven loading or overloading of vehicle may increase the load of the front wheel, thus reducing the effect of steering power. - Abnormal front wheel alignment parameters: Improper setting of alignment parameters such as front wheel toe-in and camber may also affect the effect of steering power.	Check and adjust the suspension system of vehicle: - Check whether the shock absorber, suspension spring and other components of the suspension system work normally, and replace them in time if they are damaged or aged. At the same time, check whether the front wheel alignment parameters are set correctly, and adjust them in time if there is any abnormality. Other maintenance measures: - Regularly check whether the components of the steering system are loose or worn, and tighten or replace them in time if necessary. At the same time, keep the vehicle's cleanliness and tidiness to prevent dust and impurities from entering the steering system, which may affect power assistance effect.

Fault diagnosis

Fault symptom	Possible causes	Measures
Abnormal noise from steering system	Friction between plastic parts: - The handlebar is composed of various plastic parts, which may produce abnormal noise due to friction during rotation. Especially when the temperature is low, plastic parts become rigid, making the friction noise more noticeable;	Check and adjust the plastic parts: - For the abnormal noise caused by the friction of plastic parts, you can try to apply an appropriate amount of lubricant between the plastic parts to reduce the friction noise. If it is a new vehicle or an abnormal noise that occurs when the temperature is low, it will generally disappear as the use time increases and the temperature rises;
	Aging of steering tie rod ball joint: - Aging or damage of the steering tie rod ball joint may cause abnormal noise during rotation, which may be accompanied by handlebar jitter;	Replacement of steering tie rod ball joint: - If it is confirmed that the steering tie rod ball joint is aged or damaged, replace it with a new one in time, and perform four-wheel alignment after replacement to ensure stable driving of the vehicle;

Fault diagnosis

Fault symptom	Possible causes	Measures
Abnormal noise from steering system	Problems with tires and suspension system: - Insufficient tire pressure, uneven wear or suspension system fault (such as shock absorber failure, suspension spring aging, etc.) may also indirectly lead to abnormal noise from the steering system;	Check the tires and suspension system: - Regularly check the tire pressure and wear to ensure that the tire is in good condition. At the same time, check whether the suspension system components such as shock absorber and suspension spring work normally, and replace them in time if they are damaged or aged;
	Abnormal noise from shock absorber plane bearing: - If the plane bearing of the shock absorber is damaged or insufficiently lubricated, it may also produce abnormal noise when the handlebars are turned;	Check and replace the shock absorber plane bearing: - If it is confirmed that the abnormal noise comes from the shock absorber plane bearing, you may try to apply an appropriate amount of grease to the bearing to reduce the abnormal noise. If the abnormal noise is not eliminated after applying the grease, replace with a new plane bearing;

Fault diagnosis

⚠ NOTE
-Before repair or replacement of parts, make sure that the vehicle has been parked safely and shutdown. -Non-professionals should not disassemble vehicle components arbitrarily to avoid damage or safety hazards. -If special tools or equipment are required during maintenance, please follow relevant operating procedures and safety specifications. To sum up, the steering system fault is a complex problem involving multiple systems and components, which requires troubleshooting based on specific conditions, taking into account various factors and implementing appropriate measures. If you are unable to solve the problem on your own, please promptly contact an authorized dealer for assistance from professional maintenance personnel.

ATV cleaning

Wait for the vehicle to cool down: Make sure that the ATV has stopped working and cooled down before washing the vehicle, so as to avoid damage to the engine and other components caused by sudden cool water flushing.
Use appropriate cleaning agent: It is recommended to use neutral cleaning agent or special vehicle cleaning agent, and avoid using excessively irritating chemical cleaning agent.
Avoid direct flushing of sensitive parts: headlights, left and right handlebars, switches, exhaust pipe exhaust pipe outlets, horns, spark plugs, air filters, batteries and other parts should not be directly flushed with water, so as to avoid short circuit or electric leakage caused by wetting electric circuit. These areas are recommended to be scrubbed with a cloth.
Dry with a dry cloth: After cleaning, use a dry cloth to thoroughly wipe the ATV, especially the switch, instrument, left and right handlebars, spark plug, fuel tank cap and other parts. Take off the spark plug cap and shake it a few times to remove the water on it and avoid affecting the ignition.
Check the vehicle status: After cleaning, check whether all components of the vehicle are in normal working condition, such as whether the electric circuit is normal, whether the engine leaks oil, etc.

⚠ NOTE
After cleaning the ATV, be sure to lubricate all key components immediately to ensure smooth operation. Then, start the vehicle and let it run for a period of time to effectively evaporate any residual moisture that may have accidentally entered the engine or exhaust system. This prevents potential damage to the vehicle system and ensures stability and safety in future use.

ATV storage

Cleaning and drying

Thorough cleaning: Before storage, first clean the ATV to remove any dust, mud and dirt.
Drying: Use a dry cloth or towel to thoroughly wipe the vehicle dry, especially the engine, electrical components and exhaust system.

Inspection and maintenance

Check the tires: Ensure that the tire pressure is appropriate and check for wear or damage.
Check the battery: Disconnect the negative terminal of the battery to avoid battery discharge.
Check fluids: Check the engine oil, brake fluid and other fluids, and replace or replenish it as needed.
Replace the filter: Consider replacing the air filter and oil filter to ensure that no impurities enter the engine during storage.

Preparation for storage

Lubrication: Lubricate all key components (such as chain, bearing, etc.) before storage.
Covering: Cover the ATV with a special ATV cover or tarpaulin to prevent dust and moisture from entering.
Supporting: If possible, support the vehicle on stands or a jack to reduce pressure on the suspension and tires.

Storage location

Dry and ventilated: Select a dry and ventilated place to store the ATV to prevent corrosion and mildew.
Avoid extreme temperatures: Avoid storing the vehicle in an environment with extreme temperatures (too high or too low), which may cause damage to vehicle components.
Safety: Ensure that the storage position is safe and away from children and other people or objects that may damage the vehicle.

ATV storage

Precautions for long-term storage

Regular inspection: Even if not in use for extended periods, the ATV shall be inspected regularly (e.g. quarterly) to ensure that it is in good condition.
Start: Start the engine every few months and let it run at idling for a period of time to prevent internal components from sticking.

Storage records

Record: Record the key information such as vehicle status, mileage and battery power during storage for future reference.
By following these steps, you can ensure that your ATV is properly protected during storage and ready for future use.

ATV transportation

- Shut down the engine and remove the key to prevent the key from being lost during transportation.
- Please check carefully and ensure that the fuel filler cap is properly installed and secured to ensure the safety of the fuel system.
- Ensure that the seat cushion is properly fitted and secured to prevent displacement or damage during transportation.
- Before transportation, please set the gear in any position except the parking position, and use the front and rear wheel stoppers to fix the wheels to prevent unnecessary movement of the vehicle during transportation.

⚠ WARNING
It is strictly forbidden to place the gear shift lever in the parking position, as this may cause serious damage to the transmission.

Declaration of Driver’s exposure to noise level

The undersigned: Name and position in the company:

Jinxiang Huang, R&D Director

Company name and address of the manufacturer:

Hangzhou Saturn Power Technology Co., Ltd.

No. 282, Renliang Road, Renhe Street, Yuhang District, Hangzhou City, Zhejiang Province, China

Hereby declares that:

For the following vehicle:

1.1. Make (trade name of the manufacturer): BENDA, BDMOTO

1.2. Type: BD1000AU

1.2.1. Variant(s): BD1000AU

1.2.2. Version(s): A, B, C

1.2.3. Commercial name(s) (if available):

REDSTONE 1000 R2 ET, REDSTONE 1000 R2 MD,

REDSTONE 1000 R2 DL

1.3. Category, subcategory and speed index of the vehicle:

Variant/Version: BD1000AU/A: T3a

Variant/Version: BD1000AU/B: T3b

Variant/Version: BD1000AU/C: T3b

Declaration of Driver’s exposure to noise level

Variant/Version: BD1000AU/A:

The Driver’s exposure to noise level result is 85.6 dB(A)(Limit: 86 dB(A)) according to test method 2 in accordance with: section 3 of Annex XIII to EU 1322/2014.

Variant/Version: BD1000AU/B:

The Driver’s exposure to noise level result is 85.8 dB(A)(Limit: 86 dB(A)) according to test method 2 in accordance with: section 3 of Annex XIII to EU 1322/2014.

Variant/Version: BD1000AU/C:

The Driver’s exposure to noise level result is 86.0 dB(A)(Limit: 86 dB(A)) according to test method 2 in accordance with: section 3 of Annex XIII to EU 1322/2014.

Place: Hangzhou, China Date: 11/11/2025

Signature: 

Name and position in the company: Jinxiang Huang, R&D Director

Declaration of Vibration declaration

The undersigned: Name and position in the company:

Jinxiang Huang, R&D Director

Company name and address of the manufacturer:

Hangzhou Saturn Power Technology Co., Ltd.

No. 282, Renliang Road, Renhe Street, Yuhang District, Hangzhou City, Zhejiang Province, China

Hereby declares that:

For the following vehicle:

1.1. Make (trade name of the manufacturer): BENDA, BDMOTO

1.2. Type: BD1000AU

1.2.1. Variant(s): BD1000AU

1.2.2. Version(s): A, B, C

1.2.3. Commercial name(s) (if available):

REDSTONE 1000 R2 ET, REDSTONE 1000 R2 MD,

REDSTONE 1000 R2 DL

1.3. Category, subcategory and speed index of the vehicle:

Variant/Version: BD1000AU/A: T3a

Variant/Version: BD1000AU/B: T3b

Variant/Version: BD1000AU/C: T3b

Declaration of Vibration declaration

Driver mass	Test run	awS m/s2	awB m/s2	awS/awB	Requirement
59± 1kg	Test run 1	0.44	1.71	---	Deviation<10% between test run 1/2 and Arithmetic mean, awS<1.25 m/s2
	Test run 2	0.45	1.70		
	Arithmetic mean	0.45	1.71	0.26	
98± 5kg	Test run 1	0.41	1.68	---	
	Test run 2	0.41	1.68		
	Arithmetic mean	0.41	1.68	0.24	

End

Here I would like to express my heartfelt gratitude to the customers who have chosen our products. We truly appreciate your trust and recognition in selecting us among many outstanding products. Meanwhile, welcome to the warm BENDA family. We will live up to your expectations and remain committed to providing you with products of excellent quality and first-class service.

We are full of confidence and expectations for the future, and will continue to strive for continuous innovation and progress to provide you with more excellent vehicles and more considerate services.

If you have any questions or need help, we are always here, ready to help and provide support.

Once again, thank you for your trust and choice. We look forward to creating more wonderful memories with you in the days to come. Your satisfaction and recognition are our greatest honor.

We sincerely wish you a joyful and smooth journey ahead, full of vigor and inspiration!BENDA will accompany you all the way!

BENDA

Hangzhou Saturn Power Technology Co., Ltd.
Address: No. 282 Renliang Road, Renhe Sub-district, Yuhang District, Hangzhou
Tel: 400-1140-110
Website: www.bendamoto.com