

REDSTONE

ALL TERRAIN VEHICLE
USER'S MANUAL



BENDA

REDSTONE 550

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

Driving within the local regulatory driving area

The driver's age is not less than 16 years old

Passengers must be at least 12 years old

Original User Manual (The original user manual for this vehicle is in Chinese, and other languages are translated versions of the original user manual)

Introduction

Congratulations on becoming a BENDA owner. Thank you for your choice and we hope our product can bring you a wonderful experience.

Before driving the vehicle, please read this manual carefully to ensure that you can fully utilize the functions of this product and use it safely.

This manual contains the main specifications, usage methods, maintenance methods, and simple fault diagnosis of the vehicle. Major maintenance items will be explained in detail in the BENDA maintenance manual.

Note that this manual applies to all models in this series, so your vehicle may differ slightly from this manual. The illustrations in this manual are for demonstration purposes only, please refer to the actual situation. The instructions in this manual have been verified during printing, but there may be slight discrepancies between the manual and the actual situation due to improvements or other changes in this vehicle model. Please refer to the user manual selectively based on the actual situation. The company will reserve the right to make changes at any time. Please pay attention to the official account and official website announcements without further notice.

If there are any problems during use, please consult the dealer.

BENDA

⚠ATTENTION

The content of this manual is limited. To ensure your personal safety and improve your driving skills, we strongly recommend that you participate in formal driving training courses. Prudent driving, accumulating experience, and continuously improving driving skills are always the core principles for preventing driving hazards. No matter how rich your driving experience is, you should not ignore these basic principles.

⚠ATTENTION

Remove the spare key and store it in a safe location. If all keys are lost, the entire set of locks must be replaced.

⚠DANGER

1. Do not operate off-road motorcycles without proper training or guidance.
2. This all terrain vehicle and any all terrain vehicle exceeding 90cc shall not be driven by individuals under the age of 16.
3. This vehicle may be different from other vehicles you have driven before. Please take the time to familiarize yourself with your new vehicle.
4. Carefully select non original accessories to avoid property damage and personal injury.
5. Before operating this vehicle, please refer to the relevant laws and regulations in your local area.

Vehicle information

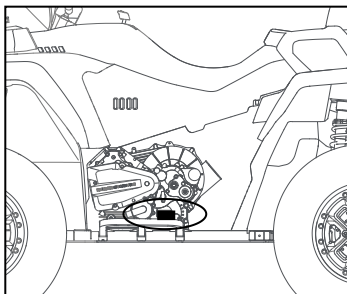
To ensure that you receive accurate service and support during future repairs, maintenance, or service processes, it is recommended that you record your vehicle identification code and engine serial number at the corresponding location.

Model :

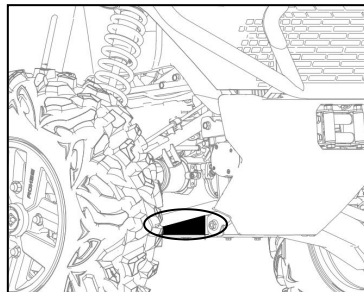
VIN Number:

Color code:

Engine number:



Engine No.



VIN No.

Dealer information

Distributors are requested to provide their contact information to customers promptly when selling products, in order to provide better service.

Distributor Name:

After sales service contact person:

Service Hotline:

Distributor address/official seal:

ATTENTION

If you would like to contact the nearest BENDA dealer, please call 800-832-2966 or log in to the website for more information:
www.bendamoto.com

Catalogue

Important Notice.....	1
Signal words.....	1
Spare parts and accessories.....	2
Warranty guarantee.....	2
Illustration.....	3
Vehicle size parameters.....	4
Engine parameter.....	4
Maximum load capacity.....	5
Transmission parameter.....	5
Main liquid parameters.....	6
Chassis.....	7
Main Fluid parameters.....	8
Operation System.....	9
Safety Warning Stickers.....	10
Security Information.....	15
Safe driving.....	29
Control components and operations.....	47
Main switch.....	47
Power socket and USB socket	50

Winch	51
Left Switch	53
Right Switch.....	59
Foot brake	64
Fuel tank and gasoline grade.....	66
Shift lever.....	67
Gear lock	68
CVT.....	69
Speedometer.....	70
Shock absorber.....	83
New vehicle running in.....	88
Maintenance Regulations.....	89
Fault diagnosis.....	132
Cleaning ATV.....	159
Store ATV.....	161
Transport ATV.....	163
Warranty policy.....	164
Declaration of Driver's exposure to noise level.....	170
Declaration of Vibration.....	172
Ending.....	175

Important Notice

Signal words

Pay close attention to the following labels. These labels indicate important information that may pose a threat to your and others' safety, or key guidance on vehicle operation and maintenance.

When you see these labels, please read the relevant content carefully and ensure that you fully understand their meaning. If you have any questions or uncertainties about any content, please contact your dealer or professional repair personnel in a timely manner to ensure that you can safely and correctly use and maintain your vehicle.

WARNING
If not avoided, it may cause equipment or property damage.

DANGER
If not avoided, it may result in serious personal injury or death.

ATTENTION
Provide important information or explanations.

Important Notice

Spare parts and accessories

To ensure your own safety, please use spare parts or accessory products approved or recommended by BENDA manufacturers and install them at BENDA authorized after-sales service centers. BENDA shall not be held responsible for any other products or losses caused by them.

Warranty and Guarantee

All operations specified in the maintenance plan must be strictly carried out at BENDA authorized after-sales service centers. Otherwise, the right to warranty and warranty application will be automatically lost. In addition, any damage and subsequent issues caused by incorrect operation or unauthorized modification of the vehicle will not be covered by our warranty.

To ensure that your rights are fully protected, it is recommended that you choose a BENDA authorized after-sales service center for vehicle maintenance and repair. Please refer to the maintenance and warranty manual for a more comprehensive understanding of your rights and related regulations.

Important Notice

Illustration

The illustrations in this manual may include certain optional devices to provide a more comprehensive explanation.

In some cases, in order to present specific parts or functions more clearly, we may have disassembled certain components or not drawn all components in the illustrations. However, this does not mean that all descriptions require disassembly of components to present.

Therefore, when viewing illustrations, please be sure to carefully read the text instructions to ensure an accurate understanding of the described content.

Vehicle size parameters

Item	BD500AU (RESTONE 550 ET,RESTONE 550 DL)	BD500AU-2 (REDSTONE 550 R2 ET,REDSTONE 550 R2 MD,REDSTONE 550 R2 DL)
Length x Width x Height (mm)	2165×1245×1260	2365×1245×1450
Wheelbase (mm)	1300	1500
Seat height (mm)	550	
Minimum ground clearance (mm)	290	
Minimum turning diameter (m)	6.5	7.5
Front wheelbase (mm)	1020	
Rear wheelbase (mm)	965	
Fuel tank capacity (L)	30	
Storage box capacity (L)	6	

Engine parameters

Item	BD500AU (RESTONE 550 ET,RESTONE 550 DL)	BD500AU-2 (REDSTONE 550 R2 ET,REDSTONE 550 R2 MD,REDSTONE 550 R2 DL)
Rated Power/rpm	31.3/8000 kW/(r/min)	
Start type	ECU electric start	
Vehicle emission standard	EU V+	
Transmission type	Shaft drive	

Maximum load capacity

Item	BD500AU (RESTONE 550 ET,RESTONE 550 DL)	BD500AU-2 (REDSTONE 550 R2 ET,REDSTONE 550 R2 MD,REDSTONE 550 R2 DL)
Total load (kg)	660	680
Front rack load (kg)		35
Rear rackload (kg)		50
Trailer towing load (kg)		122
Trailer vertical load (kg)		47
Towing load (kg)		900

Transmission parameters

Item	BD500AU (RESTONE 550 ET,RESTONE 550 DL)	BD500AU-2 (REDSTONE 550 R2 ET,REDSTONE 550 R2 MD,REDSTONE 550 R2 DL)
type	Continuously variable transmission	
Gear position	L H N R P	
L gear ratio	6.8	
H-gear ratio	3.3	
Reverse gear ratio	5.4	5.8

Main liquid parameters

Item	Type	BD500AU (RESTONE 550 ET,RESTONE 550 DL)	BD500AU-2 (REDSTONE 550 R2 ET,REDSTONE 550 R2 MD,REDSTONE 550 R2 DL)
Number of tank		2	
Material of the engine	Aluminium		
Bore×stroke		72*61.2	
Compression ratio		11.5: 1	
Fuel injection type	EFL+ETCS		
Rated power +Rotational speed		33kW/8000rpm	
Max torque		41.3N.m/5000rpm	
Max net power/ speed		31.3kW/8000rpm	
Starting method		ECU-controlled electric start	

Chassis

Item	BD500AU (RESTONE 550 ET,RESTONE 550 DL) & BD500AU-2 (REDSTONE 550 R2 ET,REDSTONE 550 R2 MD,REDSTONE 550 R2 DL)		
Drive type	Optional 2WD/4WD, lockable front axle differential (optional front and rear axle differential lock)		
Front suspension	Double A-Arm, independent suspension		
Rear suspension	Trailing Arm independent Suspension		
Shock absorber	Standard: Spiral spring+oil damping hydraulic shock absorber, Optional: high-end airbag shock absorber		
Standard air pressure	48.3kPa		
Front wheel specifications	25×8×12	26×9×12 (option)	26×9×14 (option)
Rear wheel	25×10×12	26×11×12 (option)	26×11×14 (option)
Wheel hub specifications	12		14
Wheel hub structure type	Multiple pieces of aluminum alloy		Multiple pieces of aluminum alloy (with anti stripping ring)
Wheel hub bolt indexing circle	4×136mm		

Main Fluid Parameters

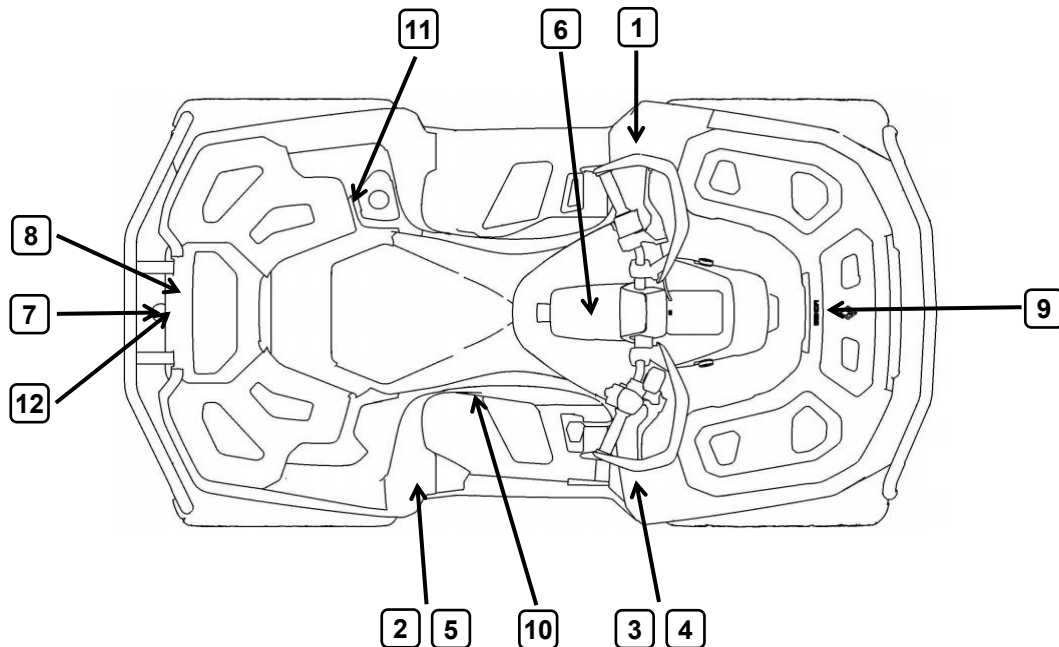
Item	Specification	Unit	BD500AU	BD500AU-2
Fuel Tank Capacity	95 Octane or equivalent grade and above	L	30	
Engine Oil (with filter replacement)	SAE SJ/10W-40	L	2.8	
Engine Oil(without filter replacement)	SAE SJ/10W-40	L	2.7	
Front Axle Lubricant	SAE 80W-90 or GL-5	mL	210	
Rear Axle Lubricant(Differential and Non-Differential)	SAE 80W-90 or GL-5	mL	310	

Operation system

Item	BD500AU (RESTONE 550 ET,RESTONE 550 DL)	BD500AU-2 (REDSTONE 550 R2 ET,REDSTONE 550 R2 MD,REDSTONE 550 R2 DL)
Turning type	Directional handle	
Power steering assistance	Optional: Multi mode switching (Comfort/Standard/Sport)	
Shift structure	Mid mounted, mechanical	
Parking mechanism	Rear wheel mechanical disc brake (Optional: Electronic parking brake)	

Safety warning stickers

This vehicle has been affixed with safety warning stickers in the corresponding positions. Please read and follow them carefully, and do not tear off the labels. If the sticker is blurry or falls off, please contact the dealer promptly to obtain the sticker and replace it.



Safety warning stickers

1

**WARNING**

Improper use can result in SEVERE INJURY or DEATH



ALWAYS USE AN APR-
-OVED HELMET AND
PROTECTIVE GEAR FOR
DRIVER AND PASSENGER



NEVER CARRY
MORE THAN
1 PASSENGER



NEVER USE
WITH DRUGS
OR ALCOHOL

NEVER operate :

- without proper ATV training or instruction.
- at speeds too fast for your skills or the conditions.
- with a passenger unless passenger seat is securely in place.

THE OPERATOR MUST ALWAYS:

- use proper riding techniques to avoid overturns on hills and rough terrain and in turns
- reduce speed and use extra caution at all times when carrying a passenger - dismount passenger when conditions require
- make sure passenger reads and understands this label and passenger safety label

**LOCATE AND READ OPERATOR'S MANUAL.
FOLLOW ALL INSTRUCTIONS AND WARNINGS**

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Safety warning stickers

2



3



Safety warning stickers

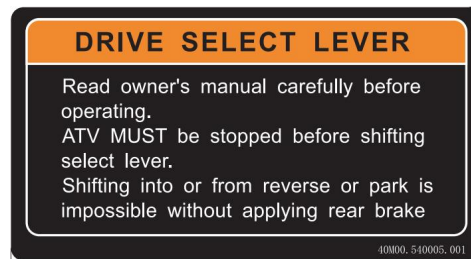
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6



Safety warning stickers

7



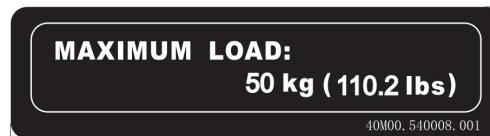
11



8



9



10



12



Security information

- ATV is a high-performance, high-risk vehicle that requires drivers to possess high driving skills and coping abilities.
- This all terrain vehicle and any vehicle over 90cc are not allowed to be driven by individuals under the age of 16.
- Beginners and inexperienced drivers are more prone to accidents and incidents due to a lack of relevant skills and experience. In order to ensure the safety of drivers and reduce the risk of accidents, it is necessary to undergo relevant training before driving, master basic driving skills, cultivate safety awareness and psychological qualities, understand and comply with traffic rules, improve driving skills and reaction ability. Otherwise, driving is prohibited.

⚠DANGER

- Before driving this vehicle, please read this manual carefully and follow it. Incorrect operation may result in injury or death;
- This vehicle is only for adults to drive, and minors are prohibited from driving this vehicle.
- Passengers are prohibited from riding in a single row; Double row passengers must be at least 12 years old and have a safe and stable seat;
- Beginners and inexperienced drivers should complete relevant training before driving.
- Failure to follow the guidance and procedures outlined below may result in serious injury or fatal accidents.

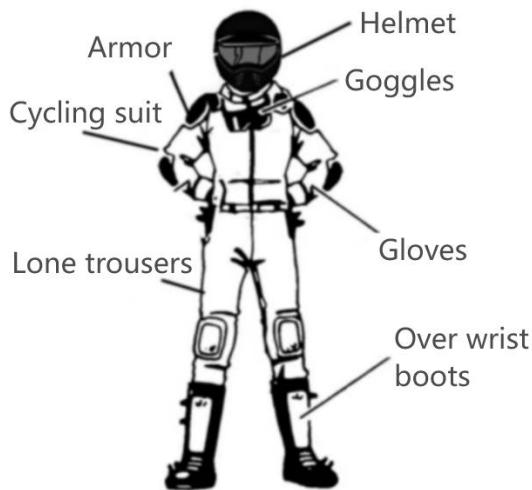
Security information

Protective equipment

Drivers and passengers must always wear appropriate protective gear when driving an all terrain vehicle (ATV) to ensure their own safety. These protective gear not only provide additional protection and support, but also reduce the risk of injury caused by accidental falls or impacts.

Wear off-road helmets, gloves, wrist boots, goggles, armor, elbow guards, cycling clothes and other protective gear while driving. Suggest using a cervical spine protector. According to climate change increase cycling equipment such as raincoats, warm coats, and colored goggles on your own.

Do not wear loose clothing that may entangle vehicles or be hooked by trees.



Security information

- Off road helmets are key equipment for protecting the head from potential injuries. During ATV driving, drivers and passengers may encounter bumps, falls, or other unexpected situations, and helmets can provide solid protection, effectively reducing impacts and collisions on the head.
- Gloves can protect the hands of drivers and passengers from friction, scratches, and collisions. During driving, hands frequently come into contact with vehicle handles, control levers, and other components. Gloves can provide additional grip and stability while reducing the risk of hand injuries.
- ATV driving is usually carried out in various complex terrains and environments, and over the wrist boots can provide strong support and protection, protecting the feet from sharp objects such as stones and branches that can stab and collide. Meanwhile, wrist boots can also provide good grip and stability, helping drivers better control the vehicle. Avoid using long shoelaces to prevent them from getting caught in the vehicle.
- Wind goggles can effectively prevent splashes of dust, sand, and other debris from entering the eyes, protecting them from irritation and injury. In off-road environments, windshields can also provide additional protection to prevent insects or other small objects from hitting the eyes.
- Armor can cover key parts of the body, such as the chest, back, and abdomen, reducing injuries caused by accidental falls or impacts. Elbow protectors can protect the elbows

Security information

from friction and collisions, reducing injuries caused by falls or impacts.

- Cycling clothes can protect the bodies of drivers and passengers from scratches and collisions caused by sharp objects such as branches and stones. At the same time, it can also provide good breathability and comfort, helping drivers maintain comfort and dryness during long-term driving.
- Cervical protectors can provide stable support for the neck. In the event of an accident, it can limit excessive bending or twisting of the neck, thereby avoiding serious injuries such as cervical spine injury or fracture.
- On sunny days with strong sunlight, riders can choose dark or colored goggles with UV protection to reduce the stimulation of sunlight. On rainy days, riders can choose waterproof and anti fog colored goggles to maintain clear visibility.

Prohibition of any illegal modifications

To ensure the safety and compliance of vehicles and protect the lives of drivers and other road users. BENDA firmly prohibits illegal modification of vehicles. Illegal modification includes but is not limited to changing the appearance, power system, braking system, chassis structure, etc. of the vehicle, which may seriously affect the performance and stability of the vehicle and increase the risk of accidents. All accessories added to this vehicle must be approved by BENDA. If any unauthorized accessory equipment is added or modified to this vehicle, our warranty policy for you will immediately terminate.

Security information

Prohibit carrying passengers or animals on the racks

This vehicle was designed and manufactured primarily to meet the needs of cargo transportation or off-road driving. The cargo box or rack is not specially designed for carrying passengers or animals, nor is it equipped with necessary safety measures such as seats, seat belts, and guardrails. Therefore, these areas do not have the conditions for safe passenger transportation.

Carrying passengers or animals on cargo boxes or racks can alter the vehicle's center of gravity distribution, increasing the risk of rollover or loss of control. Especially when encountering bumps, sharp turns, or emergency braking during driving, 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 line of sight, affecting their accurate judgment of the surrounding environment and road conditions. This obstruction of vision may result in drivers being unable to detect and respond to potential hazards in a timely manner. In emergency situations such as vehicle loss of control, rollover, or collision, passengers or animals on the shelves may be injured or even killed due to impact, compression, or throwing out of the vehicle.

Security information

Vehicle and environmental safety

Before boarding, check the condition of the vehicle and the surrounding environment to ensure that it is in a safe state and to avoid any malfunctions or accidents during driving. At the same time, check the surrounding environment and observe the people or animals around the vehicle.

Driving under harsh conditions requires high vehicle performance and significant damage. Before and after driving under harsh conditions, it is necessary to inspect the vehicle and evaluate whether it can continue to drive. After driving, it is necessary to check for any damage and promptly solve any problems that may arise due to harsh conditions.

Preventing carbon monoxide poisoning

Carbon monoxide is a colorless, odorless, and non irritating toxic gas that is often produced due to incomplete combustion. During vehicle driving, if the engine is not fully burned or poorly ventilated, carbon monoxide will be produced, posing a threat to the safety of occupants in the vehicle. Therefore, when driving in poorly ventilated spaces, it is necessary to be particularly vigilant about the risk of carbon monoxide poisoning.

To prevent carbon monoxide poisoning, do not operate vehicles in poorly ventilated or relatively enclosed environments. Do not operate vehicles in areas where exhaust can be directed into sealed chambers.

Security information

It is prohibited to drive vehicles after drinking alcohol, taking medication, or using drugs

Alcohol can paralyze the driver's nervous system, reduce reaction speed and judgment ability, and increase the possibility of operational errors.

Some drugs may affect the driver's attention, reaction speed, judgment, and coordination ability, leading to driving errors. Therefore, during medication, drivers should try to avoid driving as much as possible. If driving is necessary, they should first consult a doctor or pharmacist to see if the medication will affect their driving ability, and determine whether it is suitable to drive based on the medication user manual and the doctor's advice.

Drugs can have a strong stimulating effect on the driver's central nervous system, leading to symptoms such as hallucinations and delusions, causing the driver to completely lose control of the vehicle.

Fire warning

Gasoline is an extremely flammable liquid with a low flash point (the volatility index of flammable liquids), which easily evaporates at room temperature to form a combustible concentration of gas. Once it encounters a fire source or overheated components, it is prone to rapid combustion.

Security information

The engine, electrical system or fuel system of the vehicle may malfunction, causing overheating, short circuit or fuel leakage; Possible collision or accident with other objects while driving, resulting in vehicle damage, fuel leakage, or component damage; During refueling or refueling, the friction between gasoline and metal components such as oil tanks and pipes may generate electrostatic sparks; Improper modification or use of substandard components may lead to electrical or fuel system failures, all of which increase the risk of fire.

To prevent fires caused by gasoline used in cars, we should regularly inspect the fuel and electrical systems of the car to ensure their proper functioning. At the same time, when refueling, avoid operating in a static environment and ensure good sealing of components such as oil tanks and pipelines. In addition, when parking in high temperature environments, a cool and ventilated place should be chosen to reduce the risk of fire.

Load driving

When loading and unloading goods, ensure that the vehicle is in park and try to load and unload goods on a flat surface.

When transporting goods, low gear must be used to avoid CVT wear and belt failure.

When loading shelves onto vehicles and using them, handling, stability, and braking distance are significantly affected. Before operating the vehicle, it is necessary to ensure

Security information

that all goods are firmly fixed on the shelves. In order to reduce the impact of high center of gravity, try to fix the goods at a lower position on the shelves. Goods with a high center of gravity may cause the vehicle to be more unstable during operation.

During the driving process, it is necessary to slow down appropriately according to the terrain conditions and try to avoid driving on slopes and rugged terrain as much as possible. Due to the influence of load and terrain, the braking distance may increase, so please slow down in advance and leave enough braking space.

Do not leave keys on the vehicle

Leaving keys on the vehicle, especially in a prominent location, greatly increases the risk of vehicle theft. Thieves may easily find keys and steal vehicles, which not only causes property damage but may also bring other security issues.

If the vehicle is parked on a slope or unstable ground, leaving the key on the vehicle may cause the vehicle to start and move unexpectedly, which may cause property damage and even harm nearby people or animals.

In some cases, leaving keys on the car may give other malicious individuals the opportunity to illegally modify or damage the vehicle, which not only increases economic losses but may also affect the safety and performance of the vehicle.

Security information

No resting under the vehicle

Vehicles emit exhaust gases during operation, including carbon monoxide and other harmful gases. When resting under the car, personnel may inhale these harmful gases, increasing the risk of poisoning or suffocation.

If the vehicle suddenly moves or starts, people under the vehicle may be injured or even crushed.

Do Not Exceed Weight Limit

Overloading not only increases the difficulty of ATV operation and reduces braking performance, increasing the risk of accidents, but may also lead to mechanical failure or damage, and even endanger the lives of drivers and other passengers. Please strictly follow the nuclear load indicated in this User Manual and do not overload.

Short ATVs are prohibited from carrying passengers, while long ATVs are prohibited from carrying more than one passenger. Double row passengers must be at least 12 years old and have a safe and stable seat.

Tyre

Improper use of tires on this vehicle, or operating the vehicle with incorrect or uneven tire pressure, may result in loss of control, tire blowouts, skidding, etc., thereby increasing the risk of accidents. Choose suitable tires based on the actual driving environment and needs, and regularly observe tire pressure and damage.

Security information

The pattern of snow tires is usually deeper and wider, which helps to push away snow and moisture, and has higher traction and grip on snow and ice surfaces, providing better braking and acceleration performance. However, their performance on dry roads may not be as good as ordinary tires

Rain tires (also known as wet tires) are designed to provide better grip and handling on slippery or wet roads. Their tread material and pattern design can more effectively drain moisture, reduce water slippage, and thus increase the friction between the tire and the road surface.

Mud tires often have wider tread surfaces than tires of other properties, reducing the likelihood of getting stuck in mud. The angle and pattern of the mud tire tread embedding use centrifugal force to push other substances away from the tire surface during vehicle rotation, preventing tire blockage.

When replacing tires, choose tires of the same size as the original car tires. Tires of different sizes may affect the vehicle's handling, stability, and braking performance. Using tires of the same size can ensure that the performance and safety of the vehicle are not affected.

Security information

⚠ATTENTION

For this vehicle, it is essential to comply with the tire size and type specified in this user manual. Maintain the appropriate tire pressure as described in this user manual. Timely replace damaged tires.

Burn warning

After running or driving for a period of time, the engine, exhaust system, and other working components of the vehicle will generate high temperatures. These high-temperature components may cause burns. Therefore, please come into contact with the vehicle after it has cooled down. If unavoidable, please take precautions. After scalding, please immediately rinse the scalded area with cold water to reduce pain and minimize tissue damage. Gently cover the burned area with a clean cloth or gauze to avoid contamination and further damage. If the burn is severe or requires further treatment, seek medical attention immediately and seek the help of a professional doctor.

Pre driving inspection

It is essential to conduct a vehicle inspection before driving. By inspecting various parts of the vehicle, potential safety hazards and mechanical failures can be identified and resolved in a timely manner, ensuring that the vehicle is in good working condition, improving driving safety, and protecting the safety of drivers and other road users. If you have any questions, please refer to the chapter on "Simple Troubleshooting" or contact your dealer.

Security information

Before driving, be sure to carefully check the following items:

Item	Requirement
Tyre	Normal air pressure, normal tread depth, no cracks or other wounds, no damage to the wheel hub, and tightened wheel nuts
Turning	Flexible steering (if there is steering assistance, it needs to be tested after being powered on)
Gear shift	Flexible gear shifting
Brake	The brake lever and pedal operation are normal, the brake fluid level in the cylinder is above the lower line, there is no dragging sensation when releasing the brake, the brake disc and brake pad are within the limit of use, there is no leakage of brake fluid, and the braking force is sufficient
Parking	The handle operates normally and can park (electronic parking requires power on before use, and will automatically park after power off)
Shock absorption	Smooth and flexible during exercise
Fuel	Adequate oil supply
transmission	No abnormal noise can drive normally, and the shaft sleeve is intact and undamaged
throttle	Use unobstructed and return to its original position upon release

Security information

Item	Requirement	
engine oil	Lay the vehicle flat and observe the oil window. The oil level is at the normal level	
cooling	The liquid level in the coolant expansion pot is between MAX and MIN	
lighting	All lights are on and off normally, and the height of the lights is normal	
indicator light	Instrument indicator light	
horn	Capable of producing loud and clear sounds	
The ignition switch	Start the engine normally	
Turn off the engine	Normal engine shutdown	
throttle	The engine works normally after refueling	
load	goods shelves	Not exceeding the maximum load capacity, evenly distributed goods, and securely fixed
	trailer	Not exceeding the maximum trailer load and the trailer connection device is securely fastened
2/4WD switch	Normal switching between 2/4WD and 4WD locking	
Passengers and Drivers	Meet driving and riding requirements, wear protective gear properly	

Safe driving

Driving posture

To maintain stable handling, we strongly recommend 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 emergencies, but also significantly reduces the risk of leg or foot injuries. Please avoid extending your toes outside the foot pedal, as this may cause your feet to be hit, stuck by passing obstacles, or come into contact with the wheels, resulting in unnecessary injury. Always maintaining the correct driving posture is the best guarantee for one's own safety.

Safe driving

Driving steps

1. Before driving, check the condition of the vehicle and observe the surrounding environment.
2. Sit in the driver's seat in the correct riding posture, grip the handles tightly with both hands, and press the pedals firmly with both feet.
3. Step on the brake pedal and shift the gear to N or P.
4. Start the engine.
5. Shift the gear to L gear.
6. Slowly add fuel to the door while releasing the brake.
7. When you need to stop, release the accelerator while stepping on the foot pedal and shift the car to P gear.

Cross the mountain slope or turn on the mountain slope

If it is not absolutely necessary, try to avoid crossing or turning on slopes as much as possible.

- Maintain body center of gravity: If it is necessary to do so, make sure that your body center of gravity is always above the slope. This helps maintain the balance of the vehicle.

Safe driving

- Get ready to get off: Be prepared to quickly get off the uphill side when you feel the vehicle starting to become unstable or tipping over.
- Do not protect the vehicle: In emergency situations, do not attempt to stop or take other measures to protect the vehicle from damage. Your safety is the most important thing.
- Avoid obstacles and depressions: Pay special attention to avoiding objects or depressions that may cause one side of the vehicle to be higher than the other, as this greatly increases the risk of rollover.

Prohibition of speeding driving

This vehicle is designed for off-road or complex terrain, and may not have the same stability or safety measures as cars on the road. Therefore, even in seemingly flat or open areas, the vehicle speed should always be controlled to ensure sufficient reaction time and handling ability in various unexpected situations. When riding an ATV, please be sure to:

1. Comply with all applicable traffic regulations and speed limit signs.
2. Familiarize yourself with the performance and limitations of the ATV you are driving.
3. Adjust the vehicle speed based on terrain, weather, and visibility conditions.
4. When going downhill, do not overly rely on the vehicle's inertia to slide, but use the brake appropriately to control the speed.

Safe driving

5. Avoid driving at high speeds on rough, slippery, or muddy roads, as these conditions can affect the vehicle's handling.

Prohibit tilting, jumping, and other stunt driving

High speed and difficult movements are highly likely to cause the driver to lose control or balance, leading to serious safety accidents. Stunt driving may also result in injury or death to the driver, and may also pose a threat to pedestrians, vehicles, and other road users in the surrounding area.

When performing stunt driving, the vehicle will withstand tremendous impact and twisting forces, which may cause damage to key components such as the suspension system, engine, and frame of the vehicle.

Do not operate the gear lever while the car is in motion

During vehicle operation, if the gear lever is suddenly operated, the gears inside the gearbox may be unexpectedly impacted. This kind of impact may lead to increased gear wear, and may even cause gear breakage, resulting in transmission damage.

When shifting gears, please first stop the vehicle and press the brake pedal before shifting.

Safe driving

Turning

Before attempting to accelerate a turn, please start practicing with low-speed turns to ensure that you are familiar with the vehicle's reaction and turning skills.

During the driving process, it is important to keep both hands tightly gripping the handles and both feet firmly placed on the footrest, which helps you better control the vehicle. When turning, it is recommended to maintain a constant speed or slight acceleration to maintain stability and control. To significantly reduce the risk of rollover, special care should be taken when turning to avoid excessive turning of the handle or sudden changes in speed. Adjust the steering amplitude appropriately based on the current speed and environmental conditions to maintain a smooth turning process. Before entering a bend, be sure to slow down in advance and avoid emergency braking during the turning process.

Please avoid sudden or sharp acceleration when turning, especially when starting from a parked or low-speed state. Do not attempt to perform high-risk stunt actions such as circling, gliding, sliding, tail swinging, jumping, etc. If the vehicle shows signs of sliding or skidding, immediately make a slight turn towards the direction of sliding or skidding and avoid sudden braking to prevent loss of control.

This vehicle is not suitable for operation on paved roads as it may increase the risk of overturning. If you must drive on paved roads, be sure to drive carefully, take gradual turns, maintain slow driving, and avoid sudden acceleration and braking.

Safe driving

Uphill slope

This vehicle has excellent climbing ability, but special attention should be paid to the possibility of tipping when approaching or reaching the stability limit of the vehicle. For example, on heavily eroded mountaintops, the terrain may become steep, and although vehicles have the ability to pass through these terrains, there is a risk of tipping when the front of the vehicle is driven to the equilibrium point and moves back.

If obstacles ahead cause the vehicle to climb too high, the same situation may also occur. In these cases, it is recommended to choose other routes. When evaluating a route, it is important to pay attention to the risks of side slopes and understand the terrain conditions on the other side of the slope to prevent encountering steep slopes that cannot be crossed or descended.

Before attempting to climb a slope, please ensure that you are fully prepared. It is recommended that experienced operators make such attempts and start with relatively gentle slopes. During the climbing process, please keep straight, with your center of gravity facing towards the top of the mountain, and place your feet firmly on the footrest. Adjust the ATV to a lower gear and accelerate appropriately before starting to climb the hill. During the climbing process, try to maintain a constant speed and avoid sudden acceleration to maintain the stability of the vehicle. When encountering sudden changes in slope or terrain obstacles, please release the throttle to avoid affecting stability.

Safe driving

When going uphill, keep going straight and place your center of gravity towards the top of the mountain, which helps maintain the stability of the vehicle. At the same time, both feet should be placed on the footrest, shift the ATV to a lower gear, and accelerate appropriately before starting to climb.

Maintaining a stable speed is crucial during the climbing process. Sudden changes in slope or terrain obstacles, such as rolling wheels over rocks or tree roots, can cause the front of the vehicle to lift, increasing the risk of rollover. Therefore, this situation should be avoided as much as possible.

Some mountain slopes may be too steep, and a failed climbing attempt may not be able to safely stop or recover. In this situation, the best option is to avoid these steep slopes. If you encounter problems during the climbing process, such as the vehicle being unable to continue driving or starting to slide backwards, you should quickly apply the brake and ensure that it does not slide, then apply the parking brake.

Downhill slope

Before attempting to climb a slope, please ensure that a safe downhill route has been planned. A steep slope without a safe downhill route may pose serious risks. Therefore, when planning your itinerary, it is important to understand and confirm the safe route for going up and down hills in advance.

Safe driving

When going downhill on a steep slope, slowing down is a common practice, but excessive deceleration may cause the vehicle to "slide". If this happens, please remain calm and try to regain control by maintaining a stable speed or slightly accelerating. Make sure your body's center of gravity is backwards, which helps maintain the balance of the vehicle.

Gradually applying the brake is the key to preventing slipping. Avoid relying solely on engine compression or shifting to neutral to "slide" along slopes, as this may increase the risk of losing control. Please always use the brake with caution and adjust it according to the slope and vehicle speed.

When encountering steep slopes, try to avoid them as much as possible to reduce risks. If unavoidable, it is important to remain highly vigilant as the risk of overturning increases when going downhill.

Crossing water bodies

Water is a special hazard for ATV cycling. Deep water or rapids can cause vehicles to lose control and even float and tip over, posing a serious threat to riders. Before attempting to cross water bodies, it is important to carefully assess the risks and take appropriate preventive measures. Safety always comes first, don't take risks driving in unsafe waters.

Safe driving

- Check water depth and flow: Before deciding to cross a water area, check the water depth and flow first. Ideally, the water surface should not be higher than the footrest of the ATV to ensure sufficient buoyancy for the vehicle.
- Pay attention to obstacles underwater and along the shore: Rocks, grass, wood, and other objects in the water and along the shore may have smooth surfaces that can cause the vehicle's tires to lose traction, thereby increasing the risk of losing control.

Driving on sandy terrain

When riding in wet, deep sandy or fine sandy or snowy terrain, special caution is required as the vehicle may lose traction, resulting in slipping, sliding or getting stuck in mud. In these special terrains, to ensure safety, it is recommended to prioritize driving on more solid roads. In addition, it is necessary to reduce the driving speed and maintain a high level of vigilance towards the surrounding environment in order to respond promptly to possible emergencies. When driving in sand dune areas, it is recommended to equip vehicles with safety flags of antenna type. This can help other drivers on the sand dunes more clearly identify your vehicle's location, effectively avoiding potential collision accidents. When you notice a vehicle using a safety flag ahead, you should be extra careful to ensure safe passage and avoid accidents.

Safe driving

Note that when using antenna type safety flags, avoid using them in areas with low hanging branches or obstacles. Because once the flag gets stuck and bounces against these obstacles, it may directly hit your body, causing accidental injury. Therefore, it is essential to use safety flags in appropriate venues and environmental conditions to ensure personal safety.

Turn off the engine and slide the car while climbing

- Shutdown handling: If the vehicle stalls during climbing, do not panic first. Immediately use the service brake (foot brake) and parking brake (handbrake) to forcefully stop the vehicle to prevent it from rolling backwards. Then restart the vehicle and attempt to climb the slope again.
- Prevent skidding: When parking on a slope, make sure to apply the handbrake. If you need to start, first place your right foot on the brake pedal, lubricate it appropriately, and release the brake at the same time. This can prevent the vehicle from rolling backwards.

Safe driving

Driving and getting on/off in unfamiliar terrain

When driving on slopes and unfamiliar terrain, always pay attention to the vehicle's condition and environmental changes, and take necessary preventive measures. In case of emergency, remain calm and take appropriate measures to ensure your own and others' safety.

When driving on unfamiliar terrain, if it is necessary to get off the vehicle to check the road conditions or perform other operations, the first step is to ensure that the vehicle is in a safe state, such as using the parking brake to secure the vehicle. Before getting off the car, observe the surrounding environment to ensure safety before getting off. At the same time, wear appropriate protective equipment such as helmets, safety shoes, etc.

It is very important to remain calm in emergency situations. Do not panic or take extreme actions, as this may lead to greater danger. Take appropriate measures based on the specific situation to ensure the safety of oneself and others.

Crossing obstacles

When crossing obstacles on the 'small path', be sure to remain highly vigilant. These obstacles may include loose rocks, fallen trees, slippery surfaces, fences, pillars, embankments, and depressions. For your safety, you should try to avoid these obstacles as

Safe driving

much as possible. Some obstacles may be too large or dangerous to pass through, please make sure to detour.

For small rocks or fallen trees, you can choose to safely cross at a vertical angle. When crossing, please stand on the footrest and keep your knees slightly bent. To maintain stability, you need to adjust the vehicle speed without losing power and avoid sudden acceleration. Hold the handlebar firmly to maintain stability, and adjust your body weight backward at the same time. During the entire process, do not attempt to lift the front wheels of the vehicle. Please note that the surface of obstacles may be slippery or moving, which may increase the difficulty and risk of crossing.

When performing such operations, please ensure that your skills and experience are sufficient to address potential challenges and ensure your own and others' safety.

Crossing water bodies

- Control speed: Do not attempt to enter the water at high speed. The resistance of water can act as a brake, and high-speed entry may cause the rider to fly out of the seat, causing serious injury. Excessive splashing of water can cause engine stalling.
- Avoid deep water or rapids: If possible, avoid crossing deep water or rapids. Deep water may cause ATV to float and lose stability, while rapids may generate strong water flow forces, leading to vehicle loss of control.

Safe driving

- Wearing appropriate equipment: Wearing a life jacket or other buoyancy equipment can increase safety in the water. At the same time, ensure that safety equipment such as helmets, knee pads, and elbow pads are fully equipped.
- Pay attention to terrain changes: In the vicinity of water bodies, soft terrain such as silt and swamps may appear on the ground, which may cause vehicles to suddenly "sink" or change in depth. Therefore, drivers should pay close attention to terrain changes during driving and prepare in advance to deal with them.
- Test brake: Moisture or water can reduce braking performance. After leaving the water, please use the brake multiple times to dry the brake pads through friction.

⚠WARNING

If the vehicle breaks down or is submerged while crossing water, do not start the engine and promptly use external force to remove it from the water. At this time, water may have been sucked into the cylinder, and starting the engine may cause internal damage to the engine.

⚠ATTENTION

After crossing the water, a comprehensive inspection of the vehicle must be carried out, paying special attention to the following items: engine oil, front and rear axles, air filter, and various lubrication points. If not checked, it may cause engine failure.

Safe driving

Driving on snowy roads

Before driving, be sure to carefully check whether there is snow or ice on the vehicle. These ice and snow may cause interference to multiple critical parts of the vehicle, affecting driving safety. For example, they may obstruct taillights and reflective strips, reducing their visibility at night or in adverse weather conditions, thereby affecting the judgment of other drivers. At the same time, ice and snow may accumulate in the ventilation openings, hindering the normal operation of the radiator and fan, causing the vehicle to overheat. Ice and snow may also jam control levers, switches, and brake pedals, making it difficult for drivers to operate the vehicle accurately and quickly.

Ensure that the steering wheel, throttle, brake lever, and pedals can be operated freely and smoothly without interference from ice and snow. Frequently use the brake during driving to ensure that the brake pads remain dry.

When driving on snowy roads, snow can reduce the grip of the tires. Slow down and avoid excessive acceleration and sudden braking.

Driving on muddy ground

When driving on terrain that is not dedicated to ATV lanes, it is strongly recommended to use low gear to ensure optimal driving control and vehicle performance. Although this vehicle is designed to handle various rugged terrains and extreme conditions, failure to

Safe driving

operate according to specifications may still result in premature wear and even failure of vehicle components.

Especially when increasing the throttle, such as driving in deep mud, please pay special attention to avoid sudden turning or direction killing before starting. This driving method may not only damage the vehicle, but also increase the risk of rollover, posing a threat to the safety of the driver.

Driving on frozen water surfaces

Ice formation can affect the vehicle's control performance. Therefore, please be sure to slow down and avoid sudden acceleration or "slamming" on the accelerator, as this may cause the tires to spin and increase the risk of rollover. Similarly, sudden braking may also cause the vehicle to lose control, slide, or tip over.

If you plan to drive through icy waterways, safety is crucial. Please ensure that the thickness and strength of the ice layer are sufficient to support the total weight of you, your vehicle, and its load. A reliable method is to search for open water areas and determine their safety by observing changes in the thickness of the ice layer.

Safe driving

Braking

Early braking: When it is necessary to slow down or stop, braking should be done in advance to avoid sudden braking. Sudden braking may cause the vehicle to lose control or slip, increasing the risk of accidents.

Smooth braking: When braking, the braking force should be applied smoothly to avoid sudden strong braking. Smooth braking can reduce the possibility of sudden deceleration or skidding of the vehicle, making driving safer.

Avoid prolonged braking: Prolonged continuous braking can cause the brake discs to overheat and lead to brake failure.

Slipping

The primary task in the event of skidding or sliding is to reduce the speed of the vehicle. By reducing the throttle, the friction between the tires and the ground can be minimized, thereby reducing the risk of slipping. Excessive steering during skidding or sliding may cause the vehicle to lose control. Therefore, drivers should maintain a stable steering angle and avoid sudden or sharp turns. If necessary, brakes can be used to control slipping or sliding.

However, it should be noted that when braking, the brake pedal should be gently pressed to avoid excessive braking that may cause the vehicle to lose control.

Safe driving

Reverse the vehicle

- Ensure the vehicle is stationary: Before starting to reverse, make sure the ATV is stationary and there are no obstacles or other dangerous objects around it.
- Observe the surrounding environment: During the reverse process, always keep an eye on the surrounding environment, especially the situation behind and to the side of the vehicle. Ensure that there are no pedestrians, obstacles, or other vehicles approaching to avoid accidents.
- Engage reverse gear: Shift the gear lever to the R gear.
- Keep right distance.
- Slowly reverse: Release the brake slowly and gently step on the accelerator to start reversing the ATV.
- Control vehicle speed and steering: Use throttle and brake as needed to control the speed of the ATV. If turning is required, the steering handle or steering lever can be used to adjust the direction of the vehicle's travel
- Avoid overload: Don't put more pressure than the gear lever could handle
- Use gloves to protect your hand while using the gear lever

Driving on loose gravel

Driving on loose rocks or gravel is similar to driving on ice, both of which can affect the vehicle's handling. Especially at high speeds, these surfaces can cause the vehicle to slip

Safe driving

or tip over, as the friction between the tires and these unstable surfaces decreases. Meanwhile, the braking distance may also increase as the tires require a longer distance to decelerate and stop.

It is important to be aware that 'slamming' the accelerator or performing sliding maneuvers on such roads may cause rocks to bounce and fly towards the rear, which could pose a threat to other riders. Therefore, please avoid engaging in such dangerous behavior and always prioritize safety. During the driving process, try to maintain a stable driving speed and operate cautiously to ensure the safety of yourself and others.

Slope turning (K-type turning)

When turning on a slope, a "K" - shaped U-turn should be used. Approach the uphill side of the vehicle, walk backwards while holding the brake lever with your hand, slowly move the vehicle towards the mountaintop, and then safely drive downwards. During this process, it is essential to keep walking or getting off the uphill side and maintain a safe distance from the vehicle and its rotating wheels. If the vehicle begins to tip over, do not attempt to grab onto it to avoid injury.

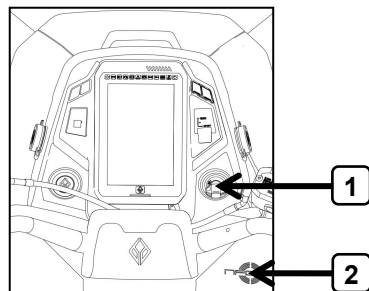
For more information on safe riding of ATV, please contact your dealer

Control components and operations

Main switch (mechanical)

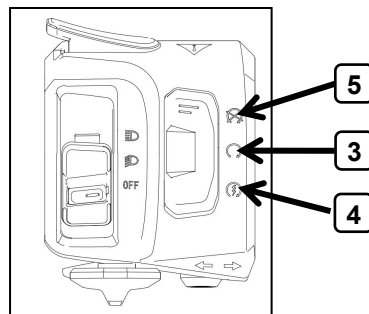
The main switch **1** is located on the right side of the dashboard. When turning the key to different positions:

	The whole vehicle is powered on, the vehicle is powered on, self checks, and the engine can be started at this time.
	The power of the whole car is turned off and you shouldn't start the car at this time.



ATTENTION

This vehicle comes with two keys, please keep one of them safe. When one of the keys is lost, it can be promptly replicated. If both keys are lost, the entire set of locks needs to be replaced.



Main switch(NFC) (Optional)

Place the NFC sensing key close to the sensing area **2** and remove it. At this point, the vehicle will be powered on Self inspection.

Make sure the gear is at P or N

Depress the brake pedal or engage the parking brake

Control components and operations

Depress the on button on the left handle **4** to start the engine

Before you press on, please pre-warm the car.

ATTENTION

It can be powered on in any gear, but only in N/P gear.

Start the engine (NFC or mechanical)

- Place the NFC sensing key close to the sensing area or use the mechanical key to select the power mode to ensure that the vehicle is powered on;
- Place the left switch in the "⌚" position for activation;
- Step on the brake pedal or hold the handbrake;
- Ensure that the gear lever is in P or N gear;
- Press the start switch **3** to start the engine;
- After starting, please preheat the engine first before operating the vehicle.

WARNING

During each start-up, the ignition must not exceed ten seconds; If the ignition fails and needs to be restarted, please pause for at least five seconds.

After starting, please preheat the engine first before operating the vehicle. Otherwise, it may cause damage to the engine.

Control components and operations

Stop the engine

- Under normal circumstances: Press the shutdown switch on left handle to turn off the engine on the left handle.
- Emergency:
 1. Rotate the mechanical key to the OFF position
 2. (NFC) Control the left switch to quickly turn off the engine three times in a row, wait for 3s and then the whole vehicle will be powered off.

Power socket and USB socket

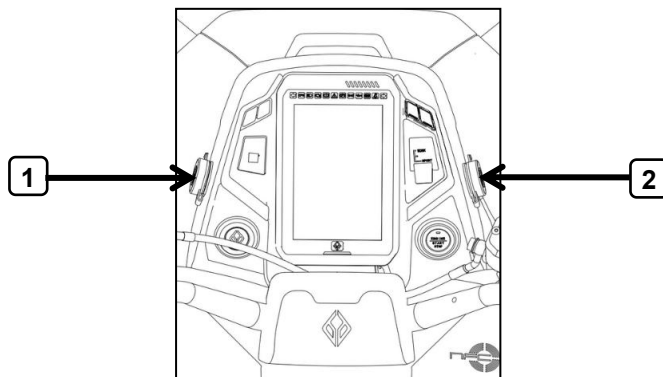
There is a 12Vdc power socket and USB&Type C port at the windshield position of the vehicle for charging your electronic devices.

The USB&Type C socket is located on the right **1** , and the 2VDC power socket is located on the left **2** .

WARNING

Improper use or insertion of incompatible chargers/devices may result in short circuits, equipment damage, or fires.

Please ensure to use charging equipment and cables that are compatible with the socket and of qualified quality.



Winch

This vehicle is equipped with a winch and its controller. If you would like a more detailed winch manual, please contact your dealer.

WARNING

- Do not engage or release the winch clutch when the winch is under load, the wire rope is under tension, or the rope drum is in operation. Ensure that the vehicle is within sight when operating the winch.
- Do not attach the recovery strap to the winch hook to increase tension.
- Do not operate the winch with less than 5 turns of rope on the drum. The rope may detach from the drum because it is not attached to the drum to carry heavy objects.
- Do not use the winch as a heavy tool.
- Do not attempt to disconnect the winch clutch when the rope is under tension. When the drum rotates, do not engage the winch clutch with teeth. Ensure that the winch clutch is fully engaged or disengaged.
- When operating or rewinding, keep hands and clothing away from ropes, hooks, and cable guide openings. Do not use hooks to hook back the rope, as this will damage the rope.
- To avoid overheating of the winch motor, stop using it at reasonable intervals to allow the winch motor to cool down.
- Always avoid continuous unilateral traction by stacking the rope at one end of the drum, as this can damage the rope or winch.
- Carefully inspect the rope for wear, damage, and twisting. If damage is found, replace the rope.

 ATTENTION

When the winch is running, it will consume a large amount of electricity. Please keep the engine running continuously and closely monitor the battery level during use.

Left switch

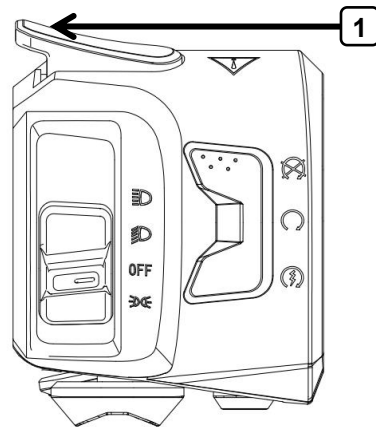
Override switch ①

When the four-wheel drive is locked, it is in the speed limit state. If more engine power is needed:

1. Release the accelerator and press the power switch at the same time, and the power switch indicator light will turn on.

2. Continue to press the switch, then press the throttle (right-hand handle), and the engine speed limit will be canceled.

Release the power switch button to restore the speed limit.



WARNING

When the vehicle is limited in speed, be sure to turn off and release the throttle before pressing the power button, otherwise it may cause sudden acceleration and loss of control, which could result in serious injury or death.

ATTENTION

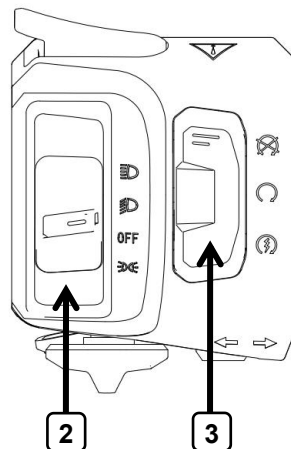
The power boost switch is not available when the four-wheel drive is in the locked state.

Left switch

Headlight switch 2

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

	high beam		The high beam, front and rear position lights, tail lights, and license plate lights are on
	dipped headlight		The low beam, front and rear position lights, tail lights, and license plate lights are on
	close	Engine OFF	All lights are off
		Engine ON	The low beam, front and rear position lights, tail lights, and license plate lights are on



ATTENTION

After the engine is turned off, please turn off the headlights in a timely manner, otherwise it may cause the battery to run low and the vehicle cannot be started.

Left switch

The ignition switch 3

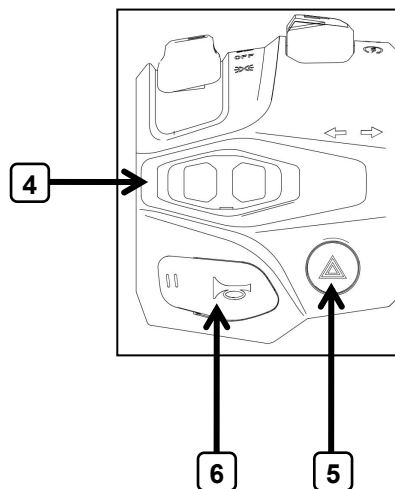
Pressing the switch can place it in different positions.

	Kill Switch	ECU cannot start the engine
	Self-resetting ignition switch	The ECU, fuel injector, ignition coil, fuel pump, and starting system are ready to operate.
	Ignition	Start the engine

Steering switch 4

Move the steering switch horizontally to different positions.

	Turn left	Left turning lights flashing
Middle		
	Turn right	Right turning lights flashing



Left switch

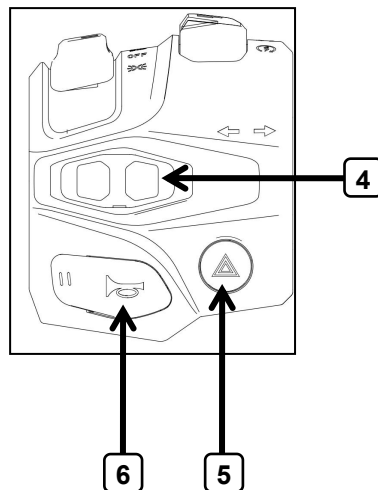
Warning switch 5

Pressing and pressing again will place the switch in high and low positions

high position	The relevant lights are not flashing
Low position	The front and rear turn signals, as well as the instrument turn signal lights, start flashing simultaneously

Horn switch 6

	Horn	Short press this button, the horn will sound
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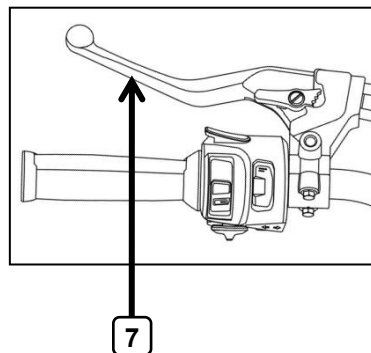
Left switch

Mechanical parking 7

Pull the mechanical parking handle backwards until it locks into place.

WARNING

Before operating an ATV (all terrain vehicle), it is crucial to ensure that the parking brake has been fully disengaged, as operating the vehicle with the parking brake in the engaged (i.e. locked) state is highly likely to cause serious safety accidents. Before driving each time, please make sure that the parking brake has been released to ensure your and others' safety.



Left switch

Important security protection

When parked for a long time, the parking brake system may gradually loosen due to natural factors

Relaxation increases the risk of unexpected vehicle movement. To ensure safety, it is recommended to take the following preventive measures:

1. Place blocks under the wheels: Place bricks or other stable obstacles securely under the wheels to prevent the vehicle from accidentally rolling due to parking brake failure.
2. Pay special attention to hill parking: When parking on a hill, relying solely on the parking brake may not be sufficient to prevent the vehicle from sliding down due to gravity. At this point, additional stones or sturdy barriers should be placed under the wheels on the downhill side to increase safety.
3. Choose a safer parking location: If possible, try to avoid parking for long periods of time on steep or unstable slopes. Finding a flat and stable ground as a parking spot can significantly reduce the risk of unexpected vehicle movement.

 **DANGER**

The parking brake system shall not be used for braking while driving

Right switch

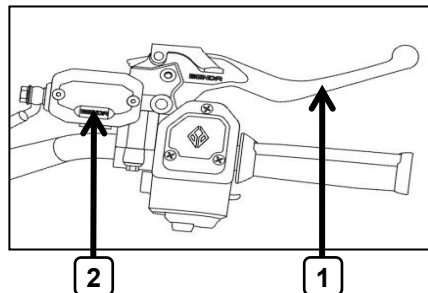
Front brake

1. Front brake lever 1

The front brake lever is located in front of the right handlebar and only applies to the front wheels for braking. When gripping tightly, provide braking force, and the magnitude of the braking force increases with the increase of the handle stroke.

ATTENTION

When gripping tightly, the handle should feel a strong force feedback rather than a soft and fluffy state.



2. Front brake master cylinder 2

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

ATTENTION

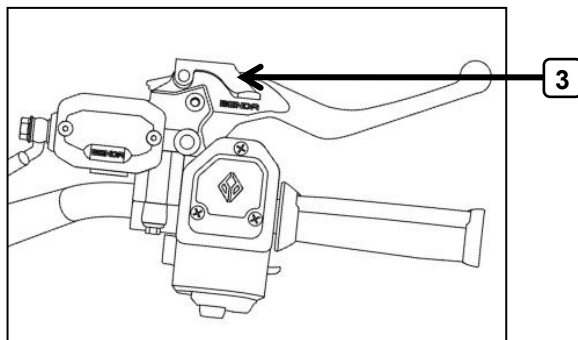
When there is a lack of brake fluid, it can lead to a difference in braking force; Excessive brake fluid can cause excessive braking resistance or locking. Please keep the brake fluid within the recommended level, not too low or too full.

Right switch

Hydraulic parking brake

For a hydraulic parking brake system, if it is installed on the right-hand brake and triggered according to the described operating procedure, the correct operation to trigger the parking brake is:

To activate the hydraulic parking brake, first step on the foot brake to ensure vehicle stability, then hold the right brake lever with your right hand. While holding the brake lever with the right hand, use the left hand to turn the hydraulic parking [3] brake switch (marked) outward to activate the hydraulic parking brake, effectively fixing the vehicle position.



Right switch

Drive switch handle

1. 2/4WD switch [4]

Simply toggle the switch "[4]" to switch between 2-WD and 4-WD;

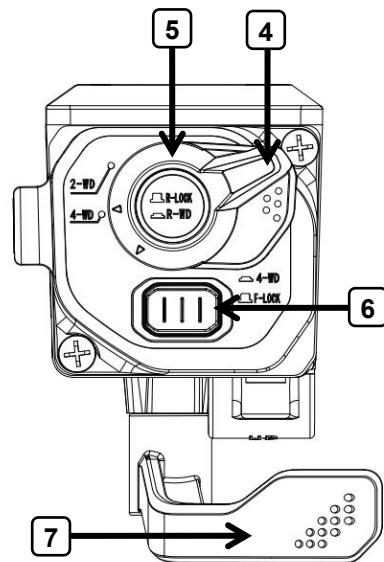
In 2WD mode, only two rear wheels provide power. This mode is suitable for general flat roads or high-speed driving which helps save fuel and reduce tire wear;

In 4WD mode, all four wheels provide power. This mode is suitable for complex road conditions such as mud, bumps, or downhill slopes, and helps provide better traction and stability.

2. Rear differential lock switch (optional) [5]

Press switch "[5]" to complete the switch of the rear wheel drive differential;

When in low position, it is R-WD, which is the rear wheel differential mode. The differential distributes the speed through planetary gears, distributing power to the wheels that require more power while reducing or limiting the power of the other wheel to achieve the desired speed difference;



Right switch

When in high position, it is R-Lock, which means the rear wheel is locked and the rear axle is locked. Both sides run at the same speed, and the differential can only engage after the half axle rotates.

3. 4-wheel drive lock switch **6**

Press the " **6** " button to complete the "4-wheel drive lock" switch switch (not operable in two wheel drive mode);

When the button is in the high position, it is in the "4-WD" state and the front axle differential state;

When the button is in the high position, it is in the "F-lock" state, the front axle is locked, and the two front wheels rotate at the same speed. The vehicle can obtain better traction on low adhesion or high resistance roads. Due to the differential locking, the speed difference between the two wheels is eliminated, which requires greater force when turning. The differential can only engage after the half shaft rotates. The maximum speed limit in F-lock state is 45km/h. When the differential is fully engaged and requires more power, press the override switch on the left handlebar to release the speed limit.

4. Throttle button **7**

When the engine is running, pressing the throttle lever will increase the engine speed, thereby changing the overall vehicle speed. The throttle lever is spring-loaded. When the driver stops applying force, the throttle lever automatically returns to its original position and the engine speed returns to idle.

Right switch

ATTENTION

Before starting the engine, it is necessary to check whether the throttle lever is operated smoothly and whether it is in the initial position of the stroke.

WARNING

Press the throttle handle steadily to avoid sudden increase in force and reduce the risk of sudden acceleration of the vehicle when you do a switch to 2-4 start.

It is necessary to adjust the throttle force appropriately to maintain the vehicle's speed within a controllable range.

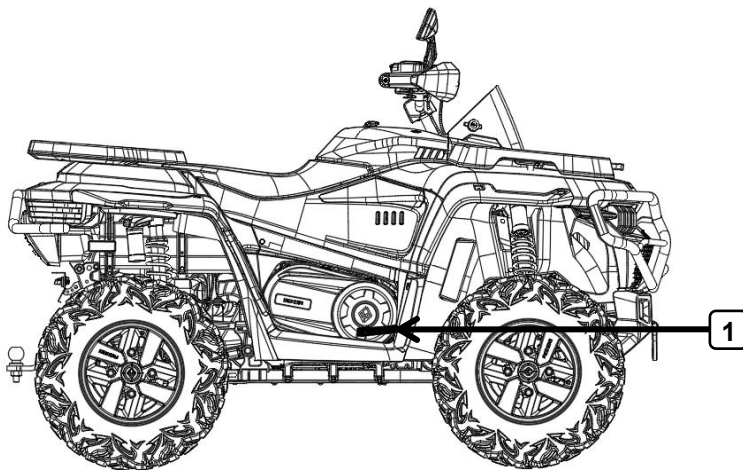
When slowing down or stopping, release the throttle lever in a timely manner to allow the engine speed to naturally fall back to idle state

Foot brake

The brake pedal is located on the right footrest, and when the pedal is pressed, the front and rear brakes start working simultaneously.

WARNING

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



Foot brake

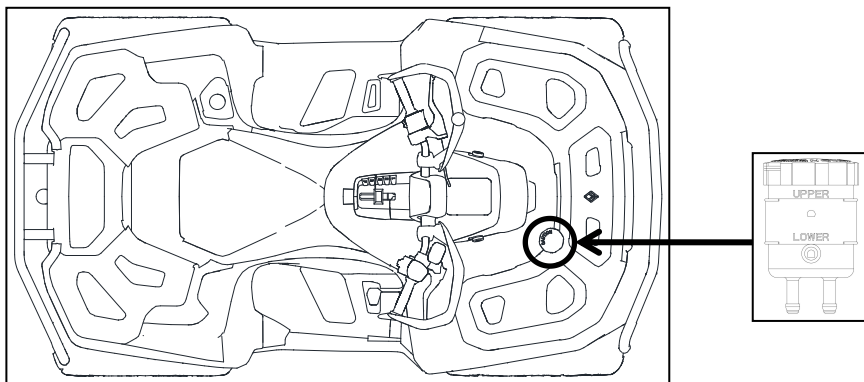
Oil cup and fluid inspection for foot brake

Remove the front maintenance cover and check the brake fluid level.

When the brake fluid is below lower, please add DOT4 brake fluid in a timely manner and guide the fluid level to be between UPPER and LOWER.

WARNING

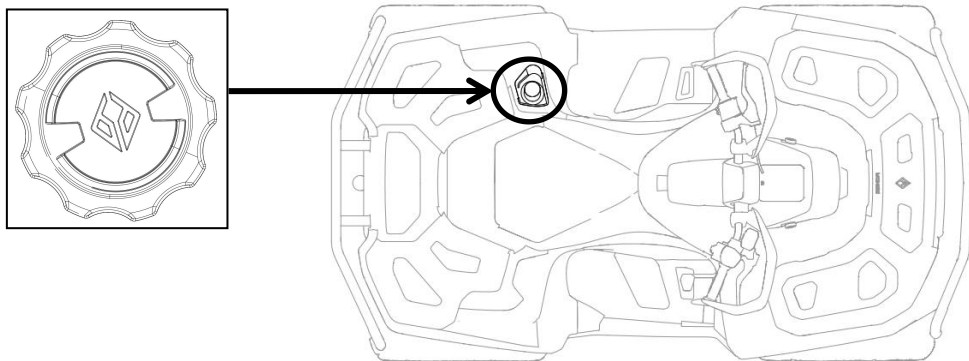
Do not use brake fluid that has been stored for too long after opening. Brake fluid will absorb a large amount of moisture from the air, resulting in a weakened braking effect.



Fuel tank and gasoline grade

The fuel tank is located at the rear of the vehicle, and turning the fuel tank cap counterclockwise can open the fuel tank.

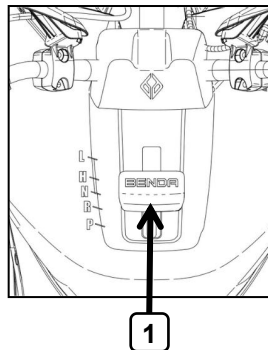
Require the use of octane number 92 or E10 and above unleaded fuel (with a maximum allowable ethanol content of 10%). It is recommended to use non oxidizing and ethanol free fuel.



Shift lever

The gear lever **1** is located in the middle of the vehicle. When changing gears, you need to stop the vehicle and press the brake pedal, and then change the appropriate gear according to your needs.

L gear	Low speed	Low speed range of gearbox, high wheel torque
H gear	High speed	Gearbox high-speed range, at which point the vehicle will reach its maximum speed
N gear	Neutral	Engine power output and transmission system disconnect
R gear	Reverse	The vehicle is driving backwards with a speed limit of 30 km/h.
P gear	Parking	Gearbox locked to prevent vehicle movement

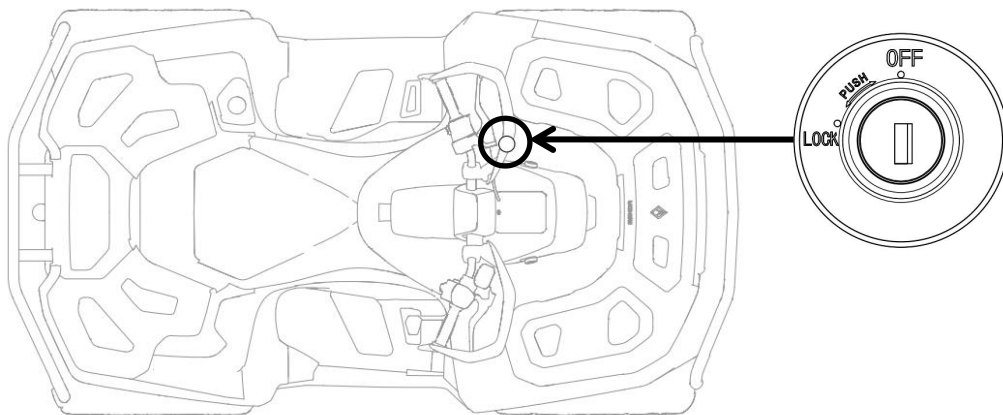


WARNING

- Do not put the vehicle in P gear while it is in motion, as it may cause damage to the transmission shaft.
- When it is necessary to shift into P gear, the vehicle needs to be shaken back and forth to ensure complete gear engagement in the gearbox.
- When parking on a hillside, please cooperate with other external conditions if possible to prevent the vehicle from rolling.
- To avoid damaging the CVT, please use L gear when driving at low speed for a long time, towing, carrying heavy loads, crossing obstacles, and other situations that require high torque.

Gear lock

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



CVT

This vehicle is equipped with a continuously variable transmission (CVT) system, which allows the vehicle to achieve a continuously variable transmission between the highest and lowest speeds without the need for manual shifting during driving.

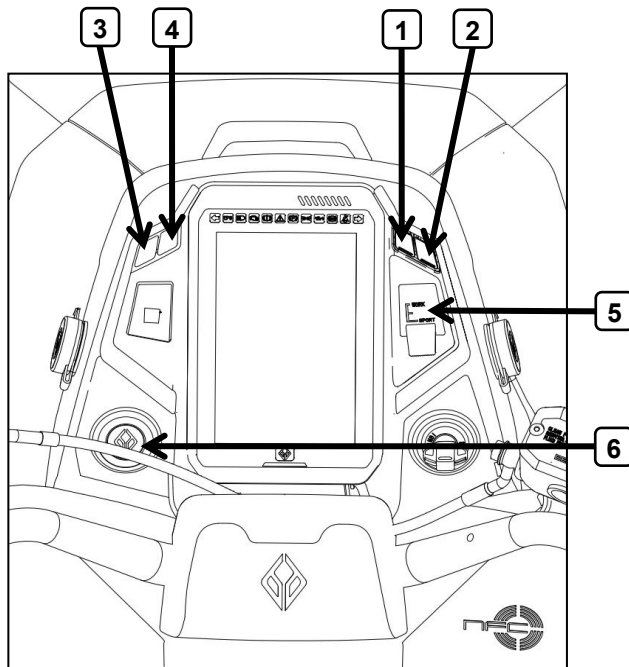
ATTENTION

To ensure the extension of belt life in vehicles equipped with CVT systems during use, the following are some recommended driving and maintenance guidelines:

- When pulling heavy cargo, use low gear: When the vehicle needs to carry heavy cargo or transport heavy objects, especially at low speeds, using low gear can reduce the pressure between the belt and clutch pulley, thereby extending their lifespan.
- When driving at speeds below 15Km/h, especially when making low-speed turns, climbing slopes, or parking, it is recommended to use low gear. This can also reduce belt pressure and wear, as CVT systems may experience greater pressure at low speeds.
- Precautions when towing a vehicle: If the vehicle needs to be towed, the transmission should be placed in neutral position. This is because when the vehicle is dragged, the engine usually does not run, so the transmission system (including the CVT belt) should not be subjected to any mechanical stress. Placing in neutral can ensure that the components inside the CVT system are not damaged by external forces.
- Regular inspection and maintenance: In addition to the above driving suggestions, regular inspection and maintenance of the CVT system are also crucial. This includes checking the wear of the belt, cleaning and lubricating related components, and ensuring that the coolant (if any) in the transmission system is at an appropriate level.

Instrument Buttons

- 1 Confirm
- 2 Return
- 3 Scroll Up
- 4 Scroll Down
- 5 Mode Switch
- 6 Electronic parking brake (optional)



Electronic Parking Brake

1. Static Parking

When the vehicle is stationary, manually press the EPB switch once, and the EPB will output the maximum clamping force.

2. Static Release

When the vehicle is in a stationary state, manually press the Electronic Parking Brake (EPB) switch, and the system will release the parking state. The specific operation steps are as follows:

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

3. Departure Assist

When the vehicle starts moving, the EPB system will automatically release the parking brake to ensure a smooth start. Especially when starting on an uphill slope, the EPB system can effectively prevent the vehicle from rolling back. The specific operation steps are as follows:

When the vehicle starts, the EPB system will automatically release the parking brake. If starting on a downhill slope, press the accelerator handle. If 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 vehicle.

Electronic Parking Brake

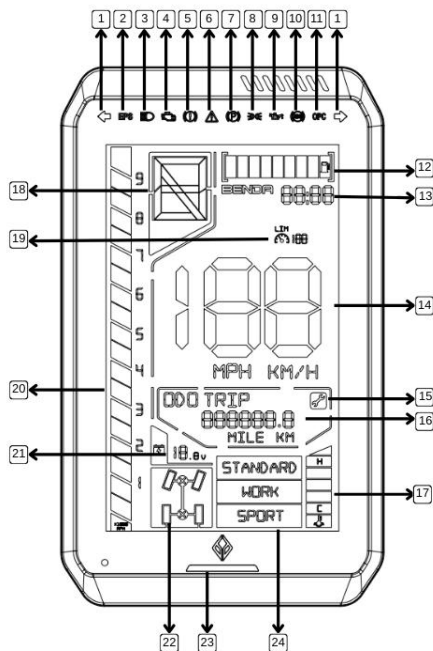
4. Emergency Braking

When the vehicle speed exceeds 5 km/h, pressing the EPB switch will trigger the emergency braking. The specific operation steps are as follows:

When the vehicle speed exceeds 5 km/h, press the EPB switch.

The EPB system will apply the emergency braking force.

Speedometer (LCD)

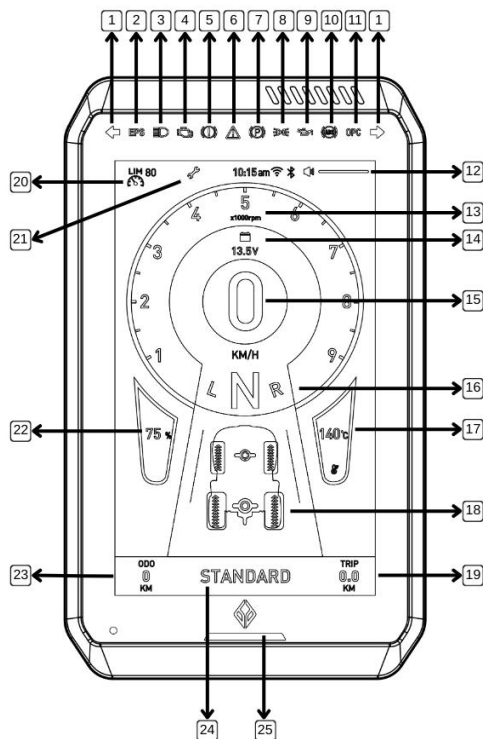


1	Turning light indicator	13	Time
2	EPS malfunction indicator	14	Speed
3	High beam indicator	15	Maintenance reminder
4	Engine malfunction indicator	16	Odometer
5	Brake system malfunction indicator/Low brake fluid level	17	Water temperature
6	Override release speed limit indicator	18	Gear indicator
7	Parking indicator	19	Maximum speed
8	Width indicator	20	Engine rpm
9	Oil pressure warning indicator	21	Voltage
10	ABS indicator	22	2/4WD & Rear-diff indicator
11	OPC indicator	23	Reverse/N gear indicator
12	Fuel capacity	24	Drive mode indicator

Speedometer operation

Operation interface	ODO screen	TRIP screen	Time setting	Limited speed setting under ABS
Short press to flip up	ODO/TRIP Switch		Value +1	Value -5
Long press to flip up	≥3S brightness level +1		Numerical increment	/
Short press to flip down	ODO/TRIP Switch		Value -1	Value +5
Long press to flip down	≥3S brightness level -1		Numerical decrease	/
Short press to confirm	/		Set the next digit, save and exit at the last digit	Save and Exit
Long press to confirm	≥5S Enter time setting	≥5S Reset TRIP	/	/
Short press to return	/		Exit	Exit
Long press to return	≥5S Enter the maximum speed setting	≥5SSwitch between Km and Mile	/	/

Speedometer (TFT Optional)



1	Turning light indicator	14	Voltage
2	EPS malfunction indicator	15	Speed
3	High beam indicator	16	Gear indicator
4	Engine malfunction indicator	17	Water temperature
5	Brake system malfunction indicator/Low brake fluid level	18	2/4WD & Rear-diff indicator
6	Override release speed limit indicator	19	TPIP mileage
7	Parking indicator	20	Maximum speed
8	Width indicator	21	Maintenance reminder
9	Oil pressure warning indicator	22	Fuel capacity
10	ABS indicator	23	Odometer
11	OPC indicator	24	Drive mode indicator
12	Time/WIFI/Bluetooth		Reverse/N gear indicator
13	Engine rpm		

Speedometer operation

Operation interface	Main interface	First level menu, second level menu, and below menus	Incoming call	During the call	Music	ABS Maximum Speed Setting
Short press to flip up	/	Switch upwards	/	Turn up the volume	Last song	Value -5
Long press to flip up	/	/	/	/	Turn up the volume bar	/
Short press to flip down	/	Switch Down	/	/-	Next song	Value +5
Long press to flip down	/	/	/	/	Turn up the volume bar	/

Speedometer operation

Operation interface	Main interface	First level menu, second level menu, and below menus	Incoming call	During the call	Music	ABS Maximum Speed Setting
Short press to confirm	Adjust background brightness	Enter the next level menu/confirm	Answer the phone	/	/	Save and Exit
Long press to confirm	Enter setting menu	/	/	/	Pause /Play	/
Short press return	Null	Return to Previous Level (returns to main interface at top menu)	End Call (priority over menu selection)	End Call	/	Exist
Long press return	Null	/	/	/	/	/

Speedometer

Bluetooth signal

- ① Bluetooth is turned on by default when the speedometer is turned on, entering matching mode, and then turned off when turned off;
- ② When not connected, the Bluetooth symbol does not display;
- ③ During the connection process, the Bluetooth symbol flashes;

Gear display

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

Driving mode

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

2/4WD display

Display range: 2WD, 4WD, 4WD-LOCK

Music

- ① The song information is displayed in the main interface and screen projection menu (menu interface does not need to be displayed);
- ② Display in the form of a pop-up window, content: singer name+song title;
- ③ No longer displayed after exiting music playback.

Speedometer

Brightness setting

Light brightness levels: Level 1, Level 2, Level 3;

During the startup animation process, the backlight is at level 3;

The default factory level is level 2;

Call

Long press the confirm button to connect the call;

Long press the back button to hang up the call;

During the call, long press to bring up the volume adjustment interface, and then short press the up and down buttons to adjust the volume.

Mileage unit setting

1. Mileage units: metric and imperial

2. The default unit at the factory is the metric system;

3. Turn off and then turn on the power, keeping the unit unchanged from front to back;

4. Mileage units can be adjusted through a manual switch;

Speedometer

BE CAREFUL

- Turn off and then turn on the power, the brightness level remains unchanged before and after;
- The backlight brightness can be adjusted automatically or manually, and can be adjusted through a manual switch;

Language settings

Language types: Chinese, English, Italian, German, French, Russian, Spanish, Portuguese;

The default language at the factory is English;

Bluetooth Settings

The default name for telephone Bluetooth is "BENDA xxxx";

Phone Bluetooth and music Bluetooth are enabled by default

Turn off and then turn on the power, the configuration remains unchanged before and after;

Support adjustment through manual switch;

Speedometer

EPS settings(Optional)

- ① The three modes of EPS are LOW/MODERATE/FAST;
- ② Every time you enter the settings, it defaults to MODRTATE.

Adjustable speed limit function (TFT)

On the main interface, when the vehicle speed is less than 5 km/h and the engine speed is less than 1500 rpm:

Press and hold the back button for more than 5 seconds to enter the maximum vehicle speed setting. At this time, the value in the vehicle speed position will flash. Press the down - arrow key briefly, and the value will increase by 5. Press the up - arrow key briefly, and the value will decrease by 5. Press the confirm key briefly, and the number will be constantly displayed, indicating that the current value is confirmed as the limit. After entering the maximum vehicle speed limit setting, if there is no key operation, the setting will automatically exit without saving after 10 seconds, or you can press the back button briefly to exit the setting.

Adjustable speed limit function (LCD)

On the 0D0 interface display, when the vehicle speed is less than 5 km/h and the engine speed is less than 1500 rpm:

Press and hold the back button for more than 5 seconds. The instrument will flash the currently limited maximum vehicle speed value. Press the down - arrow key briefly, and the

Speedometer

value will increase by 5. Press the up - arrow key briefly, and the value will decrease by 5. Press the confirm key briefly, and the number will be constantly displayed, indicating that the current value is confirmed as the limit. After entering the maximum vehicle speed limit setting, if there is no key operation, the setting will automatically exit without saving after 10 seconds, or you can press the back button briefly to exit the setting.

NOTE

Variant/Version: **BD500AU - 2/A、BD500AU/A** :

This version has the ABS as an optional installation item, and the user can choose whether to install it according to the actual usage needs. The maximum speed of this version is 60 km/h.

Variant/Version: **BD500AU - 2/B、BD500AU/B** :

In this version, ABS is configured as a mandatory standard item, integrated into the system during factory production; it is necessary to ensure device integrity and functional compliance. The adjustable speed limiting function is only activated when the vehicle is equipped with ABS and operates in conjunction with the ABS system to ensure safety performance.

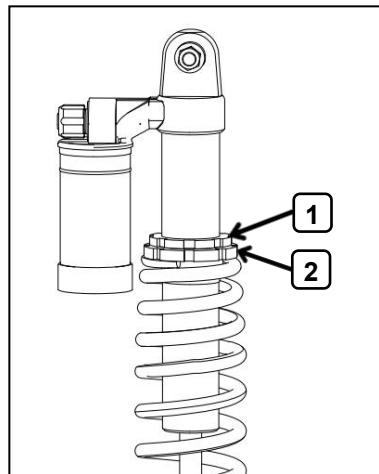
Shock Absorption (Airbag Shock Absorption)

To ensure the safety and comfort of the rider, the spring preload of the standard shock absorber can be adjusted accordingly according to the rider's weight and riding conditions.

The following is the official guide for adjusting the spring preload of the shock absorber:

1.Remove the Rear Wheel: Park the vehicle in a flat and safe location, turn off the engine, confirm that the vehicle is stationary. Use a jack to lift the vehicle to ensure it is off the ground. Please follow the guiding steps in the vehicle manual to remove the tire, ensuring that no components 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.



Shock absorber (Airbag shock absorber)

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.

ATTENTION

The adjustment of left and right shock absorbers should always be consistent elect an appropriate spring preload according to the rider's weight and riding conditions. Generally speaking, when the rider's weight is heavier or the riding conditions are harsher, a larger spring preload should be selected; conversely, a smaller spring preload should be chosen.

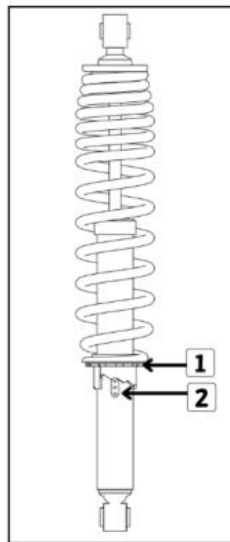
Shock absorber (Oil shock absorber)

Air shock absorber(Optional)

1. Use a special tool to clamp the gear ① ② and rotate it clockwise or counterclockwise in sequence. When rotating clockwise, increase the spring preload, and when rotating counterclockwise ② , increase the spring preload. When adjusting to the appropriate height, tighten ① and ② tightly to make them fit.
2. After the adjustment is completed, ensure that all components are correctly installed and tightened. Subsequently, a cycling test was conducted to verify the adjustment effect.

ATTENTION

Choose the appropriate spring preload based on the rider's weight and riding conditions. Generally speaking, when the weight is heavy or the riding conditions are harsh, a larger spring preload should be chosen; On the contrary, choose a smaller spring preload.



New vehicle running in

For new vehicle, the vehicle requires a break in period of 40 operating hours or 800 kilometers. Proper new car running in can extend the service life of the vehicle, effectively reduce the occurrence of faults and damage during future use, and also fully utilize the performance of the new vehicle.

WARNING

- During the break in period:
- Within the first 20 hours, the throttle opening should not exceed 1/2 of the throttle position.
- During the first 20 to 40 hours of operation, the maximum throttle should not exceed 3/4 of the throttle position.
- Avoid engine overheating.
- Avoid prolonged and continuous driving.
- Avoid engine overheating.
- Do not tow or load heavy objects.

ATTENTION

Regular maintenance and upkeep are crucial. If you are not familiar with the maintenance process, please contact a qualified dealer for professional maintenance and upkeep.

New vehicle running in

Routine first maintenance

The maintenance at the initial 800 km is crucial. During this period, all engine components and vehicle parts have been run in. Please complete this maintenance carefully to ensure that your vehicle performs well and extends its service life.

Please strictly follow the maintenance procedures in this manual for operation.

New vehicle running in

Break in of new tires

The pattern of new tires is usually deeper, and the contact area between the tire and the ground is not fully worn in, which means that the tire's grip may be insufficient. Through running in, the tire pattern gradually adapts to the ground, improving grip and enhancing vehicle handling and safety.

- Try to avoid driving at high speeds for long periods of time within the first 200 kilometers.
- Regularly check the tire pressure to ensure even and appropriate pressure, in order to ensure the uniformity of tire running in.
- During the running in period, try to avoid excessive sharp turns and acceleration to prevent unnecessary damage to the tires.
- During the running in period, try to avoid driving on rough and uneven roads as much as possible to prevent additional wear on the tires.

ATTENTION

Tires are the only part of a vehicle that comes into contact with the ground and are crucial for its performance and safety. If the tires are not run in, it may affect the vehicle's handling, stability, and braking performance, increasing driving risks.

Maintenance Regulations

Overall description

This chapter mainly introduces the maintenance of vehicles, which is necessary to ensure the normal operation of your vehicle. Maintenance is of great significance in maintaining vehicle performance, preventing potential faults, extending service life, ensuring riding safety, and saving maintenance costs. You are responsible for regular maintenance according to the provisions in this manual. For vehicles frequently used in harsh working conditions, more frequent maintenance and upkeep must be carried out to ensure that the ATV is always in optimal condition.

Check the status, clean the surface, replace vulnerable parts, lubricate key parts, adjust parameters, test performance, and record maintenance logs. When replacing vulnerable parts, please replace them with genuine parts from the dealer. If the parts replaced are not recommended by the factory, the vehicle's warranty terms will be invalid.

Maintenance Regulations

ATTENTION

Please strictly follow this manual for repair and adjustment procedures. If you are not familiar with or unable to perform maintenance, please contact a qualified dealer for professional maintenance.

Unless otherwise indicated, the ignition switch must be kept off and the engine must be stopped when performing any operation.

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

Some bolts require the use of thread glue, please follow the manufacturer's specific instructions when using.

Definition of adverse working conditions:

1. Extreme environment:

- High or low temperature environment: In extreme temperatures, critical components such as engines, tires, and batteries may be affected.
- Wet or rainy areas: Continuous humidity may cause electrical system corrosion, vehicle rusting, and reduced lubrication performance.
- Acidic or alkaline environment: Acidic or alkaline structures may accelerate the corrosion process, affecting the structure and components of vehicles.

Maintenance Regulations

2. Rough and unstable terrain:

- Rough mountainous or rocky areas: When driving in these areas, ATVs need to deal with unstable ground and stronger impacts.
- Muddy, swampy or sandy terrain: These terrains may cause vehicles to get stuck, placing higher demands on tires and power systems.

3. High frequency or high-intensity use:

- Long term continuous work: Long term or continuous work may cause ATV overheating, increased wear and fatigue.
- High intensity off-road races or activities: In these situations, the vehicle needs to withstand frequent acceleration, braking, and high-speed turns.

4. Overloading or improper use:

- Goods beyond the vehicle's carrying capacity: may cause structural damage, excessive suspension wear, or brake failure.
- Improper operation or driving, such as high-speed collision with obstacles, sharp turns, or jumping, may cause serious damage to the suspension, frame, and power system of the vehicle.
- Long term idling or low-speed driving: When idling or driving at low speeds, the engine speed is low, which leads to insufficient combustion of the fuel mixture in the engine and easily produces carbon deposits. The load on the engine is relatively light, and the circulation speed of the oil will also slow down, which may lead to increased wear inside the engine.

Maintenance Regulations

ATTENTION

If your vehicle uses any of the definitions above, please shorten the maintenance cycle by 50%.

In cold environments, special attention should be paid to the oil level in the oil window. If the oil level rises abnormally, it may be due to the accumulation of pollutants in the oil storage tank or crankcase. Please replace the oil immediately and check carefully. If the oil level continues to rise, stop starting the vehicle and investigate the cause. If the issue cannot be resolved, please contact the dealer promptly.

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 40 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 40 hours	--	800 km	Lubricate all grease points, oil nipples, cables, etc.
	Engine oil/engine oil filter element/engine oil coarse strainer	Every 40 hours	--	800 km	Replace the engine oil and filter element. Clean the coarse strainer.
►	Engine air filter element	Every 40 hours	--	800 km	Check, and if it is dirty, replace it instead of cleaning
●	Engine valve clearance	Every 40 hours	--	800 km	Check and make adjustment when necessary
	Front and rear axle oil	Every 40 hours	--	800 km	Check the oil level and detect whether there is oil leakage
	★ Coolant	Every 40 hours	--	800 km	Check the fluid level and detect whether there is leakage
►	Brake pad	Every 40 hours	--	800 km	Check the brake pad thickness

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule	Kilometers	
	★ Battery	Every 40 hours	--	800 km	Check and clean the terminal and test the battery if necessary
	Idling conditions	Every 40 hours	--	800 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 40 hours	--	800 km	Check the steering system and contact the dealer for wheel calibration when necessary.
►	Foot brake/hand brake	Every 40 hours	--	800 km	Check the function and make adjustment when necessary.
	Axle body, constant-velocity half shaft, and transmission shaft	Every 40 hours	--	800 km	Check for oil leakage.
	Engine oil pipes, gaskets and seals	Every 40 hours	--	800 km	Check for leakage.

Maintenance procedures

Periodic maintenance plan

After the 800km, 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	
►	Brake pad	--	Monthly	--	Check the brake disc thickness
	★ Battery	150 hours	Every 12 months	3000km	Check the terminal. Clean and test the battery if necessary.
	Engine oil pipes, gaskets and seals	150 hours	Every 12 months	3000km	Check for leakage
►	Air filter element	150 hours	Every 12 months	3000km	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	150 hours	Every 12 months	3000km	Clean the strainer or filter element, and replace the strainer or filter element when necessary.

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer	
►	Conventional lubrication	150 hours	Every 12 months	3000km	Lubricate all the oil filling points, cables, etc.
►	Front axle oil	150 hours	Every 12 months	3000km	Check the oil level and replace it every year if the specified hour or distance reading is not reached.
►	Rear axle oil	150 hours	Every 12 months	3000km	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	150 hours	Every 12 months	3000km	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	150 hours	Every 12 months	3000km	Inspect and clean the external surfaces. Cleaning shall be more frequent if the ATV is subjected to severe usage scenarios
	Steering system	150 hours	Every 12 months	3000km	Check and lubricate

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer (mile)	
	Steering system	150 hours	Every 12 months	3000km	Check and lubricate
▶	Front suspension	150 hours	Every 12 months	3000km	Lubricate and check the fasteners
▶	Rear suspension	150 hours	Every 12 months	3000km	Lubricate and check the fasteners
	Cooling system	150 hours	Every 12 months	3000km	Test the strength of the coolant and carry out pressure test for the system annually.
▶	Gear shifting	150 hours	Every 12 months	3000km	Check, lubricate and adjust if necessary.
▶ ■	Throttle valve body and throttle cable	150 hours	Every 12 months	3000km	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	150 hours	Every 12 months	3000km	Check and replace it when necessary, and contact the dealer for maintenance

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer	
■	CVT driving and driven wheels	150 hours	Every 12 months	3000km	Clean and check the pulley, replace the worn parts, and contact the dealer for maintenance
	Fuel filter element and fuel pipe	150 hours	Every 24 months	3000km	Check the line conditions, and replace the filter element and high-pressure fuel pipe every four years
	Cooling pipe	150 hours	--	3000km	Check the wiring and actual conditions
▶	★★ Valve clearance	150 hours	--	3000km	Check and adjust it when necessary, and contact the dealer for maintenance
●	Fuel system	150 hours	Every 12 months	3000km	Check the fuel tank, fuel tank cap, fuel pump and fuel pump relay
	Spark plug	150 hours	Every 2 years	3000km	Check, and replace it if worn or contaminated
■	Engine mounting bracket	150 hours	Annually	3000km	Check the conditions

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer	
▶	Electric circuit, fuse, connector, relay and cable	150 hours	Annually	3000km	Check the line for wear, ensure safety, and apply necessary non-conductive grease to connectors exposed to water, mud, etc.
▶ ■	Bearings of the ATV	150 hours	Annually	3000km	Check for noise and looseness, and replace it if necessary
▶	Seat belt	150 hours	Annually	3000km	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.
	Exhaust pipe and spark collector	150 hours	Annually	3000km	Check and clean the spark collector
	★ Coolant	150 hours	Every 2 years	6000km	If the hour or distance interval is not reached, change the coolant every two years.

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer	
▶	Brake fluid	150 hours	Every 2 years	3000km	Check the changes in the color of the brake fluid and replace the brake fluid every two years.
■	Engine mounting bracket	150 hours	Annually	3000km	Check the conditions
	Exhaust pipe and spark collector	150 hours	Annually	3000km	Check and clean the spark collector
▶	Electric circuit, fuse, connector, relay and cable	150 hours	Annually	3000km	Check the line for wear, ensure safety, and apply necessary non-conductive grease to connectors exposed to water, mud, etc.
▶ ■	Bearings of the ATV	150 hours	Annually	3000km	Check for noise and looseness, and replace it if necessary

Maintenance procedures

Maintenance item		Maintenance during the running-in period (take the first due item)			Remarks
		Hours	Schedule (month)	Kilometer (mile)	
▶	Seat belt	150 hours	Annually	3000km	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	150 hours	Every 2 years	3000km	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 Regulations

Check the engine oil level

1).Parking on a flat surface: Park the vehicle on a flat surface and ensure that it is in a parked state to ensure measurement accuracy.

2).Start the engine: Start the vehicle engine and let it idle for 30 seconds. This helps the oil circulate to the oil pan.

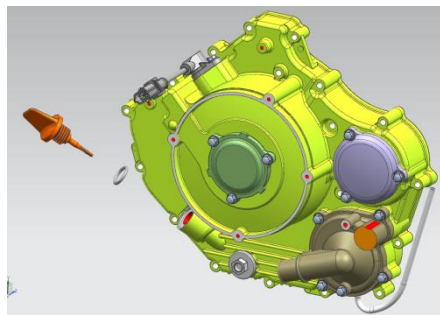
3).Idle and cooling: After idling for 30 seconds, turn off the engine. Then wait for a few minutes to allow the engine oil to flow back into the oil pan, while ensuring that the engine is adequately cooled.

4).Open the maintenance cover: Remove the expansion buckle and remove the maintenance cover.

5).Remove the oil dipstick: Pull out the oil dipstick from the oil dipstick hole and wipe it clean with a clean cloth or tissue.

6).Reinstall the oil dipstick: Insert the cleaned oil dipstick back into the oil dipstick hole, but do not fully tighten it.

7).Check oil level: Gently pull out the oil dipstick again and check the oil level. The oil level should be between the two markings on the scale, that is, between the upper and lower



Maintenance Regulations

limits. If the oil level is below the lower limit, it is necessary to add engine oil.

8).Reset: Insert the oil dipstick back into the oil dipstick hole and ensure it is securely tightened. Reinstall the engine maintenance cover and install the expansion buckle (check the expansion buckle and replace it promptly if damaged).

Change engine oil

1). Preparation and parking: Park the vehicle on a flat and hard surface, and tighten the handbrake to park.

2). Engine preheating: Start the engine and let it run for 2-3 minutes to preheat the oil. Turn off the engine and ensure that the vehicle is completely turned off.

3). Prepare to drain oil: Place a suitable oil pan under the oil drain port of the engine (it is recommended to use a graduated collection device) to collect the old oil that flows out.

4). Discharge old engine oil: Remove the magnetic oil drain bolt and its washer from the crankcase, and allow the old engine oil to flow into the oil pan. Confirm that the oil in the crankcase has been completely drained.

5). Check the oil dipstick: Remove the oil dipstick and wipe it clean with a clean cloth or tissue.

Maintenance Regulations

- 6). Replace the oil filter: Use a T-shaped socket to remove the three bolts on the oil filter cover. Carefully remove the oil filter cover. Check the condition of the O-ring and replace it with a new one if any damage is found. Apply a layer of fresh engine oil on the new O-ring to provide lubrication. Install a new oil filter element.
- 7). Reinstall the filter cover: Place the oil filter cover back in place and tighten the bolts with a T-shaped sleeve to the specified torque (10 N.m).
- 8). Clean the oil drain bolt: Clean the debris and dirt adsorbed on the magnetic oil drain bolt. If the gasket is damaged, replace it with a new gasket.
- 9). Reinstall the oil drain bolt: Reinstall the cleaned magnetic oil drain bolt and its washer onto the engine.
- 10). Wipe off the oil drain area: Use a clean and dry cloth to thoroughly dry the magnetic oil drain bolt and its surrounding area.
- 11). Refueling operation: Use a funnel and appropriate extension tube to add the recommended oil from the oil filling hole until the specified oil level is reached.
- 12). Check the oil level: Remove the oil dipstick again and check if the oil level is within the recommended range. If the engine oil is insufficient, please add an appropriate amount of new engine oil.

Maintenance Regulations

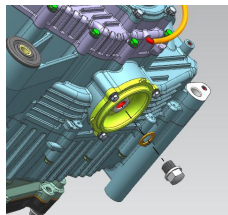
13). Completion and inspection: Start the engine and check for oil leaks or abnormal noise. After ensuring everything is normal, turn off the engine. After turning off the engine, immediately check whether there is any oil leakage in the engine and oil discharge area. Once any abnormalities are detected, please contact your dealer immediately.

WARNING

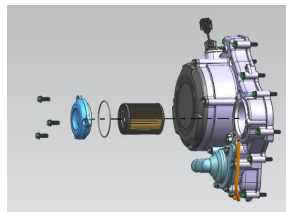
When changing the oil, it is necessary to ensure that the vehicle is turned off and parked.

ATTENTION

Oil filter cover bolt torque: 10N * m
Tightening torque of oil drain bolt: 25N * m



Oil drain bolt



Oil filter

Maintenance Regulations

Adjustment of engine throttle clearance

As the vehicle is used, the clearance between the intake and exhaust valves of the engine may change. This is because the valves and their transmission components will wear out during long-term operation, resulting in an increase or decrease in valve clearance. Ensure that these changes may have a range of negative impacts, including incorrect fuel/air supply or increased engine noise. To ensure the performance and safety of the vehicle, it is recommended that the owner regularly contact the dealer for maintenance and upkeep. The professional maintenance engineers of dealers will conduct corresponding inspections and adjustments based on the actual situation of the vehicle and the maintenance schedule to ensure that the vehicle is always in good condition.

Engine idling

This vehicle adopts an electronic fuel injection system, which has been professionally calibrated before leaving the factory to ensure optimal engine performance and fuel efficiency, including the setting of engine idle speed. Consumers should not attempt to adjust the engine idle speed on their own. As an important component of the fuel system, the throttle valve body requires professional knowledge and technology for regulation. Improper adjustment of the throttle valve body may lead to decreased engine performance, increased fuel consumption, and even engine failure.

Maintenance Regulations

To ensure the stability of engine idle, it is recommended to conduct regular inspections. If you find any abnormal conditions with the engine idling, such as instability, high or low, please contact your vehicle dealer or professional repair station immediately for professional inspection and maintenance.

	BD500AU	BD500AU-2
Engine intake valve clearance (cold engine)	0.8mm~0.12mm	
Engine exhaust valve clearance (cold engine)	0.12mm~0.18mm	
Engine idle speed (engine at operating temperature)	1500±140 rpm	

Front and rear axles

WARNING

To ensure cycling 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 detected, it is recommended that you immediately contact the dealer so that they can arrange for a professional inspection and timely repair of the vehicle.

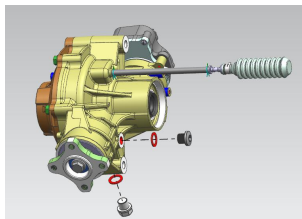
Maintenance Regulations

Front and rear axle oil replacement

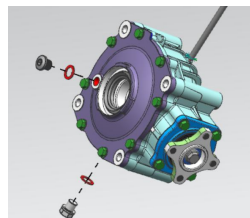
1. Place the vehicle on a level surface;
2. Place an oil pan under the bridge to catch used bridge oil;
3. Remove the refueling bolt and the oil drain bolt at the bottom of the rear axle and drain the bridge oil;
4. Install the oil drain bolt and tighten it to the specified torque; Tightening torque of oil drain bolt: 25N m
5. Add bridge oil; Front axle: 210ml Rear axle: 310ml
6. Install the refueling bolt and tighten it to the specified torque; Tightening torque of refueling bolt: 25N * m
7. Check if the bridge is leaking oil, and if oil leakage is found, investigate the cause.

WARNING

Prevent foreign objects from falling into the bridge body when adding bridge oil.



front axle



rear axle

Maintenance Regulations

Spark plug

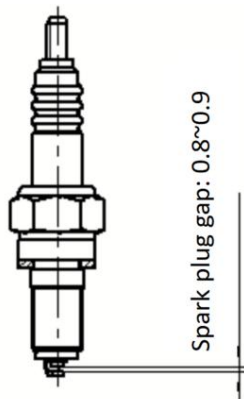
The spark plug is a core component of the engine, and its condition directly affects the performance of the engine.

For a normally running engine, the insulator around the center electrode of the spark plug usually presents an ideal color of moderate to light brown. However, if the electrodes experience excessive corrosion or accumulate too much carbon and other deposits, this is usually a signal to replace the spark plug. To ensure the continuous healthy operation of the engine, it is recommended to replace it with a specified new spark plug.

Overheating damage or accumulation of deposits may still cause engine failure and corrosion of spark plugs. Therefore, it is strongly recommended that car owners do not attempt to diagnose and determine the color of spark plugs or engine issues on their own, but instead entrust the vehicle to a professional dealer for repair. When removing and inspecting spark plugs, be sure to use the spark plug wrench in the accompanying tool kit to ensure accuracy and safety of operation.

ATTENTION

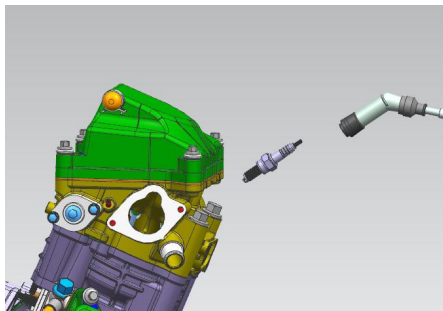
Spark plug model: CPR8EA
Spark plug disassembly tool:
16MM long socket



Maintenance Regulations

Check and install spark plugs

- 1). Use the spark plug wrench in the vehicle kit to disassemble the spark plug;
- 2). After disassembly, observe the surface color of the spark plug and use a thickness gauge to check the electrode gap. If necessary, Please adjust the spark plug gap or replace the spark plug;
- 3). Clean the surface of the gasket and wipe off the threads;
- 4). Install spark plugs and tighten to the specified torque: 20N.m.



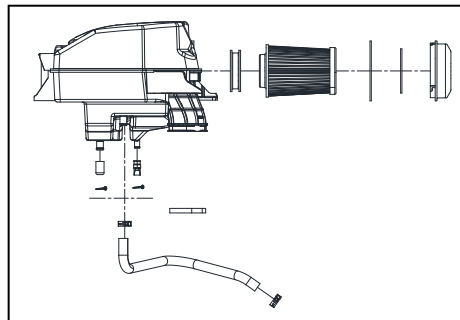
position of spark pug

Maintenance Regulations

Replace the air filter

There is an inspection hose at the bottom of the air filter chamber. When dust or water is visible inside the hose, empty the hose and thoroughly clean the air filter chamber. If the vehicle has been submerged in water, please contact your local dealer to check the moisture level in the engine crankcase. Air filter maintenance and repair.

- 1). Remove the seat cushion;
- 2). Remove the air filter maintenance shell;
- 3). Remove the upper shell of the air filter;
- 4). Remove the filter element from the air filter;
- 5). Check the filter element and ensure it is reusable, brush off accumulated dust; If necessary, replace and install a new filter element;
- 6). Install the pre filter element onto the air filter;
- 7). Apply a layer of lubricating oil film on the inner diameter of the rubber sealing ring of the air filter;
- 8). Reinstall the protective plate on the air filter.



WARNING

It is strictly prohibited to start the engine without installing or replacing a brand new air filter element.

Maintenance Regulations

Braking system

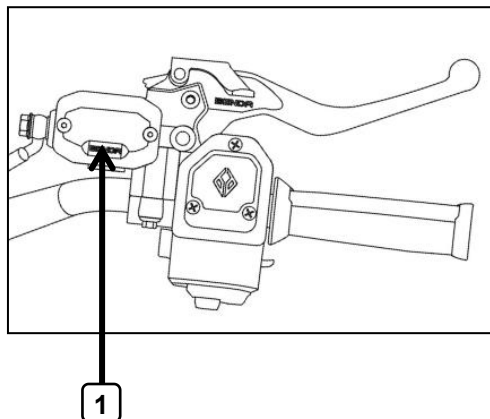
Brake fluid level inspection

Check if the brake fluid level **1** is between the upper and lower limit marks.

Insufficient brake fluid can cause air to enter the brake system, which may result in ineffective braking. Before riding, check that the brake fluid is above the minimum level and replenish it if necessary. The front brake fluid master pump oil cup is located on the right handlebar.

ATTENTION

The front brake fluid master pump oil cup is located on the right handlebar. The main brake fluid pump for the foot brake is located in the front cabin of the vehicle



Maintenance Regulations

WARNING

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

1. Proper parking of the vehicle: Park the vehicle on a flat surface, ensuring that the wheels are facing straight ahead and the direction is returned to the center position. This helps the brake fluid reservoir (main pump oil cup) to be level, allowing for accurate reading of the fluid level.

2. Check the quality and type of brake fluid: Only use DOT4 grade brake fluid recommended or specified by the manufacturer. Non specified quality brake fluid may accelerate the aging of rubber seals, leading to leaks and reduced performance of the braking system.

3. Avoid mixing brake fluid: Do not mix different types of brake fluid, as mixing may cause harmful chemical reactions that can affect braking effectiveness and even lead to brake system failure.

4. Precautions during refueling:

During the filling process, care should be taken to avoid water or other impurities from entering the brake fluid reservoir. Moisture can significantly lower the boiling point of brake fluid, increase the risk of air resistance, and seriously affect braking performance.

Use specialized filling tools or funnels to reduce the risk of splashing and contamination.

5. Clean up spilled brake fluid: Brake fluid is corrosive and may damage the paint surface or plastic parts of the vehicle. Once brake fluid splashes out, immediately clean the affected area thoroughly with water and soap.

Maintenance Regulations

WARNING

6. Response measures when the fluid level drops: If you find that the brake fluid level drops abnormally, please immediately contact a professional car dealer or repair station for inspection. The decrease in brake fluid may be caused by leaks, worn components, or other potential issues, and requires professional diagnosis and repair.

By following the above steps, you can ensure that your vehicle's braking system is in good working condition and improve driving safety.

Brake pad inspection

Check the condition and wear level of the brake pads:

It is crucial to regularly check the condition of brake pads to ensure driving safety. When conducting inspections, special attention should be paid to the two key indicators of brake pad thickness and brake disc thickness.

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

Maintenance Regulations

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

ATTENTION

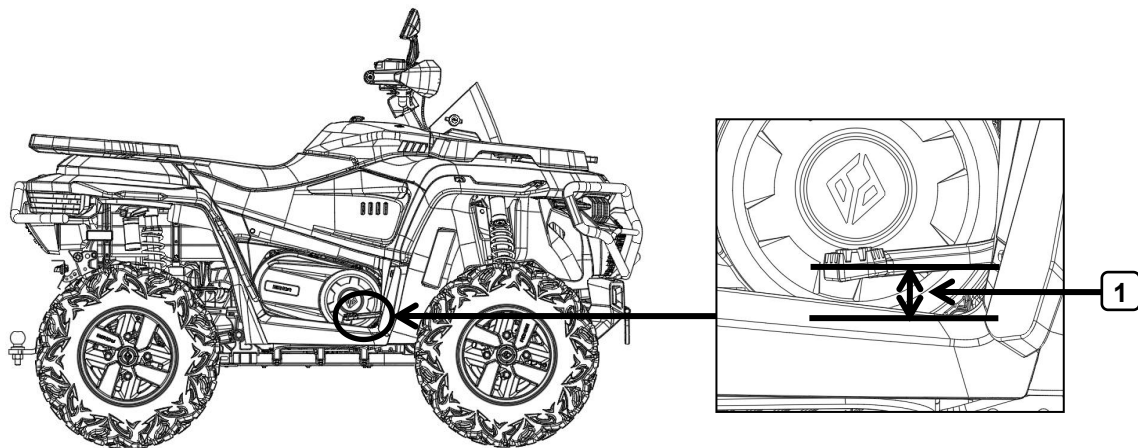
When checking the brake pads, it is necessary to remove the wheels in order to more thoroughly and accurately assess the wear of the brake pads. This step is to ensure direct contact with the brake pads and discs, and to use professional measuring tools for accurate thickness detection. After removing the wheels, the technician can remove dust and dirt from the brake system in order to observe the remaining thickness of the brake pads and the condition of the brake discs more clearly.

Once the brake pads or discs meet the above replacement standards, it is recommended to immediately contact an authorized dealer or professional repair center for replacement. Replacing brake accessories is a highly technical operation that requires professional knowledge and experience to ensure safety and quality. Incorrect replacement may lead to a decrease or failure of the braking system performance, and even cause safety accidents. Do not attempt to replace brake accessories on your own to avoid unnecessary losses and safety hazards.

Maintenance Regulations

Brake pedal height

To ensure driving comfort and the effectiveness of the braking system, the top of the brake pedal should be located exactly above the top of the foot pedal: ① 55-65mm. If it is found through inspection that the height of the brake pedal does not meet this standard range, it is recommended to immediately contact an authorized dealer or professional car repair service center for necessary adjustments. Correct adjustment can ensure that the position of the brake pedal is suitable for the driver's operating habits and can fully utilize the performance of the braking system, thereby ensuring driving safety.



Maintenance Regulations

DANGER

When carrying out vehicle maintenance, the following key steps must be strictly followed to ensure the safety and efficiency of the braking system:

1. Ensure smooth braking operation and precise free travel: Ensure smooth and unobstructed operation of the brake pedal, and adjust the free travel (i.e. the distance the pedal can move freely before being fully depressed) to the standard range specified by the manufacturer to ensure that the braking response is both rapid and not overly sensitive.
2. Prevent brake drag phenomenon: Check and confirm that the braking system will not unnecessarily apply braking force while the vehicle is in motion, i.e. eliminate brake drag phenomenon.
3. Thoroughly eliminate air from the brake system: After replacing the brake fluid or performing any repairs that may affect the brake hydraulic system, it is necessary to ensure that all air is completely expelled. Residual air can cause brake failure or performance degradation.
4. Professional replacement of brake components: Given the importance of the braking system for driving safety, replacing any brake components such as brake pads, brake discs, or hydraulic components requires professional knowledge and skills. It is strongly recommended that these operations be carried out by authorized dealers or qualified maintenance technicians to ensure the compatibility of components, accuracy of installation, and overall performance of the system.

Maintenance Regulations

Brake light switch

If encountering a brake light malfunction, the first thing to check is whether the switch components and connecting cables of the brake light have been installed correctly and are not damaged. If the brake lights still cannot display normally after self inspection, it is recommended to immediately contact a local authorized dealer or professional car repair center for further troubleshooting and repair. This can ensure that the brake light system quickly returns to normal operation, ensuring driving safety.

Tire disassembly and installation

When using a jack for vehicle maintenance, especially when replacing wheels, please follow the following detailed steps to ensure safe and effective operation:

1. Preparation work:

- Ensure that the vehicle is parked on a flat and stable surface, away from traffic flow. Tighten the handbrake and place the gearbox in park to prevent the vehicle from moving during operation.
- Prepare the necessary tools and spare parts, including jacks, wrenches, wheel bolt sockets, new tires (or repaired tires).

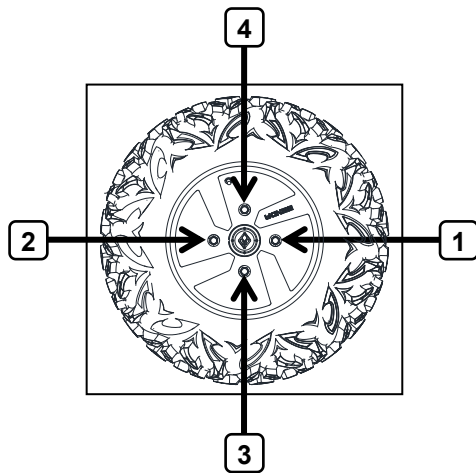
Maintenance Regulations

2. Use a jack to lift the vehicle:

- Ensure that the jack is in good and stable contact with the bottom of the vehicle.
- Slowly operate the jack handle and steadily raise the vehicle to a sufficient height so that the wheels can be easily removed.

3. Remove the wheel bolts:

- Use a wheel bolt socket and wrench to loosen all 4 wheel nuts in order of **1** **2** **3** **4** , but do not completely remove them.
- After the wheels become slightly loose, completely unscrew all bolts and place them properly to prevent loss.



4. Remove the wheels:

- Gently remove the wheel from the hub. If the wheel is stuck tightly, you can gently tap the edge of the tire to help it loosen.
- Check for abnormal wear or damage to the wheel hub and brake system, and if necessary, perform corresponding repairs.

Maintenance Regulations

5. Replace:

- Align the new tire (or repaired tire) with the wheel hub, ensuring that the valve position of the tire is correct.
- Carefully install the wheel back onto the hub, ensuring that there are no foreign objects between the tire and the hub.
- Reinstall and tighten all wheel bolts, following the torque specifications recommended by the vehicle manufacturer. Use cross tightening (i.e. diagonal tightening) to ensure that the bolts are evenly stressed.

6. Lowering the vehicle:

- Slowly lower the vehicle to the ground using a jack handle, while ensuring that the wheels are fully in contact with the ground.
- Use the wrench again to check if the wheel bolts have been fully tightened.
- Wheel nut torque: $70\text{N} \cdot \text{m} \sim 80\text{N} \cdot \text{m}$

7. Clean up the work site:

- Retrieve the jack and other tools, and dispose of the old tire properly (such as recycling or using it as a spare tire).
- Check for any missing tools or components around the vehicle to ensure there are no safety hazards.

Maintenance Regulations

8. Test driving:

- Conduct short distance test driving within a safe area to check the performance of new tires and the stability of the vehicle.
- Pay attention to any abnormal noise or vibration and be prepared to take necessary measures at any time.
- By following the above steps, you can safely complete the wheel replacement work. If you encounter any difficulties or uncertainties during the operation, please be sure to contact a professional car repair technician for assistance.

ATTENTION
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When installing the cone nut, the cone surface should face the wheel.

Tire inspection

1. Tire visual inspection

- Appearance inspection: Before using the pressure gauge, conduct a preliminary visual inspection of the tires. Observe the surface of the tire for any damage, cracks, foreign objects embedded, or obvious signs of uneven wear.

Maintenance Regulations

2. Measure the front and rear wheel air pressure

- Position confirmation: Ensure that the front wheels are in a stable state and tightly connect the air nozzle interface **2** of the pressure gauge to the tire air nozzle.
- Reading record: Press the button on the pressure gauge to read and record the current pressure value.

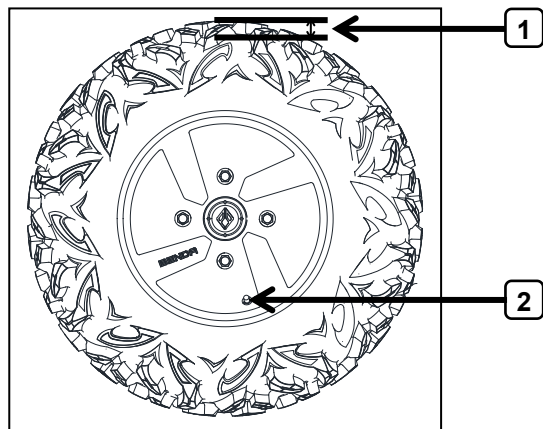
3. Check the sealing of the air nozzle

After measuring the two rounds of air pressure, gently pull out the pressure gauge and observe if there is any air leakage at the nozzle. If there is any air leakage, it may be due to poor sealing of the air nozzle and needs to be replaced in a timely manner.

⚠ATTENTION

Suggested front and rear tire pressure:
48.3kPa(or 7psi)

Minimum tire tread depth: 3.0mm



Maintenance Regulations

4. Adjust tire pressure to standard

Aeration or deflation: Compare the measured tire pressure value with the recommended tire pressure standard. If necessary, use an inflator to inflate the tire or use a deflation needle to fine tune until the recommended tire pressure value is reached or approached.

Battery maintenance and upkeep

Long term parking treatment

If the vehicle is planned to be parked for a month or longer without use, it is recommended to remove the battery and store it properly in a cool, dry, and well ventilated place. Before reinstalling the battery back into the vehicle, make sure it is fully charged to maintain optimal performance.

Charging requirements:

For low maintenance batteries, it is recommended to use a specialized constant voltage/current charger for charging to ensure a stable charging process without damaging the internal structure of the battery. Using a regular battery charger may accelerate battery aging and shorten its lifespan due to mismatched charging parameters.

Maintenance Regulations

Cleaning and maintenance

This car is equipped with a maintenance free battery located under the front access cover. Therefore, there is no need to check the electrolyte or add distilled water to the battery. If corrosion is found at the battery connection, a suitable amount of baking soda mixed with water can be used to form a solution and gently wipe the corroded area. Baking soda has the ability to neutralize acidic substances, effectively remove corrosive substances, and restore good conductivity at connections. But please note that after cleaning, the connection should be thoroughly wiped dry to avoid residual moisture causing new problems. If leakage is found in the battery during use, to ensure driving safety and battery performance is not affected, it is recommended to immediately contact an authorized dealer for troubleshooting and repair.

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

Battery specification: 12V 32Ah

Maintenance Regulations

WARNING

Do not dismantle the battery cell sealing cover at will, as it may damage the battery.

DANGER

Avoid contact of electrolyte with skin, eyes, or clothing. Protect your eyes when working near batteries. Avoid contact with children

Emergency measures:

In case of accidental contact with electrolyte, external: wash with clean water. Internal: Seek medical attention immediately. Eyes: Rinse with clean water for 15 minutes, then seek medical attention immediately.

Keep the battery away from sparks, flames, smoke, or other ignition sources. Ventilation is necessary when charging or using in enclosed areas.

Maintenance Regulations

WARNING

Precautions for installation and disassembly:

During installation: Please ensure that the positive and negative cables of the battery are connected accurately. The red line represents the positive pole (+) and should be connected to the positive pole of the battery; The black line represents the negative pole (-) and should be connected to the negative pole of the battery. During the connection process, priority should be given to connecting the positive wire to reduce the risk of accidental short circuits.

When disassembling: To avoid damage caused by short circuits, the negative wire (black wire) should be disconnected first, and then the positive wire (red wire) should be disconnected when disassembling the battery. Ensure that the circuit remains disconnected and insulated throughout the entire process.

Cooling system

Coolant level inspection and addition:

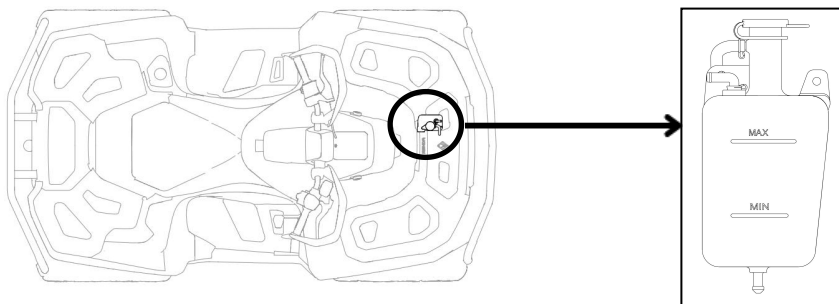
- 1). Ensure the vehicle is parked horizontally: Park the vehicle on a flat surface, ensuring that it is level in all directions, so that the most accurate results can be obtained when checking the fluid level.
- 2). Find the location of the auxiliary water tank: Open the front upper maintenance cover, and the auxiliary water tank is located on the left side of the front.

Maintenance Regulations

3). Check the coolant level: Check the coolant level in the auxiliary water tank. Please note that the coolant level may vary due to the operating temperature of the engine. Make sure to check after the engine has cooled down.

4). Confirm the liquid level range: check the scale line on the auxiliary water tank. The coolant level should be between the highest and lowest scale lines. If the liquid level is too low, you need to add coolant.

5). Add coolant: When the coolant level reaches or falls below the minimum mark, carefully remove the auxiliary water tank cover and slowly add coolant until the level reaches the maximum mark. Then, reinstall the auxiliary water tank cover and any external cover plates.



Maintenance Regulations

Replace the coolant

1. Drain the coolant

Ensure that the vehicle is parked on a level surface and that the engine is completely cooled to prevent burns.

1). Remove the front maintenance cover plate.

2). Remove radiator cap: Carefully unscrew the radiator cap slowly to avoid sudden coolant spray. Remove the coolant auxiliary water tank cover: Unscrew the auxiliary water tank cover and place it aside.

3). Remove the maintenance cover and left cover on the left side of the engine: As needed, remove the maintenance cover and left cover on the left side of the engine for better access to the cooling system.

4). Container placement: Place a suitable container under the drain bolt at the bottom of the engine to collect the discharged coolant.

5). Remove the drain bolt and washer: Use appropriate tools to remove the drain bolt and washer, allowing the coolant to flow into the container below.

6). Drain coolant: Allow the coolant to be completely drained.

7). Disconnect the water pipe: Disconnect the coolant pipe from the auxiliary water tank to ensure that all remaining coolant is drained.

Maintenance Regulations

8). Flush the cooling system: Use clean tap water to flush the entire cooling system through the hole of the previously removed drain bolt until the discharged water is clear.

2. Add coolant

1). Check the components of the coolant system: Carefully inspect whether the coolant drain bolt and its washer are damaged. Once any damaged components are found, they should be replaced with new ones immediately.

2). Preliminary installation of drain bolt: Reinstall the new drain bolt to its original position, but it is not necessary to fully tighten it at this time.

3). Restore the water pipe of the auxiliary water tank: Reinstall the water pipe of the auxiliary water tank and ensure that it is firmly connected.

4). Add coolant: Add coolant to the upper limit of the filling port.

5). Discharge and circulation of coolant: First, loosen the drain bolt to allow the coolant to drain naturally until there are no bubbles in the discharged liquid.

6). Tighten the drain bolt: Use appropriate tools to tighten the drain bolt to the specified torque (10 N.m).

7). Recharge coolant: Due to the previous discharge process, the coolant may have decreased and needs to be refilled to the upper limit.

8). Install radiator cap: Install the radiator cap correctly in its position.

Maintenance Regulations

- 9). Idle running and inspection of engine: Start the engine and let it run at idle for a few minutes, then turn it off. 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 stabilizes and no longer changes.
- 10). Add coolant to the auxiliary water tank: Add coolant to the auxiliary water tank until the highest mark is reached.
- 11). Install the auxiliary water tank cover: Install the auxiliary water tank cover correctly in its position.
- 12). Check for leaks in the cooling system: Start the engine and let it run for a period of time before shutting it down. After cooling, carefully inspect the entire cooling system for any signs of leakage. If any leakage is found, please immediately contact an authorized dealer for inspection and repair.
- 13). Restore the engine peripheral cover plate: Reinstall the maintenance cover plate on the left side of the engine, the left side cover of the engine, and the front maintenance cover plate, ensuring that all components are installed in place and tightened.

Maintenance Regulations

ATTENTION

It is recommended to use high-quality ethylene glycol antifreeze containing corrosion inhibitors, suitable for aluminum engines.

Coolant antifreeze level: -35 °C

Total coolant capacity (excluding auxiliary water tank): 3.5L

Secondary water tank capacity: 0.45~0.56L

DANGER

When replacing different brands or types of coolant, to ensure engine performance and safety, please be sure to contact your vehicle dealer for professional assistance in thoroughly draining and removing residual coolant. Mixing different coolants may cause engine failure and affect the normal operation of the vehicle. Please follow professional guidance to ensure that your car receives the best maintenance and upkeep.

Fault diagnosis

This chapter on fault diagnosis is for reference only. If there are any problems, please contact the dealer immediately.

Engine Failure (EFI)

EFI malfunction indicator, especially in the automotive field, usually refers to the Engine Fault Indicator, sometimes abbreviated as EFI PART indicator or EFI light. This indicator light plays an important role on the vehicle dashboard, used to alert the driver that there may be a malfunction in the engine system. The following is a detailed analysis of EFI fault indicator lights:

Meaning of indicator lights

When the EFI malfunction indicator light is on, it indicates that the Engine Management System (EMS) has detected an abnormality or potential problem during engine operation. This may be caused by various reasons such as sensor failure, actuator failure, wiring issues, or mechanical failure of the engine itself.

Possible reasons

1. Sensor malfunction: Malfunctions in oxygen sensors, mass air flow meters, crankshaft position sensors, etc. can affect the engine management system's accurate judgment of the engine's operating status.

Fault diagnosis

2. Malfunction of actuators, such as ignition coils, fuel injectors, throttle actuators, etc., can cause the engine to malfunction.
3. Line issues: Short circuits, open circuits, or poor contacts in the engine management system's wiring can affect signal transmission and command execution.
4. Engine mechanical failures, such as insufficient cylinder pressure, valve malfunctions, piston ring wear, etc., can affect the performance and emissions of the engine.

Response measures

1. When the EFI malfunction indicator light is on, the driver should take the vehicle to a professional dealership for inspection and repair as soon as possible.
2. During the driving process, if there are no obvious abnormal phenomena (such as weak acceleration, shaking, abnormal noise, etc.), you can drive cautiously to the repair shop. But if there is any abnormal phenomenon in the vehicle, it should be stopped immediately and help should be sought.
3. Maintenance technicians will use professional diagnostic equipment to conduct a comprehensive inspection of the engine management system, in order to determine the specific cause and location of the malfunction, and carry out corresponding repairs and replacements.

Fault diagnosis

ATTENTION

1. The illumination of the EFI malfunction indicator light does not mean that the engine will immediately stop working, but the driver should take measures as soon as possible to avoid possible expansion and damage of the malfunction.
2. In daily use, drivers should regularly maintain the vehicle, such as changing the oil, cleaning the throttle valve, etc., to reduce the occurrence of engine failures.

The EFI malfunction indicator light is an important indicator light on the vehicle dashboard, used to alert the driver of possible engine system faults. When the indicator light is on, the driver should take the vehicle to a professional dealer repair shop for inspection and maintenance as soon as possible to ensure the safety and performance of the vehicle.

Engine system fault diagnosis and solutions

Engine fails to start

Faulty component	Possible Cause	Solution
Operating system	Startup operation steps incorrect	Refer to the operating steps of the startup process
Electrical system	Insufficient battery power	Check if the battery is fully charged, and if it is low, promptly charge or replace the battery;

Fault diagnosis

Electrical system	The electrical system fuse is blown	Check if all relevant fuses are in good condition. If damaged, replace the blown fuse
	Abnormal connection of battery terminals	Check the connection of the battery terminals for looseness, rust, damage, etc. If so, make corresponding adjustments and measure the conductivity status to restore the connection of the battery terminals and ensure good contact
	Abnormal connection of battery terminals	Check the connection of the battery terminals for looseness, rust, damage, etc. If so, make corresponding adjustments and measure the conductivity status to restore the connection of the battery terminals and ensure good contact
	Ignition switch malfunction	Check if the ignition switch is damaged or has poor contact, causing the circuit to fail to close. If necessary, replace the ignition switch or repair the faulty wiring harness;

Fault diagnosis

Electrical system	Fault in starting relay or electromagnetic coil	Check for open circuit or burnt contacts in the wireless coil of the starting relay, open circuit in the electromagnetic coil, or poor contact in the contact plate. If found, replace the damaged relay or electromagnetic coil;
	Abnormal line connection	Check the connection status of each connector in the circuit for looseness, rust, open circuit, open circuit or other damage. If so, adjust, repair or replace the relevant faulty wiring harness;
Fuel system	Fuel tank exhausted	There is too little fuel in the fuel tank to meet the engine start-up requirements. Please replenish the fuel to the specified level;
	Fuel water ingress/use of non recommended gasoline	Check for water ingress inside the fuel tank, and if so, replace it with gasoline of grade 95 or higher;
	Fuel pump malfunction	Check if the fuel pump is damaged or has insufficient pressure to deliver fuel to the engine. If so, replace the fuel pump;
	Fuel filter blockage	Check if the fuel filter is clogged, which may affect the fuel supply. If so, clean or replace the fuel filter element;

Fault diagnosis

Fuel system	Fuel injector malfunction	Check whether the fuel injector is blocked or damaged, which may cause the fuel to not be injected correctly. If so, please clean or replace the fuel injector.
	Fuel pipeline malfunction	Check for any damage, leakage, or blockage in the fuel pipeline that may affect fuel supply. If so, clean or replace the fuel pipeline;
	Related electrical circuit faults	Use a decoding device to read relevant fault codes, and check whether the relevant control circuits and power supply circuits are connected normally for faults such as open circuits or short circuits. If so, please adjust, repair or replace the relevant wiring harness;
Ignition system	Spark plug malfunction	Check the spark plug for damage, carbon buildup, or excessive clearance that may cause poor ignition. If so, replace the spark plug;
	Ignition coil malfunction	Check if the ignition coil is damaged and unable to generate sufficient voltage to ignite the spark plug. If so, replace the ignition coil;

Fault diagnosis

Ignition system	Ignition high-voltage circuit fault	Check whether the ignition high-voltage cylinder line and spark plug cap are damaged or aged, measure the resistance value to determine if there is an open circuit, and if so, replace the ignition high-voltage line or spark plug cap;
	Related electrical circuit faults	Use a decoding device to read relevant fault codes, and check whether the relevant control circuits and power supply circuits are connected normally for faults such as open circuits or short circuits. If so, please adjust, repair or replace the relevant wiring harness;
Mechanical failure	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 is deformed, whether the valve spring is malfunctioning, whether the valve or valve rocker arm is deformed, and whether there is abnormal wear, which causes the cylinder pressure to not meet the starting conditions. If so, adjust or replace the faulty components of the exhaust valve and measure the cylinder pressure;

Fault diagnosis

Mechanical failure	Valve timing malfunction	Check whether the marked positions of the engine valve timing are correct and whether there is any gear jumping phenomenon. If so, adjust or replace the timing mechanism;
	Cylinder, piston, piston ring malfunction	Check for scratches on the inner wall of the cylinder, damaged or abnormally worn pistons, and stuck piston rings. If found, adjust or replace the relevant faulty components;
	Air intake pipeline malfunction	Check for aging, damage, or cracks in the intake manifold and manifold, as well as any loose connections that may cause abnormal effects of intake air leakage. If so, adjust and replace the relevant faulty components;

Engine loses power

Faulty component	Possible Cause	Solution
Fuel system (insufficient fuel supply)	Insufficient fuel supply pressure	Check if there is a pressure shortage fault in the fuel pump, which may cause insufficient fuel supply to the engine; If necessary, please adjust and replace the relevant faulty components;

Fault diagnosis

Fuel system (insufficient fuel supply)	Fuel filter blockage fault	Check for blockages in the fuel filter that may affect the smooth flow of fuel; If necessary, please adjust and replace the relevant faulty components;
	Fuel injector malfunction	Check for blockages in the fuel injectors that may cause uneven or insufficient fuel injection; If necessary, please adjust and replace the relevant faulty components;
	Abnormal concentration fault of mixer	Check and read the engine data stream to see if there are any abnormal changes in the engine air-fuel ratio data, such as poor oil flow or blocked intake, which can cause the mixture to be too lean or too rich, affecting combustion efficiency; If necessary, please adjust and replace the relevant faulty components;
Fuel system	Related electrical circuit faults	Use a decoding device to read relevant fault codes, and check whether the relevant control circuits and power supply circuits are connected normally for faults such as open circuits or short circuits. If so, please adjust, repair or replace the relevant wiring harness;

Fault diagnosis

Air intake system	The air filter is dirty and clogged	Check if the air filter is clogged. The air filter has been used for a long time without replacement or cleaning, which has caused air intake obstruction and affected engine power output; If necessary, please adjust and replace the relevant faulty components;
	Air leakage fault in the intake duct	Check for aging, damage, and air leakage in the intake duct. The intake duct is not tightly sealed, causing air to enter the engine without passing through the air flow meter, which affects the actual air-fuel ratio and combustion efficiency; If necessary, please adjust and replace the relevant faulty components;
	Fault in air flow meter and related electrical circuits	Use a decoding device to read relevant fault codes and check whether the relevant control circuits and power supply circuits are connected normally for faults such as open circuits or short circuits. If so, please adjust, repair or replace the relevant wiring harness or components;

Fault diagnosis

Exhaust system	Exhaust pipe blockage	Check whether there is excessive carbon buildup or foreign object blockage inside the exhaust pipe, which prevents the smooth discharge of exhaust gas and affects engine performance; If necessary, please adjust and replace the relevant faulty components;
	Oxygen sensor malfunction	Use a decoder to read the engine data stream and check if the oxygen sensor is working properly; The oxygen sensor is responsible for monitoring the oxygen content in the exhaust to adjust the air-fuel ratio. If the oxygen sensor malfunctions, it will cause an imbalance in air-fuel ratio, affecting engine power; If necessary, please adjust, repair or replace the relevant wiring harness or components;

Fault diagnosis

Mechanical failure	Insufficient cylinder pressure	Use a cylinder pressure gauge to check the cylinder pressure. If there are any abnormalities, check the sealing status of the cylinder gasket and whether there is any erosion; Whether the valve seat ring is burned, unsealed or detached; Is the valve spring too soft and not functioning properly; The piston ring is stuck or aligned; Whether the clearance between the piston and cylinder is too large, which leads to a decrease in cylinder pressure and affects engine power; If necessary, please adjust, repair or replace the relevant components;
	Engine temperature too high	Check if the engine cooling water temperature is normal. If it is abnormal, check if the water pump and thermostat are working properly; Is the belt slipping; Excessive scaling in the cooling system can lead to high engine temperature, which in turn affects engine performance; If necessary, please adjust, repair or replace the relevant wiring harness or components;

Fault diagnosis

Mechanical failure	Engine components aging or damaged	Aging or damage to components such as crankshafts, connecting rods, and valves can lead to increased internal friction and power loss in the engine; If necessary, please adjust, repair or replace the relevant wiring harness or components;
Ignition system	Valve timing malfunction	Check whether the marked positions of the engine valve timing are correct and whether there is any gear jumping phenomenon. If so, adjust or replace the timing mechanism;
	Spark plug malfunction	Check whether the spark plug has excessive clearance, aging, or excessive carbon buildup, which may cause poor ignition; If necessary, please adjust, repair or replace the relevant wiring harness or components;
	Ignition coil malfunction	Conduct ignition experiments, observe the spark state of the spark plug and measure the ignition voltage to determine whether sufficient voltage can be generated to ignite the mixture; If necessary, please adjust, repair or replace the relevant wiring harness or components;

Fault diagnosis

Ignition system	Ignition timing	Read the data stream to check if the engine ignition timing is correct. If the ignition time is too late or the contact gap is too small or too large, it will affect the ignition timing; If necessary, please adjust, repair or replace the relevant wiring harness or components;
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Fault diagnosis

This chapter on fault diagnosis is for reference only. If there are any problems, please contact the dealer immediately.

Electronic power steering malfunction (EPS)

The electronic power steering (EPS) malfunction indicator light is an important indicator light on the vehicle dashboard, used to alert the driver of possible faults in the electric power steering system.

Meaning of indicator lights

When the EPS malfunction indicator light is on, it indicates that there is a problem with the vehicle's electronic power steering system. This may be caused by malfunctions in sensors, controllers, mechanical components of the power steering pump, or insufficient steering fluid.

Symptom manifestations

When the EPS malfunction indicator light is on, the vehicle may experience symptoms such as heavy steering, abnormal steering, shaking of the steering handle, and poor centering ability of the steering handle. These symptoms can affect the handling and safety of the vehicle.

Response measures

- If the EPS malfunction indicator light is on, the driver should immediately stop the vehicle and check if there are any abnormalities in the steering system. If obvious problems are found with the steering system, such as heavy steering or inability to turn,

Fault diagnosis

professional assistance should be sought immediately.

- During driving, if the EPS malfunction indicator light suddenly lights up and accompanied by symptoms such as difficulty turning, the driver should drive cautiously and take the vehicle to the dealer for inspection and repair as soon as possible.

ATTENTION

The illumination of the EPS malfunction indicator light does not immediately mean that the vehicle cannot be driven, but the driver should take measures as soon as possible to avoid possible expansion and damage of the malfunction.

In daily use, drivers should regularly check the EPS system to ensure its normal operation.

In summary, the EPS fault indicator light is an important indicator light on the vehicle dashboard, used to alert the driver of possible faults in the electronic power steering system. When the indicator light is on, the driver should immediately stop the vehicle and check if there are any abnormalities in the steering system. At the same time, the vehicle should be taken to a professional dealer repair shop for inspection and maintenance as soon as possible.

Fault diagnosis

Steering system malfunction diagnosis and solutions

Electronic power steering failure

Possible Cause	Solution
Power and battery failure: Insufficient battery power or battery damage may cause the electric power steering system to malfunction;	Check the power and battery: Ensure that the battery voltage is normal and the battery is fully charged. If the battery is low, it should be charged or replaced in a timely manner;
Control circuit and related components malfunction: Loose, loose, short circuited, or blown fuses in the control circuit connectors can cause the electric power steering system to malfunction;	Check if the control circuit and related components are functioning properly: Check if the relevant connectors are installed properly, and verify if the measurement related circuits and fuses are connected properly;
Power assisted motor malfunction: The power assist motor is a key component of the electronic power steering system. If the motor malfunctions (such as damage, overheating, etc.), it will cause the power assist to fail;	Check the power assist motor: Check if the power assist motor is working properly and if there are any abnormal sounds or overheating. If there is any abnormality, the power assist motor should be replaced in a timely manner;

Fault diagnosis

Possible Cause	Solution
Control system malfunction: If components such as sensors, actuators, and controllers in the control system fail, it will affect the normal control of the power steering system;	Check the control system: Use diagnostic tools to check if the sensors, actuators, controllers, and other components in the control system are working properly. If there is a problem, it should be repaired or replaced in a timely manner;
Steering gear malfunction: If the gears, bearings, and other components of the steering gear are worn or damaged, it can cause a decrease or failure of the steering assistance;	Check the steering gear: Check whether the gears, bearings, and other components of the steering gear are worn or damaged. If there is wear or damage, relevant components should be replaced in a timely manner;
Software malfunction: Adopting an electronic control assisted steering system, if there is a software malfunction, it may also cause the power steering to fail;	Check software: If you suspect that the power steering failure is caused by a software malfunction, you can try to diagnose and upgrade the relevant software with both vehicles;

Fault diagnosis

Unbalanced power steering

Possible Cause	Solution
Inconsistent tire pressure: Inconsistent front tire pressure will directly affect the balance of steering assistance;	Adjust tire pressure: Use a tire pressure gauge to check the front tire pressure and adjust it to the standard value;
Front wheel hub bearing issue: Tight and loose front wheel hub bearings can also cause uneven steering assistance;	Check and repair the front wheel hub bearings: If necessary, go to authorized dealerships for dismantling, inspection, and adjustment;
Front wheel brake sticking fault: One side jamming of the front axle brake cylinder can also cause uneven steering assistance;	Check and repair the front axle brake system: If necessary, go to authorized dealerships for dismantling, inspection, and adjustment;
Electronic power assist system malfunction: If it is an electronic power assist system, the steering angle sensor may be damaged or improperly installed, causing the driver's steering instructions to be unable to be effectively transmitted to the power assist computer, resulting in uneven left and right power assistance;	Check the electronic power assist system: -Check whether the steering angle sensor is damaged or improperly installed, and clean it if there is dust; If the sensor malfunctions, it needs to be replaced. -Check the thermal stability and data accuracy of the steering computer CPU, and replace or reprogram it if necessary. -If there is no fault code but the steering angle does not match, the steering angle matching operation can be performed.

Fault diagnosis

Swinging during turning

Possible Cause	Solution
Loose steering mechanism: The wear and looseness of the various components of the steering mechanism, excessive wear of the ball joints, and large clearances can lead to a weakened damping effect of the steering transmission system, increased vibration displacement, and reduced front wheel stability effect, thereby causing the steering wheel to swing;	Check the steering mechanism: Inspect and tighten the various components of the steering mechanism to ensure that they are not loose or worn. If severely worn components are found, they should be replaced in a timely manner;
Suspension system malfunction: Aging or damage of suspension system: If the springs, shock absorbers and other components of the suspension system age or are damaged, it will cause a decrease in the stability of the vehicle during driving, affect the stability of steering, and make the vehicle body sensitive to shaking. It takes a long time to level off the shaking; Aging and looseness of suspension components may also cause the vehicle to deviate.	Check the suspension system: Inspect and adjust the various components of the suspension system to ensure its proper functioning. If any malfunction or wear is found in the suspension system, it should be repaired or replaced in a timely manner;

Fault diagnosis

Possible Cause	Solution
Abnormal front wheel alignment: If the front wheel alignment parameters such as caster angle, camber angle, camber angle, and toe in angle are incorrect, it can cause unstable factors in the front wheels during driving, leading to steering wheel sway;	Check the front wheel alignment: Use professional equipment to check and adjust the front wheel alignment parameters to ensure accurate front wheel alignment;
Tire factors: -Uneven tire wear: The wear of tires directly affects the balance and grip of the wheels, thereby affecting the stability of steering. -Abnormal tire pressure: High or low tire pressure can cause a decrease in the stability of the tire during driving, leading to the swinging of the steering wheel.	Check the condition of the tires: Check the wear, pressure, and installation of the tires for correctness. If problems such as uneven tire wear, insufficient air pressure, or improper installation are found, they should be dealt with in a timely manner; Check the balance of the front wheels: Use a tire balancer to perform a mass balance check on the front wheels. If an imbalance is found, timely tire rotation or installation of balance weights should be carried out

Fault diagnosis

Possible Cause	Solution
System software malfunction: Vehicle software version too old: Sometimes the software version of the vehicle is too old, which may also cause abnormal swinging of the steering wheel. -Malfunction of the steering wheel sensor: Malfunction of the steering wheel sensor may also cause the steering wheel to swing or get stuck.	Upgrade software or replace components: If the steering swing problem is caused by an outdated vehicle software version or component failure, you can contact the dealer for software upgrade or replacement of relevant components
Vehicle loading situation: Uneven or overloaded vehicle loading: This increases the difficulty of stabilizing the front wheels, causing the steering wheel to sway during driving. Especially when the rear wheels are overloaded or the rear tire pressure is insufficient, it is easy to cause excessive lateral deviation of the rear axle when encountering uneven road surfaces, leading to left and right deviation of the driving direction of the car;	Pay attention to vehicle loading: Ensure that the vehicle is loaded evenly and does not exceed the specified load limit. Reduce rear wheel overload or ensure sufficient rear tire pressure;

Fault diagnosis

Insufficient electrical steering power

Possible Cause	Solution
*Electronic power assist system issue: -Power or circuit failure: The electronic power assist system relies on the power supply and circuit to function properly. If the power supply is insufficient or the circuit malfunctions, it can lead to weakened or ineffective power assistance; -Sensor malfunction: The sensors in the electronic power assist system are responsible for monitoring information such as steering angle and vehicle speed. If the sensors malfunction, it will cause the system to be unable to accurately determine the power assist demand; -Control unit failure: The control unit is the core component of the electronic power assist system, responsible for processing sensor signals and controlling the operation of the power assist motor. If the control unit fails, it will cause a decrease in the power assist effect;	Check and repair the electronic power assist system: For electronic power assist systems, the power supply and circuit should be checked for normal operation, and any malfunctions should be promptly repaired. At the same time, check whether the sensors and control units are working properly, and replace the faulty components if necessary

Fault diagnosis

Possible Cause	Solution
Other factors: -Vehicle suspension system malfunction: The status of the suspension system can also affect the effectiveness of steering assistance, such as shock absorber failure, aging suspension springs, etc. -Uneven or overloaded vehicle loading: Uneven or overloaded vehicle loading can increase the load on the front wheels, thereby reducing the effectiveness of steering assistance. -Abnormal front wheel alignment parameters: Improper settings of positioning parameters such as front wheel toe in and camber angle can also affect the effectiveness of steering assistance.	Check and adjust the vehicle suspension system: -Check whether the shock absorbers, suspension springs, and other components of the suspension system are working properly. If they are damaged or aged, they should be replaced in a timely manner. At the same time, check if the front wheel alignment parameters are set correctly, and adjust them promptly if there are any abnormalities. Other maintenance measures: -Regularly check whether the components of the steering system are loose or worn, and if necessary, tighten or replace them in a timely manner. At the same time, pay attention to keeping the vehicle clean and tidy, avoiding dust and impurities from entering the steering system and affecting the power assist effect.

Fault diagnosis

Abnormal noise from steering system

Possible Cause	Solution
Friction between plastic parts: -The directional lever 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 harder and the friction sound is more pronounced;	Check and adjust plastic parts: -For the abnormal noise caused by friction between plastic parts, it is recommended to apply an appropriate amount of lubricant between the plastic parts to reduce the friction noise. If the abnormal noise occurs in a new car or when the temperature is low, it generally disappears gradually with the increase of usage time and temperature;
Aging of steering tie rod ball joint: -Aging or damage to the ball joint of the steering tie rod may cause abnormal noise during rotation and may be accompanied by shaking of the steering handle;	Replace the steering tie rod ball joint: -If it is confirmed that the steering tie rod ball joint is aging or damaged, it should be replaced with a new ball joint in a timely manner, and four-wheel alignment should be performed after replacement to ensure stable driving of the vehicle;

Fault diagnosis

Possible Cause	Solution
Tire and suspension system issues: -Insufficient tire pressure, uneven wear, or suspension system failures (such as shock absorber failure, aging suspension springs, etc.) may also indirectly lead to abnormal steering system noise;	Check the tires and suspension system: -Regularly check tire pressure and wear to ensure that the tires are in good working condition. At the same time, check whether all components of the suspension system are working properly, such as shock absorbers and suspension springs. If they are damaged or aged, they should be replaced in a timely manner;
Abnormal noise from shock absorber flat bearings: -If the flat bearing of the shock absorber is damaged or poorly lubricated, it may also produce abnormal noise when turning in the direction of rotation;	Check and replace the flat bearing of the shock absorber: -If it is confirmed that the abnormal noise comes from the shock absorber flat bearing, you can try applying an appropriate amount of butter on the bearing to reduce the abnormal noise. If the abnormal noise persists after applying butter, a new flat bearing needs to be replaced;

Fault diagnosis

ATTENTION

-Before carrying out any repairs or component replacements, please ensure that the vehicle is safely parked and turned off.

-Non professionals are not allowed to disassemble vehicle components at will to avoid damage or safety hazards.

-If special tools or equipment are required during the maintenance process, please follow the relevant operating procedures and safety regulations.

In summary, steering system failure is a complex problem involving multiple systems and components, which requires individual investigation and resolution based on specific circumstances, comprehensive consideration of multiple factors, and corresponding measures taken. If you are unable to solve the problem on your own, please contact an authorized dealer promptly for professional repair personnel to handle it.

Cleaning ATV

Wait for the vehicle to cool down: Ensure that the ATV has stopped working and cooled down before washing the car to avoid damage to the engine and other components caused by sudden flushing with cold water.

Use appropriate cleaning agents: It is recommended to use neutral cleaning agents or specialized vehicle cleaning agents, and avoid using overly irritating chemical cleaning agents.

Be careful not to rinse sensitive parts directly: headlights, left and right armrests, power switches, exhaust pipes, horns, spark plugs, air filters, batteries, etc. It is best not to rinse them directly with water to avoid short circuits or leakage caused by circuit wetting. It is recommended to use a cloth to scrub these areas.

Wipe dry with a dry cloth: After cleaning, use a dry cloth to thoroughly dry the ATV, especially the switches, instruments, left and right armrests, spark plugs, fuel tank cap, and other parts. Pay special attention to taking off the spark plug cap and shaking it a few times to remove any water on top and avoid affecting ignition.

Check the vehicle status: After cleaning, check whether all components of the vehicle are in normal working condition, such as whether the circuit is normal, whether the engine is leaking oil, etc.

Cleaning ATV

ATTENTION

After cleaning the ATV, it is necessary to immediately lubricate all key components to ensure smooth operation. Subsequently, start the vehicle and let it run for a period of time to effectively evaporate any residual moisture that may accidentally enter the engine or exhaust system. This can prevent potential damage to the vehicle system caused by moisture and ensure the stability and safety of the vehicle in future use.

Store ATV

Cleaning and drying

Thoroughly clean: Before storage, the ATV should be cleaned first to remove any dust, mud, and dirt.

Drying: Use a dry cloth or towel to thoroughly dry the vehicle, especially the engine, electrical components, and exhaust system.

Inspection and maintenance

Check tires: Ensure proper tire pressure and inspect for wear or damage.

Check the battery: Disconnect the negative terminal of the battery to avoid discharging.

Check oil: Check engine oil, brake oil, and other fluids, and replace or replenish as needed.

Filter replacement: Consider replacing the air filter and oil filter to ensure that no impurities enter the engine during storage.

Storage preparation

Lubrication: Before storage, lubricate all critical components such as chains, bearings, etc.

Coverage: Use a dedicated ATV cover or waterproof cloth to cover the vehicle to prevent dust and moisture from entering.

Support: If possible, support the vehicle on tires or jacks to reduce pressure on the suspension and tires.

Store ATV

Storage location

Dry and ventilated: Choose a dry and ventilated place to store the ATV to prevent corrosion and mold.

Avoid extreme temperatures: Avoid storing vehicles in environments with extreme temperatures (too high or too low), as this may cause damage to vehicle components.

Safety: Ensure the storage location is safe and away from children and other people or objects that may damage the vehicle.

Long term storage precautions

Regular inspection: Even if not in use for a long time, the ATV should be checked regularly (such as once every quarter) to ensure that it is in good condition.

Start: Start the engine every few months and let it run at idle for a period of time to prevent internal components from sticking.

Storage records

Record: Record key information such as vehicle status, mileage, battery level, etc. during storage for future reference.

By following these steps, you can ensure that the ATV is properly protected during storage and prepared for future use.

Transport ATV

- Turn off the engine and remove the key to prevent it from being lost during transportation.
- Please carefully check and ensure that the fuel cap is correctly installed and securely fastened to ensure the safety of the fuel system.
- The seat cushion also needs to be installed properly and ensure its safety to prevent displacement or damage during transportation.
- Before transportation, please set the gear position to any gear except for the parking gear, and use front and rear wheel chocks to secure the wheels to prevent unnecessary movement of the vehicle during transportation.

WARNING
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It is strictly prohibited to place the gear lever in the parking position, as doing so may cause serious damage to the gearbox.

Warranty policy

Warranty Principle

For the BENDA four-wheel products, due to quality defects in the materials, manufacturing, packaging, and other aspects of their original components, which affect their appearance, integrity, and performance, BENDA will provide free warranty within the scope and period specified in the warranty regulations.

The warranty is mainly carried out through the principle of adjustment and repair, supplemented by replacement of new parts.

The vehicle after warranty repair should meet the relevant technical requirements of our company.

Warranty period

BENDA provides a 24-month manufacturer warranty period for all All Terrain Vehicles(ATV), Utility Vehicles(TUV), SSV vehicles sold by BENDA authorized distributors. All vehicles used for commercial purposes have a warranty period of 6 months. The manufacturer warranty periods begins on the date of purchase by the original retail purchaser. If BENDA provides full engine or vehicle replacement services during the warranty period, the warranty period will not be extended, and the starting of warranty date will be the same as the retail date.

BENDA Importer may develop their own warranty policies for consumers based on the laws, regulations, and market sales environment within the designated area specified in their

Warranty policy

distribution agreement. But its policy period shall not be lower than basic warranty period provided by BENDA.

Performance or functional quality issues not caused by external forces will be provided with after-sales service during the warranty period. If the vehicle is disassembled, modified, or used without following the requirements of the user manual, not maintained according to the user manual, or not repaired and maintained at a BENDA authorized dealership, BENDA will not be responsible for after-sales service.

Warranty policy

Warranty range

Category	Parts	Period
	Body: Main frame; Front and rear axles、Braking system(excluding hoses, brake pads, brake discs)、 Front and rear shock absorption; Main Engine components: Crankcase、Cylinder body、Cylinder head、Crankshaft connecting rod mechanism、 Valve timing mechanism、Transmission mechanism、Magnetic motor/rotor、Oil pump、Starter motor、Overrunning clutch、Transmission gears and bearings of the engine; Main electrical components: Main EFI parts(ECU、fuel injection parts)、EPS system、Rectifier、Main harness、 Auxiliary harness.	2 years

Warranty policy

Category	Parts	Period
Body	Sub-frame、Front & rear brackets、Footrest bracket、Backrest bracket、Fuel tank、Water tank、Radiator fan、Auxiliary water bottle、Top bar、Seat belt、Side doors、Front & rear racks、Handrails、Rear cargo box	1 years
Chassis	Rim、Front & rear arms、Steering handle (wheel)、Steering column、Steering rod、Shifting mechanism、Parking mechanism、Stable rod、Front & rear drive shafts、Muffler	
Electronics	Flasher、Horn、Buzzer、Lights、Speedometer、Switches、Relays、Winch motor、Power & Trailer socket	
Engine	Drive pulley、Driven pulley、Water pump	
Electronics	Cover parts(only for cracks caused by paint quality and material quality)、Seats、Rear mirrors(Non quality damage)	6 months
Body	Spark plug、Battery	
CVT	CVT Belt	3 months

Warranty policy

Non-Warranty

Normal maintenance parts and consumable parts are excluded from warranty:

Stickers&Labels、Gaskets&Washers、Plastic buckles、Standard fasteners、Fuel filter、Oil filter element、Air filter element、Brake pads、Brake discs、Front & rear wheel bearings (non quality damage)、Ball joints、Light bulbs、Fuses、Rubber parts (tires, hoses)、Engine connection buffer parts (non quality damage)、Lubricants (oil, grease, etc.) and technical fluids (battery electrolyte/brake fluid/coolant, etc.)

Parts warranty exclusion - what is NOT covered:

1. Any damage which is results from improper use of the vehicle, and caused by failure to operate, drive, maintain or adjust in according to the BENDA user manual.
2. Any direct or indirect damage caused by the use of Non-genuine BENDA parts or accessories.
3. Any damage caused by failure to perform regular maintenance as specified in the BENDA user manual.
4. Any damage caused by repair, modification, maintenance or other operations using any method other than the methods specified in the user manual and service manual of BENDA.
5. Any indirect or direct damage caused by repairs, modifications, or maintenance operations carried out at non authorized BENDA dealer repair points.

Warranty policy

6. Any damage caused by improper storage or transportation.
7. Any damage caused by external injuries, such as fire, collision, and theft.
8. Any damage caused by cigarette ash, smoke, rain or snow immersion, use of chemicals, bird droppings, seawater corrosion, natural wear and tear, sea breeze or salt.
9. Any product that has participated in racing events, rally races, or competitions, or has been used for commercial purposes such as rental vehicles, postal services, express delivery, etc.
10. It is considered a reasonable and normal phenomenon, such as noise, vibration, or oil leakage, that does not affect the quality and functionality of the product.

Declaration of Driver's exposure to noise level

The undersigned: Huang Jingxiang, Manager

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:BD500ATV

Variant	Version	Engine	Power	Wheelbase	Maximum vehicle speed
BD500AU-2	A	BD2V72R	31.3 kW at 8000 rpm	1500 mm	60 km/h
BD500AU	A	BD2V72R	31.3 kW at 8000 rpm	1300 mm	60 km/h
<u>BD500AU-2</u>	<u>B</u>	<u>BD2V72R</u>	<u>31.3 kW at 8000 rpm</u>	<u>1500 mm</u>	<u>100 km/h</u>
<u>BD500AU</u>	<u>B</u>	<u>BD2V72R</u>	<u>31.3 kW at 8000 rpm</u>	<u>1300 mm</u>	<u>100 km/h</u>

1.2.1. Variant(s): See item 1.2.

Declaration of Driver's exposure to noise level

1.2.2. Version(s): See item 1.2.

1.2.3. Commercial name(s): REDSTONE 550ET, REDSTONE 550DL, REDSTONE 550 R2 ET, REDSTONE 550 R2 DL, REDSTONE 550 R2 MD

1.3. Category, subcategory and speed index of the vehicle: T3b

Variant/Version: BD500AU-2/A, BD500AU/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 Commission Delegated Regulation (EU) 1322/2014

Variant/Version: BD500AU-2/B, BD500AU/B:

The Driver's exposure to noise level result is 85.9 dB(A)(Limit: 86 dB(A)) according to Test method 2 in accordance with: section 3 of Annex XIII to Commission Delegated Regulation (EU) 1322/2014

Place: Hangzhou, China

Date: 05/05/2024

Signature: 

Name and position in the company: Huang Jinxiang, Manager

Declaration of Vibration

The undersigned: Huang Jingxiang, Manager

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:BD500ATV

Variant	Version	Engine	Power	Wheelbase	Maximum vehicle speed
BD500AU-2	A	BD2V72R	31.3 kW at 8000 rpm	1500 mm	60 km/h
BD500AU	A	BD2V72R	31.3 kW at 8000 rpm	1300 mm	60 km/h
<u>BD500AU-2</u>	<u>B</u>	<u>BD2V72R</u>	<u>31.3 kW at 8000 rpm</u>	<u>1500 mm</u>	<u>100 km/h</u>
<u>BD500AU</u>	<u>B</u>	<u>BD2V72R</u>	<u>31.3 kW at 8000 rpm</u>	<u>1300 mm</u>	<u>100 km/h</u>

1.2.1. Variant(s): See item 1.2.

1.2.2. Version(s): See item 1.2.

Declaration of Vibration

1.2.3. Commercial name(s): REDSTONE 550ET, REDSTONE 550DL, REDSTONE 550 R2 ET, REDSTONE 550 R2 DL, REDSTONE 550 R2 MD

1.3. Category, subcategory and speed index of the vehicle: T3b

The value of the vibration level measured according to Annex XIV to EU 1322/2014 is

Variant/Version: BD500AU-2/A, **BD500AU-2/B:**

River mass	D	a_{ws} (m/s ²)	Requirement
59± 1kg	Test run 1	0.76	Deviation<10% between test run 1/2 and Arithmetic mean, a_{ws} <1.25 m/s ²
	Test run 2	0.77	
	Arithmetic mean	0.77	
98± 5kg	Test run 1	0.83	Deviation<10% between test run 1/2 and Arithmetic mean, a_{ws} <1.25 m/s ²
	Test run 2	0.83	
	Arithmetic mean	0.83	
a_{ws} : rms value of the weighted seat vibration acceleration measured during a standard roadway test			

Variant/Version: BD500AU/A, **BD500AU/B:**

River mass	D	a_{ws} (m/s ²)	Requirement
59± 1kg	Test run 1	0.60	Deviation<10% between test run 1/2 and Arithmetic mean, a_{ws} <1.25 m/s ²
	Test run 2	0.62	
	Arithmetic mean	0.61	
98± 5kg	Test run 1	0.69	Deviation<10% between test run 1/2 and Arithmetic mean, a_{ws} <1.25 m/s ²
	Test run 2	0.70	
	Arithmetic mean	0.70	
a_{ws} : rms value of the weighted seat vibration acceleration measured during a standard roadway test			

Declaration of Vibration

Place: Hangzhou, China

Date: 06/05/2025

Signature: 

Name and position in the company: Huang Jinxiang, Manager

Ending

I would like to express my sincere gratitude to the customers who have chosen our products. We appreciate your trust and recognition in our products, and have chosen us among many excellent products. Meanwhile, welcome to join BENDA's warm family. We will live up to your expectations and strive to provide you with excellent quality products and first-class services.

We are full of confidence and anticipation for the future. We will continue to work hard, innovate and make progress, to provide you with better vehicles and more thoughtful services.

If you have any questions or need help, we are always here, ready to solve your problems and provide assistance.

Thank you again for your trust and choice. We look forward to creating more beautiful memories with you in the future. Your satisfaction and recognition are our greatest honor.

Sincerely wish you a happy and prosperous journey ahead, full of determination and vitality! Xuebei Xiangnan, Benda accompanies you all the way!

BENDA

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