

Adjusting the throttle level free play

The throttle level free play should be checked and, if necessary, adjusted at the intervals specified in the periodic maintenance and lubrication chart.

The throttle lever free play should measure 2.0-4.0 mm (0.08-0.16 in) as shown. Periodically check the throttle lever free play and, if necessary, adjust it as follows.

TIP

The engine idling speed must be checked, and adjusted if necessary, before adjusting the throttle level free play.

To increase the throttle lever free play, turn the throttle lever free play adjusting bolt counterclockwise. To decrease the throttle lever free play, turn the adjusting bolt clockwise.



1. Throttle lever free play adjusting bolt

Valve clearance

The valve clearance changes with use, resulting in improper air-fuel mixture and/or engine noise. To prevent this from occurring, the valve clearance must be adjusted by a dealer at the intervals specified in the periodic maintenance and lubrication chart.

Brakes

Replacement of the brake components requires professional knowledge. Brake service should be performed by a dealer.

WARNING

Operating with improperly serviced or adjusted brakes could lead to a loss in braking ability and an accident.

Checking the front and rear brake pads

The front and rear brake pads must be checked for wear at the intervals specified in the periodic maintenance and lubrication chart.

Front brake pads

Each brake pad is provided with a wear indicator groove, which allows you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator groove. If a brake pad has worn to the point that the wear indicator groove has almost disappeared, have a dealer replace the brake pads as a set.

TIP

The wheels need to be removed to check the brake pads.

Rear brake pads

Each brake pad is provided with two wear indicator grooves, which allow you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator grooves. If a brake pad has worn to the point that a wear indicator groove almost appears, have a dealer replace the brake pads as a set.

Checking the brake fluid level

Before riding, check that the brake fluid is above the minimum level mark. Check the brake fluid level with the top of the reservoir level. Replenish the brake fluid if necessary.

Front brake



1. Minimum level mark

WARNING

Improper maintenance can result in loss of braking ability.

Observe these precautions:

Insufficient brake fluid may allow air to enter the brake system, reducing braking performance.

- **Clean the filler cap before removing. Use brake fluid from a sealed container.**
- **Use only the specified brake fluid; otherwise, the rubber seals may deteriorate, causing leakage.**
- **Refill with the same type of brake fluid. Adding a brake fluid other may result in a harmful chemical reaction.**
- **Be careful that water does not enter the brake fluid reservoir when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.**

NOTICE

Brake fluid may damage painted surfaces or plastic parts. Always clean up spilled fluid immediately.

As the brake pads wear, it is normal for the brake fluid level to gradually go down. A low brake fluid level may indicate worn brake pads and/or brake system leakage; therefore, be sure to check the brake pads for wear and the brake system for leakage. If the brake fluid level goes down suddenly, have a dealer check the cause before further riding.

Changing the brake fluid

Have a dealer change the brake fluid at the intervals specified in the TIP after the periodic maintenance and lubrication chart. In addition, have the oil seals of the master cylinders and calipers as well as the brake hoses replaced at the intervals listed below or whenever they are damaged or leaking.

Checking the front brake level free play

The brake level free play must be checked at the intervals specified in the periodic maintenance and lubrication chart. The brake level should have no free play as shown. If there is free play, have a dealer check the brake system.



1. No brake level free play

Checking the brake pedal height

The brake pedal height must be checked and, if necessary, adjusted at the intervals specified in the periodic maintenance and lubrication chart.

The top of the brake pedal should be positioned 40.0 mm (1.57 in) above the top of the frame as shown. If the brake pedal is not positioned as specified, have a dealer adjust it.



1. Brake pedal height

Adjusting the clutch lever free play

The clutch lever free play must be checked and, if necessary, adjusted at the intervals specified in the periodic maintenance and lubrication chart.

The clutch lever free play should measure 5.0- 10.0 mm (0.20-0.39 in) as shown, if the free play is incorrect, adjust it as follow.



- 1.Locknut
- 2.Clutch lever free play adjusting bolt

1. Loosen the locknut at the clutch lever.
2. To increase the clutch lever free play, turn the adjusting bolt counterclockwise, and to decrease it, turn the bolt clockwise.
3. Tighten the locknut.

TIP

If the specified free play cannot be obtained as described above or if the clutch does not operate correctly, have a dealer check the internal clutch mechanism.

Drive chain slack

The drive chain slack should be checked before each ride and adjusted if necessary.

To check the drive chain slack

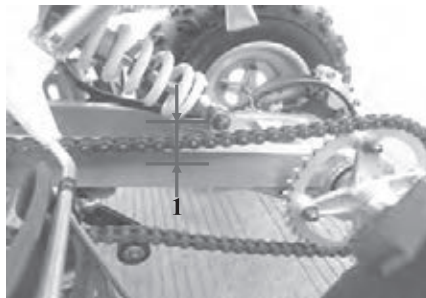
1. Place the ATV on a level surface.

TIP

When checking and adjusting the drive chain slack, there should be no weight on the ATV and all tires must be touching the ground.

2. Move the ATV back and forth to locate the tightest portion of the drive chain, and then measure the drive chain slack as shown.

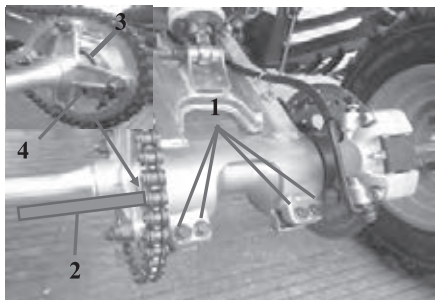
Drive chain slack:
45.0-55.0 mm (1.77-2.17 in)



1. Drive chain slack
3. If the drive chain slack is incorrect, adjust it as follows.

To adjust the drive chain slack

1. Place the ATV on a level surface.
2. Loosen the rear wheel axle pinch bolts.
3. Insert a rod of a diameter of 8 mm (0.3 in) and a length of 10 cm (4 in) into one of the holes in the drive chain tensioner as shown.



1. Rear wheel axle pinch bolt
2. Rod
3. Drive chain tensioner
4. Hole

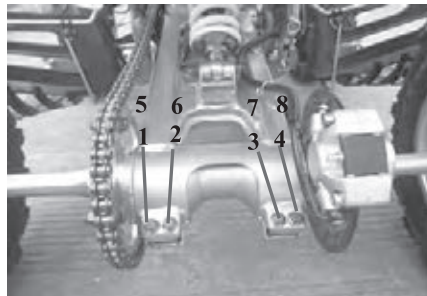
TIP

A rod can be obtained at a dealer to make this adjustment.

4. Shift the transmission into neutral.
5. To tighten the drive chain, push the ATV backward. To loosen the drive chain, push the ATV forward. **NOTICE: Improper drive chain slack will overload the engine as well as**

other vital parts of the ATV and can lead to drive chain slippage or breakage. To prevent this from occurring, keep the drive chain slack within the specified limits.

6. Pull the rod out, and then tighten the rear axle pinch bolts to the specified torque in the order shown.



Tighten torque:

Rear axle pinch bolt:

21 Nm (2.1 m·kgf, 15ft ·lbf)

Lubricating the drive chain

The drive chain must be cleaned and lubricated at the intervals specified in the periodic maintenance and lubrication chart, otherwise it will quickly wear out, especially when riding in dusty or wet areas.

Service the drive chain as follows.

NOTICE

The drive chain must be lubricated after washing the ATV or riding in the rain or wet areas.

1. Clean the drive chain with kerosene and a small soft brush.
2. Wipe the drive chain dry.

Checking and lubricating the cables

The operation and condition of all control cables should be checked before each ride, and the cables and cable ends should be lubricated if necessary.

If a cable is damaged or does not move smoothly, have a dealer check or replace it.

WARNING

● Inspect cables frequently and replace if damaged. Corrosion can result when the cable sheaths become damaged, and cables can also become frayed or kinked, which could restrict the operation of controls and lead to an accident or injury.

● Always make sure all control cables work smoothly before you begin riding in cold weather. If the control cables are frozen or do not work smoothly, you could be unable to control the ATV, which could lead to an accident or collision.

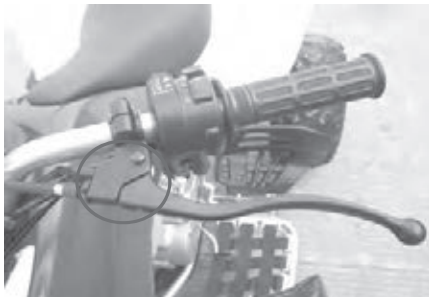
Checking and lubricating the brake and clutch levers

The operation of the brake and clutch levers should be checked before each ride, and the lever pivots should be lubricated if necessary.

Brake lever



Clutch lever



Checking the shift pedal

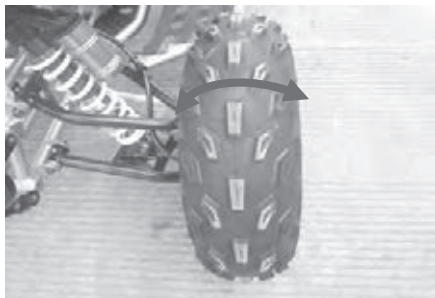
The operation of the shift pedal should be checked before each ride. If operation is not smooth, have a dealer check the vehicle.

Checking and lubricating the brake pedal

The operation of the brake pedal should be checked before each ride, and the pedal pivot should be lubricated if necessary.

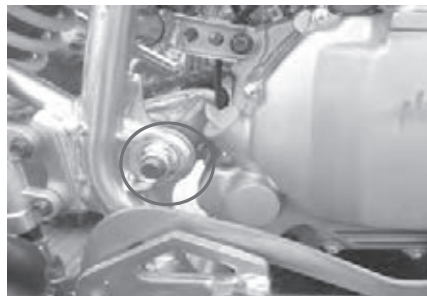
Checking the wheel hub bearings

The front and rear wheel hub bearings must be checked at the intervals specified in the periodic maintenance and lubrication chart. If there is play in a wheel hub or if a wheel does not turn smoothly, have a dealer check the wheel hub bearings.



Lubricating the swing arm pivots

The swing arm pivots must be lubricated by a dealer at the intervals specified in the periodic maintenance and lubrication chart.



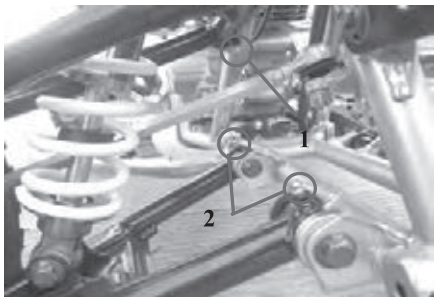
Lubricating the upper and lower arm pivots

The upper and lower arm pivots must be lubricated at the intervals specified in the periodic maintenance and lubrication chart.

TIP

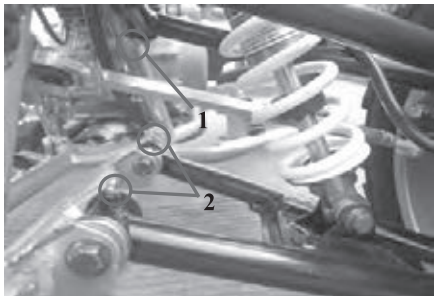
For parts equipped with a grease nipple, use a grease gun.

Left side



1. Upper grease nipple
2. Lower grease nipple

Right side



1. Upper grease nipple
2. Lower grease nipple

Lubricating the steering shaft

The steering shaft must be lubricated by a dealer at the intervals specified in the periodic maintenance and lubrication chart.

TIP

For parts equipped with a grease nipple, use a grease gun.

Battery

The battery is located under the seat.

This model is equipped with a Valve Regulated Lead Acid battery. There is no need to check the electrolyte or to add distilled water. However, the battery lead connections need to be checked and, if necessary, tightened.

WARNING

Battery electrolyte is poisonous and dangerous, as it contains sulfuric acid, which can cause severe burns. Avoid contact with skin, eyes or clothing. Always shield your eyes when working near batteries.

Antidote:

EXTERNAL: Flush with water.

INTERNAL: Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call a physician immediately.

EYES: Flush with water for 15 minutes and get prompt medical attention.

Batteries produce explosive gases. Keep sparks, flame, cigarettes or other sources of ignition away. Ventilate when charging or using in an enclosed space.

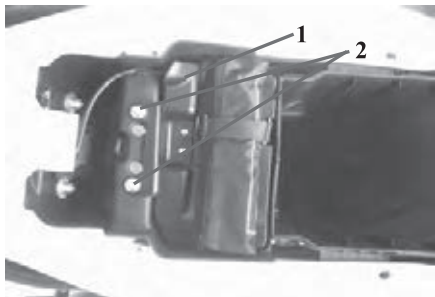
KEEP OUT OF REACH OF CHILDREN.

NOTICE

Never attempt to remove the battery cell seals, as this would permanently damage the battery.

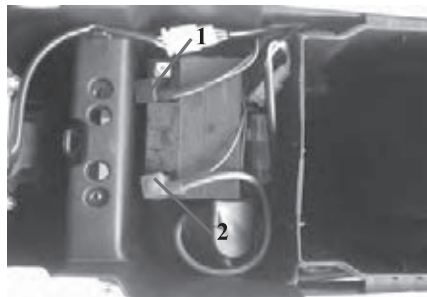
To remove the battery

1. Remove the seat.
2. Unhook the band securing the owner's tool kit, and then remove the battery holding plate by removing the bolts.



1. Battery holding plate
2. Bolt

3. Disconnect the negative battery lead first, then the positive battery lead by removing their bolt. **NOTICE: When removing the battery, the main switch must be off, and the negative lead must be disconnected before the positive lead.**



1. Negative battery lead (black)
2. Positive battery lead (red)

4. Pull the battery out of its compartment.

To charge the battery

Have a dealer charge the battery as soon as possible if it seems to have discharged. Keep in mind that the battery tends to discharge more quickly if the ATV is equipped with optional electrical accessories.

NOTICE

To charge a battery, a special (constant-voltage) battery charger is required. Using a conventional battery charger will damage the battery.

To store the battery

- If the ATV will not be used for more than one month, remove the battery, fully charge it, and then place it in a cool, dry place.
- If the battery will be stored for more than two months, check it at least once a month and fully charge it if necessary.

NOTICE

Always keep the battery charged. Storing a discharged battery can cause permanent battery damage.

To install the battery

TIP

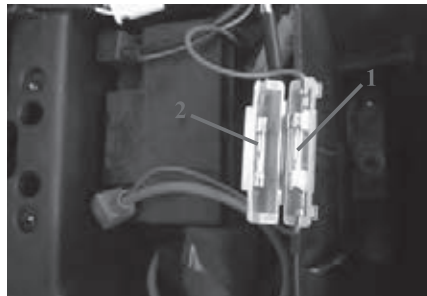
Be sure the battery is fully charged.

1. Place the battery in its compartment.
2. Connect the positive battery lead first, then connect the negative battery lead by installing their bolt. **NOTICE:** **When installing the battery, the main switch must be off, and the positive lead must be connected before the negative lead.**
3. Install the battery holding plate by installing the bolts, and then hook the band to secure the owner's tool kit.
4. Install the seat.

Replacing the fuse

The fuse holder is located beside the battery and can be accessed as follows:

1. Remove the seat.
2. Unhook the band securing the owner's tool kit, and then remove the battery holding plate by removing the bolts.



1. Fuse
2. Spare fuse

If the fuse is blown, replace it as follows.

1. Turn the key to "OFF" and turn off all electrical circuits.

NOTICE

To prevent accidental short-circuiting, turn off the main switch when checking or replacing a fuse.

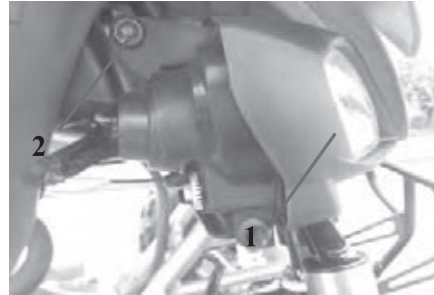
2. Remove the blown fuse, and then install a new fuse of the specified amperage.

WARNING! Always use a fuse of the specified rating, and never use a substitute object in place of the proper fuse. An improper fuse or substitute object can cause damage to the electrical system, which could lead to a fire.

Specified fuse:

Fuse:
10.0 A

3. Turn the key to "ON" and turn on the electrical circuits to check if the devices operate.
4. If the fuse immediately blows again, have a dealer check the electrical system.
5. Install the battery holding plate by installing the bolts, and then hook the band to secure the owner's tool kit.
6. Install the seat.



1. Headlight unit
2. Bolt
2. Disconnect the headlight coupler.
3. Remove the headlight bulb holder cover.



1. Headlight bulb holder cover

Replacing a headlight bulb

If a headlight bulb burns out, replace it as follows.

1. Remove the headlight unit by removing the bolt.

4. Remove the headlight bulb holder by pushing it in and turning it counterclockwise, and then remove the burnt-out bulb.



1. Headlight bulb holder

5. Place a new headlight bulb into position.

NOTICE: Do not touch the glass part of the headlight bulb to keep it free from oil, otherwise the transparency of the glass, the luminosity of the bulb, and the bulb life will be adversely affected. Thoroughly clean off any dirt and fingerprints on the headlight bulb using a cloth moistened with alcohol or thinner.



1. Do not touch the glass part of the bulb.
6. Install the headlight bulb holder by pushing it in and turning it clockwise.
7. Install the headlight bulb holder cover.
8. Connect the headlight coupler.
9. Install the headlight unit by installing the bolt.
10. Adjust the headlight beam if necessary.

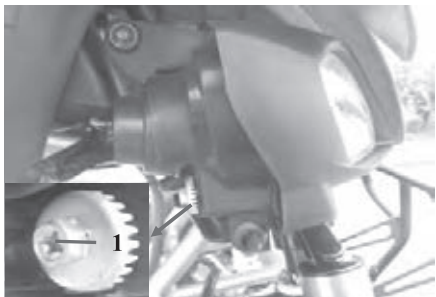
Adjusting a headlight beam

NOTICE

It is advisable to have a dealer make this adjustment.

To raise a headlight beam, turn the headlight beam adjusting bolt counter-clockwise.

To lower a headlight beam, turn the adjusting bolt clockwise.



1. Headlight beam adjusting bolt

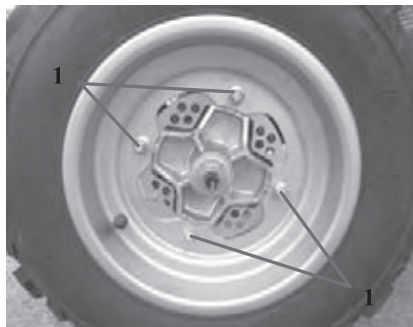
Replacing the tail/brake light bulb

If the tail/brake light bulb burns out, have a dealer replace it.

Removing a wheel

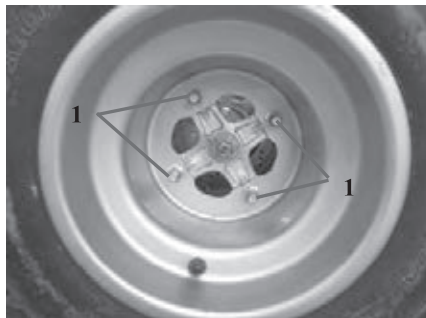
1. Place the ATV on a level surface.
2. Loosen the wheel nuts.

Front



1. Wheel nut

Rear



1. Wheel nut

3. Elevate the ATV and place a suitable stand under the frame.
4. Remove the nuts from the wheel.
5. Remove the wheel.

Installing a wheel

1. Place the ATV on a level surfaces.
2. Install the wheel and nuts.
3. Lower the ATV to the ground.
4. Tighten the wheel nuts to the specified torques.

Tightening torques:

Front wheel nut:

45 Nm (4.5 m·kgf, 33 ft·lbf)

Rear wheel nut:

45 Nm (4.5 m·kgf, 33 ft·lbf)

WARNING

Do not smoke when checking the fuel system. Fuel can ignite or explode, causing severe injury or property damage. Make sure there are no open flames or spark in the area, including pilot lights from water heaters or furnaces.

Troubleshooting

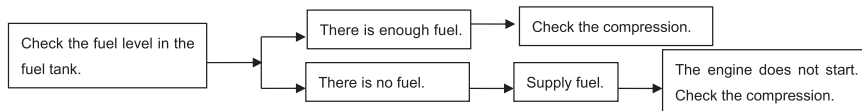
Although the ATVs receive a thorough inspection before shipment from the factory, trouble may occur during operation.

Any problem in the fuel, compression, or ignition systems, for example, can cause poor starting and loss of power.

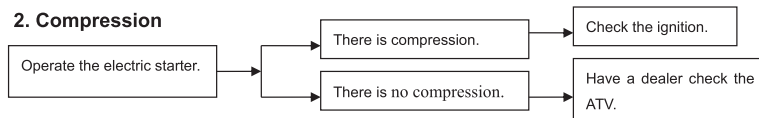
The following troubleshooting chart represents a quick and easy procedure for checking these vital systems yourself. However, should your ATV require any repair, take it to a dealer, whose skilled technicians have the necessary tools, experience, and know-how to service the ATV properly. Use only original replacement parts.

Troubleshooting chart

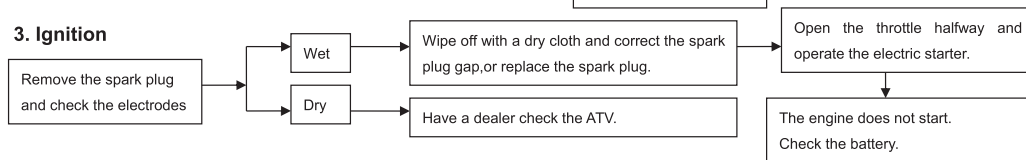
1. Fuel



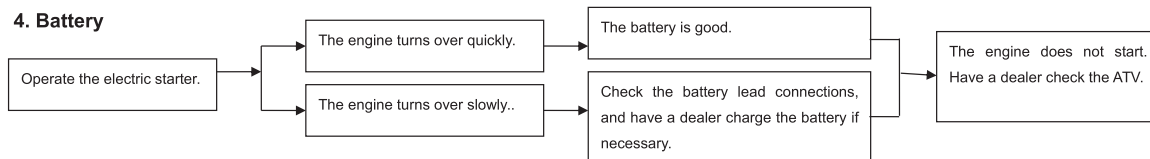
2. Compression



3. Ignition



4. Battery



CLEANING AND STORAGE

Cleaning

Frequent, thorough cleaning of your ATV will not only enhance its appearance but will improve its general performance and extend the useful life of many components.

1. Before cleaning the ATV:
 - a. Block off the end of the exhaust pipe to prevent water entry. A plastic bag and strong rubber band may be used.
 - b. Make sure the spark plug and all filler caps are properly installed.
2. If the engine case is excessively greasy, apply degreaser with a paint brush. Do not apply degreaser to the chain, sprockets or wheel axles.
3. Rinse the dirt and degreaser off with a garden hose. Use only enough pressure to do the job.

WARNING! Wet brakes may have reduced stopping ability, increasing the chance of an accident. Test the brakes after washing. Apply the brakes several times at slow speeds to let friction dry out the linings.

NOTICE: Excessive water pressure may cause water

Seepage and deterioration of wheel bearings, brakes, transmission seals and electrical devices. Many expensive repair bills have resulted from improper high-pressure detergent applications such as those available in coin-operated car washers.

4. Once most of the dirt has been hosed off, wash all surfaces with warm water and mild, detergent-type soap. An old toothbrush or bottle brush is handy for hard-to-reach places.
5. Rinse the ATV off immediately with clean water and dry all surfaces with a chamois, clean towel or soft absorbing cloth.
6. Dry the chain and lubricate it to prevent it from rusting.
7. Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy.
8. Automotive type wax may be applied to all painted and chrome plated surfaces. Avoid combination cleaner-waxes. Many contain abrasives which may mar the paint or protective finish. When finished cleaning, start the engine and let it idle for several minutes.

Storage

Short-term

Always store your ATV in a cool, dry place and, if necessary, protect it against dust with a porous cover. **NOTICE: Storing the ATV in a poorly ventilated room or covering it with a tarp while it is still wet, will allow water and humidity to seep in and cause rust. To prevent corrosion, avoid damp cellars, stables (because the presence of ammonia) and areas where strong chemicals are stored.**

Long-term

Before storing your ATV for several months:

1. Follow all the instructions in the "Cleaning" section of this chapter.
2. Turn the fuel cock lever to "OFF".
3. Drain the carburetor float chamber by loosening the drain bolt; this will prevent fuel deposits from building up. Pour the drained fuel into the fuel tank.
4. Fill up the fuel tank and add fuel stabilizer (if available) to prevent the fuel from deteriorating.
5. Perform the following steps to protect the cylinder, piston rings, etc. from corrosion.
 - a. Remove the spark plug cap and spark plug.
 - b. Pour a teaspoonful of engine oil into the spark plug bore.
 - c. Install the spark plug cap onto the spark plug, and then place the spark plug on the cylinder head so that the electrodes are grounded. (This will limit sparking during the next step.)
 - d. Turn the engine over several times with the starter. (This will coat the cylinder wall with oil.)
 - e. Remove the spark plug cap from the spark plug and then install the spark plug and the spark plug cap.
6. Lubricate all control cables and the pivoting points of all levers and pedals.
7. Check and, if necessary, correct the tire air pressure, and block up the ATV so that all of its wheels are off the ground. Alternatively, turn the wheels a little every month in order to prevent the tires from becoming degraded in one spot.
8. Cover the muffler outlet with a plastic bag to prevent moisture from entering it.
9. Remove the battery and fully charge it. Store it in a cool, dry place and charge it once a month. Do not store the battery in an excessively cold or warm place [less than 0 °C (30 °F) or more than 30 °C (90 °F)].

TIP

Make any necessary repairs before storing the ATV.

SPECIFICATIONS (AIR COOLED ENGINE)

L×W×H	1625×1060×1065
Wheelbase	1090±20mm
Front wheelbase	820mm
Rear wheelbase	830mm
Ground clearance	135±15mm
Seat height	790±15 mm
Chassis clearance	225mm
Handle height	1000mm
Carton size:L×W×H	1460×880×860 mm
Front suspension travel	70mm
Rear suspension travel	80mm
Minimum steering radius	5900±500mm
Steering angle	<45°
Sideslip	<5m/km
Max load	100kg
Net weight	149kg
Gross weight	177kg
Brake/Front &Rear	Hydraulic brake
Brake type/ Front &Rear	Hand brake& foot brake
Wheel / Front &Rear	10×5.5AT/9×8.0AT
Tire /Front &Rear	AT 20×7.0-10/AT 19×10-9
Tire air pressure /Front &Rear	36PSI
Drive Train	Chain

Engine type	ZS169FMM
Engine model	single cylinder, 4-stroke, air-cooled
Manufacturer	ZONGSHEN
Cylinder bore×stroke	69×62.2mm
Displacement	232.6ml
Compression ratio	(8.3~8.9):1
Output, Rated	/
Output, Max	12 (1±5%) kw /7500 (1±5%) rpm
Torque, Max	17 (1±5%) N·m /6000 (1±5%) rpm
Idling speed	1400(1±10%) r/min
Fuel Consumption rate	354g / kw.h
Fuel type	≥RQ90
Lubrication	Pressure, Splash
Lubricating oil type	SF15W/40
Clutch type	Manual, wet multiplate clutch

Start	Electric start	
Ignition	CDI	
Carburetor	PZ30	
Spark plug	D8TC	
Battery	12V, 7HA	
Front lamp bulb	12V18-18W	
Max speed	90km/h	
Start ability	15S	
Brake ability	Front	≥60%
	Rear	≥55%
Brake balance	Front	≤20%
	Rear	≤24%
Climb ability	21°	
Parking ability	≥18°	
Exhaust	CO(%)	≤3.8
	HC(PPm)	≤800
Max noise	≤82 dB(A)	
Starting acceleration ability	≤6.8 S	
Passing acceleration ability	≤6.8 S	
Fuel tank capacity	9L	
Front& Rear suspension	Oil damper with air-cell adjustable/Oil damper	
Exhaust muffler model	Cartridge impedance compound muffler	
Front& Rear suspension length	L=350mm/ L=390mm	

SPECIFICATION(WATER COOLED ENGINE)

L×W×H	1625×1060×1065
Wheelbase	1090±20mm
Front wheelbase	820mm
Rear wheelbase	830mm
Ground clearance	135±15mm
Seat height	790±15 mm
Chassis clearance	225mm
Handle height	1000mm
Carton size:L×W×H	1460×880×860 mm
Front suspension travel	70mm
Rear suspension travel	80mm
Minimum steering radius	5900±500mm
Steering angle	<45°
Sideslip	<5m/km
Max load	100kg
Net weight	149kg
Gross weight	177kg
Brake/Front &Rear	Hydraulic brake
Brake type/ Front &Rear	Hand brake& foot brake
Wheel / Front &Rear	10×5.5AT/9×8.0AT
Tire /Front &Rear	AT 20×7.0-10/AT 19×10-9
Tire air pressure /Front &Rear	36PSI
Drive Train	Chain

Engine type	ZS169MM
Engine model	single cylinder, 4-stroke, water-cooled, single overhead camshaft
Manufacturer	ZONGSHEN
Cylinder bore×stroke	69×65mm
Displacement	243.1ml
Compression ratio	(9.8~10.7):1
Output, Rated	/
Output, Max	11.5 (1±5%) kw /7000 (1±5%) rpm
Torque, Max	19 (1±5%)N · m /5000 (1±5%) rpm
Idling speed	1400(1±10%) r/min
Fuel Consumption rate	354g / kw.h
Fuel type	≥RQ90
Lubrication	Pressure, Splash
Lubricating oil type	SF15W/40
Clutch type	Manual, wet multiplate clutch

Start	Electric start	
Ignition	CDI	
Carburetor	PZ30	
Spark plug	D8TC	
Battery	12V, 7HA	
Front lamp bulb	12V18-18W	
Max speed	85km/h	
Start ability	15S	
Brake ability	Front	≥60%
	Rear	≥55%
Brake balance	Front	≤20%
	Rear	≤24%
Climb ability	21°	
Parking ability	≥18°	
Exhaust	CO(%)	≤3.8
	HC(PPm)	≤800
Max noise	≤82 dB(A)	
Starting acceleration ability	≤8 S	
Passing acceleration ability	≤8 S	
Fuel tank capacity	9L	
Front& Rear suspension model	Oil damper with air-cell adjustable/Oil damper	
Exhaust muffler model	Cartridge impedance compound muffler	
Front& Rear suspension length	L=350mm/ L=390mm	

⚠ WARNING

Improper ATV use can result in SEVERE INJURY or DEATH.



**ALWAYS USE
AN APPROVED
HELMET AND
PROTECTIVE GEAR**



**NEVER USE
ON PAVED
ROADS**



**NEVER CARRY
PASSENGERS**



**NEVER USE
WITH DRUGS
OR ALCOHOL**

NEVER operate:

- without proper training or instruction.
- at speeds too fast for your skills or the conditions.
- on public roads—a collision can occur with another vehicle.
- with a passenger—passengers affect balance and steering and increase risk of losing control.

ALWAYS:

- use proper riding techniques to avoid vehicle overturns on hills and rough terrain and in turns.
- avoid paved surfaces—pavement may seriously affect handling and control.

LOCATE AND READ OWNER'S MANUAL. FOLLOW ALL INSTRUCTIONS AND WARNINGS.