WARNING：Read this Manual , and any Supplements Carefully Before Operating Vehicle.

- Assembly
- Operation
- Maintenance

⚠ This ATV should NOT be ridden by anyone under ⚠ 16 years of age.

INTRODUCTION

Congratulations on your purchase of the Crossfire X600. This Owner's / Operator's manual will provide you information regarding safe operation, operational instructions , maintenance and care. Fully understanding this manual and following all of the instructions herein will provide the knowledge needed to have a safe and enjoyable ATV operation.

For questions regarding this ATV, please call your closest Crossfire Deaelr.

IMPORTANT SAFETY MESSAGES

- **READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE OPERATING YOUR ATV. MAKE SURE YOU UNDERSTAND ALL INSTRUCTIONS.**
- **PAY CLOSE ATTENTION TO THE WARNING AND CAUTION LABELS ON THE ATV.**
- **NEVER OPERATE THE ATV WITHOUT PROPER TRAINING OR INSTRUCTION.**
- **THIS ATV, AND ANY OTHER ATV OVER 90 cc, SHOULD NOT BE RIDDEN BY ANYONE UNDER 16 YEARS OF AGE.**
- **Please contact your local dealer in your state to determine closest Quad bike training facility.**

IMPORTANT MANUAL INFORMATION

FAILURE TO FOLLOW THE WARNINGS CONTAINED IN THIS MANUAL CAN RESULT IN SERIOUS INJURY OR DEATH. Particularly important information is distinguished in this manual using the following notations:

The Safety Alert Symbol means **ATTENTION!**
YOUR SAFETY IS INVOLVED!

WARNING Failure to follow **WARNING** instructions could result in severe injury or death to the machine operator, a bystander or a person inspecting or repairing the machine.

CAUTION: **A CAUTION** indicates special precautions that must be taken to avoid damage to the machine.

NOTE: **A NOTE** provides key information to make procedures easier to

understand**.**

IMPORTANT NOTICE

This ATV is designed and manufactured for **OFF- ROAD** use only. It is illegal and unsafe to operate this ATV on any public street, road or highway.

This ATV complies with all applicable **OFF- ROAD** noise level and spark arrestor laws and regulations in effect at the time of manufacture.

Please check your local riding laws and regulations before operating this ATV.

When the temperature is below -4°F (-20℃), park the ATV in the place where the temperature is higher than-4°F (-20℃). Start the ATV after the ATV has warmed up, Please see page 6-2 on the warming up process.

When the temperature is higher than 100°F (38℃), and you park the ATV after operating at high speeds, please keep the engine running for 3 minutes at idle and make sure that the radiator fan continues for 3 minutes to prevent the coolant from boiling. Then turn off the power switch. Your ATV may have a 3 minute automatic continuous fan after ignition shut down.

When you park the ATV and turn off the engine, please turn the ignition switch fully to shut off the instrument panel display. With the EFI system used in this ATV, the electric fuel pump

located in the fuel tank can work when the panel display is on. If the fuel pump runs for a long time it will result in the battery discharging and the electric starter may not work.

Fuel Injection System

Warranty 12-1

⚠ SAFETY WARNING-MUST READ

RISK OF ROLL OVERS

We strongly encourage safe riding at all times. Accidents involving ATV/Quad Bikes are the second leading cause of injury and death on Australian soils. Most deaths are due to crash injuries associated with ATV/Quad Bike roll overs or by injuries associated with the victim being flung off onto a hard surface as a result of a serious crash.

Therefore we urge all riders to think carefully about their riding use of ATV/Quad Bikes, taking into account all the safety risks that are involved and how to safely ride your ATV/Quad Bike as well as keeping it serviced and maintained correctly before every ride.

SAFETY TIPS FOR RIDING

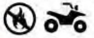
Many ATV/Quad Bike accidents are caused when ATV/Quad Bike's roll over or overturn. The key to avoiding these accidents is maintaining total control of your ATV/Quad Bike. You do this by maintaining good balance and being aware of your centre of gravity. This is most important when you are riding on an incline, going around a turn or making a sudden stop. All of these situations are recipes for disaster because they shift the momentum of an ATV/Quad Bike in such a way that you need to shift the weight of your body to counteract that momentum before the ATV/Quad Bike rolls over or flips.

Reduce your risk of injury & death by knowing exactly what your quad bike can and can not do. We strongly recommend the following:

- Read the complete manual and pay particular attention to the safety instructions and warnings.
- Read all warning labels in this guide and on your ATV/Quad Bike, specially the roll over orange warning that is affixed to your ATV/Quad Bike. Also the yellow stability tipping point swing tag warning. we strongly recommend you study them before riding.
- Wear appropriate safety gear. that also includes an approved safety helmet that meets Australian standards.
- Make sure that other persons who operate the ATV/Quad Bike understand all riding instructions, all safety guides and warnings.
- Practise riding the ATV/Quad Bike in a safe environment until you feel confident.
- Do not allow any passengers. Only a sole Rider is permitted at all times.
- Do not modify or tamper with the ATV/Quad Bike, no aftermarket parts or equipment can be fitted as it may cause malfunction and cause serious injuries.
- Observe the load ratings. do not exceed the limit
- Regularly service and maintain your ATV/Quad Bike.
- Perform a safety check each time before you ride.
- Avoid travelling up or down steep inclines or declining hills.
- Do not perform any jumping or riding on terrains beyond your riding ability.
- Leave all safety guards in place.

⚠ SAFETY WARNING-MUST READ

- Factors, such as uneven terrain, speed, loadings, accessories, modifications and rider position can effect a quad bike's stability.
- Whenever possible, ride on familiar tracks. Even then, think very carefully about the possibility of pot holes, large rocks, drains or other obstacles, the weather conditions, the nature of the surface and how fast you are able to ride.
- Ride cautiously when riding the ATV/Quad Bike on any terrain, as surfaces may compromise your control.
- Evaluate the terrain carefully before you ride. Steep hills, particularly if the dirt is loose or wet, should be avoided as they can cause the ATV/Quad Bike to roll over.
- Watch the ground ahead for potential hazards. Riding into or over rocks, pipes or any other obstacle can cause an accident.
- If you're not confident that you can negotiate a particular stretch of terrain, don't attempt it. Go another way or turn around.
- Remember that liquids within a spray tank can cause sudden shifts to your quad bike's centre of gravity when riding over uneven terrains. Make sure you are able to carry additional weight and that it doesn't exceed the load capacity.



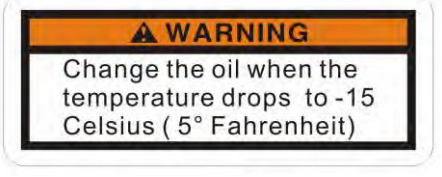
To prevent potential fire hazards all our Quad Bikes/ATV's have been fitted with a Spark Arrestor that conforms with Australian standards.

A spark arrestor is designed to trap any glowing sparks before they exit your exhaust by acting as a filter. The mesh creates many tiny holes witch the exhaust needs to flow through. Any particles larger than the holes in the mesh will be stopped.

Read and understand all of the labels on your machine. They contain important information for safe and proper operation of your ATV.

Never remove any labels from your ATV. If a label becomes difficult to read or comes off, a replacement label is available from your dealer.

[1]



[2]

[3]

1-2 Warning and Safety Labels

[4]

[5]

[6]

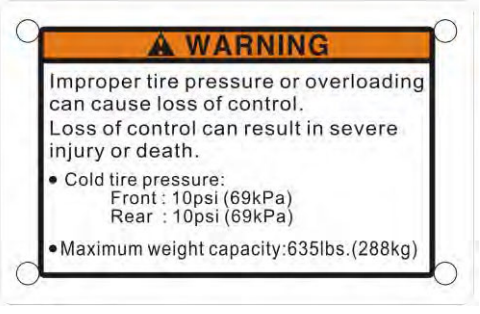
[7]


WARNING
Use electric start 5 Sec at a time at 25 Sec intervals

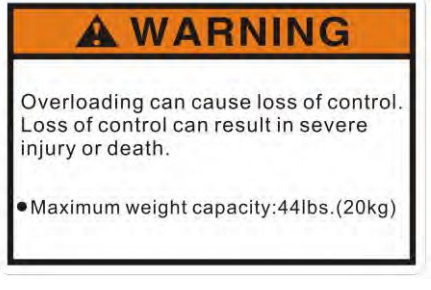
[8]


WARNING
OPERATOR UNDER 16
Operating this ATV if you are under the age of 16 increases the chances of severe injury or death to both operator and passenger.
NEVER operate this vehicle if you are under age 16.

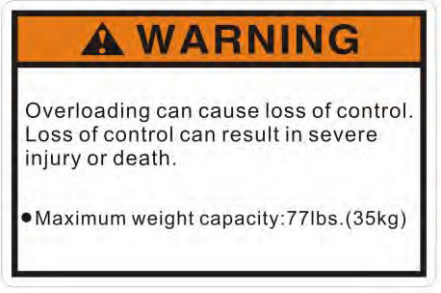
[9]


WARNING
Improper tire pressure or overloading can cause loss of control.
Loss of control can result in severe injury or death.
• Cold tire pressure:
Front : 10psi (69kPa)
Rear : 10psi (69kPa)
• Maximum weight capacity:635lbs.(288kg)

[10]


WARNING
Overloading can cause loss of control.
Loss of control can result in severe injury or death.
• Maximum weight capacity:44lbs.(20kg)

[11]


WARNING
Overloading can cause loss of control. Loss of control can result in severe injury or death.
• Maximum weight capacity:77lbs.(35kg)

[12]


This ATV is subject to Hisun Motors Corp., U.S.A. Corp., U.S.A. Action Plan approved by U.S. Consumer Product Safety Commission on March 23, 2012.

SAFETY INFORMATION

AN ATV IS NOT A TOY AND CAN BE HAZARDOUS TO OPERATE. An ATV handles differently from other vehicles including motorcycles and cars. A collision or rollover can occur quickly, even during routine maneuvers such as turning and riding on hills or over obstacles, if you fail to take proper precautions.

- **SEVERE INJURY OR DEATH** can result if you do not follow these instructions:
- Read this manual and all labels carefully and follow the operating procedures described.
- Never operate an ATV without proper training or instruction. **Take a Training Course.** Beginners should receive training from a certified instructor.
- Always follow the age recommendation:
  A child under 16 years old should never operate this X600 ATV.
- Never allow a child under age 16 to operate an ATV without adult supervision, and never allow continued use of an ATV by a child if he or she does not have the abilities to operate it safely.
- Never operate an ATV without wearing an approved motorcycle helmet that fits properly.

You should also wear eye protection (goggles or face shield), gloves, boots, long-sleeved shirt or jacket, and long pants.

- Never consume alcohol or drugs before or while operating this ATV.
- Never operate at speeds too fast for your skills or the conditions. Always go at a speed that is proper for the terrain, visibility and operating conditions, and your experience.
- Never attempt wheelies, jumps, or other stunts.
- Always inspect your ATV each time you use it to make sure it is in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in this manual.
- Always keep both hands on the handlebars and both feet on the footboards of the ATV during operation.
- Always go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating the ATV.
- Never operate on excessively rough, slippery or loose terrain until you have learned and practiced the skills necessary to control the ATV on such terrain. Always be especially cautious on these kinds of terrain.
- Always follow proper procedures for turning as described in this manual. Practice turning

at low speeds before attempting to turn at faster speeds. Do not turn at excessive speed.

- Never operate the ATV on hills too steep for the ATV or for your abilities. Practice on smaller hills before attempting larger hills.
- Always follow proper procedures for climbing hills as described in this manual. Check the terrain carefully before you start up any hill. Never climb hills with excessively slippery or loose surfaces. Shift your weight forward. Never open the throttle suddenly. Never go over the top of a hill at high speed.
- Always follow proper procedures for going down hills and for braking on hills as described in this manual. Check the terrain carefully before you start down any hill. Shift your weight backward. Never go down a hill at high speed. Avoid going down a hill at an angle that would cause the vehicle to lean sharply to one side. Go straight down the hill where possible.
- Always follow proper procedures for crossing the side of a hill as described in this manual.
- Avoid hills with excessively slippery or loose surfaces. Shift your weight to the uphill side of the ATV. Never attempt to turn the ATV around on any hill until you have mastered the turning technique described in this manual on level ground. Avoid crossing the side of a steep hill if possible.

2-4 Safety Information

- Always use proper procedures if you stall or roll backwards when climbing a hill. To avoid stalling, use proper gear range and maintain a steady speed when climbing a hill. If you stall or roll backwards, follow the special procedure for braking described in this manual. Dismount on the uphill side or to a side if pointed straight uphill. Turn the ATV around and remount, following the procedure described in this manual.
- Always check for obstacles before operating in a new area. Never attempt to operate over large obstacles, such as large rocks or fallen trees. Always follow proper procedures when operating over obstacles as described in this manual.
- Always be careful when skidding or sliding. Learn to safely control skidding or sliding by practicing at low speeds and on level, smooth terrain. On extremely slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chance of skidding or sliding out of control.
- Never operate an ATV in fast flowing water or in water deeper than that recommended in this manual. Remember that wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them several times to let friction dry out the linings.
- Always be sure there are no obstacles or people behind you when you operate in

reverse.

- When it is safe to proceed in reverse, go slowly.
- Always use the size and type tires specified in this manual.
- Always maintain proper tire pressure as described in this manual.
- Never modify an ATV through improper installation or use of accessories.
- Never exceed the stated load capacity for an ATV. Cargo should be properly distributed and securely attached. Reduce speed and follow instructions in this manual for carrying cargo or pulling a trailer. Allow greater distance for braking.
- Please contact your dealer of purchase to find the Access to your closes ATV training center.

WARNING

POTENTIAL HAZARD

Starting or running the engine in a closed area.

WHAT CAN HAPPEN

Exhaust fumes are poisonous and may cause loss of consciousness and death within a short time.

HOW TO AVOID THE HAZARD

Always operate your ATV in an area with adequate ventilation.

WARNING

POTENTIAL HAZARD

Improper handling of gasoline.

WHAT CAN HAPPEN

Gasoline can catch fire and you could be burned.

HOW TO AVOID THE HAZARD

Always turn off the engine when refueling. Do not refuel right after the engine has been running and is still very hot.

Do not spill gasoline on the engine or exhaust pipe/muffler when refueling.

Never refuel while smoking, or while in the vicinity of sparks, open flames, or other sources of ignition such as the pilot lights of water heaters and clothes dryers.

When transporting the ATV in another vehicle, be sure it is kept upright. Otherwise, fuel may leak out of the fuel tank.

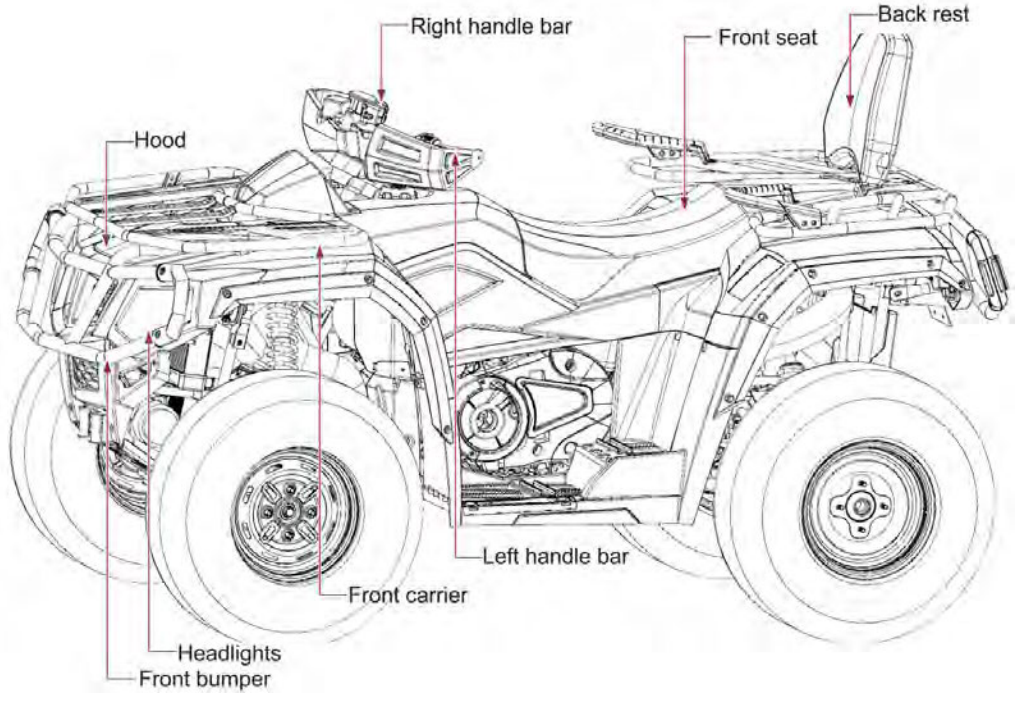
WHAT CAN HAPPEN

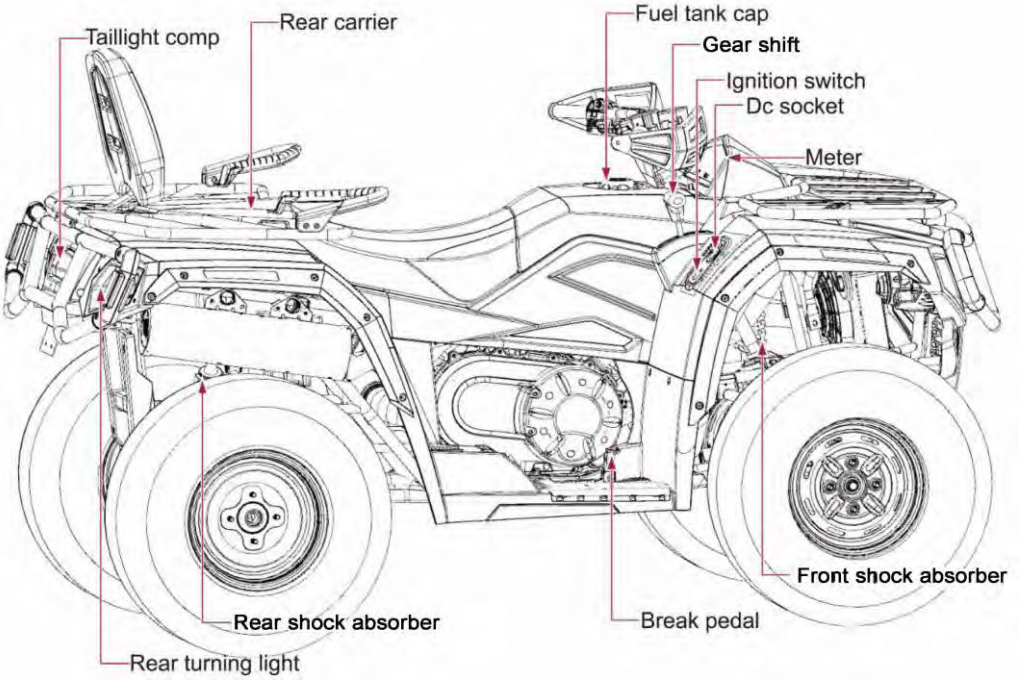
Gasoline is poisonous and can cause injuries.

HOW TO AVOID THE HAZARD

If you swallow some gasoline or inhale a lot of gasoline vapor, or get some gasoline in your eyes, see your doctor immediately. If gasoline spills on your skin, wash with soap and water. If gasoline spills on your clothing, change your clothes.

3-1 Description and Vehicle Identification




Taillight comp
Rear carrier
Fuel tank cap
Gear shift
Ignition switch
Dc socket
Meter
Front shock absorber
Break pedal
Rear shock absorber
Rear turning light

NOTE:

The machine you have purchased may differ slightly from those shown in the figures of this manual.

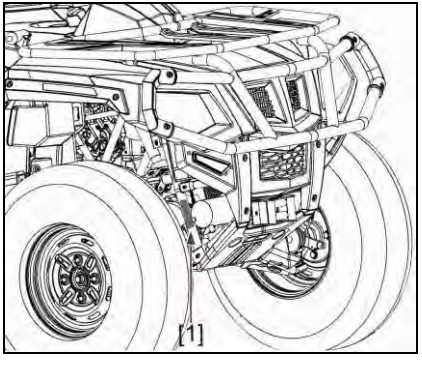
Identification number records

Record the key identification number, vehicle identification number and model label information in the spaces provided for assistance when ordering spare parts from a dealer or for reference in case the vehicle is stolen.

1.VEHICLE IDENTIFICATION NUMBER:

Vehicle identification number

The vehicle identification number is stamped into the frame.



[1]. Vehicle identification number

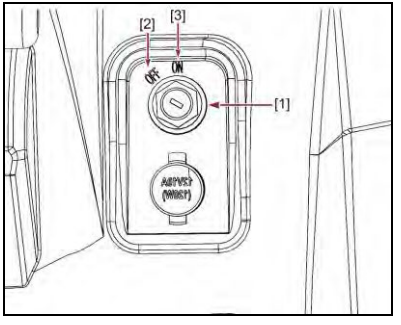
NOTE:

The vehicle identification number（VIN） is used to identify your vehicle .

CONTROL FUNCTIONS

Main switch

Functions of the respective switch positions are as follows:



[1] Ignition switch

[2] “OFF”

[3] “ON”

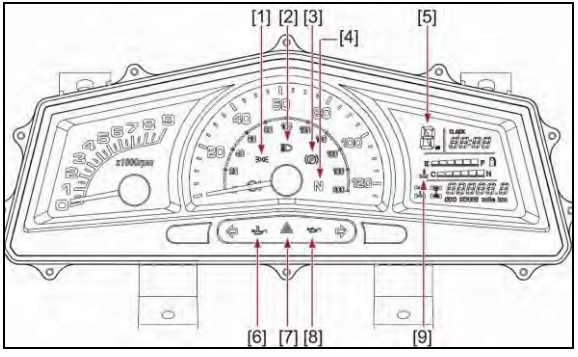
ON:

The engine can be started only at this position and the headlights and taillight come on when the light switch is on.

OFF:

All electrical circuits are switched off. The key can be removed in this position.

Indicator and Warning Lights



1. Parking light indicator
2. High beam indicator
3. Park position indicator "P"
4. Neutral indicator "N"
5. Gear display
6. Engine oil temperature
7. Emergency flashers indicator
8. Engine Oil-Pressure
9. Coolant temperature gauge

Low-Range Indicator Light "L"

This indicator light comes on when the drive select lever is in the "L" position.

Mechanical Parking Brake Indicator Light "(P)"

This indicator light comes on when the mechanical parking brake is applied.

High-Range Indicator Light "H"

This indicator light comes on when the drive select lever is in the "H" position.

Neutral Indicator Light "N"

This indicator light comes on when the drive select lever is in the "N" position.

Reverse Indicator Light "R"

This indicator light comes on when the drive select lever is in the “R” reverse position.

Coolant Temperature Warning Light “”

When the coolant temperature reaches a specified level, this light comes on to warn that the coolant temperature is too hot. If the light comes on during operation, stop the engine as soon as it is safe to do so and allow the engine to cool down for about 15 minutes.

CAUTION:

- The engine may overheat if the vehicle is overloaded. If this happens, reduce the load to specification.
- After restarting, make sure that the light is out. Continuous use while the light is on may cause damage to the engine.

High beam indicator

The light being on means headlight is at high beam mode.

Position light indicator

The light being on means that the position light fixed in the front headlight has been turned on.

Emergency indicator “”

The light being on means emergency lamp is on.

Use of EPS system

Meter is an important part of ATV.

Meter works together with EPS system and

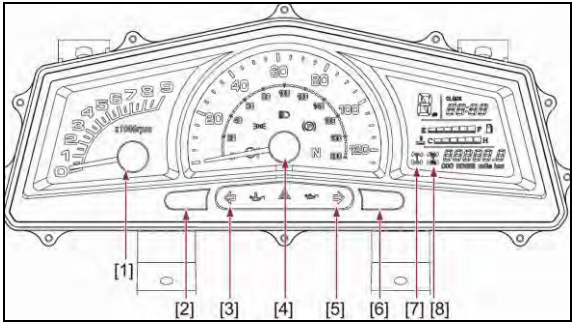
monitors working condition of EPS system.

Fault can be displayed by fault indicator light and fault indicator of EPS system, so the driver can acknowledge fault of EPS in time and take some measures to keep himself/herself safe.

When fault occurs on EPS system, fault indicator light will be lit up. At the same time, fault indicator of EPS system will display the fault code for maintenance.

- Open main switch of ATV, and EPS system will automatically enter into working state.
- Check the meter. If fault indicator light of EPS system does not be lit, ECU can be for regular use.
- If fault indicator light of EPS system is lit, that means EPS system find out some fault during ECU self-checking process, then you should consult your local dealer for maintenance in time.

Speedometer Unit



1. RPM indicator
2. Odometer/tripometer/Eng. hours & Clock adjustment
3. Left turn indicator light
4. Speed indicator
5. Right turn indicator light
6. Miles per hour/Kilometers per hour selector button
7. 2WD / 4WD indicator light
8. Differential Lock indicator light

Speedometer unit functions:

- a speedometer (which shows the speed)
- an odometer (which shows the total distance covered)
- a tripometer (which can be cleared and then show any new distances traveled)
- an RPM indicator (which shows the revolutions per minute of the engine)
- a clock
- an EFI fault code indicator (which shows the fault code for problems with the EFI)

Odometer and trip meter modes

On the display panel there are two large buttons, one located on the left side and one on the right side. Quickly pressing the button on the left side toggles the display from the odometer, to the tripometer, and

then to the hours meter; then it starts the cycle over.

The odometer displays the total distance traveled by the ATV. The tripometer records distances for a specific trip and can record distances from 0 through 999.9 miles.

To reset a trip meter, select it by pressing the left button, Press left button to switch to small mileage (Trip), press the right button for a long time to reset. The tripometer can be used to estimate the distance that can be traveled with a full tank of fuel. This information will enable you to judge the fuel consumption.

To change the display from miles per hour to kilometers per hour press the right side button on the display. This will also change the displayed mileage from miles to kilometers.

Clock time adjustment

Press the left button and hold for three seconds and the clock goes into the hour 'set' mode.

1. Press the right button to set the hour.
2. Press the left button again and the clock goes into the minute 'set' mode.
3. Press the right button to set the minutes.
4. Press the left button again and the clock will exit the 'set' mode.

Four-wheel drive indicator "  "

There are two 4WD indicators on the display

panel. The left 4WD indicator has a blinking circle on the front axle when the grey and yellow 4WD selector buttons are pressed in indicating the "4WD" function has been activated. This position also indicates that the 4WD is NOT locked. This allows the wheels on the left and right sides to rotate at different speeds to accommodate turning.

Differential gear lock indicator

The right 4WD symbol will show an 'X' over the center of the front axle when the lever is moved to the right and the yellow differential gear lock button is set to out position, which means the differential is not operational and is locked. When riding an ATV on muddy and slippery roads or when climbing a steep hill, make sure the 4WD lock indicator is on.

When riding on a flat road at a comparatively high speed, adjust the settings to "2WD/UNLOCK" and there are no symbols in either of the 4WD indicators.

Riding an ATV while the differential is functioning and is NOT locked, may improve the stability and safety of the ATV operation.

CAUTION:

When the selector is set to 4WD, the right 4WD symbol front axle will have an 'X' in the middle . When riding on good surfaces you should unlock the differential and press in the yellow and the gray buttons to the 2WD unlocked position. There should be no

symbols showing in either the left or right 4WD indicators.

CAUTION:

If the display indicators flash or the speedometer does not show the speed while the ATV is in motion, Ask a dealer to check the speed sensor and circuits.

Fault code indicator

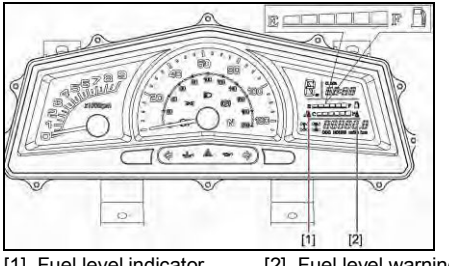
When the EFI encounters faults, the ECU will send the fault code to the instrument display, and it will flash on the clock.

If there are more than one fault code, they will be shown in rolling sequence. When fault codes are present, in order to see the time press the clock button, the time will be shown. Then after five seconds, the fault code returns again. Only after the fault is fixed, will the time show automatically.

The description for the fault codes are shown in Chapter 11 of this manual.

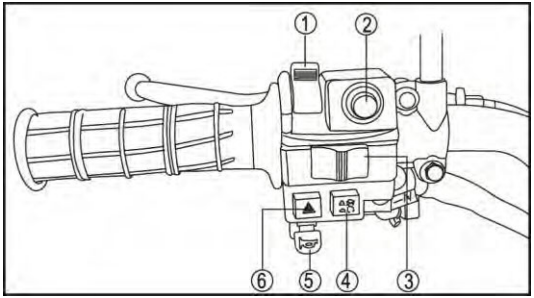
Fuel level indicator

The fuel level display will indicate the fuel volume. When the fuel is getting low the fuel pump symbol will flash



[1]. Fuel level indicator [2]. Fuel level warning indicator

Handlebar switches



1. Light switch "[high beam] / [low beam] / OFF/" [turn signals]
2. Start switch "[start]"
3. Left/right turning light switch
4..Engine stop switch "[engine stop]"
5. Horn switch
6. Emergency light switch

Light switch "[high beam] / [low beam] /OFF/ [turn signals]"

Set the switch to "[low beam]" to turn on the low beam and the taillight.

Set the switch to "[high beam]" to turn on the high beam and the taillight.

Set the switch to "OFF" to turn off all the lights.

Turn switch to "[hazard]" position, the emergency light inside of headlights and tail light are lit.

CAUTION:

Do not use the headlights with the engine turned off for more than thirty minutes.

The battery may discharge to the point that the starter motor will not operate properly. If this should happen, remove the battery and recharge it.

Start switch "⚷"

The starter motor cranks the engine when this switch is pushed.

CAUTION:

See starting instructions prior to starting the engine. (See pages 6-1—6-3 for details.)

Left/right turning light switch

Lighten the Left/right turning light respectively.

Engine stop switch "⊘/⚷"

Make sure that the engine stop switch is set to "⚷" before starting the engine. The engine stop switch controls ignition and can be used at all times to stop the engine, especially in an emergency. The engine will not start or run when the engine stop switch is set to "⊘".

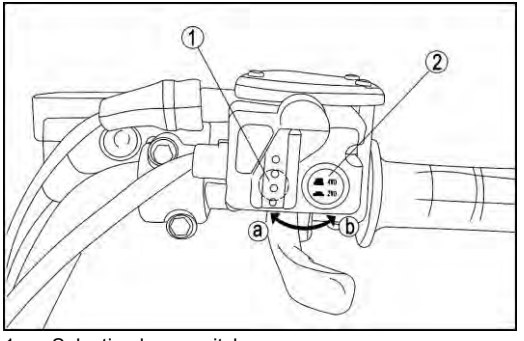
Horn switch

Press this switch, horn rings.

Emergency light switch

Press this switch, Front left/right turning light and Rear left/right turning light blink simultaneously.

On-Command four-wheel drive and differential gear lock switches



1. Selection lever switch
2. 2WD/4WD" selector button

This ATV is equipped with an On-Command four-wheel drive switch "2WD"/"4WD" and a differential gear lock switch "LOCK"/ "4WD".

Select the appropriate drive according to terrain and the conditions.

G Two-wheel drive (2WD): Power is supplied to the rear wheels only.

- Four-wheel drive (4WD): Power is supplied to the rear and front wheels.
- Four-wheel drive with the differential gear locked (4WD-LOCK): Power is supplied to the rear and front wheels when the differential gear is locked. Unlike the 4WD mode, all wheels turn at the same speed.

⚠ WARNING

POTENTIAL HAZARD

Changing from 2WD to 4WD or from 2WD to 2WD-Differential UNLOCK, or vice-versa while the vehicle is moving.

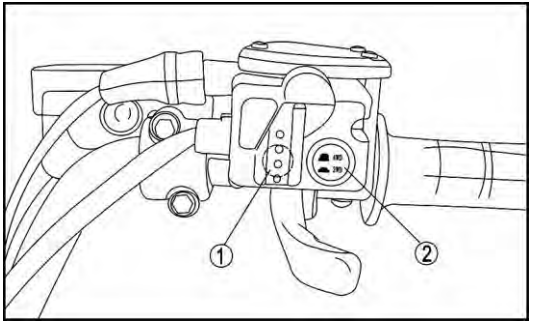
WHAT CAN HAPPEN

The vehicle handles differently in 4WD than in 2WD and in 2WD- Differential UNLOCK in some circumstances. Changing from 2WD to 4WD or from 2WD to 2WD–Differential UNLOCK, or vice-versa while moving may cause the vehicle to unexpectedly handle differently. This could distract the operator and increase the risk of losing control and an accident.

HOW TO AVOID THE HAZARD

Always stop the vehicle before changing from 2WD to 4WD or from 2WD to 2WD–Differential UNLOCK, or vice-versa.

On-Command Four-Wheel-Drive Switch "2WD/4WD"



1. "2WD"/ "4 WD" lever switch
2. "2WD/ " selector button

To change from 2WD to 4WD

stop the vehicle, be sure the select lever is set to position ⓐ, and then set the switch to "4WD". When the vehicle is in 4WD, the

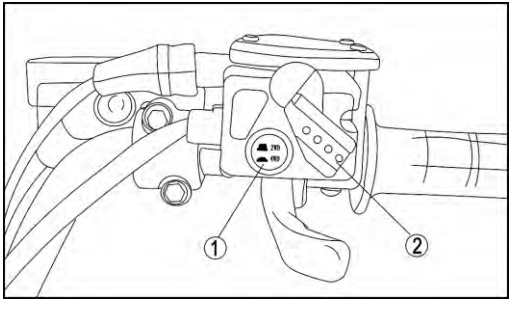
4WD indicator will come on in the

multi-function display.

To change from 4WD to 2WD

stop the vehicle, and then set the switch to “2WD”。the 4WD indicator will go out in the multi-function display.

Differential gear lock switch “LOCK” / “4WD”



1. “4WD/ “LOCK” button
2.. “2WD”/’4WD” lever switch

To lock the differential gear in 4WD, make sure the On-Command four-wheel-drive switch is set to “4WD”, stop the ATV, move the lever to position (b), and then set the switch to “LOCK”.

When the differential gear is locked, the differential gear lock indicator light will come on along with the indicator in the speedometer unit display.

To release the differential gear lock, stop the ATV and set the switch to “4WD”.

⚠ WARNING

POTENTIAL HAZARD

Riding too fast while the vehicle is in 4WD-LOCK.

WHAT CAN HAPPEN

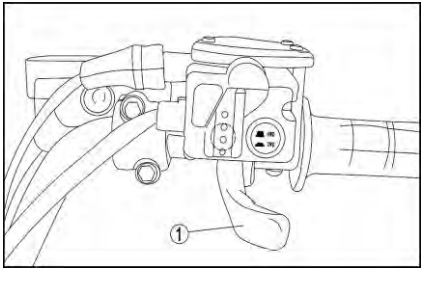
All wheels turn at the same speed when the differential is locked, so it takes more effort to turn the vehicle. The amount of effort required is greater the faster you go. You may lose control and have an accident if you cannot make a sharp enough turn for the speed you are traveling.

HOW TO AVOID THE HAZARD

Always ride at a slow speed when the vehicle is in 4WD-LOCK, and allow extra time and distance for maneuvers.

Throttle lever

Once the engine is running, movement of the throttle lever will increase the engine speed. Regulate the speed of the machine by varying the throttle position. Because the throttle is spring-loaded, the machine will decelerate, and the engine will return to an idle any time the hand is removed from the throttle lever.



1. Throttle lever

Before starting the engine, check the throttle to be sure it is operating smoothly. Make sure it returns to the idle position as soon as the lever is released.

WARNING

POTENTIAL HAZARD

Malfunction of throttle.

WHAT CAN HAPPEN

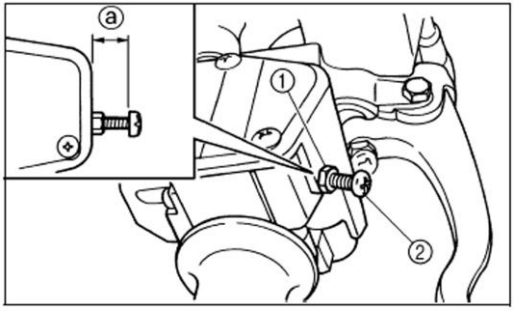
The throttle could be hard to operate, making it difficult to speed up or slow down when you need to. This could cause an accident.

HOW TO AVOID THE HAZARD

Check the operation of the throttle lever before you start the engine. If it does not work smoothly, check for the cause. Correct the problem before riding the ATV. Consult a dealer if you can't find or solve the problem yourself.

Speed limiter

The speed limiter keeps the throttle from fully opening, even when the throttle lever is pushed to the maximum. Turning in the adjusting screw limits the maximum engine power available and decreases the maximum speed of the ATV.



1. Locknut 2. Adjusting screw

a. No more than 12 mm (0.47 in)

WARNING

POTENTIAL HAZARD

Improper adjustment of the speed limit-ere and throttle.

WHAT CAN HAPPEN

The throttle cable could be damaged. Improper throttle operation could result.

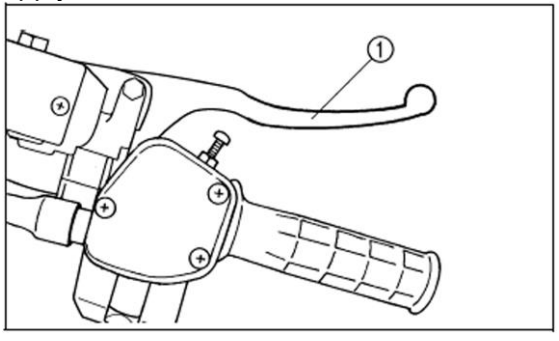
You could lose control, have an accident or be injured.

HOW TO AVOID THE HAZARD

Do not turn the adjusting screw out more than 12 mm (0.47 in). Always make sure the throttle lever free play is adjusted to 3-5 mm (0.12-0.20 in). See page 8-42.

Front brake lever

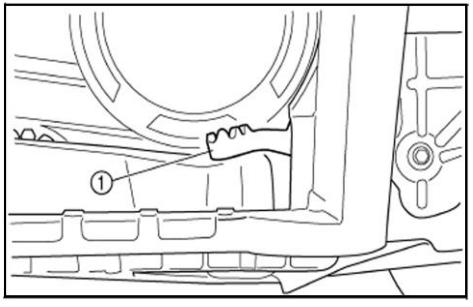
The front brake lever is located on the right handlebar. Pull it toward the handlebar to apply the front brake.



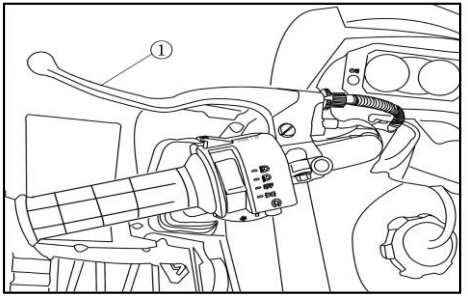
1. Brake lever

Brake pedal and rear brake lever

The brake pedal is located on the right side of the ATV and the rear brake lever is located on the left handlebar. Push down on the pedal or pull the lever toward the handlebar to apply the rear brake.



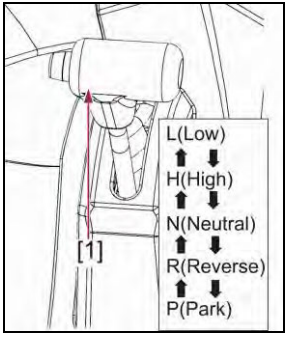
1. Brake pedal



1. Parking brake lever

Drive select lever

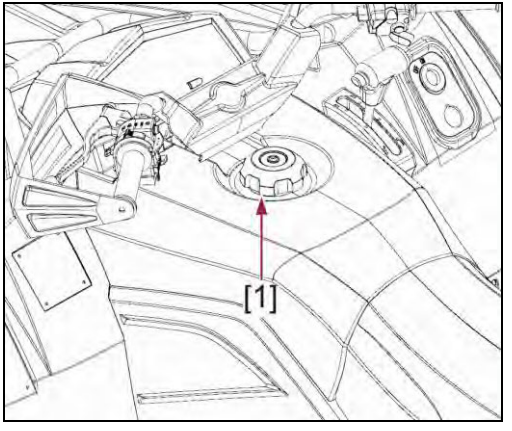
The drive select lever is used to shift your machine into the low, high, neutral, reverse and park positions. (Refer to pages 6-2—6-4 for the drive select lever operation.)



[1]. Drive select lever

Fuel tank cap

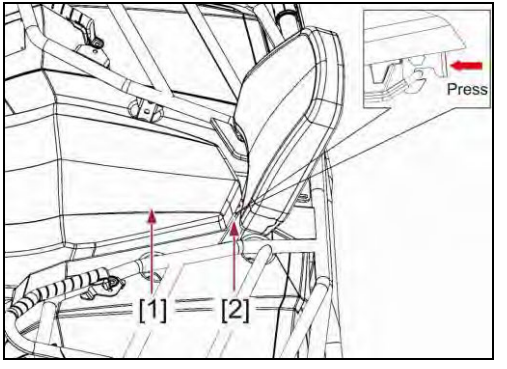
Remove the fuel tank cap by turning it counterclockwise.



[1] Fuel tank cap

SEAT

To remove the seat, pull the seat lock lever upward and pull up the seat at the rear.



[1].Seat [2].Seat lock lever

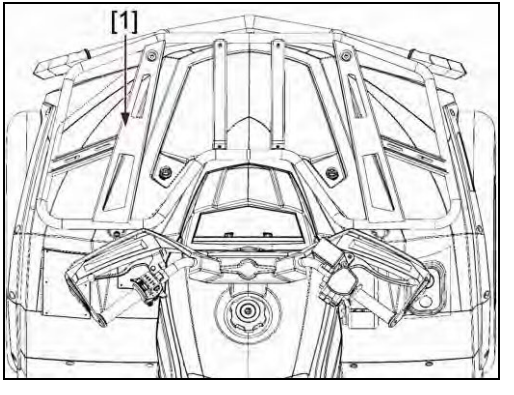
To install the seat, insert the projections on the front of the seat into the seat holders and push down on the seat at the rear.

NOTE:

Make sure that the seat is securely filed.

Front carrier

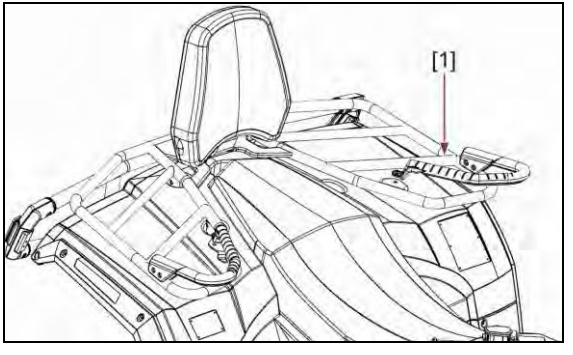
Front carrier Maximum load limit: 20kg(44lb)



[1] Front carrier

Rear carrier

Rear carrier Maximum load limit: 35kg(77lb)



[1]. Rear carrier

Front and rear shock absorber adjustment

The spring preload can be adjusted to suit rider's weight and tiding concisions.

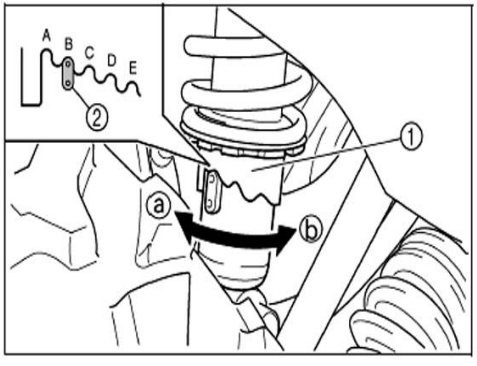
NOTE:

When adjusting the rear shock absorbers, the mar wheels need to be removed. (See pages 8-47 — 8-48 for removal and installation procedures.)

Adjust the spring proud as follows.

To increase the song preload, tom the adjusting ring in direction (a).

To decrease the spring preload, lure the adjusting ring in direction (b).

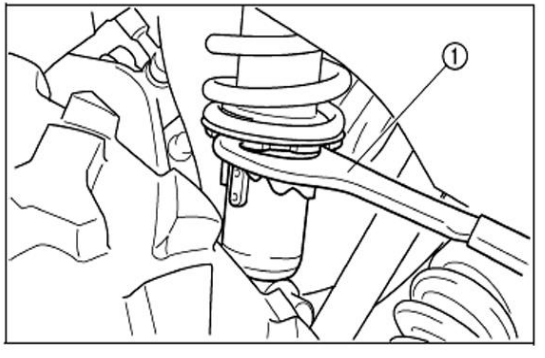


1. Spring preload adjusting ring
2. Position indicator

NOTE:

A special wrench can be obtained at a dealer to make Ibis adjustment.

Standard position: B
A- Minimum (soft)
E- Maximum (hard)



1. Special wrench

WARNING

POTENTIAL HAZARD

Improper shock absorber adjustment.

WHAT CAN HAPPEN

Uneven adjustment can cause poor handling and loss of stability, which could lead to an accident.

HOW TO AVOID THE HAZARD

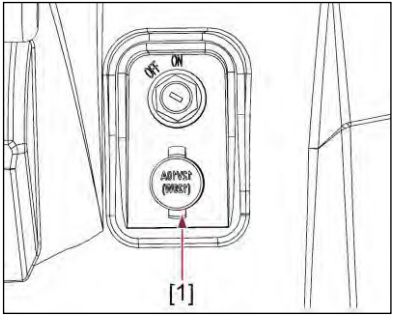
Always adjust the shock absorbers on the left and right side to the same setting.

Auxiliary DC jack

The auxiliary DC jack is located at the front righter side of the ATV.

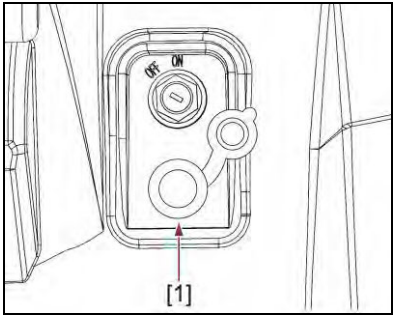
The auxiliary DC jack can be used for suitable work lights, radios, etc.

The auxiliary DC jack should only be used when the engine is running.



[1]. Auxiliary DC jack cap

1. Set the light switch to “OFF”.
2. Start the engine, (See pages 6-1—6-3.)
3. Open the auxiliary DC jack cap, and then insert the accessory power plug into the jack.



[1] Auxiliary DC jack

Maximum rated capacity for the auxiliary DC jack DC 12V, 120W(10A)

4. When the auxiliary DC jack is not being used, cover it with the cap.

CAUTION:

- Do not use accessories requiring move than the above maximum capacity. This may overload the circuit and cause the fuse to blow.
- If accessories are used without the engine running or with the headlights turned on, the battery will lose its charge and engine starting may become difficult.
- Do not use an automotive cigarette lighter or other accessories with a plug that gets hot because the jack can be damaged.

5-1 Pre Operation Checks

Before using this machine, check the following points:

ITEM	ROUTINE	PAGE
Brakes	●Check operation, free play, fluid level and fluid leakage. ●Fill with DOT 3 brake fluid if necessary.	5-2-5-3, 8-34-8-37
Parking brake	●Check for proper operation, condition and free play.	6-7
Fuel	●Check fuel level. ●Fill with fuel if necessary.	5-4-5-5
Engine/Gear box oil	●Check oil level，Fill with oil if necessary.	5-6
Coolant reservoir	●Check coolant level in reservoir. ●Fill with coolant if necessary.	5-7, 8-20-8-23
Final gear oil/ Differential gear oil	●Check for leakage.	5-6-5-7 8-15-8-18
Throttle	●Check for proper throttle cable operation and free play.	5-8,8-34
Wheels and tires	●Check tire pressure, wear and damage.	5-9-5-11, 8-42-8-43
Fittings and fasteners	●Check all fittings and fasteners.	5-8
Lights and switches	●Check for proper operation.	5-8, 8-46-8-48
Axle boots	●Check for damage.	8-23
Instrument	●Check for complete and right display	4-2—4-8
Light/Indicator	●Check for light / indicator operation	4-2—4-8

WARNING

POTENTIAL HAZARD

Failure to inspect the ATV before operating.

Failure to properly maintain the ATV.

WHAT CAN HAPPEN

Increases the possibility of an accident or equipment damage.

HOW TO AVOID THE HAZARD

Always inspect your ATV each time you use it to make sure the ATV is in safe operating condition.Always follow the inspection and maintenance procedures and schedules described in the Owner's Manual.

Front and rear brakes

Brake levers and brake pedal

Check that there is no free play in the front brake lever. If there is free play, have a dealer adjust it.

Check for correct free play in the rear brake lever. If the free play is incorrect, adjust it. (See page 8-38.)

Check for correct brake pedal height. If the pedal height is incorrect, have a dealer adjust it.

Check the operation of the brake levers and pedal. They should move smoothly and there should be a firm feeling when the brakes are applied. If not, have a dealer inspect the brake system.

Brake fluid level

Check the brake fluid level. Add fluid if necessary. (See pages 8-35.)

Recommended brake fluid: DOT 3

Brake fluid leakage

Check to see if any brake fluid is leaking out of the pipe joints or brake fluid reservoirs. Apply the brakes firmly for one minute. If the lever moves slowly inward, there may be a leak in the brake system. If there is any leakage, the brake system should be inspected by a dealer.

Brake operation

Test the brakes at slow speed after starting out to make sure they are working properly. If the brakes do not provide proper braking performance, inspect the brake pads for wear.

WARNING

POTENTIAL HAZARD

Riding with improperly operating brakes.

WHAT CAN HAPPEN

You could lose braking ability, which could lead to an accident.

HOW TO AVOID THE HAZARD

Always check the brakes at the start of every ride. Do not ride the ATV if you find any problem with the brakes. If a problem cannot be corrected by the adjustment procedures provided in this manual, have a dealer check for the cause.

Fuel

Make sure there is sufficient gasoline in the tank.

Recommended fuel:
UNLEADED GASOLINE ONLY
Fuel tank capacity:
Total:
13L (2.86 Imp gal, 3.43 US gal)

CAUTION:

Only unleaded gasoline. The use of leaded gasoline will cause severe damage to internal engine parts, such as the valves and piston rings, as well as to the exhaust system.

Your engine has been designed to use regular unleaded gasoline with a pump octane number ([R+M]/2) of 86 or higher, or research octane number of 91 or higher. If knocking or pinging occurs, use a different brand of gasoline or premium unleaded fuel. Unleaded fuel will give you longer spark plug life and reduced maintenance cost.

Gasohol

The ATV uses an electric fuel injection system, and its emissions completely meet the requirements of relevant rule of the United States and Europe. But mixed fuel is forbidden to use on the ATV, because its injection quantity is different from gasoline. The mixed fuel will cause engine to work

abnormally and exhaust to be deteriorated.

WARNING

POTENTIAL HAZARD

Improper care when refueling.

WHAT CAN HAPPEN

Fuel can spill, which can cause a fire and severe injury.

Fuel expands when it heats up. If the fuel tank is overfilled, fuel could spill out due to heat from the engine or the sun.

HOW TO AVOID THE HAZARD

Do not overfill the fuel tank. Be careful not to spill fuel, especially on the engine or exhaust pipe. Wipe up any spilled fuel immediately. Be sure the fuel tank cap is closed securely.

Do not refuel right after the engine has been running and is still very hot.

Engine Oil

Make sure the engine oil is at the specified level. Add oil as necessary.

CAUTION:

- In order to prevent clutch slippage (since the engine oil also lubricates the clutch), do not mix any chemical additives. Do not use oils with a diesel specification of "CD" or oils of a higher quality than specified. In addition, do not use oils labeled "ENERGY CONSERVING II" or higher.
- Make sure that no foreign material enters the crankcase.

Recommended engine oil type and quantity:
See page 10-2

Final gear oil

Make sure the final gear oil is at the specified level. Add oil as necessary. (See pages 8-15 — 8-16 for details.)

Recommended oil:
SAE 80 API GL-4 Hypoid gear oil

If desired, an SAE 80W90 hypoid gear oil may be used for all conditions.

NOTE:

GL-4 is a quality and additive rating, GL-5 or GL-6 rated hypoid gear oils may also be used.

Differential gear oil

Make sure the differential gear oil is at the specified level. Add oil as necessary. (See pages 8-16 for details.)

Recommended oil:
SAE 80 API GL-5 Hypoid gear oil

Coolant

Check the coolant level in the coolant reservoir when the engine is cold. (The coolant level will vary with engine temperature.) The coolant level is satisfactory if it is between the minimum and maximum level marks on the coolant reservoir. If the coolant level is at or below the minimum level mark, add distilled water

to bring the level up to maximum level mark. Change the coolant every two years. (See pages 8-20-8-23 for details.)

CAUTION:

Hard water or salt water is harmful to the engine. You may use soft water if you can not get distilled water.

Coolant reservoir capacity (up to the maximum level mark): 0.3 L (0.26 Imp qt, 0.32 US qt)

WARNING

POTENTIAL HAZARD

Removing the radiator cap when the engine and radiator are still hot.

WHAT CAN HAPPEN

You could be burned by hot fluid and steam blown out under pressure.

HOW TO AVOID THE HAZARD

Wait for the engine to cool before removing the radiator cap. Always use a thick rag over the cap. Allow any remaining pressure to escape before completely removing the cap.

Throttle lever

Check to see that the throttle lever operates correctly. It must open smoothly and spring back to the idle position when released.

Have a dealer repair as necessary for proper operation.

Fittings and fasteners

Always check the tightness of chassis fittings and fasteners before a ride. Take the machine to a dealer or refer to the Service Manual for correct tightening torque.

Lights

Check the headlights and tail/brake light to make sure they are in working condition. Repair as necessary for proper operation.

Switches

Check the operation of all switches. Have a dealer repair as necessary for proper operation.

Tires

WARNING

POTENTIAL HAZARD

Operating this ATV with improper tires, or with improper or uneven tire pressure.

WHAT CAN HAPPEN

Use of improper tires on this ATV, or operation of this ATV with improper or un-even tire pressure, may cause loss of control, increasing your risk of accident.

1. The tires listed below have been approved.

	Type	Size
Front	26×9-12	6PR
Rear	26×10-12	6PR

2.The tires should be set to the recommended pressure:

Recommended tire pressure

Front 10psi (69kpa, 0.70 kgf/cm^2)

Rear 10psi (69kpa, 0.70 kgf/cm^2)

Check and adjust tire pressures when the tires are cold.

Tire pressures must be equal on both sides.

3. Tire pressure below the minimum specified could cause the tire to dislodge from the rim under severe riding conditions.

The following are minimums:

Front 9psi (62 kpa, 0.63kgf/cm^2)

Rear 9psi (62 kpa, 0.63kgf/cm^2)

4. Use no more than the following pressures when seating the tire beads.

Front 36psi (250kpa, 2.5kgf/cm^2)

Rear 36psi (250kpa, 2.5kgf/cm^2)

Higher pressures may cause the tire to burst. Inflate the tires very slowly and carefully. Fast inflation could cause the tire to burst.

How to measure tire pressure

Use the low-pressure tire gauge.

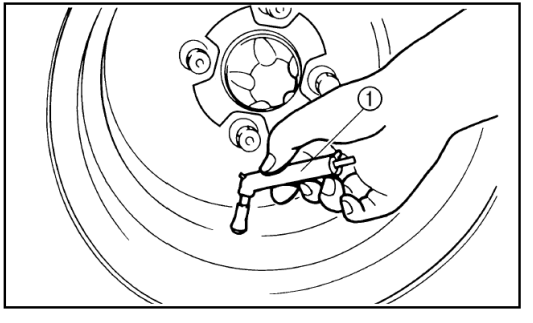
NOTE:

The low-pressure tire gauge is included as standard equipment. Make two measurements of the tire pressure and use the second reading. Dust or dirt in the gauge could cause the first reading to be incorrect.

Set pressure with tires cold.

Set tire pressures to the following specifications:

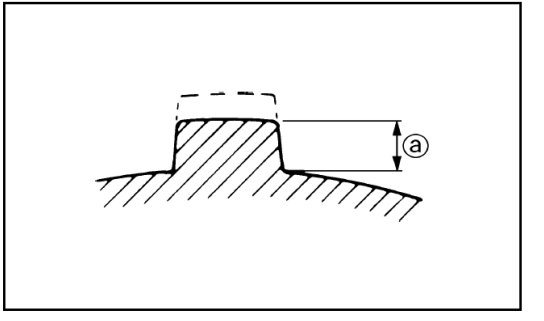
	Recommended pressure	Minimum	Maximum
Front	10psi (69kpa (0.70kgf/ cm^2)	9 psi (62kpa, 0.63kgf/ cm^2)	11psi,(76kpa, 0.77kgf/ cm^2)
Rear	10psi (69kpa (0.70kgf/ cm^2)	9 psi (62kpa, 0.63kgf/ cm^2)	11psi,(76kpa, 0.77kgf/ cm^2)



1. Low-pressure tire gauge

Tire wear limit

When the tire groove decreases to 3 mm (0.12 in) due to wear, replace the tire.



a. Tire wear limit

WARNING

POTENTIAL HAZARD

Operating ATV without being familiar with all controls.

WHAT CAN HAPPEN

Loss of control, which could cause an accident or injury.

HOW TO AVOID THE HAZARD

Read the Owner's Manual carefully. If there is a control or function you do not understand, ask your dealer.

Starting a cold engine

WARNING

POTENTIAL HAZARD

Freezing control cables in cold weather.

WHAT CAN HAPPEN

You could be unable to control the ATV, which could lead to an accident or collision.

HOW TO AVOID THE HAZARD

When riding in cold weather, always make sure all control cables work smoothly before you begin riding.

1. Apply the rear brake pedal.
2. Turn the main switch to "ON" and the engine stop switch to "".
3. Shift the drive select lever into the neutral or park position.

When the driving select lever is in the neutral or park position, if the indicator light does not come on, ask the one dealer to inspect the respective electric circuit.

The engine can be started in any gear if the rear brake lever is applied. However, it is recommended to shift into neutral or park before starting the engine.

4. Press down the button of starting, may starting engine.

CAUTION:

See the "Engine break-in" section prior to operating the engine for the first time.

Starting a warm engine

To start a warm engine, refer to the "Starting a cold engine" section. The throttle should be opened slightly.

Warming up

To get maximum engine life, always warm up the engine before starting off.

Never accelerate hard with a cold engine!

To see whether the engine is warm or not, with one third throttle to have a 3km driving, or let the engine driving 3 minutes with 2000 rpm.

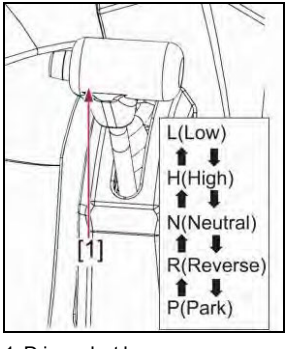
Drive select lever operation and reverse driving

CAUTION:

Before shifting, you must stop the ATV and return the throttle lever to the closed position, otherwise the transmission may be damaged.

Shifting: Neutral to High and High to Low

1. Bring the ATV to a complete stop and return the throttle lever to the closed position.
2. Apply the brakes, then shift by moving the drive select lever along the shift guide.



1. Drive select lever

NOTE:

Make sure that the drive select lever is completely shifted into position.

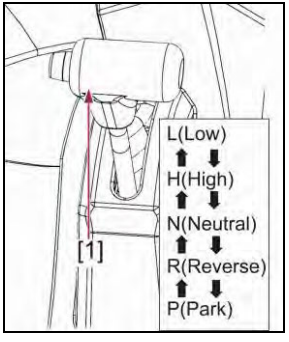
3. Open the throttle lever gradually.

Shifting: Neutral to Reverse

NOTE:

The drive select lever cannot be shifted into or from reverse or park without applying the rear brake.

1. Bring the ATV to a complete stop and return the throttle lever to the closed position.
2. Apply the brake pedal.
3. Shift from neutral to reverse or from reverse to park and vice versa by moving the drive select lever along the shift guide.



1. Drive select lever

NOTE:

When in reverse, the reverse indicator light should be on. If the light does not come on, ask a dealer to inspect the electrical circuit.

Due to the synchronizing mechanism in the engine, the light may not come on until the ATV starts moving.

4. Check behind for people or obstacles, and then release the brake pedal.
5. Open the throttle lever gradually and continue to watch to the rear while backing.

WARNING

POTENTIAL HAZARD

Improperly operating in reverse.

WHAT CAN HAPPEN

You could hit an obstacle or person behind you, resulting in serious injury.

HOW TO AVOID THE HAZARD

When you shift into reverse, make sure there are no obstacles or people behind you. When it is safe to proceed, go slowly.

Vehicle Break-in Period

The break-in period for your new ATV vehicle is the first 25 hours of operation, or the time it takes to use the first three tanks full of gasoline. No single action on your part is as important as a proper break-in period. Careful treatment of a new engine and drive components will result in more efficient performance and longer life for these components. Perform the following procedures carefully.

CAUTION:

- Excessive heat build-up during the first three hours of operation will damage close-fitted engine parts and drive components. Do not operate at full throttle or high speeds during the first three hours of use.
- Use of any engine oil not mentioned in this manual will cause severe damage to the engine。

Engine Break-In

There is never a more important period in the life of your vehicle than the period between zero and 25 hours.

For this reason, we ask that you carefully read the following material. Because the engine is brand new, you must not put an excessive load on it for the first several hours of running.

During the first 25 hours, the various parts in the engine wear and polish themselves to the correct operating clearances.

During this period, prolonged full throttle operation or any condition which might result in excessive engine heating must be avoided. However, momentary (2-3 seconds maximum)

full throttle operation under load does not harm the engine.

Each full throttle acceleration sequence should be followed with a substantial rest period for the engine by cruising at lower r/min so the engine can rid itself of the temporary build up of heat. If any abnormality is noticed during this period, consult a dealer.

0-10 Hours:

Avoid continuous operation above half throttle. Allow a cooling off period of five to ten minutes after every hour of operation. Vary the speed of the vehicle from time to time. Do not operate it at one set throttle position.

10-25 Hours:

Avoid prolonged operation above 3/4 throttle. Rev the vehicle freely but do not use full throttle at any time.

After Break-In:

The vehicle can now be operated normally.

Brake System Break-in

Apply only moderate braking force for the first 50 stops. Aggressive or overly forceful braking when the brake system is new could damage brake pads and rotors.

CVT Break-in (Clutches/Belt)

A proper break-in of the clutches and drive belt will ensure a longer life and better performance. Break in the clutches and belt by operating at slower speeds during the break-in period as recommended. Pull only light loads. Avoid aggressive acceleration and high speed operation during the break-in period.

Parking

When parking, stop the engine and shift the brave select lever into the park position, then turn the fuel cock to the "OFF" position.

NOTE:

The buzzer will keep buzzing if the park is on when driving.

Parking on a slope

WARNING

POTENTIAL HAZARD

Parking on a hill or other incline.

WHAT CAN HAPPEN

The ATV could roll out of control, increasing the chance of an accident.

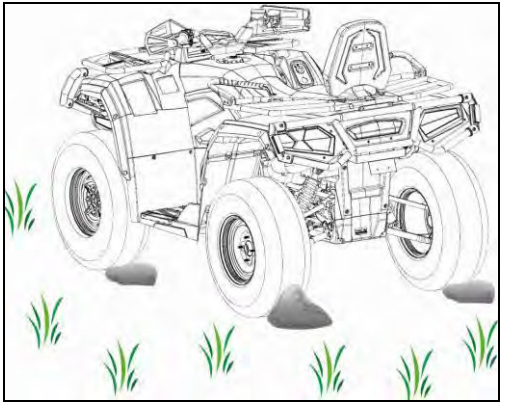
HOW TO AVOID THE HAZARD

Avoid parking on hills or other inclines.

If you must park on an incline, place the machine transversely across the incline, apply the parking brake, and block the front and rear wheels with rocks or other objects.

Do not park the ATV at all on hills that are so steep you could not walk up them easily.

1. Bring the machine to a stop by applying the brakes.
2. Stop the engine.
3. With the brake pedal applied, shift the drive select lever to the park position "P".
4. Put a big rock or wedge-shaped pieces of wood in the downhill direction of the wheel, to ensure that the car will not slide to the slopes accidentally.



Accessories and loading

Accessories

Accessories can affect the handling and control of your ATV. Keep the following in mind when considering an accessory or operating an ATV which has accessories.

Choose only accessories designed for your ATV. Your dealer has a variety of genuine accessories.

Accessories should be rigidly and securely mounted. An accessory which will shift position or come off while you are riding could affect your ability to control the ATV.

Do not mount an accessory where it could interfere with your ability to control the ATV.

Examples include (but are not limited to) a heavy or bulky object attached to the handlebars which could make steering difficult, an accessory that limits your ability to move around on the seat, or one that limits your view.

Use extra caution when riding an ATV with accessories. The ATV may handle differently

than it does without accessories.

Loading

Cargo or a trailer can change the stability and handling of an ATV. You must use common sense and good judgment when carrying cargo or towing a trailer. Keep the following points in mind:

Never exceed the weight limits shown. An overloaded ATV can be unstable.

MAXIMUM LOADING LIMIT

- Vehicle loading limit (total weight of cargo, rider and accessories, and tongue weight): 288kg (635 lb)
- Front carrier: 20kg (44lb)
- Rear carrier: 35 kg (77lb)

Do not exceed the maximum tongue weight. You can measure tongue weight with a bathroom scale. Put the tongue of the loaded trailer on the scale with the tongue at hitch height. Adjust the load in the trailer, if necessary, to reduce the weight on hitch. If you are carrying cargo and towing a trailer, include the tongue weight in the maximum vehicle load limit.

Load cargo in the cargo bed as close to the center of the vehicle as possible and tie it down using the cargo hooks equipped on the cargo bed.

Tie down cargo securely to the carriers. Make sure cargo in the trailer cannot move around. A shifting load can cause an accident.

Make sure the load does not interfere with controls or your ability to see where you are

going.

Drive more slowly than you would without a load. The more weight you carry, the slower you should go. Although conditions vary, it is good practice not to exceed low range whenever you are carrying heavier loads or when towing a trailer.

Allow more braking distance. A heavier vehicle takes longer to stop.

Avoid making sharp turns unless at very slow speeds.

Avoid hills and rough terrain. Choose terrain carefully. Added weight affects the stability and handling of the ATV.

WARNING

POTENTIAL HAZARD

Overloading this ATV or carrying or towing cargo improperly.

WHAT CAN HAPPEN

Could cause changes in vehicle handling which could lead to an accident.

HOW TO AVOID THE HAZARD

Never exceed the stated load capacity for this ATV.

Cargo should be properly distributed and securely attached. Reduce speed when carrying cargo or pulling a trailer.

Allow greater distance for braking.

DRIVING YOUR VEHICLE

This ATV is mainly for utility use, but may also be used for recreation. This section, Riding your ATV, provides general ATV riding instructions for recreational riding. The skills and techniques described in this section, however, are appropriate for all types of riding. Riding your ATV requires special skills acquired through practice over a period of time. Take the time to learn the basic techniques well before attempting more difficult maneuvers.

Riding your new ATV can be a very enjoyable activity, providing you with hours of pleasure. But it is essential to familiarize yourself with the operation of the ATV to achieve the skill necessary to enjoy riding safely. Before you begin to ride, be sure you have read this Owner's Manual completely and understand the operation of the controls. Pay particular attention to the safety information on pages 2-1—2-7. Please also read all caution and warning labels on your ATV.

RIDE WITH CARE AND GOOD JUDGEMENT

Get training if you are inexperienced.

Beginners should get training from a certified instructor.

Become familiar with this ATV at slow speeds first, even if you are an experienced operator. Do not attempt to operate at maximum performance until you are totally familiar with

the machine's handling and performance characteristics.

WARNING

POTENTIAL HAZARD

Operating this ATV without proper instruction.

WHAT CAN HAPPEN

The risk of an accident is greatly increased if the operator does not know how to operate the ATV properly in different situations and on different types of terrain.

Riding your ATV requires skills acquired through practice over a period of time. Take the time to learn the basic techniques well before attempting more difficult maneuvers.

Not recommended for children under 16 years of age.

WARNING

POTENTIAL HAZARD

Failure to follow the age recommendations for this ATV.

WHAT CAN HAPPEN

Use by children of ATVs that are not recommended for their age can lead to severe injury or death of the child.

HOW TO AVOID THE HAZARD

A child under 16 should never operate an ATV with engine size greater than 90cc.

This ATV is designed to carry operator and cargo only - passengers prohibited.

WARNING

POTENTIAL HAZARD

Carrying a passenger on this ATV.

WHAT CAN HAPPEN

Greatly reduces your ability to balance and control this ATV. Could cause an accident, resulting in harm to you and/or your passenger.

HOW TO AVOID THE HAZARD

Never carry a passenger. The long seat is to allow the operator to shift position as needed during operation. It is not for carrying passengers.

Apparel

WARNING

POTENTIAL HAZARD

Operating this ATV without wearing an approved motorcycle helmet, eye protection and protective clothing.

WHAT CAN HAPPEN

Operating without an approved motorcycle helmet increases your chances of a severe head injury or death in the event of an accident.

Operating without eye protection can result in an accident and increases your chances of a severe injury in the event of an accident.

Operating without protective clothing increases your chances of severe injury in the event of an accident.

HOW TO AVOID THE HAZARD

Always wear an approved motorcycle helmet that fits properly.

You should also wear:

eye protection

(goggles or face shield)

gloves

boots

long-sleeved shirt or jacket

long pants

Do not operate after consuming alcohol or drugs.

Operator's performance capability is reduced by the influence of alcohol or drugs.

WARNING

POTENTIAL HAZARD

Operating this ATV after consuming alcohol or drugs.

WHAT CAN HAPPEN

Could seriously affect your judgment.

Could cause you to react more slowly.

Could affect your balance and perception.

Could result in an accident.

HOW TO AVOID THE HAZARD

Never consume alcohol or drugs before or while driving this ATV.

Pre-operation checks

Always perform the pre-operation checks listed on page 5-1 before riding for safety and proper care of the ATV.

WARNING

POTENTIAL HAZARD

Failure to inspect the ATV before operating.

Failure to properly maintain the ATV.

WHAT CAN HAPPEN

Increases the possibility of an accident or equipment damage.

HOW TO AVOID THE HAZARD

Always inspect your ATV each time you use it to make sure the ATV is in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in the Owner's Manual.

WARNING

POTENTIAL HAZARD

Operating this ATV with improper tires, or with improper or uneven tire pressure.

WHAT CAN HAPPEN

Use of improper tires on this ATV, or operation of this ATV with improper or un-even tire pressure, may cause loss of control, increasing your risk of an accident.

HOW TO AVOID THE HAZARD

Always use the size and type tires specified in the Owner's Manual for this vehicle on pages. Always maintain proper tire pressure as described in the Owner's Manual on page 5-13.

WARNING

POTENTIAL HAZARD

Operating this ATV at speeds too fast for your skills or the conditions.

WHAT CAN HAPPEN

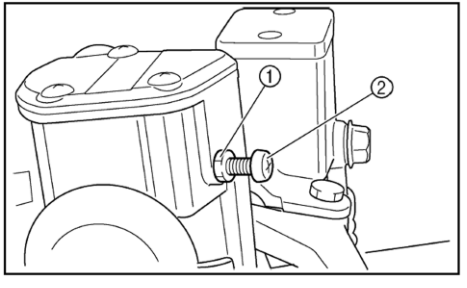
Increases your chances of losing control of the ATV, which can result in an accident.

HOW TO AVOID THE HAZARD

Always go at a speed that is proper for the terrain, visibility and operating conditions, and your experience.

Speed limiter

For riders less experienced with this model, this model is equipped with a speed limiter in the throttle lever housing. The speed limiter keeps the throttle from fully opening, even when the throttle lever is pushed to the maximum. Screwing in the adjuster limits the maximum engine power available and decreases the maximum speed of the ATV. Turning the screw in decreases top speed and turning it out increases top speed.



1. Locknut 2.Adjusting screw

Loading and accessories

Use extra caution when riding the ATV with additional loads, such as accessories or cargo. The ATV's handling may be adversely affected. Reduce your speed when adding additional loads.

MAXIMUM LOADING LIMIT

- Vehicle loading limit:288kg (635 lb)

  Total weight of cargo, rider and accessories, and trailer hitch vertical load.
- Front carrier: 20 kg (44 lb)
- Rear carrier: 35 kg (77 lb)

WARNING

POTENTIAL HAZARD

Overloading this ATV or carrying or towing cargo improperly.

WHAT CAN HAPPEN

Could cause changes in vehicle handling which could lead to an accident.

HOW TO AVOID THE HAZARD

Never exceed the stated load capacity for this ATV.

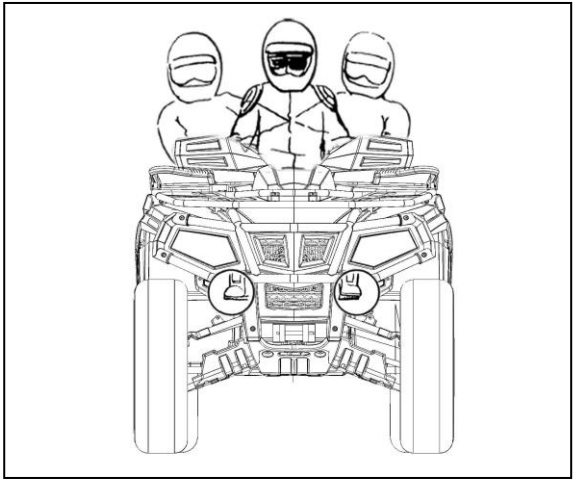
Cargo should be properly distributed and securely attached.

Reduce speed when carrying cargo or pulling a trailer. Allow greater distance for braking.

Always follow the instructions in your Owner's Manual for carrying cargo or pulling a trailer.

During operation

Always keep your feet on the footboards during operation. Otherwise your feet may contact the rear wheels.



WARNING

POTENTIAL HAZARD

Removing hands from handlebars or feet from footboards during operation.

WHAT CAN HAPPEN

Removing even one hand or foot can re-duce your ability to control the ATV or could cause you to lose your balance and fall off of the ATV. If you remove a foot from a footboard, your foot or leg may come into contact with the rear wheels, which could injure you or cause an accident.

HOW TO AVOID THE HAZARD

Always keep both hands on the handlebars and both feet on the footboards of your ATV during operation.

Avoid wheelies and jumping. You may lose control of the ATV or overturn.

WARNING

POTENTIAL HAZARD

Attempting wheelies, jumps, and other stunts.

WHAT CAN HAPPEN

Increases the chance of an accident, including an overturn.

HOW TO AVOID THE HAZARD

Never attempt stunts, such as wheelies or jumps. Don't try to show off.

Modifications

WARNING

POTENTIAL HAZARD

Operating this ATV with improper modifications.

WHAT CAN HAPPEN

Improper installation of accessories or modification of this vehicle may cause changes in handling which in some situations could lead to an accident.

HOW TO AVOID THE HAZARD

Never modify this ATV through improper installation or use of accessories. All parts and accessories added to this vehicle should be genuine or equivalent components designed for use on this ATV and should be installed and used according to instructions. If you have questions, consult an authorized ATV dealer.

Exhaust system

The exhaust system on the ATV is very hot during and following operation. To prevent burns, avoid touching the exhaust system. Park the ATV in a place where pedestrians or children are not likely to touch it.

WARNING

POTENTIAL HAZARD

Hot exhaust system.

WHAT CAN HAPPEN

Dry grass or brush or other combustible material accumulated around the engine area could catch fire.

Someone touching the exhaust system during or after operation could be burned.

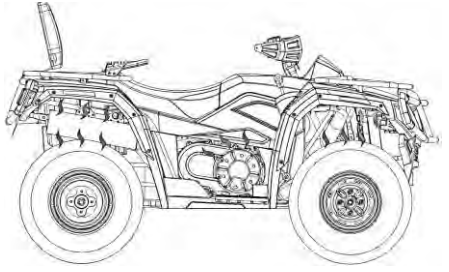
HOW TO AVOID THE HAZARD

Do not operate, idle, or park the ATV in dry grass or other dry ground cover.

Keep the engine area free of dry grass, brush, or other combustible material.

Do not touch the hot exhaust system.

Do not park the ATV in a place where others might be likely to touch it.



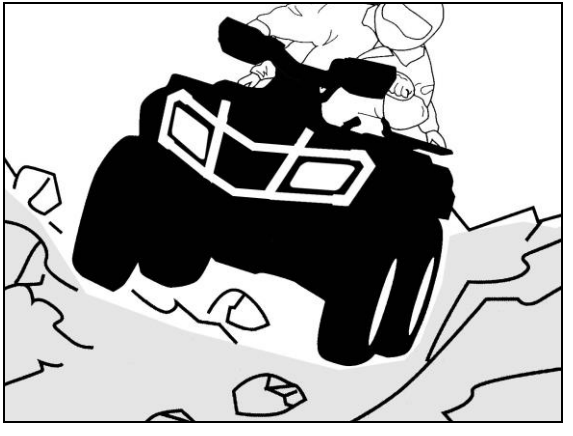
Pay attention to road conditions

Know the terrain where you ride. Ride cautiously in unfamiliar areas. Stay alert for holes, rocks, or roots in the terrain, and for other hidden hazards which may cause the ATV to roll over.

WARNING

You can come upon hidden rocks, bumps, or holes, without enough time to react. This could result in the ATV overturning or going out of control.

Go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing surface conditions when operating the ATV.

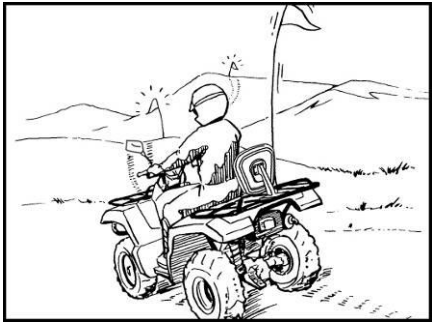


WARNING

Operating on excessively rough, slippery or loose terrain could cause loss of traction or vehicle control, which could result in an accident, including an overturn.

Do not operate on excessively rough, slippery or loose terrain until you have learned and practiced the skills necessary to control the ATV on such terrain. Always be especially cautious on these types of surfaces.

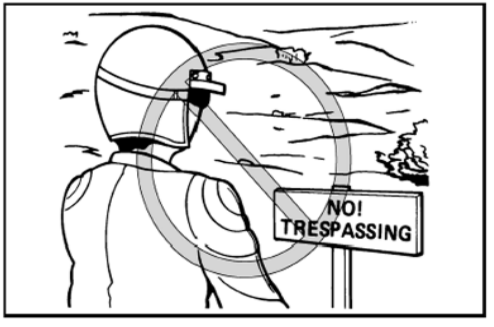
When riding in an area where you might not easily be seen, such as desert terrain, mount a caution flag on the ATV. DO NOT use the flag pole bracket as a trailer hitch.



WARNING

Always mount a caution flag on the ATV to make you more visible. Keep a lookout for other vehicles.

Do not ride in areas posted “no trespassing”. Do not ride on private property without obtaining permission.



Caution：

- Select a large, flat area off-road to become familiar with your ATV.
- Make sure that this area is free of obstacles, vehicles and pedestrians.
- You should practice controlling the throttle, brakes, shifting procedures, and turning techniques in this area before trying these operations on more difficult terrain.
- Always avoid riding on paved surfaces: the ATV is designed for off-road use, and handling maneuvers are more difficult to perform on pavement.
- Shift to the gear position “N” and follow the instructions to start the engine. Once it has warmed up you are ready to begin riding your ATV
- Remember that the engine and exhaust pipe will be hot while riding and shortly afterwards; do not allow skin or clothing to come in contact with these components.
- With the engine idling, move the gear shift lever to the low position “L” or the high position “H”. Apply the throttle slowly and

smoothly. The centrifugal clutch will engage and you will start to accelerate.

- If the throttle is applied too abruptly, the front wheels may lift off the ground resulting in a loss of steering control.
- Avoid higher speeds until you are thoroughly familiar with the operation of your ATV.
- When slowing down or stopping, release the throttle and apply the brakes smoothly and evenly.
- Improper use of the brakes can cause the tires to lose traction, reducing control and increasing the possibility of an accident.

CAUTION:

Do not shift from low gear “L” to high “H” “N” “R” or any other shift maneuver without first coming to a complete stop. This could damage the engine or drive train.

Turning your ATV

To achieve maximum traction while riding off-road in 2WD or 4WD, the two rear wheels turn together at the same speed. Furthermore, when riding in 4WD-LOCK (“DIFF. LOCK”), all four tires rotate at the same speed. Therefore, unless the wheel on the inside of the turn is allowed to slip or lose some traction, the ATV will resist turning. A special turning technique must be used to allow the ATV to make turns quickly and

easily. It is essential that this skill be mastered first at low speeds.

WARNING

POTENTIAL HAZARD

Turning improperly.

WHAT CAN HAPPEN

The ATV could go out of control, causing a collision or rolling over.

HOW TO AVOID THE HAZARD

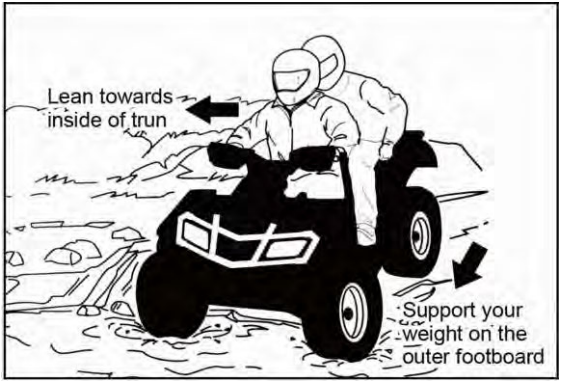
Always follow proper procedures for turning as described in this Owner's Manual.

Practice turning at low speeds below 25 km/h before attempting to turn at faster speeds.

Do not turn at speeds too fast for your skills or the surface conditions.

Operate at a slow speed and allow extra time and distance for maneuvers when in 4WD-LOCK .

As you approach a curve, slow down and begin to turn the handlebars in the desired direction. As you do so, put your weight on the footboard to the outside of the turn (opposite the direction you are turning) and lean your upper body into the turn. Use the throttle to maintain an even speed throughout the turn. This maneuver will allow the wheels on the inside of the turn to slip slightly, allowing the ATV to make the turn smoothly.



This procedure should be practiced at slow speeds several times in a large off-road area with no obstacles. If an incorrect technique is used, your ATV may try to continue to go straight. If the ATV doesn't turn as desired, come to a stop and then practice the procedure again. If the riding surface is slippery or loose, it may help to position more of your weight over the front wheels by moving forward on the seat.

Once you have learned this technique you should be able to do it at higher speeds or in tighter curves.

Improper riding procedures such as abrupt throttle changes, excessive braking, incorrect body movements, or too much speed for the sharpness of the turn may cause the ATV to tip.

If the ATV begins to tip over to the outside while negotiating a turn, lean more to the inside. It may also be necessary to gradually let off on the throttle and slowly steer to the outside of the turn to avoid tipping over.

Remember: Avoid higher speed turning

maneuvers until you are thoroughly familiar with the operation and feel of your ATV.

Climbing uphill

Use proper riding techniques to keep your ATV from overturning on hills. Be sure that you can maneuver your ATV effectively on flat ground before attempting any incline. Even then practice riding first on gentle slopes. Try more difficult climbs only after you have developed your skills. In all cases avoid inclines with slippery or loose surfaces, or obstacles that might cause you to lose control.

WARNING

The vehicle can overturn more easily on extremely steep hills than on level surfaces or small hills.

Never operate the ATV on hills too steep for the ATV or for your abilities. Practice on smaller hills before attempting large hills.

It is important when climbing a hill to make sure that your weight is transferred forward on the ATV. This can be accomplished by leaning forward and, on steeper inclines, standing on the footboards and leaning further forward over the handlebars.

WARNING

Climbing hills improperly could cause loss of control or cause the ATV to overturn.

Always follow proper procedures for climbing hills as described in this Owner's Manual.

Always check the terrain carefully before you

start up any hill.

Never climb hills with excessively slippery or loose surfaces.

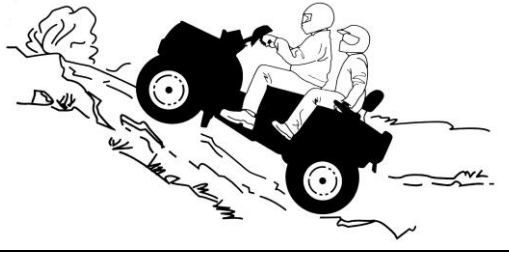
Shift your weight forward.

Never open the throttle too quickly.

The ATV could flip over backwards.

Never crest a hill at high speed.

An obstacle, a sharp drop, or another vehicle or person could be on the other side of the hill.



If you are climbing a hill and you find that you have misjudged being able to make it to the top, you should turn the ATV around while you still have forward motion (provided you have the room to do so) and go down the hill.

WARNING

- **Use proper gear and maintain a steady speed when climbing a hill.**
- **If you lose all forward speed:**
  Keep weight uphill.
  Apply the brakes.
- **Shift to the parking position "P" after you are stopped.**
- **If you begin rolling backwards:**
  Keep weight shifted uphill.

Crossing a slope

Traversing sloping surfaces on your ATV requires you to properly position your weight to maintain proper balance. Be sure that you have mastered the basic riding skills on flat ground before attempting to cross a sloped surface. Avoid slopes with slippery surfaces or rough terrain that may throw off your balance.

As you travel across a slope, lean your body toward the uphill direction. It may be necessary to adjust the steering angle when riding on loose surfaces by pointing the front wheels slightly uphill. When riding on slopes be sure not to make sharp turns either uphill or downhill.

If your ATV does begin to tip, gradually steer in the downhill direction if there are no obstacles in your path. As you regain steady balance, gradually steer in the direction you wish to travel.

WARNING

Improperly crossing hills or turning on hills, could cause loss of control or cause the ATV to overturn.

Never attempt to turn the ATV around on any hill until you have mastered the turning technique as described in the Owner's Manual on level ground. Be very careful when turning on any hill.

Avoid crossing the side of a steep hill if possible.

When crossing the side of a hill:

- Always follow proper procedures as described in the Owner's Manual.
- Avoid hills with excessively slippery or loose

surfaces.

- Shift your weight to the uphill side of the ATV.

- If your ATV has stalled or stopped and you believe you can continue up the hill, restart it then slowly apply the throttle to insure you do not lift the front wheels which could cause you to lose control.
- If you are unable to continue up the hill, dismount the ATV on the uphill side. Physically turn the ATV around and then descend the hill.
- When descending hills, application of ANY of the brakes will brake the wheels on the downhill side. Avoid sudden application of any of the brakes because the rear wheels could lift off the ground. The ATV might tip rear end over the front end. Apply any of the brakes gradually.

WARNING

Never attempt to turn the ATV around on any hill until you have mastered the turning technique as described in the Owner's Manual on level ground. Be very careful when turning on any hill. Avoid crossing the side of a steep hill if possible.

When crossing the side of a hill:

Always follow proper procedures as described in the Owner's Manual. Avoid hills with excessively slippery or loose surfaces.

Shift your weight to the uphill side of the ATV.

Riding downhill

- When riding your ATV downhill, shift your weight as far to the rear and uphill side of the ATV as possible. Move back on the seat and sit with your arms straight.
- Engine compression will do most of the braking for you.
- For maximum engine compression braking effect, select low range "L" and change to 4WD or 4WD-LOCK before beginning to descend the hill.
- Improper braking may cause a loss of traction.
- Use caution while descending a hill with loose or slippery surfaces. Braking effectiveness and traction may be adversely affected by these surfaces. Improper braking may also cause a loss of

traction.

- When this ATV is in 4WD or 4WD-LOCK, all wheels (front and rear) are interconnected by the drive train. This means applying either the front brake or the rear brake will brake all the wheels. When descending hills, using either brake lever or the brake pedal will brake the wheels on the downhill side. Avoid sudden application of either the front or rear brake because the wheels on the uphill side could lift off the ground. Apply both the front and rear brakes gradually.
- Whenever possible, ride your ATV straight down a hill. Avoid sharp angles which could allow the ATV to tip or roll over. Carefully choose your path and ride no faster than you will be able to react to obstacles which may appear in front of you

WARNING

Going down a hill improperly could cause loss of control or cause the ATV to overturn. Always follow proper procedures for going down hills as described in this Owner's

when braking as you go down a hill.

Always check the terrain carefully before you start down any hill.

Shift your weight to the rear.

Never go down a hill at high speed.

Avoid going down a hill at an angle that would cause the vehicle to lean sharply to one side. Go straight down the hill where possible.

Crossing through shallow water

The ATV can be used to cross slow moving, shallow water of up to a maximum of 35 cm (14 inches) in depth. Before entering the water, choose your path carefully. Enter where there is no sharp drop off, and avoid rocks or other obstacles which may be slippery or upset the ATV. Drive slowly and carefully.

WARNING

Operating this ATV through deep or fast flowing water.

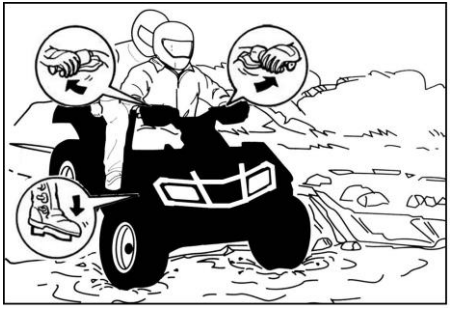
Tires may float, causing loss of traction and loss of control, which could lead to an accident.

Never operate this ATV in fast flowing water or in water deeper than that specified in your Owner's Manual.

Remember that wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them several times to let friction dry out the linings.

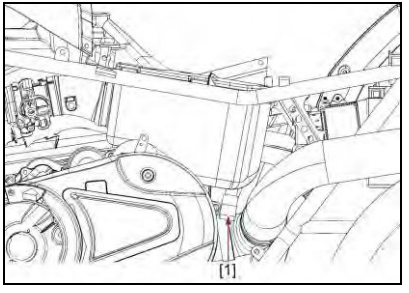
Test your brakes after leaving the water. Do not continue to ride your ATV without

verifying that you have regained proper brake performance.

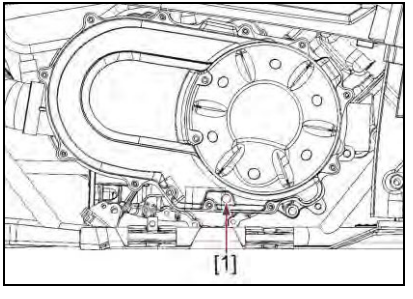


1CAUTION:

After riding your ATV in water, be sure to drain any trapped water by removing the check hose plugs at the bottom of the air filter case, the V-belt cooling duct, the gear shift lever box. Also, remove the V-belt case drain plug to drain any water that may have accumulated. Wash the ATV in fresh water if it has been operated in salt water or muddy conditions.



[1]. Air filter case check hose



[1]. V-belt case drain plug

Riding over rough terrain

Riding over rough terrain should be done with caution. Look out for obstacles which could cause damage to the ATV or could lead to a rollover or accident. Be sure to keep your feet placed firmly on the floorboards at all times.

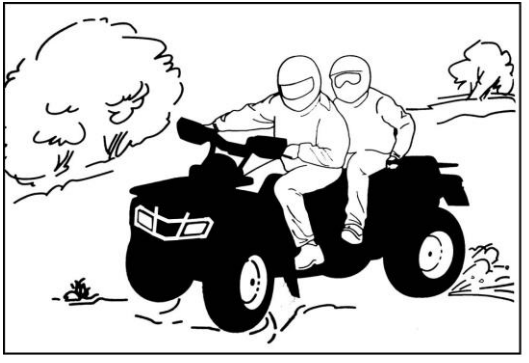
Avoid jumping with the ATV as loss of control and damage to the ATV may result.

WARNING

Before operating in a new area, check for obstacles.

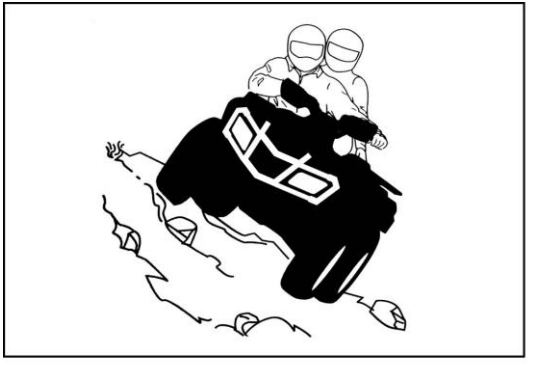
Never attempt to ride over large obstacles, such as large rocks or fallen trees.

When you go over obstacles, always follow proper procedures as described in the Owner's Manual.



Sliding and skidding

- Care should be used when riding on loose or slippery surfaces because the ATV may lose traction and slide.
- If unexpected and uncorrected, sliding could lead to an accident.
- To reduce the tendency for the front wheels to slide on loose or slippery conditions, positioning your weight over the front wheels will sometimes help.
- If the rear wheels of your ATV start to slide sideways, control can usually be regained (if there is room to do so) by steering in the direction of the slide. Applying the brakes or accelerating is not recommended until you have corrected the slide.



- With practice, over a period of time, skill at controlled sliding can be developed. The terrain should be chosen carefully before attempting such maneuvers, since both stability and control are reduced.
- Bear in mind that sliding maneuvers should always be avoided on extremely slippery surfaces such as ice, since all control may be lost.

WARNING

Skidding or sliding improperly. You may lose control of this ATV. You may also regain traction unexpectedly, which may cause the ATV to overturn.
Learn to safely control skidding or sliding by practicing at low speeds and on level, smooth terrain.

On extremely slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chances of skidding or sliding out of control.

CONCLUSION:

1. If your ATV doesn't turn in the way you want it to:

- Bring the ATV to a stop and practice the turning maneuvers again. Be sure you are putting your weight on the footboard to the outside of the turn. Position your weight over the front wheels for better control.

2. If your ATV begins to tip while turning:

- Lean more into the turn to regain balance.
- If necessary, gradually let off the throttle and/ or steer to the outside of the turn.

3. If your ATV starts to slide sideways:

- Steer in the direction of the slide if you have the room.
- Applying the brakes or accelerating is not recommended until you have corrected the slide.

4. If your ATV can't make it up a hill you are trying to climb:

- Turn the ATV around if you still have forward speed. If not, stop, dismount on the uphill side of the ATV and physically turn the ATV around.
- If the ATV starts to slip backwards DO NOT USE THE REAR BRAKE - the ATV may tip over backwards on top of you.
- Dismount the ATV on the uphill side.

5. If your ATV is traversing a sloping surface:

- Be sure to ride with your weight positioned towards the uphill side of the ATV to maintain proper balance.
- If the ATV starts to tip, steer down the hill (if there are no obstacles in your way) to regain balance.

- If you feel that the ATV is definitely going to tip over, get off quickly on the uphill side.

6. If your ATV encounters shallow water:

- Ride slowly and carefully through slow moving water, watching for obstacles.
- Be sure to let water drain from the ATV and CHECK YOUR BRAKES FOR PROPER OPERATION when you come out of the water.
- Do not continue to ride your ATV until you have regained adequate brake performance.

Periodic Maintenance And Adjustment

Periodic inspection, adjustment and lubrication will keep your machine in the safest and most efficient condition possible. Safety is an obligation of the machine owner. The most important points of machine inspection, adjustment and lubrication are explained on the following pages.

WARNING

POTENTIAL HAZARD

Servicing an engine while it is running.

WHAT CAN HAPPEN

Moving parts can catch clothing or parts of the body, causing injury.

Electrical components can cause shocks or can start fires.

HOW TO AVOID THE HAZARD

Turn off the engine when performing maintenance unless otherwise specified.

Have a dealer perform service if you are not familiar with machine service.

WARNING

POTENTIAL HAZARD

Operating this ATV with improper modifications.

WHAT CAN HAPPEN

Improper installation of accessories or modification of this vehicle may cause changes in handling which in some situations could lead to an accident.

HOW TO AVOID THE HAZARD

Never modify this ATV through improper installation or use of accessories. All parts and accessories added to this vehicle should be components designed for use on this ATV and should be installed and used according to instructions. If you have questions, consult an authorized ATV dealer.

CAUTION:

- **Be sure you have sufficient knowledge, experience, the proper replacement parts and tools before you attempt any vehicle maintenance task.**
- **If you don't have the knowledge and equipment which are necessary to perform the maintenance task, consult your local dealer.**

SERVICE INTERVALS

ITEM	MAINTENANCE INTERVAL (WHICHEVER COMES FIRST)			REMARKS
	Hours	Frequency	Miles (KM)	
Pre-Ride Inspection Check				
Steering	-	Pre-Ride	-	Inspect for loose hardware or abnormal wear
Front-suspension	-	Pre-Ride	-	Inspect for loose hardware or abnormal wear
Rear-suspension	-	Pre-Ride	-	Inspect for loose hardware or abnormal wear
Tires	-	Pre-Ride	-	Proper tire pressure
Brake fluid level	-	Pre-Ride	-	Inspect and add if needed
Brake pedal travel	-	Pre-Ride	-	See Owner's Manual

ITEM	MAINTENANCE INTERVAL (WHICHEVER COMES FIRST)			REMARKS
	Hours	Frequency	Miles (KM)	
Brake systems	-	Pre-Ride	-	Make adjustments as needed.
Lug Nuts	-	Pre-Ride	-	Ensure lug nuts are torque to spec
Frame fasteners	-	Pre-Ride	-	All fasteners are secured
Engine Oil Level	-	Pre-Ride	-	Inspect and add if needed
Coolant	-	Pre-Ride	-	Inspect and add if needed
Head / Tail / Brake Lights	-	Pre-Ride	-	Check operation
Break-In Maintenance Check				
Engine Oil/Filter change	10	-	First 50 (75)	Replace break-in oil & filter with proper oil type
Transmission	20	-	First 100 (150)	Initial fluid level inspection; add lubricant if needed
Toe adjustment	20	-	First 100 (150)	Inspect periodically; adjust when parts are replaced
Clutches (Drive and Driven)	20	-	First 100 (150)	Inspect; clean; replace worn parts

8-4 Periodic Maintenance and Adjustment

ITEM	MAINTENANCE INTERVAL (WHICHEVER COMES FIRST)			REMARKS
	Hours	Frequency	Miles (KM)	
Routine Maintenance Check (performed at each interval below, whichever comes first)				
Air filter	5 H	-	-	Inspect; replace as needed
Brake pad wear	20 H	Monthly	250 (402)	Inspect periodically
Throttle Body Intake	20 H	1 M	250 (402)	Inspect duct for proper sealing/air leaks
Battery	20H	Monthly	250 (402)	Check terminals; clean; test
Fuel System	25 H	Monthly	250 (402)	Check lines & fittings for leaks
General lubrication	25H	3 M	250 (402)	Lubricate all fittings, pivots, cables, etc.
Shift Linkage	25H	3 M	250 (402)	Inspect, lubricate, adjust
Engine Oil & Filter	50 H	6 M	500 (800)	Replace
Steering	50 H	6 M	500 (800)	Lubricate
Front / Rear Gearcase Fluid	50H	6 M	500 (800)	Change Fluid
Front / Rear Stabilizer Bars	50H	6 M	500 (800)	Lubricate and inspect bushings
Throttle Pedal/Cable	50 H	6 M	500 (800)	Inspect for free movement & lubricate
Drive Belt	50 H	6 M	500 (800)	Inspect; replace as needed

ITEM	MAINTENANCE INTERVAL (WHICHEVER COMES FIRST)			REMARKS
	Hours	Frequency	Miles (KM)	
Antifreeze Coolant	50 H	6 M	500 (800)	Pressure Test / Add Fluid
Tranmission Fluid	50 H	6 M	500 (800)	Replace
Engine mounts	100 H	12 M	1000 (1600)	Inspect; replace as needed
Cooling Hoses	100 H	12 M	1000 (1600)	Inspect for cracks and leaks
Drive Shafts	100H	12M	1000 (1600)	Remove and grease
Spark plug	100 H	12 M	1000 (1600)	inspect; replace as needed
Clutches (Drive and Driven)	100 H	12 M	1000 (1600)	Inspect; clean; replace worn parts
Wiring	100 H	12 M	1000 (1600)	Inspect for wear & routing
Wheel Bearings	100 H	12 M	1000 (1600)	Inspect; replace as needed
Shocks	100 H	12 M	1000 (1600)	Check for oil leaks
Cam Chain Tensioner	100H	12 M	1000 (1600)	Check; replace as needed
Brake Fluid	100 H	12M	1000 (1600)	Change every two years
Suspension Components	100H	12M	1000 (1600)	Inspect; replace if necessary
Spark arrestor	100H	12 M	-	Clean out

ITEM	MAINTENANCE INTERVAL (WHICHEVER COMES FIRST)			REMARKS
	Hours	Frequency	Miles (KM)	
Valve clearance	100 H	12M	1000 (1600)	Inspect; adjust
Extreme Maintenance Check (cut the Routine Maintenance Schedule in half)				
*__Service Note:__ Under extreme use, change gear case fluid every 25 hours. *"Extreme Use" is defined as constant 4WD operation on hilly or mountainous terrain, or if 4WD is the primary mode of operation.*				

LUBRICATION RECOMMENDATIONS

Check and lubricate all components at the intervals outlined in the Periodic Maintenance Chart above, or more often under severe use, such as wet or dusty conditions. Items not listed in the chart should be lubricated at the general lubrication interval.

ITEM	LUBE	METHOD
Engine Oil	See Viscosity Chart (10-2)	Add to proper level on dipstick.
Brake Fluid	DOT 3 or 4 Brake Fluid	Maintain level between fill lines.
Rear Differential	SAE 80w90	Fill to bottom of fill plug or 0.455L or 14 oz.)
Front Differential	Dextron 3 ATF	Fill to bottom of fill plug or (volume of oil)
Drive Shaft	U-Joint Grease	Locate fittings and grease.

ENGINE OIL

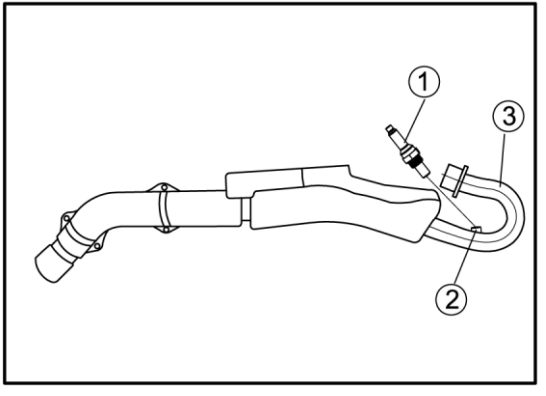
Always check and change the oil at the intervals outlined in the Service Interval Chart above. Always use the recommended engine oil. Always change the oil filter whenever changing oil.

Vehicle operation with insufficient, deteriorated, or contaminated engine oil will cause accelerated wear and may result in engine seizure, accident and injury.
Always perform the maintenance procedures as outlined in the Periodic Maintenance Chart. Failure to perform routine maintenance could result in voiding of remaining warranty.

EFI system

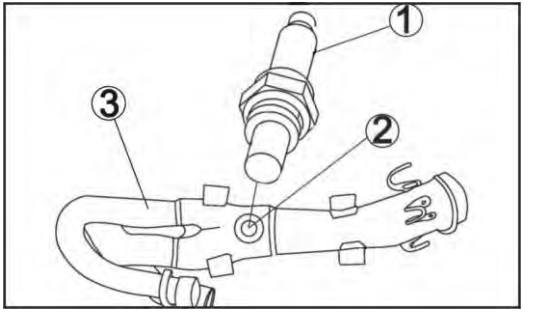
EFI engine was completely different from the engine which uses carburetor, it consist of ECU, EFI cables, sensors, actuators and other advanced components.
As the following pictures:

For HS500ATV-6/HS550ATV/HS450ATV-4

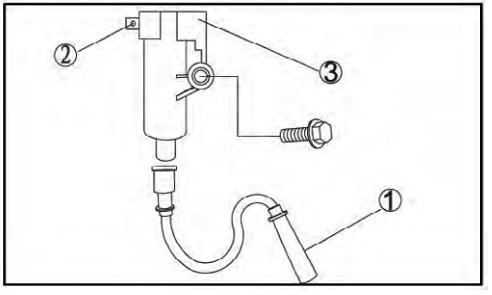


1. Oxygen sensor assy
2. Oxygen sensor threaded sleeve
3. Exhaust Pipe

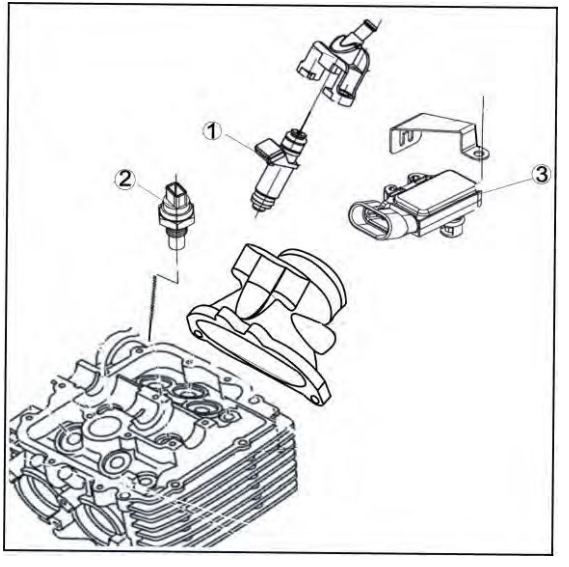
For HS700ATV-8/HS750ATV



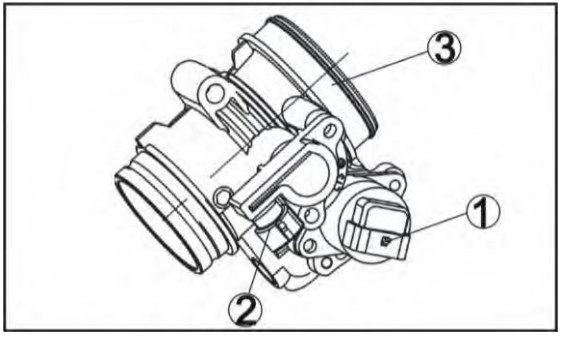
1. Oxygen sensor assy
2. Oxygen sensor threaded sleeve
3. Exhaust Pipe



1. High voltage wire 2.Ignition signal plug
3. Ignition coil



1. Fuel injector
2. Water temperature sensor
3. Intake air temperature sensor/ pressure sensor



1. Idle speed stepper motor
2. Air damper degree sensor
3. Air damper

Air damper
For the purpose of adjustment of air intake volume.

Idle speed stepper motor
To stabilize the idle speed

Fuel injector
Inject the fuel into the cylinder

Intake air temperature sensor
Inspect engine intake air temperature, according to the temperature, ECU will automatically adjust the fuel injection volume.

Air intake pipe pressure sensor
For testing the negative pressure of the air intake pipe, engine has the different working conditions, the 2 parameters- opening of air damper and pressure of air intake determine the engine's working condition, ECU will adjust the fuel injection volume according to different negative pressure and opening of air damper. Adjust the engine fuel injection volume can adjust the output power and output torque.

Water temperature sensor

For testing cooling water temperature, according to the temperature difference, ECU will automatically revise fuel injection volume, to ensure the smooth operation of the engine all the time.

Ignition signal

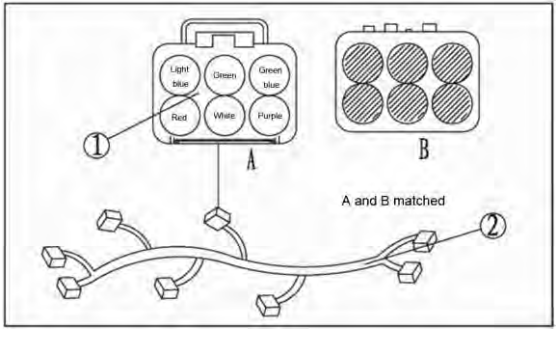
Ignition signal arising from the magneto, to provide the ECU with correct ignition timing signal.

ECU

It is the core of EFI system, it used a specially designed micro computer chip as a controller，according to the information from sensors, has been calculated to ensure accurate control in different conditions from the nozzle of the fuel injection volume. To achieve fuel-efficient, low emissions performance of the EFI engine.

EFI System inspection

If the EFI system has failure, the meter will display the appropriate failure code, you can also use the special "EFI system failure diagnostic apparatus" (need to buy it from the dealers) for inspection, diagnostic apparatus can provide a more detailed faliure information . Diagnostic apparatus equipped with its own user manual.



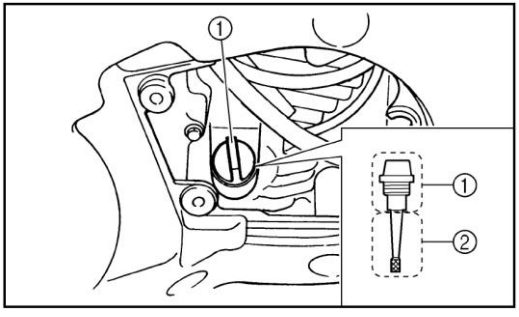
1. diagnostic apparatus cable 2. EFI cables

Engine oil and oil filter cartridge

The engine oil level should be checked before each ride. In addition, the oil must be changed and the oil filter cartridge replaced at the intervals specified in the periodic maintenance and lubrication chart.

To check the engine oil level

1. Place the ATV on a level surface.
2. Start the engine, warm it up for several minutes, and then turn it off.
3. Wait a few minutes until the oil settles.
4. Remove the engine oil filler cap and wipe off the dipstick with a clean rag.

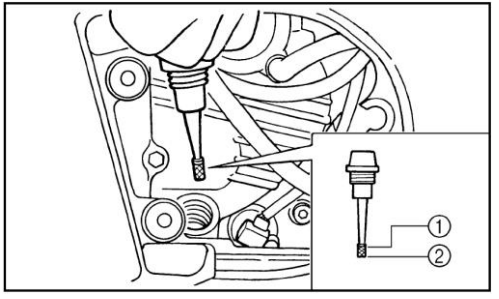


1. Engine oil filler cap 2. Dipstick

5. Insert the dipstick in the oil filler hole (without screwing it in), and then remove it again to check the oil level.

NOTE:

The engine oil should be between the minimum and maximum level marks.

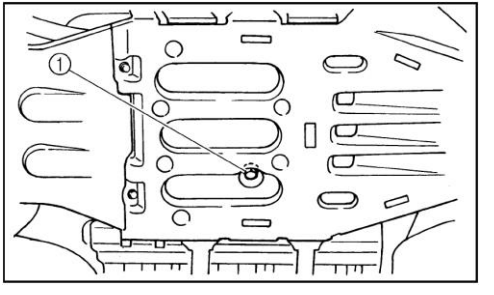


1. Maximum level mark 2. Minimum level mark

6. If the engine oil is at or below the minimum level mark, add sufficient oil of the recommended type to raise it to the correct level.
7. Insert the dipstick into the oil filler hole, and then tighten the oil filler cap.

To change the engine oil (with or without oil filter cartridge replacement)

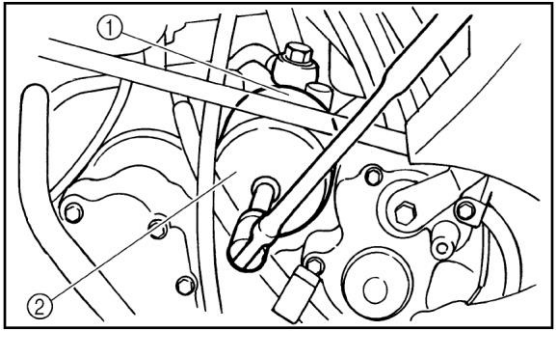
1. Start the engine, warm it up for several minutes, and then turn it off.
2. Place an oil pan under the engine to collect the used oil, and then remove the engine oil filler cap.
3. Remove the engine oil drain bolt to drain the oil from the crankcase.



1. Engine oil drain bolt

NOTE:
Skip steps 5-9 if the oil filter cartridge is not being replaced.

4. Remove the oil filter cartridge with an oil filter wrench.

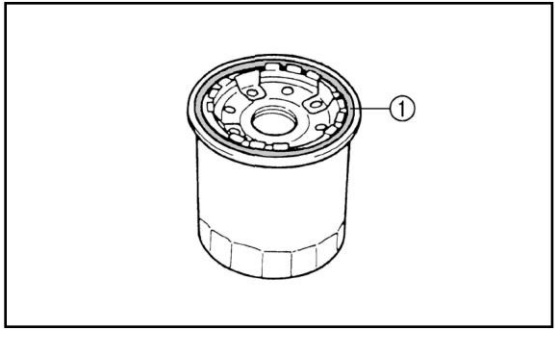


1. Engine oil filter cartridge 2. Oil filter wrench

NOTE:
An oil filter wrench is available at a nearby dealer.

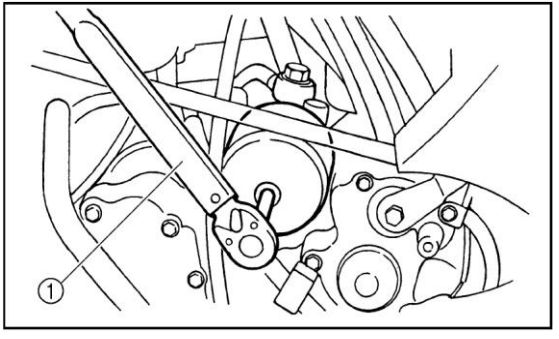
5. Apply a light coat of engine oil to the O-ring of the new oil filter cartridge.

NOTE:
Make sure the O-ring is seated properly.



1. O-ring

6. Install the new oil filter cartridge with an oil filter wrench, and then tighten it to the specified torque with a torque wrench.



1. Torque wrench

Tightening torque:
Oil filter cartridge:
17 Nm (1.7m·kgf, 12ft·lbf)

CAUTION:

In order to prevent clutch slippage (since the engine oil also lubricates the clutch), do not mix any chemical additives. Do not use oils with a diesel specification of "CD" or oils of a higher quality than specified. In addition, do not use oils labeled "ENERGY CONSERVING II" or higher.
Make sure that no foreign material enters the crankcase.

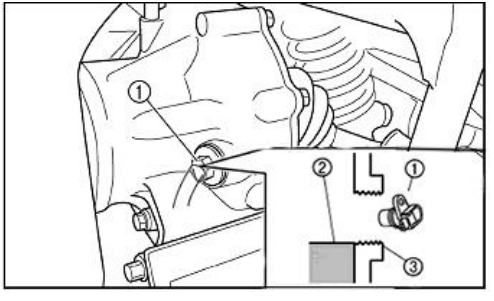
7. Start the engine and warm it up for several minutes. While warming up, check for oil leakage. If oil leakage is found, turn the engine off immediately and check for the cause.
8. Turn the engine off, and then check the oil level and correct it if necessary.

Final gear oil

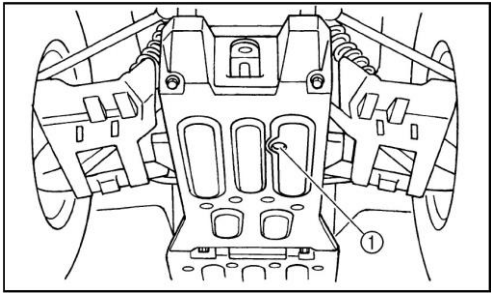
The final gear case must be checked for oil leakage before each ride. If any leakage is found, have a dealer check and repair the ATV.

Replacing the final gear oil

1. Place the ATV on a level surface.
2. Place a container under the final gear case to collect the used oil.
3. Remove the oil filler bolt and the drain bolt to drain the oil.



1. Final gear oil filler bolt



1. Final gear oil drain bolt

CAUTION:

Please clean the sensor every 500km period.

4. Install the drain bolt and tighten it to the specified torque.

Tightening torque:
Final gear oil drain bolt:
23 Nm (2.3m·kgf, 17ft·lbf)

5. Fill the final gear case with the specified amount of the recommended oil.

Recommended oil:
SAE 80 API GL-4 Hypoid gear oil
Oil quantity:
0.25 L (0.22 Imp qt, 0.26 US qt)

CAUTION:
Be sure no foreign material enters the final gear case.

6. Install the filler bolt and tighten it to the specified torque.

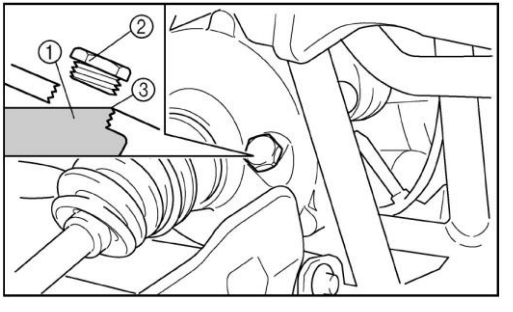
Tightening torque:
Final gear oil filler bolt:
23 Nm (2.3m·kgf, 17ft·lbf)

7. Check for oil leakage. If oil leakage is found, check for the cause.

Differential gear oil

Checking the differential gear oil

1. Place the ATV on a level surface.
2. Remove the differential gear oil filler bolt and check the oil level. It should be up to the brim of the filler hole. If the level is low, add sufficient oil of the recommended type to raise it to the specified level.



1. Differential gear oil 2. Differential gear oil filler bolt
3. Correct oil level

CAUTION:

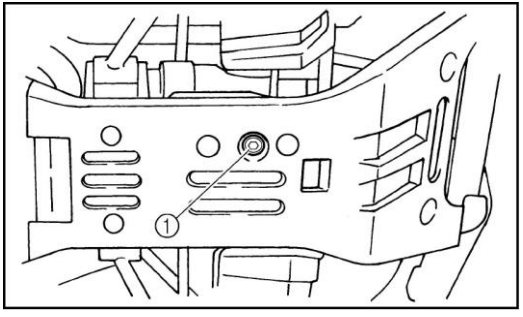
Be sure no foreign material enters the differential gear case.

3. Install the differential gear oil filler bolt, and then tighten it to the specified torque.

Tightening torque:
Differential gear oil filler bolt:
23 Nm (2.3m·kgf, 17ft·lbf)

Replacing the differential gear oil

1. Place the ATV on a level surface.
2. Place a container under the differential gear case to collect the used oil.
3. Remove the differential gear oil filler bolt and differential gear oil drain bolt to drain the oil.



1. Differential gear oil drain bolt

4. Install the differential gear oil drain bolt and tighten it to the specified torque.

Tightening torque:
Differential gear oil drain bolt:
10 Nm (1.0m·kgf, 7.2ft·lbf)

5. Fill the differential gear case with the recommended oil.

Recommended oil:
SAE 80 API GL-4 Hypoid gear oil
Oil quantity:
0.28 L (0.25 Imp qt, 0.3 US qt)

CAUTION:
Be sure no foreign material enters the differential gear case.

6. Install the differential gear oil filler bolt, and then tighten it to the specified torque.

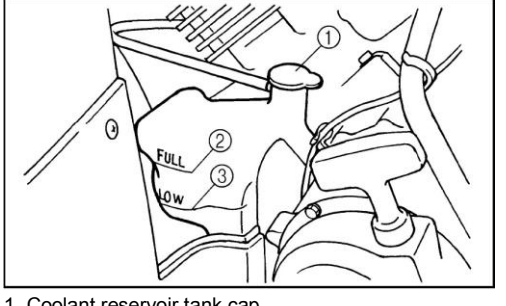
Tightening torque:
Differential gear oil filler bolt:
23 Nm (2.3m·kgf, 17ft·lbf)

Cooling system

1. Place the ATV on a level surface.
2. Check the coolant level in the coolant reservoir when the engine is cold, as the coolant level will vary with engine temperature.

NOTE:
The coolant should be between the minimum and maximum level marks.

3. If the coolant is at or below the minimum level mark, remove the reservoir cap, add coolant to the maximum level mark, install the reservoir cap.



1. Coolant reservoir tank cap
2. Maximum level mark 3. Minimum level mark

Coolant reservoir capacity
(up to the maximum level mark):
0.3 L (0.26 Imp qt, 0.32 US qt)

CAUTION:

Hard water or salt water is harmful to the engine. You may use soft water if you cannot get distilled water.

NOTE:

If water is added, have a dealer check the antifreeze content of the coolant as soon as possible.

The radiator fan operation is completely automatic. It is switched on or off according to the coolant temperature in the radiator.

Changing the coolant

WARNING

POTENTIAL HAZARD

Removing the radiator cap when the en-gone and radiator are still hot.

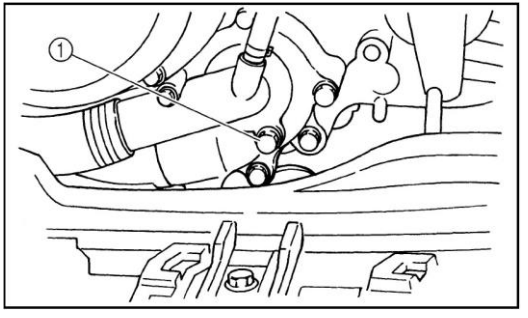
WHAT CAN HAPPEN

You could be burned by hot fluid and steam blown out under pressure.

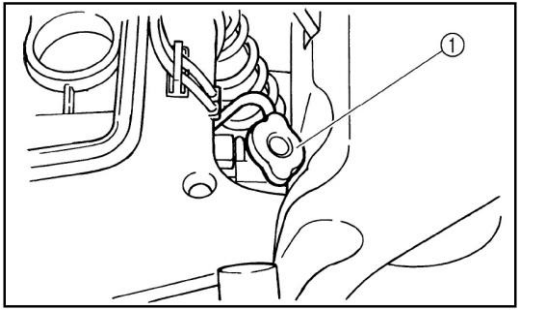
HOW TO AVOID THE HAZARD

Wait for the engine to cool before removing the radiator cap. Always use a thick rag over the cap. Allow any remaining pressure to escape before completely removing the cap.

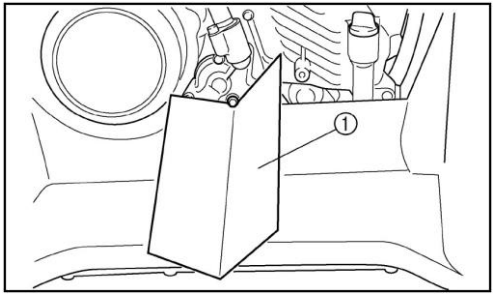
1. Place the ATV on a level surface.
2. Place a container under the engine, and then remove the coolant drain bolt. (Use a trough or a similar object as shown to prevent cool ant from spilling on the footrest.)



1. Coolant drain bolt

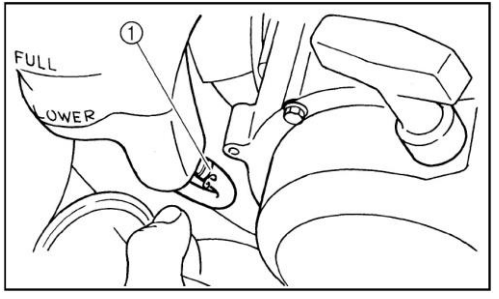


1. Radiator cap



1. Trough

3. Remove the radiator cap.
4. Remove the coolant reservoir cap.
5. Disconnect the hose on the coolant reservoir side, and then drain the coolant from the coolant reservoir.



1. Consider reservoir drain hose

6. After draining the coolant, thoroughly flush the cooling system with clean tap water.
7. Replace the coolant drain bolt washer if it is damaged, install the coolant drain bolt, and then tighten it to the specified torque.

Tightening torque:
Coolant drain bolt:
10 Nm (1.0m·kgf, 7.2ft·lbf)

8. Install the coolant reservoir hose.
9. Pour the recommended coolant into the reservoir to the maximum level mark, and then install the reservoir cap .
10. Pour the recommended coolant into the radiator until it is full, and then install the radiator cap.

Recommended antifreeze:
High quality ethylene glycol antifreeze
Containing corrosion inhibitors for aluminum engines.
Antifreeze and water mixing ratio:
1:1
Total amount:
1.8 L (1.58 Imp qt, 1.90 US qt)
Coolant reservoir capacity
(Up to the maximum level mark):
0.3 L (0.26 Imp qt, 0.32 US qt)

CAUTION:

Hard water or salt water is harmful to the engine. You may use soft water if you cannot get distilled water.

11. Start the engine and let it idle for several minutes. Stop the engine, and then check the coolant level in the radiator. If it is low, add more coolant until it reaches the top of the radiator.
12. Check for coolant leakage.

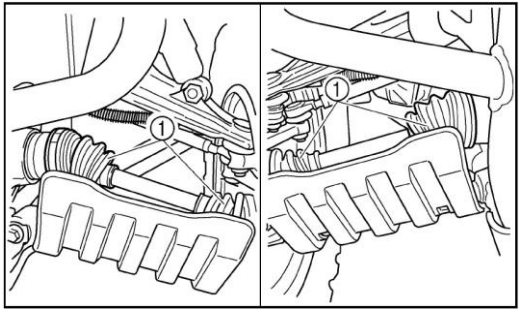
NOTE:

If any leakage is found, have a dealer check the cooling system.

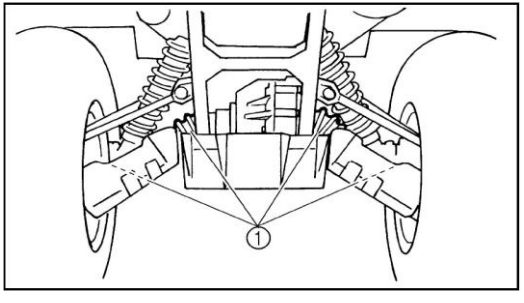
13. Install the panels and the front carrier.

Axle boots

Check the protective boots for holes or tears. If any damage is found, have them replaced by a dealer.



1.Front axle boot (×2 each side)

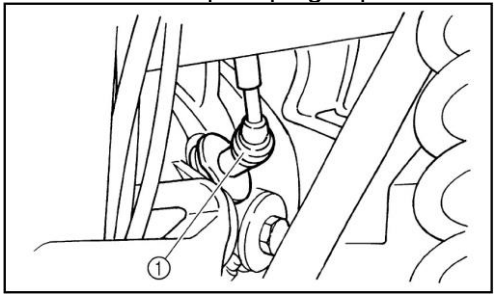


1.Rear axle boot (×2 each side)

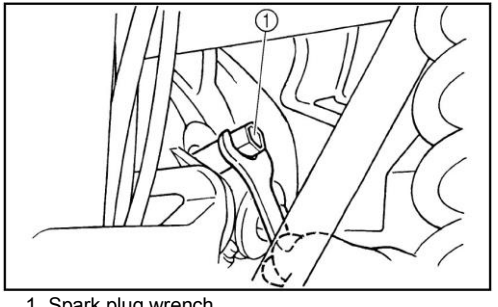
Spark plug inspection

Removal

1. Remove the spark plug cap.



1. Spark plug cap



1. Spark plug wrench

Inspection

The spark plug is an important engine component and is easy to inspect. The condition of the spark plug can indicate the condition of the engine. The ideal color on the white insulator around the center electrode is a medium to-light tan color for a ATV that is being ridden normally. Do not attempt to diagnose such problems yourself. Instead, take the ATV to a dealer. You should periodically re-move and inspect the spark plug because heat and deposits will cause the spark plug to slowly break down and erode. If electrode erosion becomes excessive, or if carbon and other deposits are excessive, you should replace the spark plug with the specified plug.

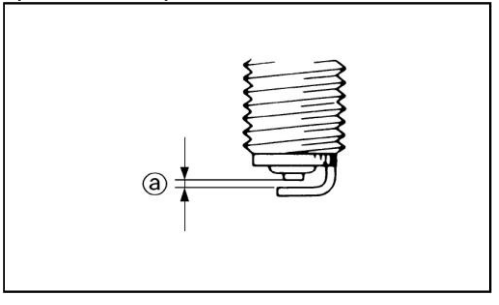
Specified spark plug:
DCPR7E(NGK) for 750cc
DR8EA (NGK) for 550cc

Installation

1. Measure the electrode gap with a wire thickness gauge and, if necessary, adjust the gap to specification.

Spark plug gap:
0.023-0.027 in (0.6 - 0.7 mm)

2. Clean the gasket surface. Wipe off any grime from the threads.
3. Install the spark plug and tighten it to the specified torque.



a. Spark plug gap

Tightening torque:
Spark plug:
17.5 Nm (1.75m·kgf, 12.7ft·lbf)

NOTE:

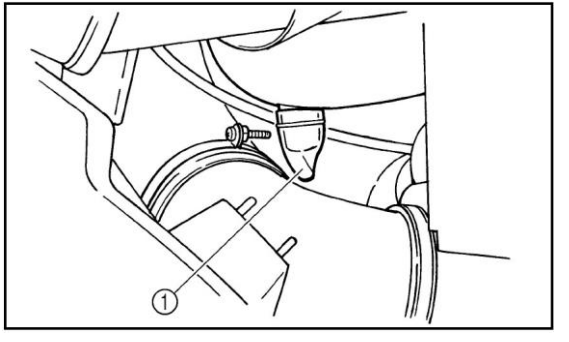
If a torque wrench is not available when you are installing a spark plug, a good estimate of the correct torque is 1/4 to 1/2 turn past finger tight. Have the spark plug tightened to the specified torque as soon as possible.

4. Install the spark plug cap.

Air filter element cleaning

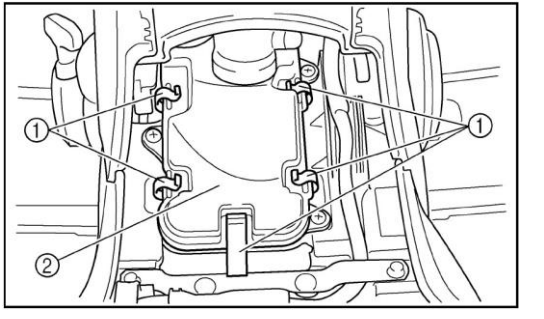
NOTE:

There is a check hose at the bottom of the air filter case. If dust or water collects in this hose, empty the hose and clean the air filter element and air filter case.

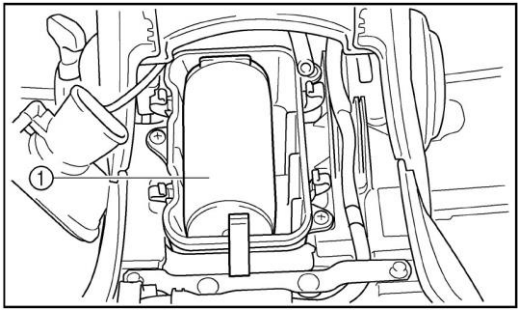


1. Air filter case check hose

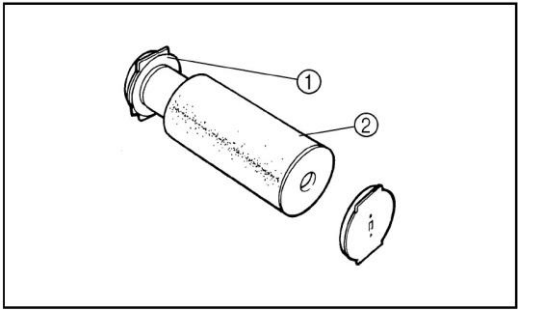
1. Remove the seat. (See page 4-19 for seat removal and installation procedures.)
2. Remove the air filter case cover by unhooking the holders.
3. Remove the air filter element.
4. Remove the air filter element from its frame.



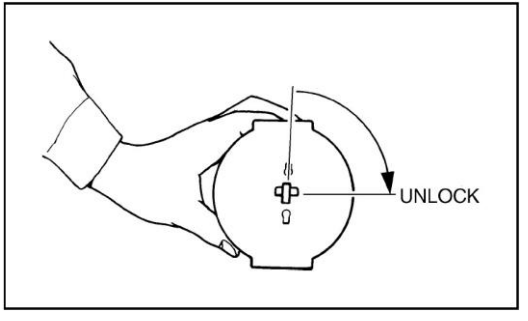
1. Holder (×5) 2. Air filter case cover



1. Air filter element



1. Frame 2. Air filter element



5. Wash the air filter element gently but thoroughly in solvent.

WARNING

POTENTIAL HAZARD

Using low flash point solvents or gasoline to clean the air filter element.

WHAT CAN HAPPEN

Low flash point solvents or gasoline can catch fire or explode.

HOW TO AVOID THE HAZARD

Use parts cleaning solvent to clean the air filter element.

6. Squeeze the excess solvent out of the air filter element and let it dry.

CAUTION:

Do not twist the air filter element when squeezing it.

7. Inspect the air filter element and replace it if damaged.

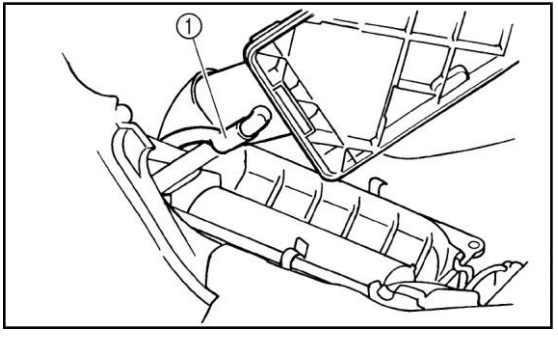
8. Apply roam air filter oil or other quality foam air filter oil to the air filter element.

NOTE:

The air filter element should be wet but not dripping.

9. Pull the air filter element over its frame.

10. Install the air filter element.



1. Hose

11. Install the air filter case cover and be sure to connect the hose.

12. Install the seat.

NOTE:

The air filter element should be cleaned every 20-40 hours. It should be cleaned and lubricated more often if the machine is operated in extremely dusty areas. Each time air filter element maintenance is performed, check the air inlet to the air filter case for obstructions.

Check the air filter element rubber joint to the carburetor and manifold fittings for an airtight seal. Tighten all fittings securely to avoid the possibility of unfiltered air entering the engine.

CAUTION:

Never operate the engine with the air filter element removed. This will allow unfiltered air to enter, causing rapid engine wear and possible engine damage. Additionally, operation without the air filter element will affect carburetor jetting with subsequent poor performance and possible engine overheating.

Check fuel line and fuel filter

CAUTION:

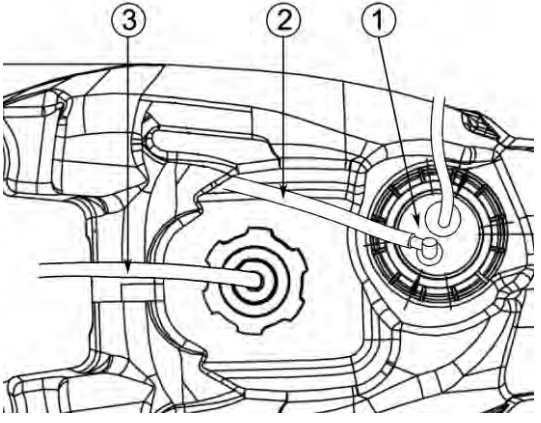
Be sure to stop the engine and remove the key. Check the fuel lines periodically. The fuel lines are subject to wear and old fuel may leak onto a running engine which may cause a fire.

The fuel line connections should be checked annually or every 100 service hours whichever comes first. The fuel line is made of rubber and wears regardless of service period.

1. Park the vehicle on a flat surface.
2. If the fuel line and clamps are damaged or deteriorated, replace them.
3. Check fuel filter if it is clogged by debris or contaminated with water replace it.

IMPORTANT

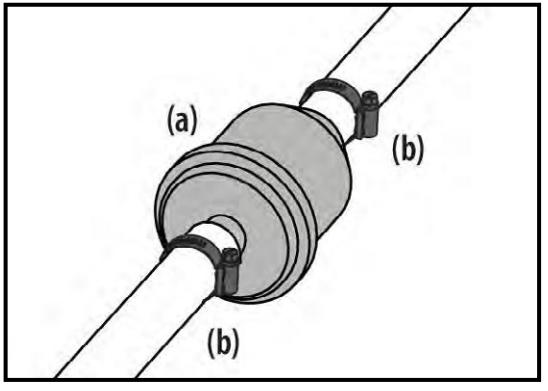
When the fuel line is disconnected for maintenance or repair, close both ends of the fuel line with a piece of clean cloth or paper to prevent dust and dirt from entering. Particular care must be taken not to allow dust and dirt into the fuel pump entrance. Even a small amount of dust or dirt cause premature wear and the malfunction of the fuel pump and injector components.



① fuel pump ② fuel line

③ Exit pipe

4. To remove the in-line fuel filter clamps (b), slide the clamps (b) away from the in-line fuel filter (a). Twist and pull the fuel lines off of the in-line fuel filter (a).

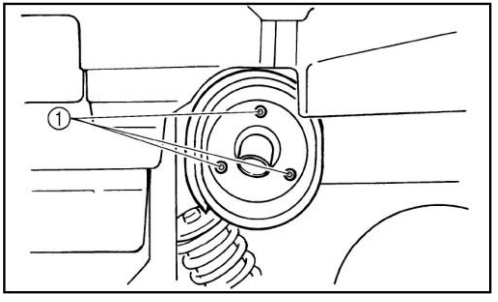


5. Check the in-line filter (a) for debris and/or water contamination. Replace as necessary.

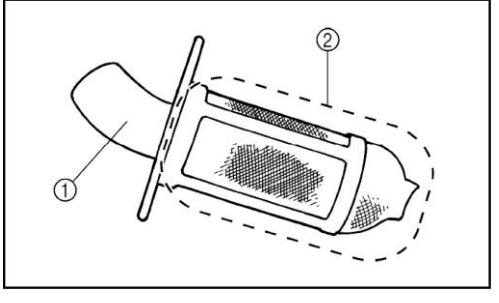
Spark arrester cleaning

Be sure the exhaust pipe and muffler are cool before cleaning the spark arrester.

1. Remove the bolts.
2. Remove the tailpipe by pulling it out of the muffler.
3. Tap the tailpipe lightly, and then use a wire brush to remove any carbon deposits from the spark arrester portion of the tailpipe and inside of the tailpipe housing.
4. Insert the tailpipe into the muffler and align the bolt holes.
5. Install and tighten the bolts.



1. Bolt (×3)



1. Tailpipe 2. Spark arrester

WARNING

POTENTIAL HAZARD

Improper cleaning of the spark arrester.
Hot exhaust system

WHAT CAN HAPPEN

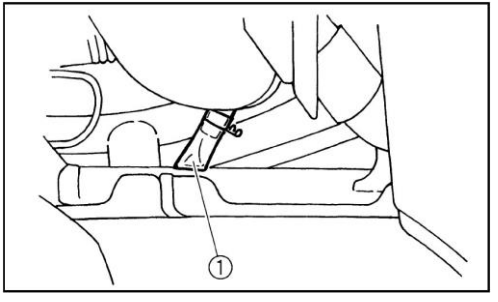
Could injure the eyes.
Could cause burns.
Could cause carbon monoxide poisoning, possibly leading to death.
Could start a fire.

HOW TO AVOID THE HAZARD

When cleaning the spark arrester:
Always let the exhaust system cool prior to touching exhaust components.
Do not start the engine when cleaning the exhaust system.

V-belt cooling duct check hose

If dust or water collects in the V-belt cooling duct check hose, remove the hose and clean it.



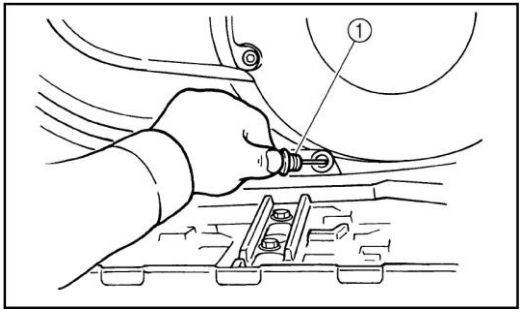
1. V-belt cooling duct check hose (Left side)

V-belt case drain plug

After riding in water deep enough to allow it to enter the V-belt case, remove this plug to drain the water from the case.

NOTE:

If water drains from the V-belt case after removing the plug, have the dealer inspect the ATV as the water may affect other engine parts.



1.V-belt case drain plug

Valve clearance adjustment

The correct valve clearance changes with use, resulting in improper fuel/air supply or engine noise. To prevent this, the valve clearance must be adjusted regularly. This adjustment however, should be left to a professional service technician.

Select lever safety system cable adjustment

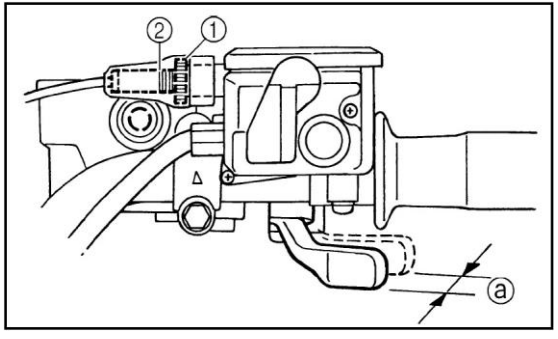
The select lever safety system cable stretches with use, resulting in improper function. To prevent this, the cable must be adjusted regularly. This adjustment, however, should be left to a dealer.

Throttle lever adjustment

NOTE:

Adjust the engine idling speed before adjusting the throttle lever free play.

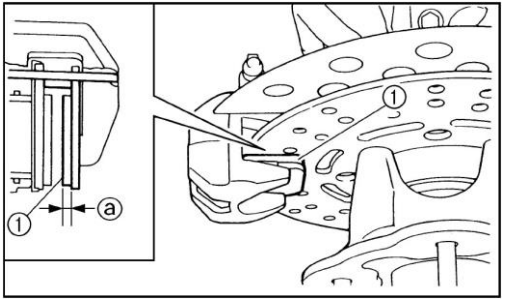
1. Loosen the locknut.
2. Turn the adjusting bolt until the throttle lever free play is 3-5 mm (0.12-0.20 in).
3. Tighten the locknut.



1. Locknut 2. Adjusting bolt
a. Throttle lever free play

Front brake pad check

Check the brake pads for damage and wear. If a brake pad thickness is less than 1 mm (0.04 in), have a dealer replace the pads as a set.



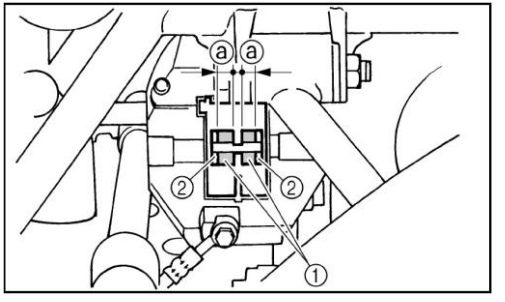
1. Brake pad a. Brake pad thickness

NOTE:

The wheels need to be removed to check the brake pads. (See pages 8-47 — 8-48 for removal and installation procedures.)

Checking the rear brake pads

Check the brake pads for damage and wear. If the thickness is less than 1.0 mm (0.04 in), have a dealer replace the pads.



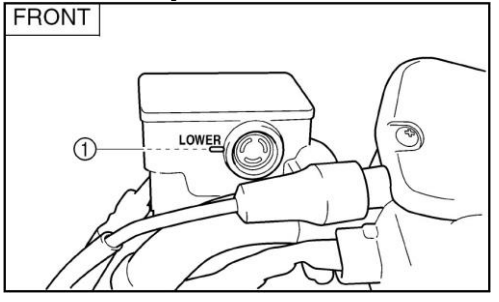
1. Brake pad 2. Brake pad plate
a. Brake pad thickness

Checking the brake fluid level

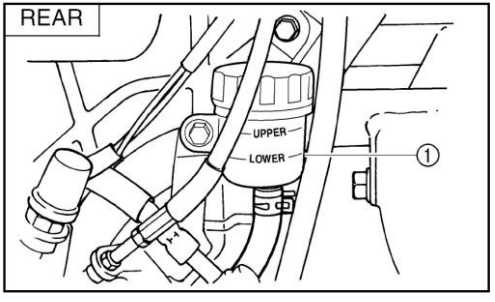
Insufficient brake fluid may let air enter the brake system, possibly causing the brakes to become ineffective.

Before riding, check that the brake fluid is above the minimum level and replenish when necessary. A low brake fluid level may indicate worn brake pads and/or brake

system leakage. If the brake fluid level is low, be sure to check the brake pads for wear and the brake system for leakage. The rear brake fluid master cylinder reservoir is located



1. Minimum level mark



1. Minimum level mark

Observe these precautions:
When checking the fluid level, make sure the top of the master cylinder reservoirs are level.
Use only the designated quality brake fluid, otherwise the rubber seals may deteriorate, causing leakage and poor brake performance.

Recommended brake fluid: DOT 3

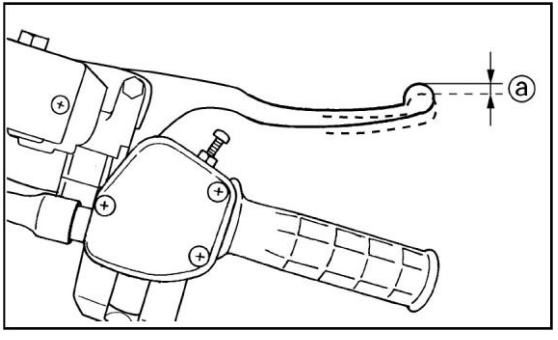
Refill with the same type of brake fluid. Mixing fluids may result in a harmful chemical reaction and lead to poor brake performance.
Be careful that water does not enter the master cylinder reservoirs when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.
Brake fluid may deteriorate painted surfaces or plastic parts. Always clean up spilled fluid immediately.
Have a dealer check the cause if the brake fluid level goes down.

Brake fluid replacement

Only trained service personnel should do complete fluid replacement.
Have a dealer replace the following components during periodic maintenance or when they are damaged or leaking.
Replace the oil seals every two years.
Replace the brake hoses every four years.

Front brake lever free play

The front brake lever should have a free play of zero mm (zero in) at the lever end. If not, have a dealer check the brake system.



a. Front brake lever free play

WARNING

POTENTIAL HAZARD

Operating with improperly serviced or Adjusted brakes.

WHAT CAN HAPPEN

You could lose braking ability, which Could lead to an accident.

HOW TO AVOID THE HAZARD

After servicing:

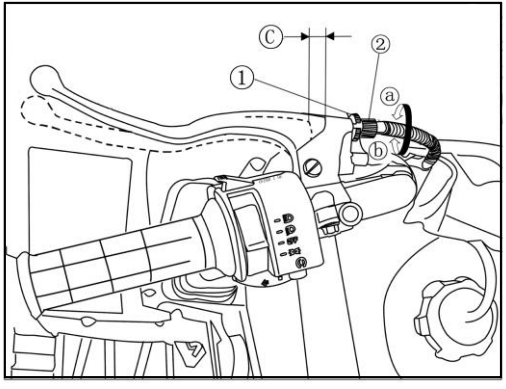
- **Make sure the brakes operate smoothly and that the free play is correct.**
- **Make sure the brakes do not drag.**
- **Make sure the brakes are not spongy. All air must be bled from the brake system.**

Replacement of brake components requires professional knowledge. A dealer should perform these procedures.

Adjusting the rear brake lever

The rear brake lever free play should be 0.5-2 mm (0.02-0.08 in).

1. Loosen the locknut.



1. Locknut 2. Adjusting bolt

c. Rear brake lever free play

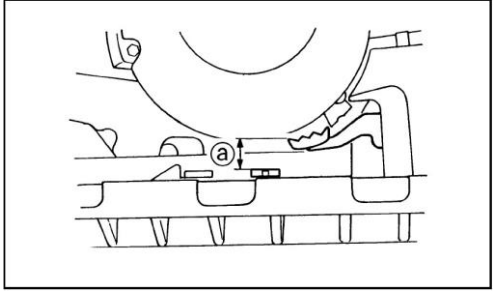
2. Turn the adjusting bolt in direction a to increase free play, and in direction b to decrease free play.
3. Tighten the locknut.

If correct free play cannot be obtained, ask a dealer to make that adjustment.

NOTE:
When adjusting the urgent brake lever free play:
- Be sure not to step on the brake pedal.
- Make sure the brake pedal does not move.

Adjusting the brake pedal

The top of the brake pedal should be positioned 72 mm (2.8 in) above the top of the footrest. If not, ask a dealer to adjust it.



a. Distance between brake pedal and footrest

WARNING

POTENTIAL HAZARD

Operating with improperly serviced or adjusted brakes.

WHAT CAN HAPPEN

You could lose braking ability, which could lead to an accident.

HOW TO AVOID THE HAZARD

After servicing:
- **Make sure the brakes operate smoothly and that the free play is correct.**
- **Make sure the brakes do not drag.**
- **All air must be bled from the brake system.**

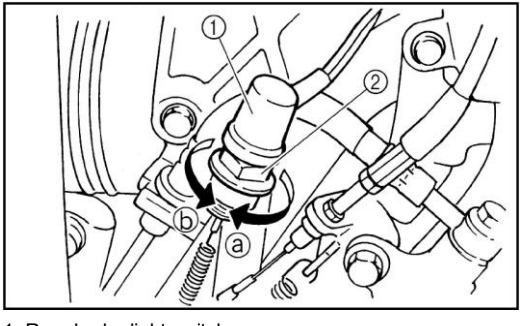
Replacement of brake components requires professional knowledge. A dealer should perform these procedures.

Adjusting the rear brake light switch

The rear brake light switch, which is activated by the brake pedal and rear brake lever, is properly adjusted when the brake

light comes on just before braking takes effect. If necessary, adjust the brake light switch as follows.

1. Turn the adjusting nut while holding the rear brake light switch in place. To make the brake light come on earlier, turn the adjusting nut in direction a. To make the brake light come on later, turn the adjusting nut in direction b.



1. Rear brake light switch
2. Adjusting nut 3. Install the panel.

Cable inspection and lubrication

WARNING

POTENTIAL HAZARD

Damaged control cables.

WHAT CAN HAPPEN

Corrosion can result when the outer covering of control cables becomes damaged. Cables can also become frayed or kinked. Operation of controls could be restricted, which could cause an accident or injury.

HOW TO AVOID THE HAZARD

Inspect cables frequently. Replace dam- aged cables.

Lubricate the inner cables and the cable ends. If the cables do not operate smoothly, ask a dealer to replace them.

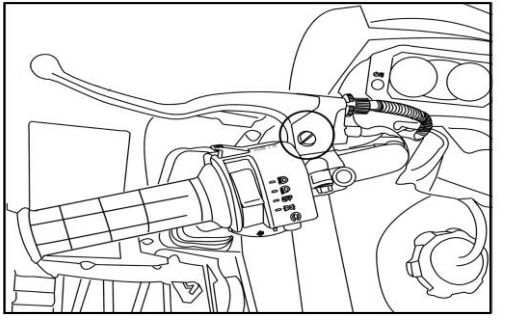
Recommended lubricant:
The chain and cable lube or
SAE 10W/40 motor oil

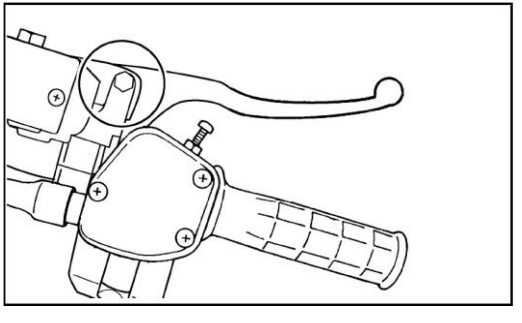
Lubricating the brake levers and brake pedal

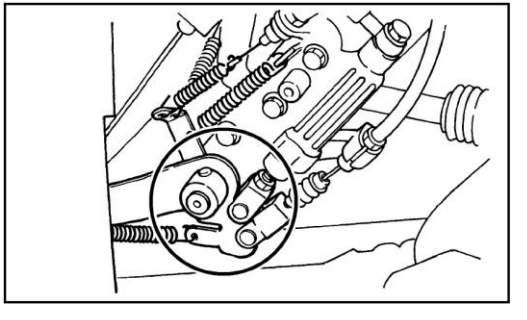
Lubricate the pivoting parts.

NOTE:
To access the brake pedal pivot.

Recommended lubricant:
Lithium-soap-based grease
(all-purpose grease)

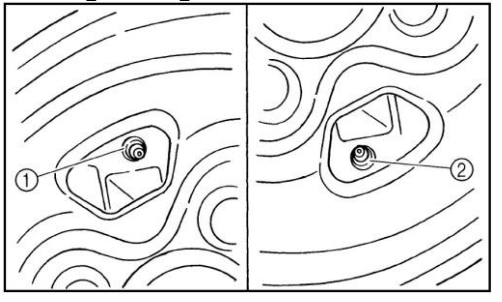






Rear knuckle upper and lower pivot lubrication

Lubricate the knuckle upper and lower pivots with a grease gun.

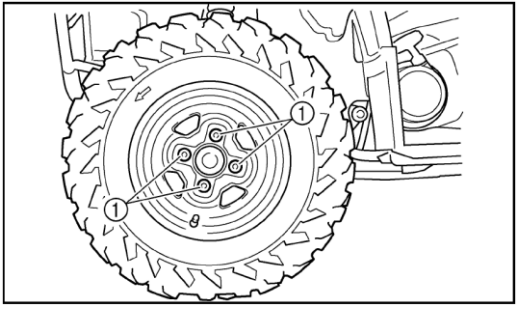


1. Upper knuckle 2. Lower knuckle

Recommended lubricant:
Lithium-soap-based grease

Wheel removal

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

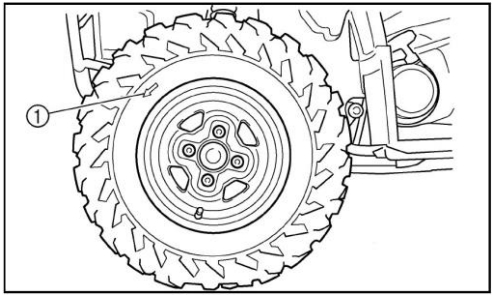


1. Nut (×4)

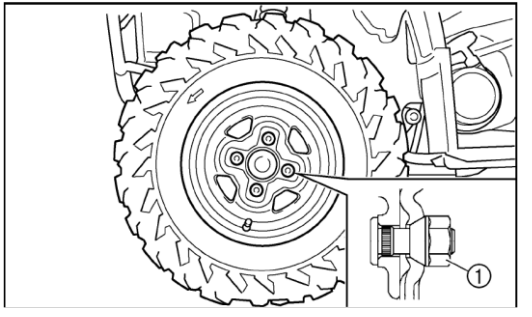
Wheel installation

1. Install the wheel and the nuts.

NOTE:
The arrow mark on the tire must point toward the rotating direction of the wheel.
Tapered nuts are used for both the front and rear wheels. Install the nut with its tapered side towards the wheel.



1. Arrow mark



1. Tapered nut

2. Lower the ATV so that the wheel is on the ground.
3. Tighten the wheel nuts to the specified torque.

Wheel nut torque:
Front: 55 Nm (5.5m·kgf, 40ft·lbf)
Rear: 55 Nm (5.5m·kgf, 40ft·lbf)

Battery

This machine is equipped with a sealed-type battery. Therefore it is not necessary to check the electrolyte or add distilled water in the battery. If the battery seems to have discharged, consult a dealer.

CAUTION:

Do not try to remove the sealing caps of the battery cells. You may damage the battery.

WARNING

POTENTIAL HAZARD

Failure to handle batteries or battery electrolyte carefully.

WHAT CAN HAPPEN

You could be poisoned. You could be severely burned by the sulfuric acid in battery electrolyte. Batteries produce explosive gases.

HOW TO AVOID THE HAZARD

Avoid contact with skin, eyes or clothing. Always shield eyes when working near batteries. Keep out of reach of children.

Antidote:

EXTERNAL: Flush with water.

INTERNAL: Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Get prompt medical attention.

EYES: Flush with water for 15 minutes and get prompt medical attention. Keep batteries away from sparks, flames, cigarettes or other sources of ignition. Ventilate when charging or using in a closed space.

Battery maintenance

1. When the machine is not used for a month or longer, remove the battery and store it in a cool, dark place. Completely recharge the battery before reinstallation.

CAUTION:

A special battery charger (constant voltage/ampere or constant voltage) is required for recharging a sealed-type battery. Using a conventional battery charger may shorten the battery life.

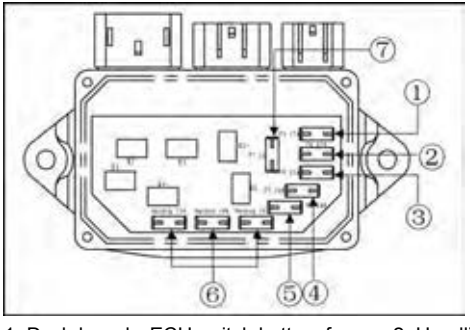
2. Always make sure the connections are correct when putting the battery back in the machine.

Fuse replacement

1.The main fuse and the fuse box are located under the seat.

2. If a fuse is blown, turn off the main switch and the switch of the circuit in question. Then, install a new fuse of the specified amperage.

Turn on the main switch. If the fuse immediately blows again, consult a dealer.



1. Dash board、ECU switch battery fuse 2. Headlight fuse
3. Auxiliary DC jack fuses 4. EPS、relay fuse
5. Brake、steering fuse 6. Backup fuse
7. Dash board、ECU constant power fuse

Specified fuses:	
Dash board、ECU switch battery fuse	15A
Headlight fuse	15A
Auxiliary DC jack fuse	15A
EPS、relay fuse	10A
Brake、steering fuse	10A
Backup fuse	(5A、10A、15A)
Dash board、ECU constant power fuse	5A

WARNING

POTENTIAL HAZARD

Using an improper fuse.

WHAT CAN HAPPEN

An improper fuse can cause damage to the electrical system, which could lead to a fire.

HOW TO AVOID THE HAZARD

Always use a fuse of the specified rating. Never use a material in place of the proper fuse.

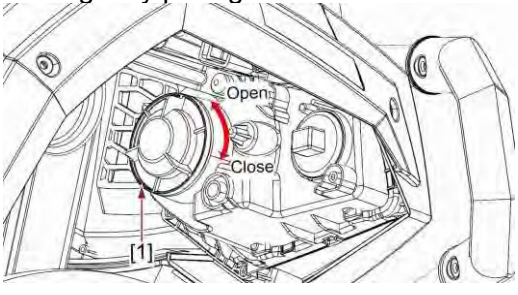
CAUTION:

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

Replacing a headlight bulb

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

1. Remove the cover at the rear of the headlight by pulling it off.



1. Cover

2. Remove the headlight bulb holder cover by pulling it off.

3. Remove the headlight bulb holder by pushing it in and turning it counterclockwise.

4. Remove the defective bulb by pulling it out.

WARNING

POTENTIAL HAZARD

A headlight bulb is hot when it is on and immediately after it is turned off.

WHAT CAN HAPPEN

You can be burned, or a fire could start if the bulb touches something flammable.

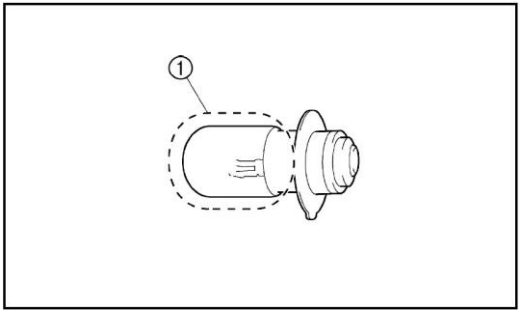
HOW TO AVOID THE HAZARD

Wait for the bulb to cool before touching or removing it.

5. Insert a new headlight bulb into the bulb holder by pushing it in.

CAUTION:

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.

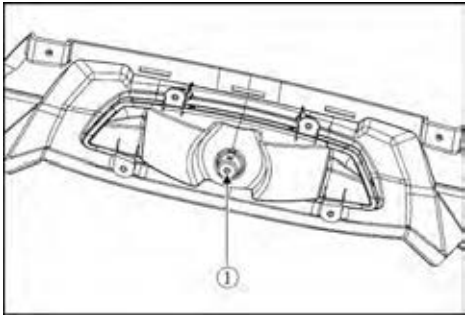


1. Do not touch the glass part of the bulb.

6. Install the bulb holder by pushing it in and turning it clockwise.
7. Install the bulb holder cover and the cover at the rear of the headlight.

Tail/brake light bulb replacement

1. Remove the bulb holder (together with the bulb) by turning it counterclockwise.



1. Tail/brake light bulb holder

2. Remove the defective bulb from the bulb holder by pushing it inward and turning it counterclockwise.
3. Install a new bulb in the bulb holder by pushing it inward and turning it clockwise.
4. Install the bulb holder (together with the bulb).

Check and solution to Common Problems in Vehicle

Here you can see some tables on the common problems which may come up when you are driving a ATV,which will help to solve these problems.
To repair a ATV requires technical skills, if you cannot fix it up yourself , please contact your dealer.

WARNING

POTENTIAL HAZARD

Checking the fuel system while smoking or near an open flame.

WHAT CAN HAPPEN

Fuel can ignite or explode, causing severe injury or property damage.

HOW TO AVOID THE HAZARD

Do not smoke when checking the fuel system. Make sure there are no open flames or sparks in the area, including pilot lights from water heaters or furnaces.

Sheet 1: Inspection and solution table for common faults

S/N	Problems	Solutions
1	Panel damaged during off-road driving	1. Check if the frame and support brackets are deformed or broken. Repair and touch-up paint as necessary
		2. Replace any damaged body panels.
		3. Re-paste on stickers and install the warning placards with rivets.
2	The skid plate is damaged by an object	1. Check if the reducer box or differential in the front and rear bridge to see if it is broken or leaking oil.
		2. Check to see if the bottom of the engine housing is broken or leaking oil.
		3. Replace with a new skid plate as necessary

Sheet 2: Inspection methods / solutions for common faults in the Brake system.

S/N	Problems	Solutions
1	Brake system seizing	1. Check if the parking brake lever returns to the normal position.
		2. Check if the brake discs on the front or rear wheels are deformed.
		3. Check the brake calipers on the front and rear wheels. See if the hydraulic cylinder is blocked, or the brake caliper parts are deformed.
2	Brake performance degradation	1. Check if the brake disc wear limit has been exceeded.
		2. Check whether the rotors or the disc brake pads have worn beyond limits or gotten contaminated by oil or other material which could reduce the brake performance.
		3. Check if any brake lines are leaking.
		4. Check if any push rods to the master cylinder are deformed.
		5. Check if the oil lines have any air and if they do, use special brake bleeding tools to remove the air.
		6. Check to see if there is sufficient oil in the front and rear brake reservoirs and the oil is at least to the minimum level line..
3	When driving, front or rear brakes make sound or brake discs or rotors turn red because of heat	1. Check if the brake discs are deformed.
		2. Check if the hydraulic cylinder on the brake calipers is blocked, or the brake caliper are deformed.

S/N	Problems	Solutions
4	Pulling during high-speed braking	1. Check to see if there is any brake component wear beyond limits or different wear between the left and right side.
		2. Check if the brake force for the front brake has been reduced allowing the rear wheels to lock before the front wheels during braking.
		3. Check if there is a difference in the spring force on the shock absorbers between the left and right side suspension
		4. Check to see if the rubber spring ring which connects the chassis and the swing arm is damaged.

Sheet 3: Inspection methods / solutions for common faults in the Electrical system.

S/N	Problems	Solutions
1	Lights not working	1. Check to be sure the light switch is working.
		2. Check to see if the wires are damaged.
		3. Check to see if the lights are damaged or blown out.
2	Will not engage in 4WD	1. “2WD/4WD” Check and be sure the control switch 2WD/4WD on the display panel is working properly.
		2. Check if electromagnet inside the front axle gearbox is damaged.
		3. Check to see if the wires are damaged.
3	Rear axle gearbox is inoperative	1. Check and be sure the control switch for 2WD/4WD on on the display panel is working properly.
		2. Check if electromagnet inside the rear axle gearbox is damaged.
		3. Check to see if the wires are damaged.
4	Display is abnormal on the display panel	1. Check to see if the sensor is damaged.
		2. Check to be sure the display panel is NOT damaged.
		3. Check to see if the surface of the speed sensor is coated with oxidation.
5	Shutdown switch does not turn off the engine.	1. Check to see if the shutdown switch has a problem.
		2. Check to see if the wires are damaged
		3. Check to see if the ECU or the EFI systems are damaged.

Sheet 4: Inspection methods / solutions for common faults in the operational systems.

S/N	Problems	Solutions
1	Steering wheel gap is too large	1. Check to see if the nuts on the steering column, steering knuckles and steering stem are damaged or loose. Tighten if necessary.
		2. Check and be sure the steering column is NOT damaged.
		3. Check to see if the gear clearance on the steering is too large. 4. Check to see if the bearing in the steering knuckle is damaged
2	Front wheels shake when driving.	1. Check to see if the main ball stud is damaged.
		2. Check and be sure the fastening nuts on the front wheels and the front wheel axles are loose or damaged.
		3. Check to see if the internal splines on the front wheel hub, or the outer splines of the front wheel axle are worn, abraded or damaged.
		4. Check to be sure the rubber spring ring which connects the front suspension and chassis is NOT damaged.
3	Rear wheels shake when driving	1. Check to see if the bearing in the rear axle bearing seat is damaged.
		2. Check to see if the moving bearing which connects the rear axle bearing seat and swing arm is worn, abraded or loose.
		3. Check to see if the retainer nut on the rear axles and/or rear wheels are loose or damaged.
		4. Check if the internal splines of rear wheel hub or the outer splines of the rear axle are worn, loose or abraded.
		5. Check if the rubber spring ring which connects the rear suspension and chassis is damaged.

S/N	Problems	Solutions
4	Wheels bounce when moving	1. Check to see if the wheel rim is deformed.
		2. Check to see if the front or the rear axle is bent.
		3. Check to see if the tire is deformed or damaged.
5	Shock absorber has become soft and uncomfortable during operation	1. Check and be sure the ATV is NOT overloaded.
		2. Check to see if the springs on the shock absorber have deformed or become weak over time.
		3. Check and be sure the damping force is present during compression and extension of shock absorber.
6	Abnormal sounds from front/rear axle during operation.	1. Check to see if the splines on the front or rear transmission shaft are damaged.
		2. Check to see if the splines on either end of the left or right axle shafts on the front or rear bridge are damaged.
		3. Check to be sure the gear inside the front and rear reduction gearbox or differential does NOT have excessive wear.
		4. Check to see if the boot on the constant velocity joint for the left or the right axle shafts are damaged.

Sheet 5: Inspection methods / solutions for common problems with the engine.

S/N	Problems	Solutions
1	Engine idle cannot be adjusted using a computer	1. Check to be sure the throttle cable is NOT seized.
		2. Check to see if the ECU is damaged.
2	Unstable of engine idle speed.	1. Check to see if the battery voltage is lower than the specified value.
		2. Check to see if the output voltage of the rectifier when the engine is idling is lower than the specified value.
		3. Check to determine if the EFI has any problems.
2	Engine power reduction	1. Check and see if a cylinder is not working.
		2. Check to be sure that an injector is NOT blocked.
		3. Check and clean the air filter element.
		4. Check to see if the muffler is blocked and clean the spark arrestor.
3	Engine backfires	1. Check to see if there are any air leaks in the air filter or air inlet pipe.
		2. Check to see if the connection between the exhaust pipe and engine or the exhaust pipe and muffler has an air leak.
		3. Check to be certain the grade of the gasoline is NOT too low.
4	Engine is hard to start at lower temperatures.	1. Check to see if the voltage of the battery has gotten lower because of the lower temperature.
		2. If the temperature is below 0° F, move the ATV to a warmer place. After it warms up it should start.

S/N	Problems	Solutions
5	Coolant overheats or boils	1. Check to see if the cooling fins on the water cooler are blocked.
		2. Check to see if the temperature sensor on the water cooler is damaged and if the cooling fan is operating properly.
		3. Check and be sure that the added antifreeze is the type specified in this user's manual.
		4. Check to see if there is any air in the water cooling system.
6	Engine does not start	1. Check to see if the battery charge is sufficient to make the starter motor crank.
		2. Check to see if the starter motor is damaged.
		3. Check to be sure the EFI system works properly.
		4. Check and be sure the ignition circuit is working properly.
		5. Check to see if the spark plug has a carbon deposit or the spark plug element is burned.
		6. Check to see if the ignition signal to the magneto is working normally.
		7. Check and be sure the air filter is NOT blocked.
		8. Check to see if the oil circuit is no blocked and operating smoothly.
		9. Check to see if the exhaust system is blocked.
		10. Check to see if the oil pump and the EFI system is working.

⚠ WARNING

POTENTIAL HAZARD
Removing the radiator cap when the engine and radiator are still hot.
WHAT CAN HAPPEN
You could be burned by hot fluid and steam blown out under pressure.
HOW TO AVOID THE HAZARD
Wait for the engine to cool before removing the radiator cap. Always use a thick rag over the cap. Allow any remaining pressure to escape before completely removing the cap.

NOTE:
If it is difficult to get the recommended coolant, tap water can be temporarily used, provided that it is changed to the recommended coolant as soon as possible.

CLEANING

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

1. Before cleaning the machine:

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 paintbrush. Do not apply degreaser to the wheel axles.

3. Rinse the dirt and degreaser off with a garden hose. Use only enough pressure to do the job.

CAUTION:

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 the majority of the dirt has been hosed off, wash all surfaces with warm water and mild, detergent-type soap. An old toothbrush or bottlebrush is handy for hard-to-get-at places.

5. Rinse the machine off immediately with clean water and dry all surfaces with a chamois, clean towel or soft absorbent

clothe.

6. Clean the seat with vinyl upholstery cleaner to keep the cover pliable and glossy.

7. 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, start the engine and let it idle for several minutes.

WARNING

POTENTIAL HAZARD

Operation with wet brakes after washing.

WHAT CAN HAPPEN

Wet brakes may have reduced stopping ability, increasing the chance of an accident.

HOW TO AVOID THE HAZARD

Test the brakes after washing. Apply the brakes several times at slow speeds to let friction dry out the linings.

STORAGE

Long-term storage (60 days or more) of your machine will require some preventive procedures to guard against deterioration. After thoroughly cleaning the machine,

prepare for storage as follows:

1. Fill the fuel tank with fresh fuel and add the specified amount of Fuel Stabilizer and Conditioner or an equivalent product.

Specified amount: 1 oz of stabilizer to each gallon of fuel (or 7.5 cc of stabilizer to each liter of fuel)

NOTE:

Use of fuel stabilizer and conditioner eliminates the need to drain the fuel system. Consult a dealer if the fuel system needs to be drained instead.

2. Remove the spark plug, pour about one tablespoon of SAE 10W30 or 20W40 motor oil in the spark plug hole and reinstall the spark plug. Ground the spark plug wire and turn the engine over several times to coat the cylinder wall with oil.

3. Lubricate all control cables.

4. Block up the frame to raise all wheels off the ground.

5. Tie a plastic bag over the exhaust pipe outlet to prevent moisture from entering.

6. If storing in a humid or salt-air atmosphere, coat all exposed metal surfaces with a light film of oil. Do not apply oil to any rubber parts or the seat cover.

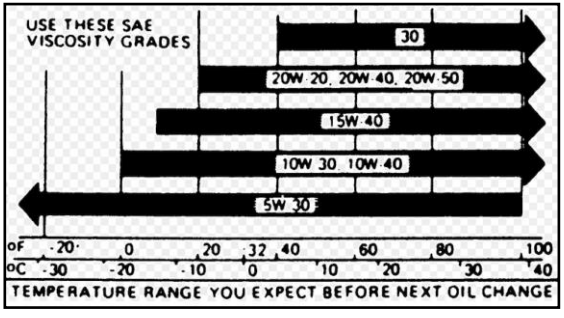
7. Remove the battery and charge it. Store it in a dry place and recharge it once a month. Do not store the battery in an excessively warm or cold place (less than 0 ℃ (32 ° F) or more than 30 ℃ (86 ° F).

NOTE:

Make any necessary repairs before storing the machine.

10-1 Specification

Model	550/750cc
Dimensions:	
Overall length	2,345mm (92.3in)
Overall width	1,280mm (50.4in)
Overall height	1,380mm (54.3in)
Seat height	930 mm (36.6in)
Wheelbase	1,455mm (57.3in)
Ground clearance	295mm (11.6in)
Minimum turning radius	3,500mm (137.8in)
Basic weight:	
With oil and full fuel tank	390kg (859.8 lb)
Engine:	
Engine type	Liquid-cooled 4-stroke, SOHC
Cylinder arrangement	Forward-inclined single cylinder
Displacement	546cm^3 /735cm^3
Bore x Stroke	91mmx84mm/102mmx90mm
Compression Ratio	9.6:1/9.7:1
Starting System	Electric Starter
Lubrication System	Wet Sump

Model	550/750cc
Engine oil: Type	 API-SJ & JASO/MA

Model	550/750cc
Recommended engine oil classification Quantity: Without oil filter cartridge replacement With oil filter cartridge replacement	**CAUTION:** In order to prevent clutch slippage (since the engine oil also lubricates the clutch), do not mix any chemical additives. Do not use oils with a diesel specification of "CD" or oils of a higher quality than specified. In addition, do not use oils labeled "ENERGY CONSERVING II" or higher. 1.9 0L (2.01 qt) 2.10 L (2.22 qt)
Final gear case oil: Type Quantity	 SAE80 API GL-4 Hypoid gear oil 0.25 L (0.22 Imp qt, 0.26 US qt)
Differential gear case oil: Type Quantity	 SAE80 API GL-5 Hypoid gear oil 0.28 L (0.25 Imp qt, 0.30 US qt)
Radiator capacity (including all routes):	1.80 L (1.58 Imp qt, 1.90 US qt)
Air filter:	Wet type element

Model	550/750cc
Fuel: Type Fuel tank capacity	 Unleaded gasoline only 13L (3.43gal)
Throttle valve: Type/quantity	 D46-A / 1
Spark plug: Type/manufacturer Spark plug gap	 DR8EA /DCPR7E for 0.6-0.7 mm (0.023-0.027 in)
Clutch type:	Wet, centrifugal automatic
Transmission: Primary reduction system Secondary reduction system Transmission type Operation Reverse gear Sub transmission ratio low high	 V-belt Shaft drive V-belt automatic Left hand operation 1.471 2.059 1.238

10-5 Specification

Model		550/750cc
Tire:		
Type		Tubeless
Size	front	25×8-12 (min);27×9-14(max)
	rear	25×10-12 (min);27×11-14(max)
Brake:		
Front brake	Type	Dual disc brake
	Operation	Right hand operation
Rear brake	Type	Single disc brake
	Operation	Left hand and right foot operation
Suspension:		
Front suspension		Double wishbone
Rear suspension		Double wishbone
Shock absorber:		
Front shock absorber		Coil spring / oil damper
Rear shock absorber		Coil spring / oil damper
Wheel travel:		
Front wheel travel		130 mm (5.12 in)
Rear wheel travel		150 mm (5.91 in)

Model	550/750cc
Electrical:	
Ignition system	ECU
Generator system	A.C. magneto
Battery type	YTX20L-BS
Battery capacity	12 V, 21 Ah
Headlight type:	Krypton bulb
Bulb voltage, wattage × quantity:	
Head light	12 V, 30 W / 30 W × 2
Tail/brake light	12 V, 5 W / 21 W × 1
Indicator light:	
Neutral indicator light	LED
Reverse indicator light	LED
Coolant temperature warning light	LED
Park indicator light	LED
High-range indicator light	LED
Low-range indicator light	LED
Differential gear lock indicator light	LED

10-7 Specification

Model	550/750cc
Fuses:	
Main fuse:	30 A
Speedometer unit	15A
Signaling system fuse	10A
Four-wheel drive fuse:	10A
Auxiliary DC jack fuse:	15A
ECU:	5A
Headlight fuse:	15A
Backup fuse:	5A、10A、15A

Fault Code of Electronic Injection System

DTC Number	DTC Description	Related Calibration	HEX	DEC
P0107	MAP Circuit Low Voltage or Open	KsDGDM_MAP_ShortLow	107	263
P0108	MAP Circuit High Voltage	KsDGDM_MAP_ShortHigh	108	264
P0112	IAT Circuit Low Voltage	KsDGDM_IAT_ShortLow	112	274
P0113	IAT Circuit High Voltage or Open	KsDGDM_IAT_ShortHigh	113	275
P0117	Coolant/Oil Temperature Sensor Circuit Low Voltage	KsDGDM_CoolantShortLow	117	279
P0118	Coolant/Oil Temperature Sensor Circuit High Voltage or Open	KsDGDM_CoolantShortHigh	118	280
P0122	TPS Circuit Low Voltage or Open	KsDGDM_TPS_ShortLow	122	290
P0123	TPS Circuit High Voltage	KsDGDM_TPS_ShortHigh	123	291
P0131	O2S 1 Circuit Low Voltage	KsDGDM_O2_1_ShortLow	131	305

P0132	O2S 1 Circuit High Voltage	KsDGDM_O2_1_ShortHigh	132	306
P0031	O2S Heater Circuit High Voltage	KsDGDM_O2_HeaterShortHigh	31	49
P0032	O2S Heater Circuit Low Voltage	KsDGDM_O2_HeaterShortLow	32	50
P0201	Injector 1 Circuit Malfunction	KsDGDM_INJ_CYL_A_Fault	201	513
P0202	Injector 2 Circuit Malfunction	KsDGDM_INJ_CYL_B_Fault	202	514
P0230	FPR Coil Circuit Low Voltage or Open	KsDGDM_FPP_CircuitShortLow	230	560
P0232	FPR Coil Circuit High Voltage	KsDGDM_FPP_CircuitShortHigh	232	562
P0336	CKP Sensor Noisy Signal	KsDGDM_CrankNoisySignal	336	822
P0337	CKP Sensor No Signal	KsDGDM_CrankNoSignal	337	823
P0351	Cylinder 1 Ignition Coil Malfunction	KsDGDM_EST_A_Fault	351	849
P0352	Cylinder 2 Ignition Coil Malfunction	KsDGDM_EST_B_Fault	352	850
P0505	Idle Speed Control Error	KsDGDM_IdleControl	505	1285
P0562	System Voltage Low	KsDGDM_SysVoltLow	562	1378

P0563	System Voltage High	KsDGDM_SysVoltHigh	563	1379
P0650	MIL Circuit Malfunction	KsDGDM_MIL_Circuit	650	1616
P1693	Tachometer Circuit Low Voltage	KsDGDM_TAC_Circuit_Low	1693	5779
P1694	Tachometer Circuit High Voltage	KsDGDM_TAC_Circuit_High	1694	5780
P0137	O2S 2 Circuit Low Voltage	KsDGDM_O2_2_ShortLow	137	311
P0138	O2S 2 Circuit High Voltage	KsDGDM_O2_2_ShortHigh	138	312
P0038	O2S Heater 2 Circuit High Voltage	KsDGDM_O2_HeaterShortHigh	38	56
P0037	O2S Heater 2 Circuit Low Voltage	KsDGDM_O2_HeaterShortLow	37	55
P0500	VSS No Signal	KsDGDM_VSS_NoSignal	500	1280
P0850	Park Neutral Switch Error	KsDGDM_ParkNeutralSwitch	850	2128
P0445	CCP short to high	KsDGDM_CCP_CircuitShortHigh	445	1093
P0444	CCP short to low/open	KsDGDM_CCP_CircuitShortLow	444	1092
P0171	BLM Max Adapt(Kohler Special)	KsFDIAG_BLM_MaxAdapt	171	369
P0172	BLM Min Adapt(Kohler Special)	KsFDIAG_BLM_MinAdapt	172	370
P0174	PE System Lean(Kohler Special)	KsFDIAG_PESystLean	174	372


WARNING
Improper use can result in SEVERE INJURY or DEATH
ALWAYS USE AN APPROVED HELMET AND PROTECTIVE GEAR FOR DRIVER AND PASSENGER
NEVER USE ON PUBLIC ROADS
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
• on public roads - a collision can occur with another vehicle
• 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
• avoid paved surfaces - pavement may seriously affect handling and control
• 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