

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

**·Assembly**

**·Operation**

**·Maintenance**

**THIS VEHICLE IS  
NOT DESIGNED  
FOR USE ON**

# **OWNER'S MANUAL**

**EPA 4x4**

**D300B**

**BEFORE OPERATING THIS VEHICLE, THE OWNER AND EACH OPERATOR MUST HAVE READ AND HAVE AN UNDERSTANDING OF ALL THE INSTRUCTIONS FOR PROPER ASSEMBLY AND SAFE OPERATION, AS WELL AS THE INSTRUCTIONS CONCERNING THE ENGINE AND ALL OTHER PORTIONS OF VEHICLE.**

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# 1. INTRODUCTION

Congratulations on the purchase of your ALL Terrain Vehicle (ATV). We take pride in offering you this product engineered and manufactured to the highest performance and quality standards. We are sure that you will enjoy superior levels of performance, reliability, riding comfort, and safety.

This manual is provided to help the owner and operators of this ATV become familiar with the operating characteristic, and the many features offered on the ATV. The manual also covers information on the care and maintenance of your ATV.

Please read this manual carefully. The information contained in this Owner's Manual, the Warning Labels supplied with this product will help your ATV. Make sure that you understand and follow all Warnings and Instructions in this material.

If you did not receive any of the material listed above, please call your dealer and request to have them sent to you.

## Important Safety Notice

Never make any modifications to the engine, drive system, mechanical or electrical systems of your ATV. Never install after market parts or accessories intended to increase the speed or power of your ATV.

Failure to follow these warnings increases the possibility of accidents leading to **DEATH** or **SERIOUS INJURY!**

Additionally, failure to follow these requirements will void the Warranty on your ATV.

## NOTE

The addition and use of certain accessories including, (but not limited to) mowers, blades, sprayers, winches and windshields will change the handling characteristics of your ATV.

## **Practice Responsible ATV Riding**

Make sure that you understand and follow all local, state/province, and federal/national riding laws and requirements.

Remember.....Respect your vehicle, respect the environment and respect the property of others. You are responsible for your safety and the safety of others around you when you ride!

**AN ATV CAN BE HAZARDOUS TO OPERATE.** An ATV handles differently from other vehicles including motorcycles and cars. A collision rollover can occur quickly, even during routine maneuvers such as turning and driving on hills or over obstacles, if you fail to take proper precautions.



**SERIOUS 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 instruction. Take a training course. Beginners should receive training from a certified instructor. Contact an authorized ATV dealer to find out about the training courses nearest you.
- Never allow anyone who is not an adult to operate this ATV.
- Never permit a guest to operate this ATV unless the guest has read this manual and all product labels and has completed a certified training course.
- Always avoid operating an ATV on any paved surfaces, including sidewalks, driveways, parking lots and streets.
- Never operate an ATV without wearing an approved helmet that fits properly. You should also wear eye protection (goggles or face shield), gloves, boots, a long-sleeved shirt or jacket, and long pants.
- Never consume alcohol or drugs before or while operating this ATV.
- Never operate at excessive speeds. Always travel at a speed which 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 footrests 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.
- 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 speeds.

- Always have the ATV checked by an authorized dealer if it has been involved in an accident.

- Never operate 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 or make sudden gear changes. Never go over the top of any hill at high speed.

- Always follow proper procedures for going downhill 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, which would cause the vehicle to lean sharply to one side. Go straight down the hill when 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 when possible.

- Always use proper procedures if you stall or roll backwards when climbing a hill. To avoid stalling, 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 either 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 of skidding or sliding. On slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chance of skidding or sliding out of control.

- Avoid operating the ATV through deep or fast-flowing water. Avoid water which exceeds the recommended maximum depth, go slowly, balance your weight carefully

avoiding sudden movements, and maintain a slow and steady forward motion. Do not make sudden turns or stops, and do not make sudden throttle changes.

·Wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them lightly several times to let friction dry out the pads.

·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. Avoid turning at sharp angles in reverse.

·Always use the size and type of 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.

## 2. UNDERSTANDING WARNINGS

### **ATTENTION:**

This is an ADULT VEHICLE ONLY: not a toy. READ AND UNDERSTAND WARNINGS AND OWNER'S MANUAL BEFORE OPERATION.



**KNOW YOUR VEHICLE BEFORE YOU BEGIN RIDING!**

Read this manual thoroughly referring to the various areas which are being discussed on your machine. Operating this vehicle carries with its responsibilities for your personal safety, the safety of others, and the protection of our environment.

**NOTE:** Illustrations used in this manual are for general representation only. Your model may differ.

## **SAFETY ALERT**

**WARNINGS** identify special instructions or procedures which, if not correctly followed, could result in personal injury, or loss of life. Read all **WARNINGS** in this manual care fully. Follow their instructions to remain safe.

The following precautionary signal words are used throughout this manual to convey the following messages:



This is the safety alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury. Your safety is involved!



**WARNING**

**Indicates a potential hazard which could result in severe injury or death.**

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**CAUTION**

**Indicates a potential hazard which may result in minor personal injury or damage to the ATV.**

---

**CAUTION**

**Indicates a situation that can result in damage to the machine.**

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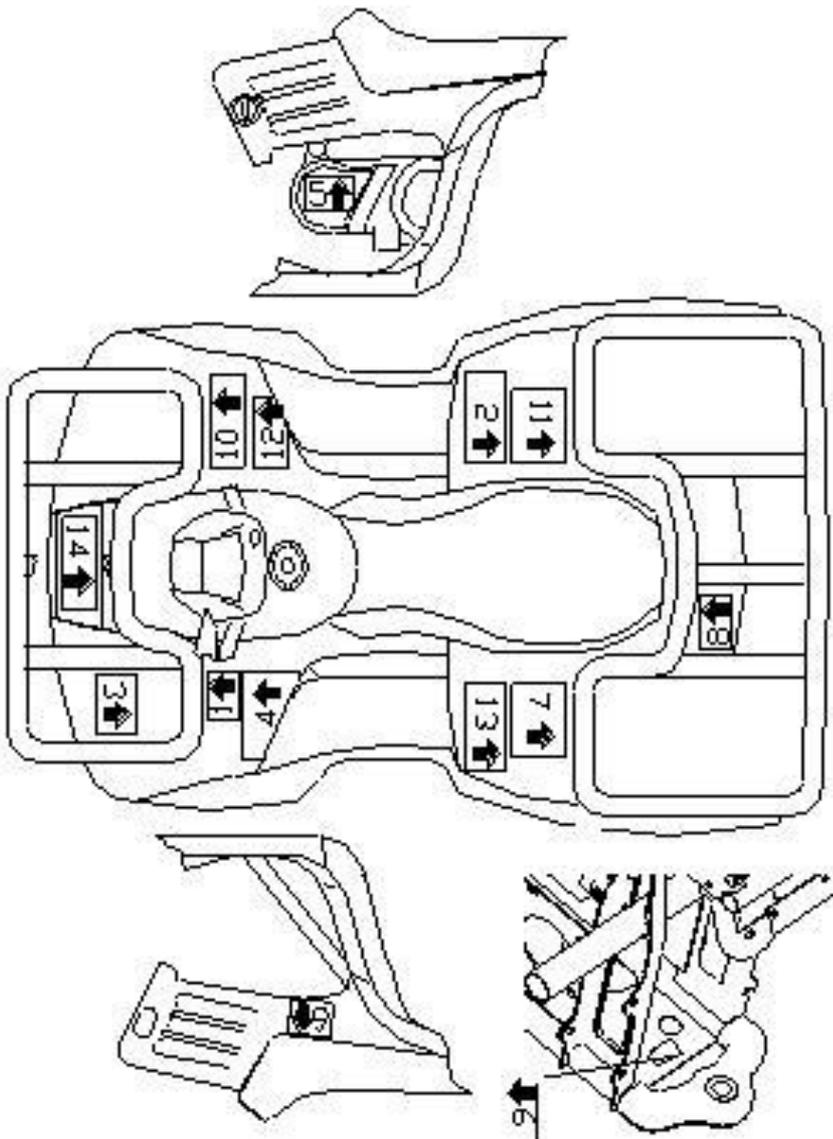
**NOTE** The word “NOTE” in this manual will alert you to key information or

instructions.

### 3. SAFETY WARNING

**NOTE :**

Warning decals have been placed on the vehicle for your protection. Read and follow the instructions on each decal carefully. In the event any decal becomes illegible or comes off, contact your dealer for a replacement.





1.

 **Warning**



Operation of this ATV by Children under the age of **16** increases the risk of severe injury or death.

**NEVER** permit children under age **16** to operate this ATV.

NO.1

2.

 **Warning**

ENGINE EXHAUST FROM THIS PRODUCT CONTAINS CHEMICALS KNOWN, IN CERTAIN QUANTITIES, TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM.

NO.2

3.

 **Warning**

Overloading of the carrying rack can cause loss of stability or control of the ATV.

Do not tow from the rack or bumper. Loss of stability or tip over may result.

Do not exceed the load capacity of the rack.

Load Capacity of this front carrying rack is  
**40 lbs/18kg**

NO.3

4.

 **Warning**

Improper **ATV** use can result in SEVERE INJURY or DEATH.

|   |   |   |  |
|---|---|---|--|
|  |  |  |  |
| <b>ALWAYS</b> USE AN APPROVED HELMET AND PROTECTIVE GEAR                            | <b>NEVER</b> USE ON PUBLIC ROADS  | <b>NEVER</b> CARRY PASSENGERS   | <b>NEVER</b> USE WITH DRUGS OR ALCOHOL   |

**NEVER** operate:

- Without proper training or instruction
- At speeds too fast for your skills or the conditions

5.

|   |
|---|
|  <b>Warning</b>  |
| THIS GUARD MUST BE IN PLACE DURING OPERATION OF THE ENGINE. KEEP HANDS, FEET, HAIR AND LOOSE GARMENTS AWAY FROM THE ENGINE, CHAIN AND DRIVE COMPONENTS. |
| NO.5  |

6.

|  |
|--|
|  <b>Warning</b>               |
| <b>Hot Surfaces</b><br><b>Never</b> touch engine or exhaust system after running engine, until they have cooled. |
| NO.6   |

7.

 **Warning**



**NEVER** ride as a passenger.

Passengers can cause a loss of control, resulting in **SEVERE INJURY OR DEATH.**

NO.7

9.

 **Warning**

Pulling excessive loads can cause loss of stability or control of the ATV.

Do not exceed the load capacity for the hitch.

Trailer Load Capacity of this ATV is  
450lbs /200kg and  
25lbs /11kg tongue weight.

NO. 9

8.

|  <b>Warning</b>   |  |
|--|--|
| Overloading of the carrying rack can cause loss of stability or control of the ATV.<br>Towing from the rack can cause tip over of the ATV. |  |
| Do not exceed the load capacity of the rack.<br>Do not tow from this rack.   |  |
| Load Capacity of this rear carrying rack is<br>801 lbs/36kg  |  |
| NO. 8  |  |

10.

|  <b>Warning</b>   |  |
|--|--|
| <b>Risk of Death or Serious Injury</b>   |  |
| <ul style="list-style-type: none"><li>▪ Shoulder length and longer hair or loose clothing can get caught in moving parts behind or below the seat.</li><li>▪ Restrain hair at or above shoulder level. Restrained hair must not interfere with the proper fit of the helmet.</li><li>▪ Securely restrain anything loose that reaches behind or below the seat.</li></ul> |  |
| Guards are supplementary Safety Devices.<br>The restraint of hair and clothing is the primary means of avoiding entanglement Death or Injury   |  |
| NO. 10   |  |

11.

|  <b>Warning</b> |  |
|--|--|
| Improper tire pressure or overloading can cause loss of control.                                   |  |
| Loss of control can result in severe injury or death.  |  |
| <b>ALWAYS</b> maintain proper tire pressure as indicated on the sidewall of your ATV               |  |

12.



## Warning

Failure to understand and follow **Warnings** and **Instructions** for the Safe Use and Maintenance of this product may result in **Death** or **Injury!**

This information is contained in the *Warning Labels*, *Owner's Manual* supplied with this product. Make sure that you understand and follow all Warnings and Instructions in this material.

If you did not receive any of the material listed above please contact your dealer.

NO.12

13.

|  <b>Warning</b>   |               |
|--|---------------|
| <p><b>Never</b> Operate this vehicle on HILLS steeper than 15%.<br/>To prevent flip over on hilly terrain, use the throttle and brake gradually.</p> <p>Operation of the ATV in reverse, even at low speeds can be dangerous.<br/>Steering and control of the ATV can become difficult.</p> <p>To prevent flip over, avoid sudden braking and sharp turns.</p> | <p>NO. 13</p> |

14.

|  <b>Warning</b>  |               |
|---|---------------|
| <p>Do not remove the radiator cap when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury.</p> <p>When the engine has cooled, open the radiator cap as follows:<br/>Place a thick rag or a towel over the radiator cap. Slowly rotate the cap counterclockwise toward the detent. This allows any residual pressure to escape. When any hissing sound has stopped, press down on the cap while turning counterclockwise and remove it.</p> | <p>NO. 14</p> |

## 4. DAILY PRE-RIDE INSPECTION



### **WARNING**

You must inspect your ATV each time before riding to ensure it is in proper working order. If proper inspection is not done, severe injury or death could result.

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Use the following checklist to verify your machine is in proper working order each time you ride.

#### **Item/Inspection procedure**

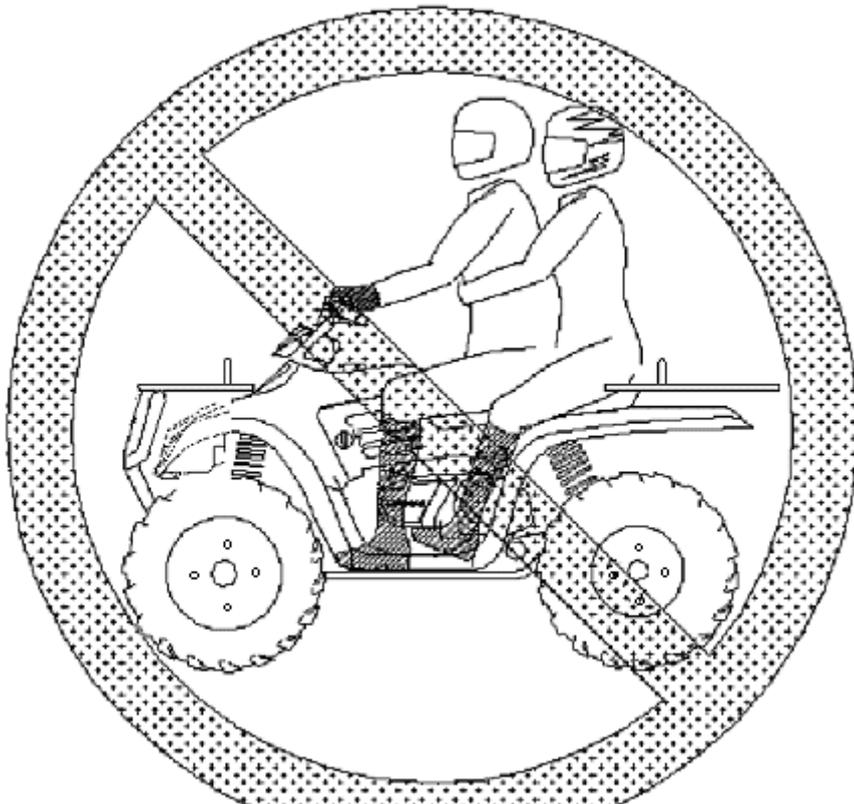
1. Tire-check condition and pressures.
2. Fuel tank-fill the fuel tank to its proper level.
3. All brakes-check operation, adjustment and fluid level (includes auxiliary brake).
4. Throttle-check for free operation and closing.
5. Headlight/Taillight/Brakelight-check operation of all indicator lights and switches.
6. Engine stop switch-check for proper function.

7. Wheels-check for tightness of wheel nuts and axle nuts; check that axle nuts are secured by cotter pins.
8. Air cleaner element-check for dirt; clean or replace.
9. Steering-check for free operation noting any unusual looseness in any area.
10. Loose parts-visually inspect vehicle for any damaged components or loose nuts/bolts or fasteners.
11. Operators' helmets, goggles and clothing.
12. Engine coolant check for proper level at the recovery bottle.

## 5. OPERATION WARNINGS



### **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.

**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.

**HOW TO AVOID THE HAZARD**

Beginning and inexperienced operators should complete the certified training course. They should then regularly learn techniques described in the Owner's Manual. For more information about the training course, contact an authorized ATV dealer.

---



## **WARNING**

### **POTENTIAL HAZARD**

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

### **WHAT CAN HAPPEN**

Operating without an approved 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.

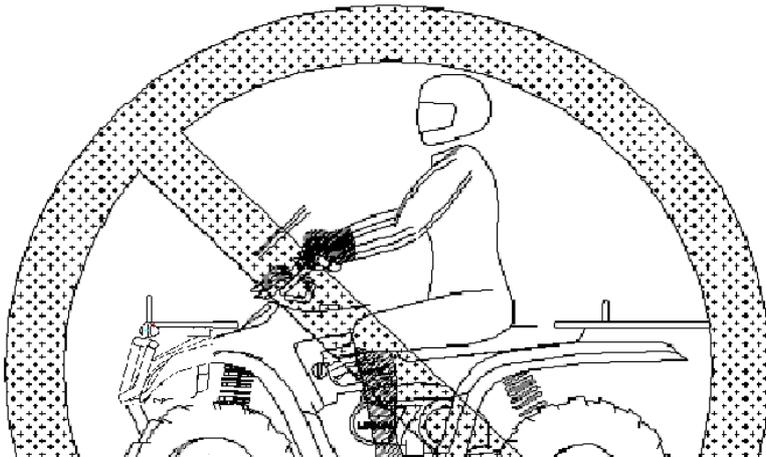
### **HOW TO AVOID THE HAZARD**

Always wear an approved helmet which fits properly.

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



## **WARNING**



**POTENTIAL HAZARD**

Operating this ATV on paved surfaces, including sidewalks, paths, parking lots, and driveways.

**WHAT CAN HAPPEN**

Paved surfaces may seriously affect the handling and control of the ATV, and may cause the vehicle to go out of control.

**HOW TO AVOID THE HAZARD**

Avoid operating the ATV on pavement.

**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.

---



## **WARNING**

### **POTENTIAL HAZARD**

Operating this ATV at excessive speeds.

### **WHAT CAN HAPPEN**

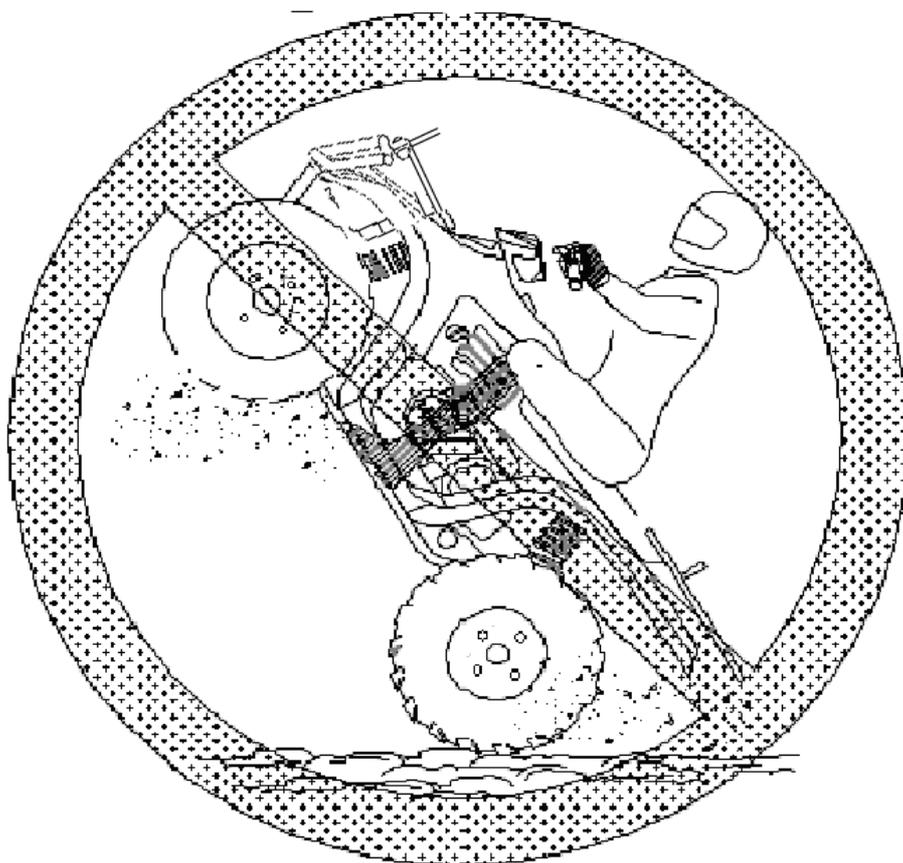
Increases your chance of losing control of the ATV, which can result in an accident.

### **HOW TO AVOID THE HAZARD**

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



## **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.



## **WARNING**

### **POTENTIAL HAZARD**

Failure to inspect the ATV before operating.

### **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**

Removing hands from the handlebars or feet from the footrests during operation.

### **WHAT CAN HAPPEN**

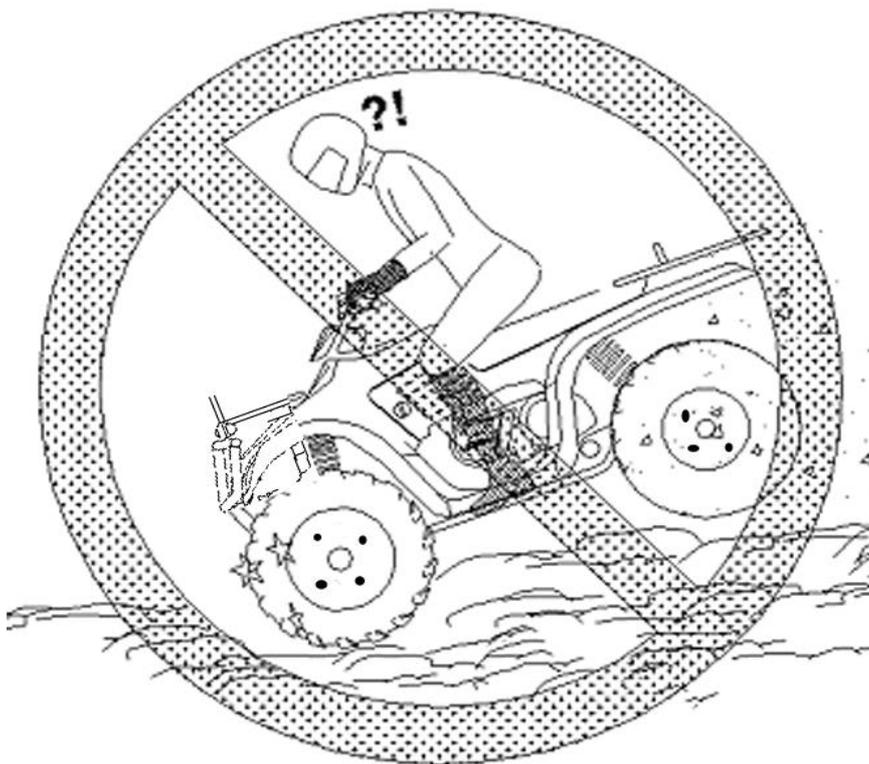
Removing even one hand or foot can reduce your ability to control the ATV or could cause you to lose your balance and fall off the ATV. If you remove a foot from the footrest, your foot or leg may come into contact with the rear wheels, which could injure you or cause an accident.

### **HOW TO AVOID THE HAZARD**

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



## **WARNING**



### **POTENTIAL HAZARD**

Failure to use extra care when operating this ATV on unfamiliar terrain.

### **WHAT CAN HAPPEN**

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

### **HOW TO AVOID THE HAZARD**

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



## **WARNING**

### **POTENTIAL HAZARD**

Failure to use extra care when operating on excessively rough, slippery or loose terrain.

### **WHAT CAN HAPPEN**

Could cause loss of traction or vehicle control, which could result in an accident, including an overturn.

### **HOW TO AVOID THE HAZARD**

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 kinds of terrain.

---



## **WARNING**

### **POTENTIAL HAZARD**

Climbing hills improperly.

### **WHAT CAN HAPPEN**

Could cause loss of control or cause ATV to overturn.

### **HOW TO AVOID THE HAZARD**

Always follow proper procedures for climbing hills as described in the 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 suddenly. The ATV could flip over backwards.

Never go over the top of any hill at high speed. An obstacle, a sharp drop, or another vehicle or person could be on the other side of the hill.



## **WARNING**

### **POTENTIAL HAZARD**

Turning improperly.

### **WHAT CAN HAPPEN**

ATV could go out of control, causing a collision or overturn.

### **HOW TO AVOID THE HAZARD**

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

---



## **WARNING**

### **POTENTIAL HAZARD**

Operating on excessively steep hills.

### **WHAT CAN HAPPEN**

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

### **HOW TO AVOID THE HAZARD**

Never operate the ATV on hills too steep for the ATV or for your abilities.

Practice on smaller hills before attempting large hills.

Never operate ATV on hills steeper than 15°.



## **WARNING**

### **POTENTIAL HAZARD**

Going down a hill improperly.

### **WHAT CAN HAPPEN**

Could cause loss of control or cause ATV to overturn.

### **HOW TO AVOID THE HAZARD**

Always follow proper procedures for going down hills as described in the Owner's

Manual.

**NOTE:** A special technique is required when braking as you go downhill.

Always 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 which would cause the vehicle to lean sharply to one side. Go straight down the hill when possible.

---



## **WARNING**

### **POTENTIAL HAZARD**

Improperly crossing hills or turning on hills.

### **WHAT CAN HAPPEN**

Could cause loss of control or cause ATV to overturn.

### **HOW TO AVOID THE HAZARD**

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:**

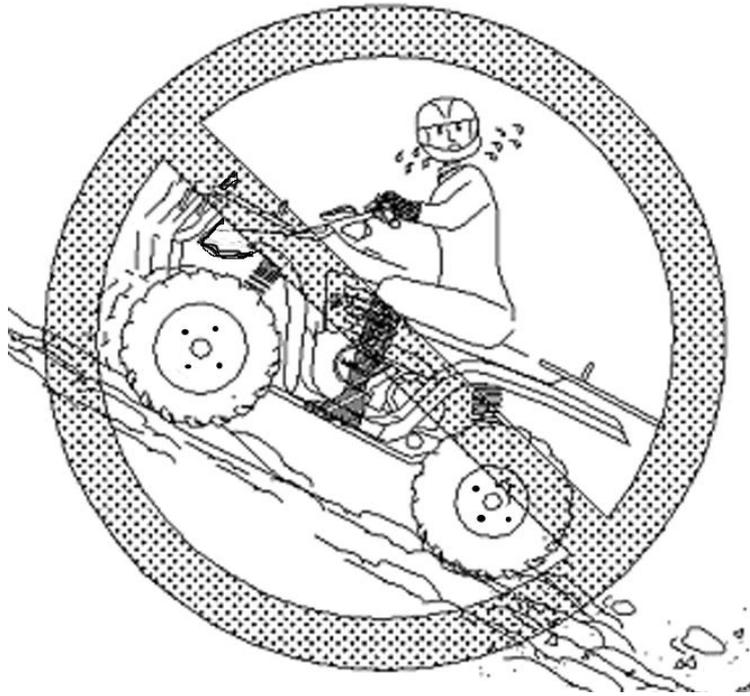
Always follow proper procedures as described in the Owner's Manual.

Avoid hills with excessively slippery or loose surfaces.

Shift your weight to the uphill side of the ATV.



## **WARNING**



### **POTENTIAL HAZARD**

Stalling, rolling backwards or improperly dismounting while climbing a hill.

### **WHAT CAN HAPPEN**

Could result in ATV overturning.

### **HOW TO AVOID THE HAZARD**

Maintain steady speed when climbing a hill.

If you lose all forward speed:

Keep your weight uphill.

Apply the brakes.

Lock parking brake after you are stopped.

If the ATV begins rolling backwards:

Keep weight uphill; never apply engine power.

Never apply the rear brake while rolling backwards.

Apply the single-lever brake gradually.

When fully stopped, apply the rear brake as well, and then lock the parking brake.

Dismount on uphill side, or to either side if pointed straight uphill.

Turn the ATV around and remount, following the procedure described in the Owner's Manual.



**WARNING**

### **POTENTIAL HAZARD**

Improperly operating over obstacles.

### **WHAT CAN HAPPEN**

Could cause loss of control or a collision. Could cause the ATV to overturn.

### **HOW TO AVOID THE HAZARD**

Before operating in a new area, check for obstacles.

Use extreme caution when riding over large obstacles, such as large rocks or fallen trees.

If you cannot avoid obstacles, always follow proper procedures as described in the Owner's Manual.

---



## **WARNING**

### **POTENTIAL HAZARD**

Skidding or sliding.

### **WHAT CAN HAPPEN**

You may lose control of the ATV.

You may also regain traction unexpectedly, which may cause the ATV to overturn.

### **HOW TO AVOID THE HAZARD**

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



## **WARNING**

### **POTENTIAL HAZARD**

Operating this ATV through deep or fast-flowing water.

### **WHAT CAN HAPPEN**

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

### **HOW TO AVOID THE HAZARD**

Never operating the ATV through water which exceeds the recommended maximum depth in this manual.

Avoid operating the ATV through deep or fast-flowing water. If you cannot avoid water, go slowly, balance your weight carefully avoiding sudden turns or stops, and do not make sudden throttle changes.

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 pads.

---



## **WARNING**

### **POTENTIAL HAZARD**

Improperly operating in reverse.

**WHAT CAN HAPPEN**

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

**HOW TO AVOID THE HAZARD**

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



**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 uneven tire pressure, may cause loss of control, and increases the risk of an accident.

**HOW TO AVOID THE HAZARD**

Always use the size and type of tires specified in the Owner's Manual for this vehicle. Always maintain proper tire pressure as described in the Owner's Manual.

---



**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 dealer.



## **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 a greater distance for braking.

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

---



## **WARNING**

### **POTENTIAL HAZARD**

Riding on frozen lakes and rivers.

### **WHAT CAN HAPPEN**

Severe injury or death can result if the ATV and/or the operator break through the ice.

### **HOW TO AVOID THE HAZARD**

Never ride your ATV on a frozen body of water before you are sure the ice is thick enough and sound enough to support the machine and its operator, as well as the force that is created by a moving vehicle.



## **WARNING**

After a rollover or an accident, have a qualified service dealer check the complete machine including, but not limited to, brakes, throttle and steering for possible damage.

---



## **WARNING**

Safe operation of this ride active vehicle requires good judgment and physical skills. Persons with cognitive or physical disabilities who operate this vehicle have an increased risk of overturns and loss of control which could result in severe injury or death.

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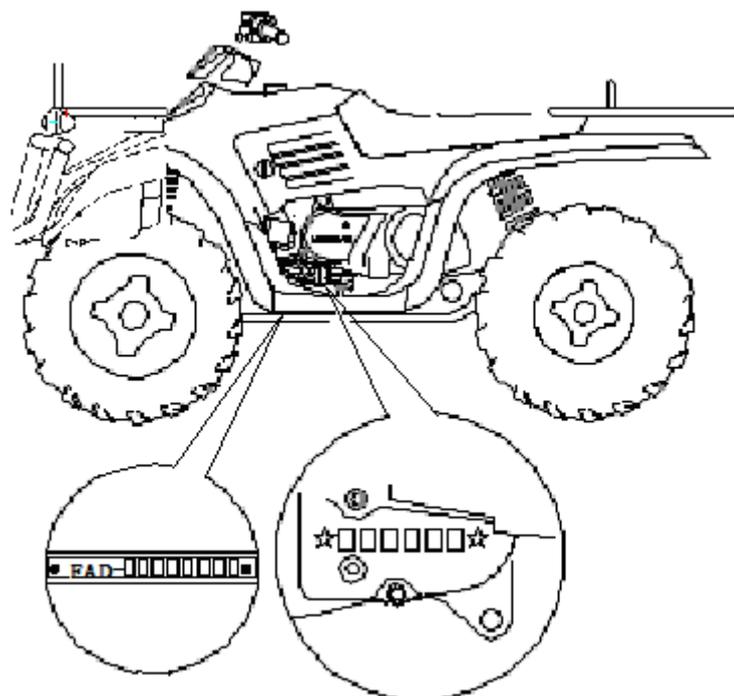


## **CAUTION**

Keep combustible materials away from exhaust system. Fire may result.

---

## 6. V.I.N



Record these numbers from your ATV in the spaces provided.

1. Frame VIN (found on the high tight side of the frame tube)
2. Engine Serial Number (Left front side of engine crankcase)

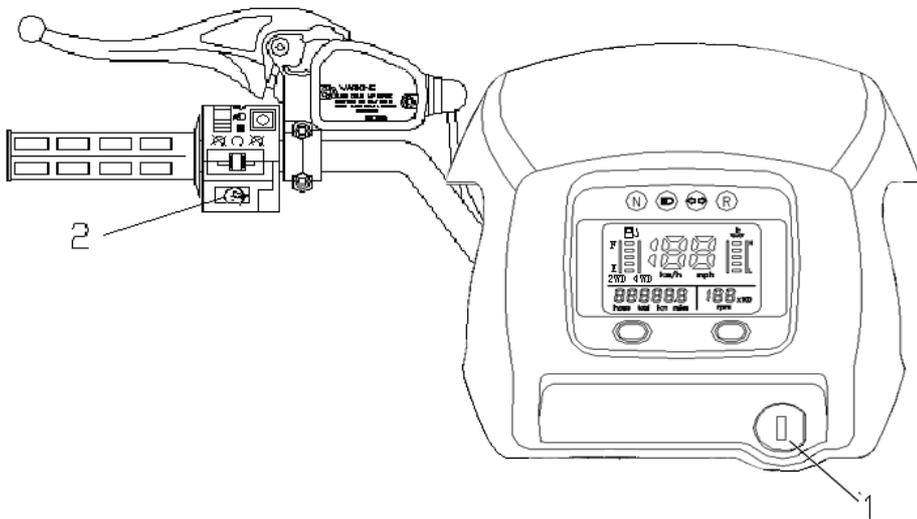
**Remove the spare key and store in a safe place.** Your key can be duplicated only by obtaining a key blank and having it cut by mating it with your existing key.

Record Key Number

The vehicle frame and engine serial numbers are important for model identification when registering your vehicle, obtaining insurance or whenever replacement parts are required. In the event your vehicle were stolen these numbers are essential to the recovery and identification of your ATV.

## 7. CONTROL AND PARTS FUNCTIONS

### Electrical Switches



**1. Main Switch-**This key switch must be turned clockwise to the “on” position to start the engine.

**2. Engine Start Button-**To start the engine.

## Light Switches and Indicator Lights



**WARNING**

This ATV is not equipped with highway approved lighting. This ATV is designed for

off-road use only and must not be ridden on streets or highways. Use caution and drive at reduced speeds in conditions of reduced visibility such as fog, rain and darkness.

---

## Switches

The light switch is located on the left hand handlebar. In addition to turning the lights on and off, it also switches the lights from to Lo on models equipped with Hi-Lo beams.

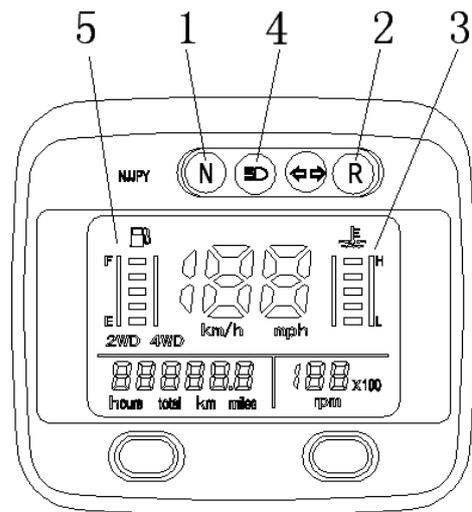
**NOTE:** Will not light unless the main switch is on.

## Indicator Lights

The ATV has indicator lights. The configuration of these lights differs with individual models and not every model is equipped with all the lights. The information will help you identify the lights on your machine and their function.

1. Transmission Neutral (Green)
2. Transmission Reverse (Red)
3. High Temp (Mark the Temp of engine whither overheats. At the same time, the buzzer sounds.)
4. High Beam Indicator (Blue) With engine running, verify function of indicator lights each time ATV is used.
5. Fuel Gauge-The segments of fuel gauge indicate the level of fuel. Refuel immediately if the last segment of the fuel gauge flashes.

**NOTE:** The taillight is on whenever the main switch (key) is the “on” position. Turn the key off to prevent battery drain.



## Throttle



## WARNING

Do not start or operate an ATV with sticking or improperly operating throttle controls.

A sticking or improperly operating throttle could cause an accident resulting in severe injury or death.

Always contact your dealer for service repairs whenever throttle problems arise.

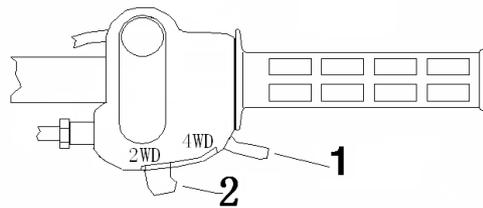
Failure to check or maintain proper operation of the throttle system can result in the throttle lever sticking during riding and cause an accident.

Always check the lever for free movement and return before starting the engine and occasionally during riding.

---

### **Throttle Lever**

Engine speed and vehicle movement are controlled by pressing the throttle lever. The throttle lever (1) is spring loaded and engine speed returns to idle when the lever is released.



### **WARNING**

**Washing or operating the scooter in freezing temperatures can result in water freezing in the throttle cable conduit and/or on the throttle mechanism.**

---

This may result in the throttle sticking which can cause the engine to continue to run and result in loss of control.

### **Front and Rear Brakes**

The brake fluid level should be checked before each ride. The reservoir is located under the seat. The fluid should be kept between the maximum and minimum marks.



## CAUTION

Once a bottle of brake fluid is opened, use what is necessary and discard the rest. Do not store or use a partial bottle of brake fluid. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the air. This causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the possibility of severe injury.

---

### **Front and Rear Brakes**

The front and rear brakes are located on the inside of the tight floor board and are operated by the right foot. The front and rear brakes are hydraulically activated disc type brakes which are activated by one pedal only.

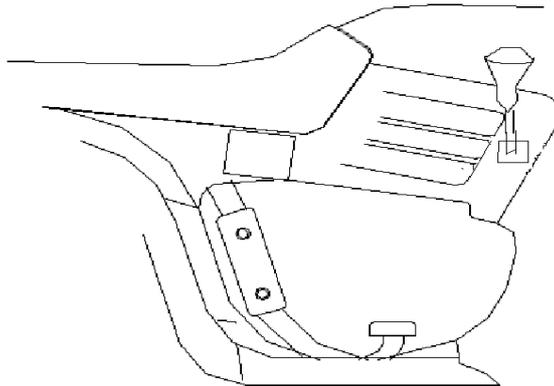
Always test brake pedal lever and reservoir fluid level before riding. When squeezed, the lever should feel firm. Any sponginess would indicate a possible fluid leak or low master cylinder fluid level, which must be corrected before riding. Contact your dealer for proper diagnosis and repairs.



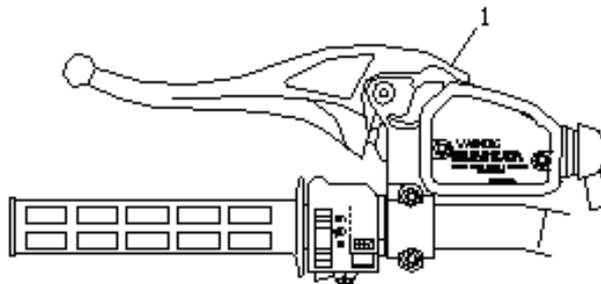
## WARNING

Never operate the ATV with a spongy-feeling brake lever. Operating the ATV with a spongy brake lever can result in loss of braking. Loss of braking could cause an accident.

---



### Setting the Parking Brake



1. Squeeze the left hand brake lever two or three times and hold it.
2. Push the park brake lock (1) into the notches on the master cylinder body. Release the brake lever.
3. To release the parking brake lock, squeeze the brake lever. It will return its released position.

## Important Safeguards

·The parking brake may relax when left on for a long period of time. This could cause an accident.

·**Do not leave the vehicle on a hill depending on the parking brake for more than five minutes.**

·Always block the downhill side of the wheels if leaving the ATV on a hill or park the ATV in a side hill position.



### WARNING

Always check to be sure that the parking brake has been disengaged before operating the ATV. An accident could result causing severe injury if the parking brake is left on while the ATV is operated.

---

## Auxiliary Brake

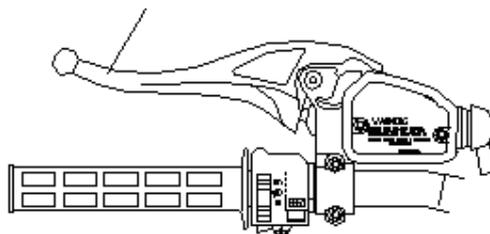


### WARNING

Use caution when applying the auxiliary brake. Do not aggressively apply the auxiliary brake when going forward, or the rear wheels may skid and slide sideways, causing loss of control.

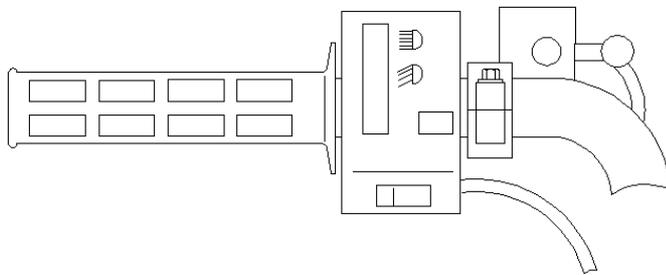
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Auxiliary brake lever



Your ATV has an auxiliary brake provided as a safety feature. It is located on the left handlebar and is operated by the left hand. It is intended as a backup to the main brake system, especially if the main system becomes inoperative. If the rear wheels slide, apply the rear brake with the left hand to some extent. Aggressively applying the rear brake when backing down a hill may cause rear wheels tip over.

### **Brake Fluid Level**



### **Window**

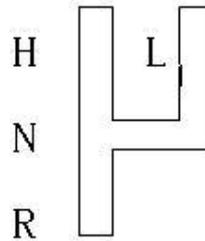
The brake fluid in the master cylinder, which is located on the left handlebar, should be checked before each ride. There is an indicator window (1) on the top of the master cylinder. This window will appear dark when the fluid level is full. When fluid needs to be added, the window will be clear.

**NOTE:** When checking the fluid level, the ATV must be on level ground and the handlebars must be straight. If the fluid level is low as DOT 3 only.

On some models, there is a “side window”, the fluid level can be seen through it, and should be maintained between the indicated “max” and “min” marks on the reservoir.

## Automatic Transmission Gear Selector Operation

The transmission gear selector is located on the right side of the vehicle. The transmission selector lever has four positions: high forward, reverse, neutral, and low forward.



**NOTE: To extend belt life, use low**

**forward gear in heavy pulling situations and in situations when you are operating below 7 mph (11 km/h) for extended periods of time.**



### CAUTION

To change gears, stop the vehicle, and with the engine idling, move the lever to the desired gear. Shifting gears with the engine speed above idle or while the vehicle is moving could cause transmission damage.

Always place the transmission in gear with the parking brake locked whenever the vehicle is left unattended.

Maintaining shift linkage adjustment is important to assure proper transmission function. Should you experience any shifting problem see your dealer.



### WARNING

#### POTENTIAL HAZARD

Engaging a lower gear when the engine speed is too high.

#### WHAT CAN HAPPEN

The wheels could stop rotating. This could cause loss of control, an accident and injury. It could also cause engine or drive train damage.

#### HOW TO AVOID THE HAZARD

Make certain the engine has sufficiently slowed before shifting to a lower gear.

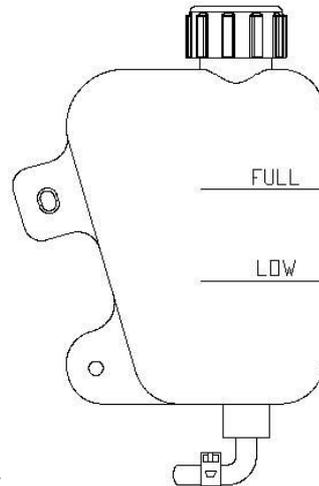
## Engine Cooling System

### Coolant Level

The recovery bottle, located under the seat, must be maintained between the minimum and levels indicated on the recovery bottle.

The engine coolant level is controlled or maintained by the recovery system. The recovery system components are the recovery bottle, radiator filler neck, radiator pressure cap and connecting hose.

As coolant operating temperature increases, the expanding (heated) excess coolant is forced out of the radiator, past the pressure cap, and into the recovery bottle. As engine coolant temperature decreases, the contracting (cooled) coolant is drawn back up from the tank, past the pressure cap, and into the radiator.



**NOTE:** Some coolant level drop on new machines is normal, as the system is purging itself of trapped air. Observe coolant levels and maintain as recommended by adding coolant to the recovery bottle. We recommend the use of a 50/50 mixture of high quality aluminum compatible anti-freeze coolant and distilled water.

**NOTE:** Always follow the manufacturer's mixing recommendations for the freeze protection required in your area.

## Cooling System



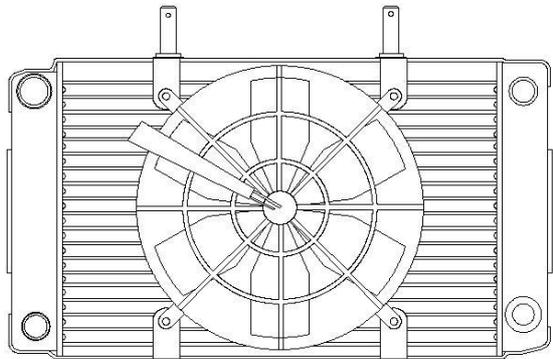
### WARNING

Never remove the pressure cap when the engine is warm or hot. Escaping steam can cause severe burns. The engine must be cool before removing the pressure cap.

---

### Radiator Coolant Level Inspection

**NOTE:** This procedure is only required if the cooling system has been drained for maintenance and/or repair. However, if the recovery bottle has run dry, the level in the radiator should be inspected and coolant added if necessary.



**NOTE:** Use of a non-standard pressure cap will not allow the recovery system to function properly. If the cap should need replacement, contact your dealer for the correct replacement part. To insure that the coolant maintains its ability to protect the engine, it is recommended that the system be completely drained every two years and a fresh mixture of antifreeze and water be added.

Using a funnel, slowly add coolant as necessary through the radiator filler neck.

## Fuel and Oil system



### WARNING

Gasoline is highly flammable and explosive under certain conditions.

- Always exercise extreme caution whenever handling gasoline.
  - Always refuel with the engine stopped, and outdoors or in a well ventilated area.
  - Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored.
  - Do not overfill the tank. Do not fill the tank neck.
  - If you get gasoline on your skin or clothing, immediately wash it off with soap and water and change clothing.
  - Never start the engine or let it run in an enclosed area. Gasoline powered engine exhaust fumes are poisonous and can cause loss of consciousness or death in a short time.
  - Shut off fuel valve whenever the ATV is stored or parked.
- 



### WARNING

The engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects or other reproductive harm.

## Fuel and Oil System

### Fuel System

The fuel tank filler cap (1) is located directly behind the handlebar.

Refer to your owner's manual for tank capacity.

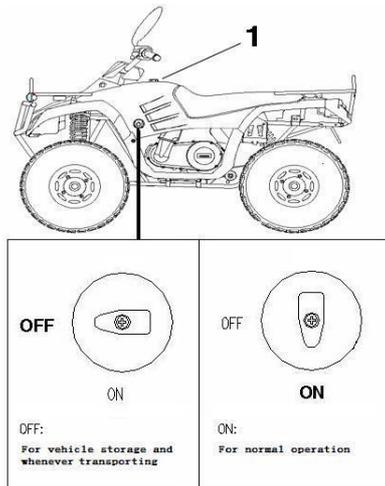
Use regular unleaded gasoline.

The fuel valve is located on the left side of the front fender and has two positions:

**OFF:** For vehicle storage and whenever transporting.

**ON:** For normal operation.

Always return valve to "on" position after refueling machine.



### Fuel filter

The filter should be replaced by your dealer every 100 hours of operation or annually.

Do not attempt to clean the fuel filter.

## Oil System

The oil tank is located on the right side of the engine.

To check the oil:

1. Set machine on a level surface.

2. Start the engine and let it idle

for 20-30 seconds.

3. Stop the engine, remove

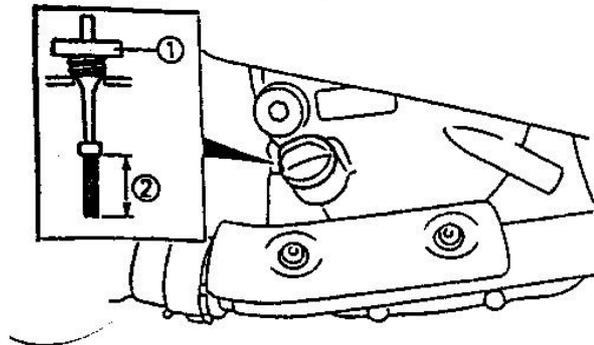
dipstick (1) and wipe dry with

a clean cloth.

4. Put dipstick into the oil tank (don't screw in it), remove it and read the oil level.

5. Remove dipstick and check to see that the oil level is between the full and add

marks (2). Add oil as indicated by the level on the dipstick. Do not overfill.



### CAUTION

Use only SAE 15W/40SG OIL. Never substitute or mix oil brands. Serious engine damage and voiding of warranty can result.

## 8. STARTING THE ENGINE

### Procedure for Starting a Cold Engine



#### **WARNING**

Never run an engine in an enclosed area. Carbon monoxide exhaust gas is poisonous and can cause severe injury or death. Always start engines outdoors.

---



#### **CAUTION**

You must allow your vehicle adequate warm up time before operating or engine damage could result.

---

1. Place the transmission in neutral and reset the parking brake.
  2. Turn the fuel tank valve to ON.
  3. Sit on the vehicle.
  4. Turn the engine stop switch to RUN.
  5. Turn the ignition key to on, apply the brake lever and press the starter button.
  6. Do not press the throttle more than 20% while starting the engine.
  7. Activate the starter for a maximum of five seconds, releasing the button when the vehicle starts. If engine does not start, release the starter for another five seconds. Repeat this procedure until the engine starts.
-



## CAUTION

This ATV only equipped with an electric start system. If the battery is under charging, the ATV will not run.

## 9. VEHICLE BREAK-IN PERIOD

The **break-in period** for your new ATV is defined as the first 50 hours of **operation**. No single action on your part is as important as a proper break-in period. Careful treatment of a new engine will result in more efficient performance and longer life for the engine. Perform the following procedures carefully.

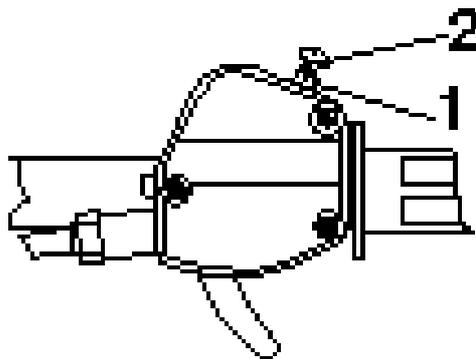


## CAUTION

Do not operate at full throttle or high speeds for extended periods during the break-in period. Excessive heat can build up and cause damage to close fitted engine parts.

**Please set a limit to half throttle during the break-in periods.**

1. Locknut 2. Adjuster



- 
1. Fill the fuel tank.
  2. Check the oil reservoir level indicated on the dipstick. Add oil if necessary.

3. Drive slowly at first. Select an area which is open and will give you room to familiarize yourself with vehicle operation and handling.
4. Vary the throttle positions. Do not operate at sustained idle.
5. Perform regular checks on fluid levels, controls and all important areas on the vehicle as outlined earlier on the daily pre-ride inspection checklist found in “4. Daily pre-ride inspection”.
6. Pull only light loads.

## **10. RIDING GEAR**

### **Safe Riding Gear**

Always wear clothing suited to the type of riding you are doing. ATV riding requires special protective clothing which will make you feel more comfortable and reduce chances of injury.

#### **1. Helmet**

Your helmet is the most important piece of protective gear for safe riding. A helmet can prevent a severe head injury.

#### **2. Eye Protection**

A pair of goggles or a helmet face shield offers the best protection for your eyes.

#### **3. Gloves (off-road style)**

#### **4. Boots**

A pair of strong over-the-calf boots with heels, such as moto-cross boots.

#### **5. Clothing**

To protect your body, long sleeves and pants should always be worn. Riding pants with kneepads and a jersey with shoulder pads provide the best protection.

## 11. CARRYING LOADS

Your ATV has been designed to carry a certain amount of load. CARGO WEIGHT should be evenly distributed (1/3 on the front and 2/3 on the rear) and mounted as low as possible. When operating over rough or hilly terrain, reduce speed and cargo weight to maintain stable driving conditions. Never exceed the weights specified in your Owner's Manual.

Maximum trailer weight--450 lbs. (200 kg) on level ground. Maximum vertical hitch weight--25 lbs. (11 kg).

Improper loading of the front rack can obstruct the headlight beam, reducing night visibility. Do not obstruct the headlight beam with cargo.

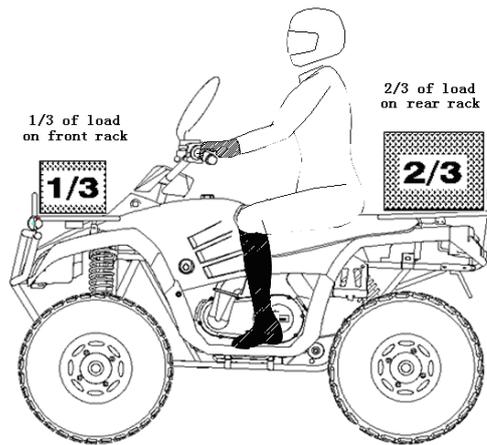
**Use of low forward gear is recommended in heavy pulling situations to extend belt life.**



### WARNING

Correct loading of this vehicle is necessary to maintain proper stability and operating characteristics. Overloading or incorrect positioning of the load affects the vehicle's turning, stopping distance and stability. Failure to follow loading requirements could cause severe injury or death.

---



## Important Safeguards

To reduce risk of injury or machine damage when carrying loads, read and follow the warnings listed below:

- REDUCE SPEED AND ALLOW GREATER DISTANCES FOR BRAKING WHEN CARRYING CARGO.
- CARGO WEIGHT DISTRIBUTION should be 1/3 on the front rack and 2/3 on the rear rack. When operating over rough or hilly terrain, reduce speed and cargo to maintain stable driving conditions. Carrying loads on one rack only increases the possibility of vehicle tipping over.
- HEAVY LOADS CAN CAUSE BRAKING AND CONTROL PROBLEMS. Use extreme caution when applying brakes with a loaded vehicle. Avoid terrain or situations which may require backing downhill.
- ALL LOADS MUST BE CARRIED AS LOW ON THE RACKS AS POSSIBLE. Carrying loads high on the racks raises the center of gravity of the vehicle and creates a less stable operating condition. When cargo loads are carried high on the racks, the weight of the loads must be reduced to maintain stable operating conditions.
- LOADS MUST BE CARRIED AS LOW ON THE RACKS AS POSSIBLE. Carrying loads high on the racks raises the center of gravity of the vehicle and creates a less stable operating condition. When cargo loads are carried high on the racks, the weight of the loads must be reduced to maintain stable operating conditions.
- OPERATE ONLY WITH STABLE AND SAFELY ARRANGED LOADS. Avoid handling off-centered loads which cannot be centered. Always attach the tow load to

the hitch point designated for your ATV.

·EXTREME CAUTION MUST BE USED. Avoid operating with loads extending over the rack sides. Stability and maneuverability may be adversely affected, causing the vehicle to overturn.

·DO NOT BLOCK THE HEADLIGHT/TAILLIGHT AND THE REFLECTORS when carrying loads on the racks.

·DO NOT TRAVEL FASTER THAN THE RECOMMENDED SPEEDS. Vehicle should never exceed 10 mph (16 km/h) while towing a load on a level grass surface. Vehicle speed should never exceed 5 mph (8 km/h) when towing loads in rough terrain, while cornering, or while ascending or descending a hill.

## 12. RIDING



### WARNING

You must inspect your ATV each time before riding to ensure it is in proper working order. If proper inspection is not done, severe injury or death could result.

See “4. DAILY PRE-RIDE INSPECTION”

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1. Sit upright with both feet on footrests and both hands on the handlebars.
2. After starting the engine and allowing it to warm up, shift the transmission into gear.
3. Check your surroundings and determine your path of travel.
4. Release the parking brake.
5. Slowly depress the throttle with your right thumb and begin driving. Vehicle speed is controlled by the amount of throttle opening.
6. Drive slowly, practice maneuvering and using the throttle and brakes on level surfaces.

## **Making turns**

### **Practice making turns at slow speeds**

This ATV is equipped with two drive shafts which drive both rear wheels equally at all times. This means that the wheel on the outside of the turn must travel a greater distance than the inside wheels when turning and the inside tire must slip traction slightly. To turn, steer in the direction of the turn, leaning your weight on the outer footrest. This technique alters the balance of traction between the rear wheels, allowing the turn to be made smoothly. The same leaning technique should be used for turning in reverse.



**WARNING**

Avoid turning at sharp angles in reverse as tip over and severe injury may result.

## **Riding on slippery surfaces**

**Whenever riding on slippery surfaces such as wet trails or loose gravel, or during cold freezing weather, special attention must be paid to prevent vehicle turnover.**

### **Always:**

1. Slow down when entering slippery areas.
2. Maintain a high level of alertness, reading the trail and avoiding quick, sharp turns, which can cause skids.
3. Correct a skid by turning the handlebars in the direction of the skid and shifting your body weight forward.
4. Never apply brakes during a skid. Complete loss of ATV control can result.
5. Do not operate on excessively slippery surfaces.
6. Always reduce speed and use additional caution.



**WARNING**

Failure to exercise care when operating the ATV on slippery surfaces can be dangerous.

Loss of tire traction and vehicle control can result in an accident, including an overturn.

## Traveling Uphill



### WARNING

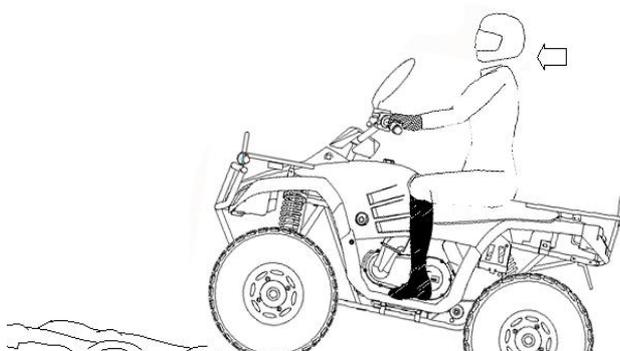
Exercise extreme caution when traveling in hilly terrain.

Braking and handling are greatly affected. Loss of vehicle control or overturning of the ATV could occur causing severe injury or death.

---

### **Whenever traveling uphill always travel straight uphill and:**

1. Avoid steep hills (15° maximum)
2. Keep both feet on the footrests.
3. Transfer your weight forward.
4. Proceed at a steady rate of speed and throttle opening.
5. Remain alert and be prepared to take emergency action. This may include quick dismounting of the ATV.



## **Side hilling**

Side hilling is one of the most dangerous types of riding your ATV and should be avoided. If you do enter into a situation where side hilling is necessary, always:

1. Slow down.
2. Lean into the hill, transferring your upper body weight toward the hill while keeping your feet on the footrests.
3. Steer slightly into the hill to maintain vehicle directions.

If the vehicle begins to tip, quickly turn the front wheel downhill, if possible, or dismount on the uphill side immediately!



### **WARNING**

Improperly crossing hills or turning on hills can be dangerous. Loss of vehicle control or overturning of the ATV could occur causing severe injury or death.

## Traveling Downhill

**Whenever descending a hill, always:**

1. Drive directly downhill.
2. Transfer your weight to the rear of the vehicle.
3. Slow down.
4. Apply the brakes slightly to aid in slowing.

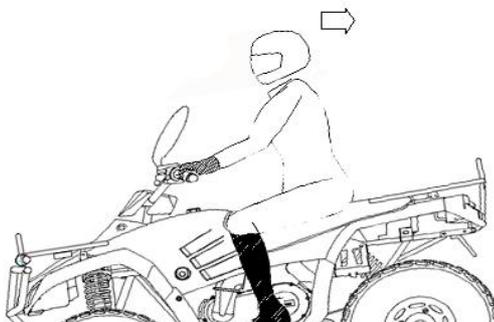
Familiarize yourself with the auxiliary rear brake pedal and its use in the event loss of normal service brakes occurs.



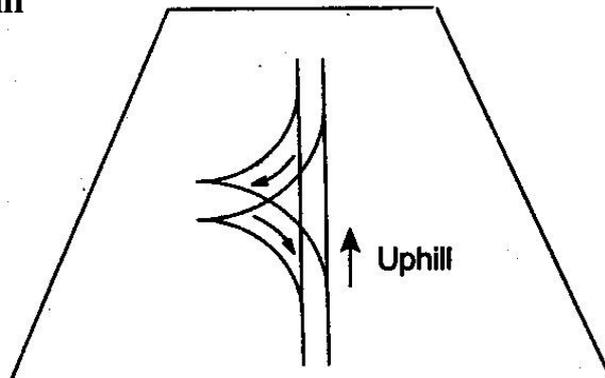
### **WARNING**

Do not travel at excessive speeds. It is dangerous and can cause loss of vehicle control and tipping, resulting in severe injury or death.

---



## Turning Around on a Hill



If the ATV stalls while climbing a hill, never back it down the hill! One maneuver which can be used when it is necessary to turn around while climbing a hill is the K-turn.

1. Stop and lock the parking brake while maintaining body weight uphill.
2. Leave transmission in forward and shut off the engine.
3. Dismount on the left or uphill side of the ATV.
4. Staying uphill of the ATV, turn handlebars full left (while facing front of ATV).
5. While holding the service brake, release parking brake lock and slowly allow the ATV to roll around to your right until the ATV is pointing across the hill or slightly downward.
6. Lock the parking brake and remount the ATV from the uphill side, maintaining body weight uphill.
7. Restart engine with transmission still in forward, release parking brake, and proceed slowly, controlling speed with the service brake, until the ATV is on

reasonably level ground.



## **WARNING**

Avoid climbing steep hills. Loss of vehicle control or overturning of the ATV could occur resulting in severe injury or death.

### **Crossing Streams**

**Your ATV can operate through water up to a maximum recommended depth**

**(8 in.). Before fording streams always:**

1. Determine water depths and current.
2. Choose a crossing where both banks have gradual inclines.
3. Proceed slowly, avoiding rocks and obstacles if possible.
4. After crossing, dry the brakes by applying light pressure to the lever until braking action is normal.



## **CAUTION**

**Never operating the ATV through deep or fast flowing water.**

---

**NOTE:** After running the vehicle in water, it is critical your machine is serviced as outlined in the maintenance chart see “**16. maintenance**”. The following areas need special attention: engine oil, transmission oil, front and rear gear cases, and all grease fittings.





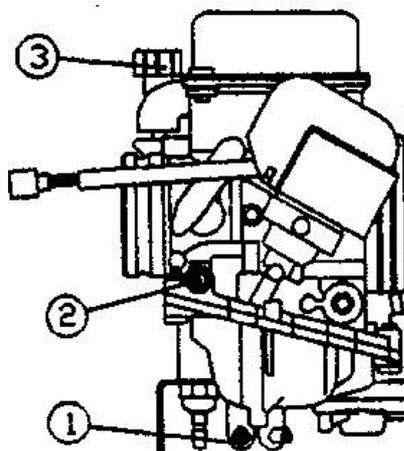
## CAUTION

**If your ATV becomes immersed, take it to your dealer before starting the engine. Major engine damage can result if the machining is not thoroughly inspected.**

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If it is impossible to take it to a dealer before starting, follow these steps outlined below.

- Move the ATV to dry land or at the very least, to water depth not more than 8 in. (200 mm).
- Turn the fuel valve to “OFF”.
- Remove the spark plug.
- Loosen the carburetor drain screw (1).
- Turn the engine over several times with the electric start.
- Dry the spark plug and reinstall or replace it with a new plug.
- Tighten the carburetor drain screw (1).
- Turn the fuel valve to “ON”.
- Attempt to start the engine. If



necessary, repeat the drying procedure.

·Take the machine to your dealer for service as soon as possible, whether you succeed in starting it or not.

If water has been ingested into the CAT system, take the ATV to your dealer for service as soon as possible.

## Trail Obstacles

### Keep Alert!

Look ahead and learn to read the trail as you ride. Stay on the right side of the trail, if possible, and be constantly alert for hazards such as logs, rocks and low hanging branches.



### WARNING

Not all obstacles are visible. Travel with caution on trails. Severe injury or death can occur when vehicle comes in contact with a hidden obstacle.

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## WARNING

### **Backing your ATV can be dangerous!**

You should hit an obstacle or a person behind you; or the vehicle could tip over rearward on a steep incline causing severe injury or death.

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### **Backing up**

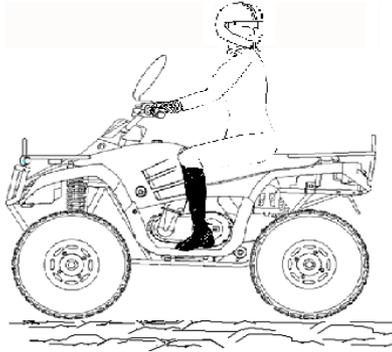
1. Avoid backing up on steep inclines.
2. Always back slowly.
3. When in reverse, apply the brakes lightly for stopping.
4. Avoid turning at sharp angles in reverse.
5. Never open the throttle suddenly while backing.

**NOTE:** This ATV is equipped with a reverse speed limiter. Do not operate at wide open throttle. Only open the throttle enough to maintain a desired speed.

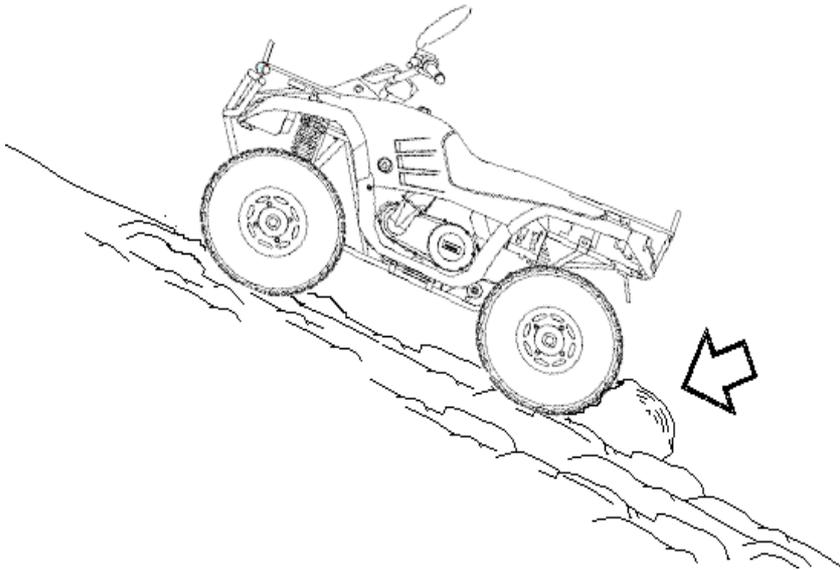


## CAUTION

Opening the throttle more than required may cause excessive fuel to build in the exhaust, resulting in engine popping and/or engine damage.



## **Parking on an incline**



### **Whenever the vehicle is parked**

1. Turn the engine off.
2. Place the transmission in gear.
3. Set the parking brake.
4. Shut off fuel supply.

5. Avoid parking on an incline. If it is necessary to park on an incline, always block the rear wheels on the downhill side as shown above.
6. Do not leave the ATV on a hill depending on the parking brake for more than five minutes.

## 13. CVT SYSTEM

### CVT System



#### **WARNING**

The CVT system rotates at high speeds, creating large amounts of force on clutch components. However, as the owner you have the following responsibilities to make sure this system remains safe:

- Do not modify any component of the CVT system. Doing so may reduce its strength so that a failure may occur at high speeds. Any modification will cause the system to be out of balance, creating vibration and additional loads on components.
- Routing maintenance is the responsibility of the owner. Always follow recommended maintenance procedures. See your dealer!
- The CVT housing must be securely in place during operation.

Failure to comply with this warning can result in severe injury or death.

---

### **Low Range Use May Reduce CVT**

#### **Operating Temperatures**

The basic operation of the CVT system is dependent on engine speed and vehicle torque requirements. As engine speed increased, the force exerted on the movable

drive sheave by the fly-weights also increases. This, in turn, increases the amount of “pinch” applied to the drive belt. Similarly, if the engine speed decreases, the amount of centrifugal force decreases, reducing the amount of belt “pinch”.

## CVT System

On this ATV, the approximate gear ratio difference between high and low range is 1:2.05. This difference in gearing affects the operation of the CVT, especially at speeds less than 7 MPH, due to the system’s dependence on engine speed.

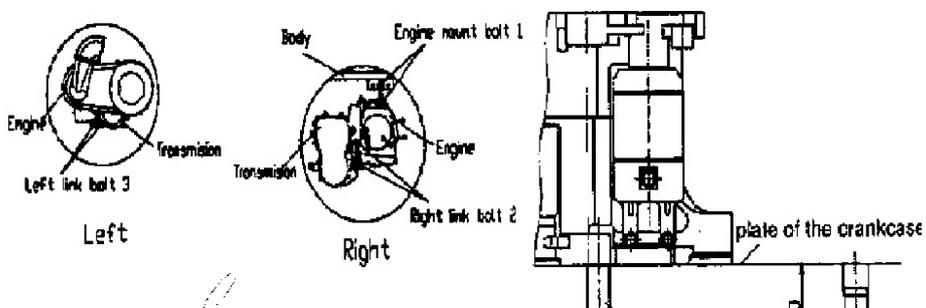
By switching to low range while operating at low ground speeds, the air temperature in the clutch will be reduced. Reducing the temperature inside the clutch cover extends the life of the CVT components (belt, cover, etc.)

### Adjust the center distance of the CVT:

1. Remove crankcase filter cover, cover protector and crankcase cover.
2. Loosen the left link bolts ③, right link bolts ② and engine mounting bolts ①.
3. Adjust the supporting bolt and measure the size L,D.
4. Tighten the engine mounting bolts ①, right link bolts ② and left link bolts ③.
5. Install crankcase filter cover, cover protector and crankcase cover.

### NOTE:

1. Never operate the engine when adjusting the CVT;
2. The adjustment of the CVT must be done by your dealer.



## **When To Use Low Range**

The following lists provide a guideline for when to use low range rather than high.

### **Low Range:**

- Basic operation at speeds less than 7 MPH (11 km/h)
- Heavy pulling
- Riding through rough terrain (swamps, mountains, etc.) at low ground speeds

### **High Range:**

- Basic operation at speeds greater than 7 MPH (11 km/h)
- High ground speeds

## 14. BATTERY

### Battery



#### WARNING

Whenever removing the battery, disconnect the negative (black) cable first. When reinstalling the battery, connect the negative (black) cable last or explosive situation could result causing serious injury or death.

---



#### WARNING

Battery electrolyte is poisonous. It contains sulfuric acid. Serious burns can result from contact with skin, eyes or clothing.

**Antidote:**

**External:** Flush with water.

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

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

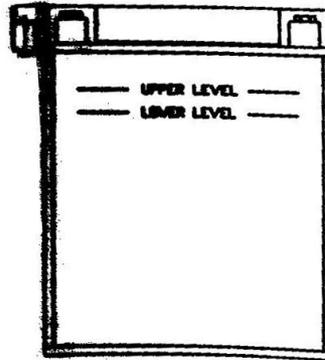
Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc. away. Ventilate when charging or using in an enclosed space. Always shield eyes when working near batteries. KEEP OUT OF REACH OF CHILDREN.

## Replenishing the Battery Fluid

A poorly maintained battery will deteriorate rapidly. Check the battery fluid level often. The fluid level should be kept between the upper and lower level marks.

To refill use only distilled water.

Tap water contains minerals which are harmful to a battery.



## Battery Removal

1. Disconnect the hold-down strap holding the electrical box and battery in position, and remove battery cover.
2. Remove the battery vent tube from the battery.
3. Disconnect the black (negative) battery cable first.
4. Disconnect the red (positive) battery cable next.
5. Lift the battery out of the ATV. Being careful not to tip it sideways, which could spill electrolyte.



### CAUTION

If electrolyte spills, immediately wash it off with a solution of one tablespoon baking soda and one cup water to prevent damage to the ATV.

---

## Battery Installation and Connections



## WARNING

To avoid the possibility of explosion, always connect battery cables in the order specified. Red (positive) cable first; black (negative) cable last. An exploding battery can cause serious injury or death.

---

Battery terminals and connections should be kept free of corrosion.

If cleaning is necessary, remove the corrosion with a stiff wire brush. Wash with a solution of one tablespoon baking soda and one cup water. Rinse well with tap water and dry off with clean rags. Coat the terminals with dielectric grease or petroleum jelly. Be careful not to allow cleaning solution or tap water into the battery.

1. Set the battery in its holder.
2. Install the battery vent tube. It must be free of obstructions and securely installed. If not, battery gases could accumulate and cause an explosion. The tube should be routed away from the frame and body to prevent corrosion. Avoid skin contact with electrolyte, severe burns could result.
3. First connect and tighten the red (positive) cable.
4. Second connect and tighten the black (negative) cable.
5. Reinstall the battery cover and attach the hold-down strap.
6. Verify that cables are properly routed.

### NOTE:

- When your ATV is placed in storage for one month or more, the battery should be removed, charged to proper level, and stored in a cool dry place.
- Before reusing, take the battery to your dealer for testing and recharging.
- When installing a new battery, make certain it is fully charged prior to its initial use.

Using a new battery that has not been fully charged can damage the battery resulting in a shorter life of the battery; it can also hinder vehicle performance.



## **CAUTION**

Your ATV is equipped with a 14Ah Battery. This may not be sufficient to provide power for optional equipment. When installing optional equipment please upgrade your battery as necessary. See your dealer for the proper battery.

## **15. EXHAUST SYSTEM**

### **SYSTEM REGULATION**

#### **TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED!**

**CAUTION:** Exhaust system components are very hot during and after use of ATV.

- Do not touch exhaust system components. Serious burns can result.
- Be especially careful when traveling through tall grass. The potential for fire exists.

#### **Spark Arrester**

The exhaust pipe must be periodically purged of accumulated carbon as follows:

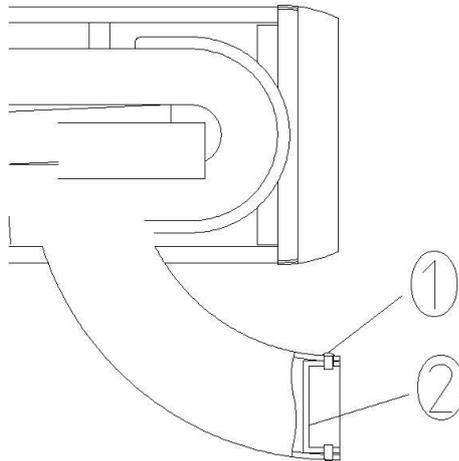
1. Remove the arrester screw ① located on the bottom of the muffler, pull out the arrester (the mesh) ②
2. Clean the arrester or replace it.



## **WARNING**

When cleaning the spark arrester, you must follow the safe guards listed below to avoid serious injury.

- Do not perform this operation immediately after the engine has been run because the exhaust system becomes very hot.
  - Keep combustible materials away from exhaust system. Fire may result.
- 



## 16. MAINTENANCE



### CAUTION

Due to the nature of the adjustments marked with a D on the following chart, it is recommended that service be performed by an authorized dealer.

---

- More often under severe use, such as dirty or wet conditions to purge water or dirt contamination from grease fittings and other critical components.

### Periodic Maintenance Schedule

Careful periodic maintenance will help keep your vehicle in the safest, most reliable condition. Inspection, adjustment and lubrication intervals of important components

are explained in the following chart on the following pages.

Maintenance intervals are based upon average riding conditions and an average vehicle speed of approximately 10 miles per hour. Vehicles subjected to severe use, such as operation in wet or dusty areas, should be inspected and serviced more frequently.

Inspect, clean, lubricate, adjust or replace parts as necessary.

**NOTE:** Inspection may reveal the need for replacement parts. Always use genuine parts available from your dealer.

Service and adjustment are critical. If you are not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

|   | <b>Item</b>                 | <b>Hours</b> | <b>When</b> | <b>Remarks</b>                          |
|---|-----------------------------|--------------|-------------|---|
|   | Brake System                | Pre-ride     | Pre-ride    | Pre-ride inspection item                |
|   | Auxiliary Brake             | Pre-ride     | Pre-ride    | Pre-ride inspection item                |
|   | Tires                       | Pre-ride     | Pre-ride    | Inspect daily, pre-ride inspection item |
|   | Wheels                      | Pre-ride     | Pre-ride    | Pre-ride inspection item                |
|   | Frame nuts, bolts fasteners | Pre-ride     | Pre-ride    | Pre-ride inspection item                |
| ● | Air Filter Pre-Cleaner      | Daily        | Daily       | Inspect-Clean                           |
|   | Coolant/Level Inspection    | Daily        | Daily       | Replace engine coolant every one year   |
| ● | Air Box Sediment Tube       | Daily        | Daily       | Drain deposits whenever visible         |
|   | Head Lamp Inspection        | Daily        | Daily       | Check operation daily; apply dielectric |

|   |  |         |          |  |
|---|--|---------|----------|--|
|   |  |         |          | grease to connector when replaced                                      |
|   | Tail Lamp Inspection                             | Daily   | Daily    | Check operation daily; apply dielectric grease to socket when replaced |
|   | ● Air Filter-Main Element                        | Weekly  | Weekly   | Inspect-Replace if necessary   |
|   | ● Transmission Oil Level                         | 20 hrs  | Monthly  | Inspect monthly; change annually                                       |
|   | Battery  | 20 hrs  | Monthly  | Check/Clean terminals; check fluid level                               |
| D | Brake Pad Wear                                   | 10 hrs  | Monthly  | Inspect periodically   |
|   | ● Front Gear Case Oil                            | 100 hrs | Monthly  | Check monthly and change annually                                      |
|   | ● Rear Gear Case Oil                             | 100 hrs | Monthly  | Check monthly and change annually                                      |
|   | Engine Cylinder Head and Cylinder Base Fasteners | 25 hrs  | 3 months | Inspect (re-torque required at first service only)                     |
|   | ● General Lubrication                            | 50 hrs  | 3 months | Lubricate all fittings, pivots, cables, etc.                           |

|   | Item                          | Hours   | When     | Remarks  |
|---|-------------------------------|---------|----------|--|
|   | ● Engine Oil-Level/<br>Change | 30 hrs  | 3 months | Check Level Daily; Break in Service at 1 month. Change oil more often in cold weather use. |
|   | ● Oil Filter                  | 50 hrs  | 6 months | Inspect-clean  |
|   | Engine Breather<br>Hose       | 100 hrs | 6 months | Inspect  |
|   | Carburetor Float<br>Bowl      | 50 hrs  | 6 months | Drain bowl periodically and prior to storage   |
| D | Throttle Cable                | 50 hrs  | 6 months | Inspect-adjust, lubricate, replace if  |

|   |                  |         |           |  |
|---|------------------|---------|-----------|--|
|   |                  |         |           | necessary; pre-ride inspection item  |
|   | Coolant Strength | 100 hrs | 6 months  | Inspect strength seasonally  |
|   | Shift Linkage    | 50 hrs  | 6 months  | Inspect, adjust  |
| D | Drive Belt       | 50 hrs  | 6 months  | Inspect, replace if necessary  |
| ● | Steering         | 50 hrs  | 6 months  | Inspect daily, lubricate   |
| ● | Rear Axle        | 50 hrs  | 6 months  | Inspect bearings, Lube   |
| ● | Front Suspension | 50 hrs  | 6 months  | Inspect-lubricate, tighten fasteners   |
| ● | Rear Suspension  | 50 hrs  | 6 months  | Inspect, tighten fasteners   |
|   | Spark Plug       | 100 hrs | 12 months | Inspect-replace if necessary   |
| D | Ignition Timing  | 100 hrs | 12 months | Inspect and adjust as needed   |
| D | Fuel System      | 100 hrs | 12 months | Check for leaks at tank cap, lines, fuel valve, filter, and carburetor. Replace lines every one year |
| D | Fuel Filter      | 100 hrs | 12 months | Replace annually   |

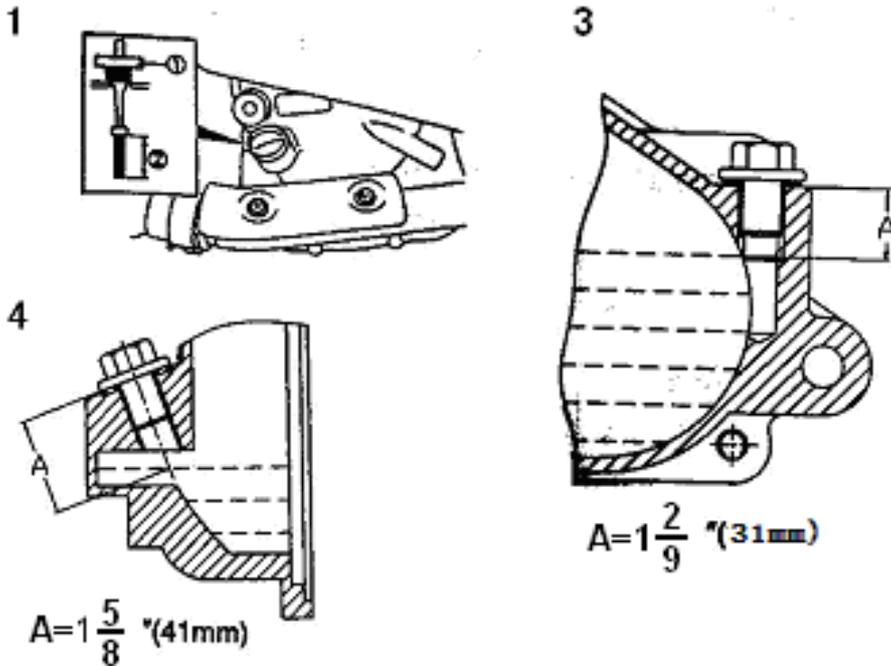
|   | <b>Item</b>                 | <b>Hours</b> | <b>When</b> | <b>Remarks</b>                 |
|---|-----------------------------|--------------|-------------|--------------------------------|
|   | Radiator                    | 100 hrs      | 12 months   | Inspect/clean external surface |
|   | Cooling System<br>Hoses     | 50 hrs       | 6 months    | Inspect/replace if necessary   |
|   | Spark Arrester              | 10 hrs       | monthly     | Clean out-replace if necessary |
| D | Clutches (drive and Driven) | 25 hrs       | 3 months    | Inspect, clean                 |
|   | Engine Mounts               | 25 hrs       | 3 months    | Inspect                        |
| D | Valve Clearance             | 100 hrs      | 12 months   | Inspect/adjust                 |
| D | Shift Selector Box          | 200 hrs      | 24 months   | Change grease every two years  |

|   |                |             |             |   |
|---|----------------|-------------|-------------|---|
|   | (H/L/R/N)      |             |             |   |
| D | Brake Fluid    | 200 hrs     | 24 months   | Change every two years                              |
|   | Idle Speed     | As Required | As Required | Adjust  |
| D | Toe Adjustment | As Required | As Required | Periodic inspection, adjust when parts are replaced |
|   | Headlight Aim  | As Required | As Required | Adjust if necessary                                 |

## Lubrication Recommendations

| Item                | Lube Rec         | Method   | Frequency  |
|---------------------|------------------|--|--|
| 1. Engine Oil       | SAE<br>15W/40SG  | Add to proper level on dipstick                        | Check level daily                                |
| 2. Brake Fluid      | DOT 3 Only       | Maintain level between fill lines.<br>See "7. CONTROL" | As required; change every two years or 200 hours |
| 3. Transmission Oil | SEA<br>80W/90GL5 | See<br>"16. MAINTENANCE/<br>Transmission Lube"         | Change annually or at 100 hours                  |

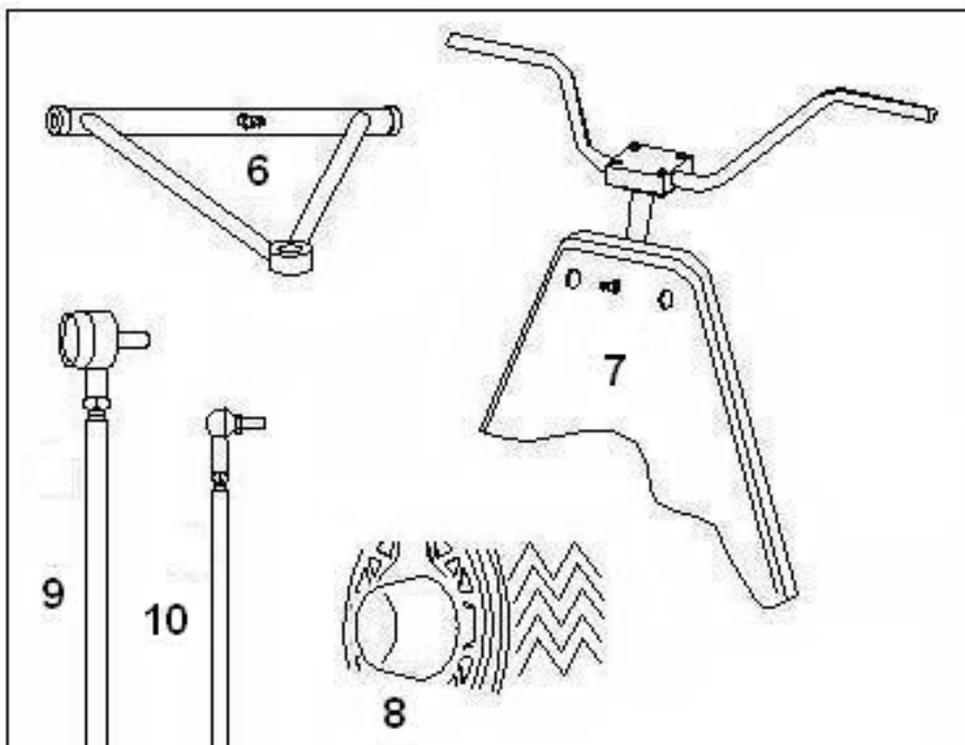
|                        |               |  |                                 |
|------------------------|---------------|--|---------------------------------|
| 4. Front Gear Case Oil | SAE 15W/40SG  | See "16. MAINTENANCE/ Front Gear Case Oil" | Change annually or at 100 hours |
| 5. Rear Gear Case Oil  | SEA 80W/90GL5 | See "16. MAINTENANCE/ Rear Gear Case Oil"  | Change annually or at 100 hours |



### Lubrication Recommendations

| Item                       | Lube Rec | Method   | Frequency                  |
|----------------------------|----------|--|----------------------------|
| 6. Front A-arm Pivot Shaft | Grease   | Locate fitting on pivot shaft and grease with grease gun | Every 3 months or 50 hours |
| 7. Steering Post Bushings  | Grease   | Locate fitting on pivot shaft and grease with grease gun | Every 3 months or 50 hours |
| 8. Front Wheel Bearings    | Grease   | Inspect and replace bearings if necessary                | Semi-annually              |
| 9. Tie Rods                | Grease   | Locate fittings and grease                               | Semi-annually              |

|                        |          |   |                            |
|------------------------|----------|---|----------------------------|
| 10. Shift Linkages     | Grease   | Locate fittings and grease                  | Semi-annually              |
| 11. Ball Joints        | Inspect  | Inspect and replace it if necessary         | Semi-annually              |
| 12. Front Axle Bearing | Grease   | Locate fittings and grease                  | Every 3 months or 50 hours |
| 13. Rear Axle Bearing  | Grease   | Locate fittings and grease                  | Monthly or 20 hours        |
| 14. Throttle Cable     | Grease M | Grease, inspect and replace it if necessary | Monthly or 20 hours        |



**NOTE:**

- 1. More often under severe use, such as wet or dusty conditions.
- 2. Grease: Light weight lithium-soap grease.
- 3. Grease M: molybdenum disulfide (MoS<sub>2</sub>) grease (water resistant).
- 4. \*When suspension action becomes stiff or after washing.
- 5. Hours are based on 10 mph (16 Km/h) average.

**Periodic Maintenance Record**

Use the following chart to record periodic maintenance work :

| <b>Maintenance Interval Performed</b> | <b>Servicing Date</b> | <b>Servicing Dealer or Person</b> | <b>Remark</b> |
|---------------------------------------|-----------------------|-----------------------------------|---------------|
| First 5 Hrs                           |                       |                                   |               |
| 10 Hrs                                |                       |                                   |               |
| 15 Hrs                                |                       |                                   |               |
| 20 Hrs                                |                       |                                   |               |

|         |  |  |  |
|---------|--|--|--|
| 25 Hrs  |  |  |  |
| 50 Hrs  |  |  |  |
| 75 Hrs  |  |  |  |
| 100 Hrs |  |  |  |
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 **WARNING**

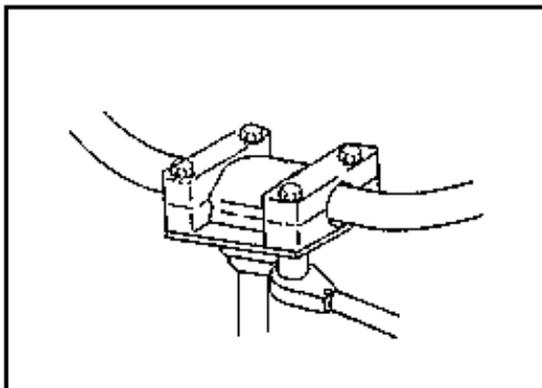
Improper adjustment of the handlebars or incorrect torquing of the adjuster block tightening bolts can cause limited steering or loosening of the handlebars, resulting in loss of control and possible serious personal injury or death.

---

## Handlebar Adjustment

Your ATV has handlebars which can be adjusted for your personal fit.

1. Remove the handlebar cover.
2. Loosen the four bolts.
3. Adjust handlebar to desired height. Be sure handlebars do not hit gas tank or any other part of machine when turned fully to left or right.
4. Torque handlebar adjuster block to 10-12 ft. lbs. (14-16 Nm).



**NOTE:** Tighten bolts so there is an equal gap at the front and rear of the handlebar block. Improper gap will result in improper fit of upper pod.

The following items should be checked occasionally for tightness; or if they have been loosened for maintenance service.

## Wheel Nut Torque Specifications

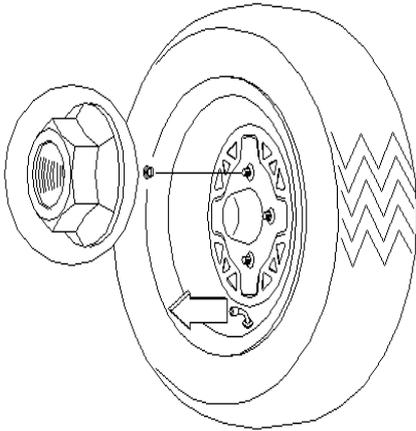
| Bolt Size | Specification |
|-----------|---------------|
|-----------|---------------|

|                |               |       |
|----------------|---------------|-------|
| Front M10x1.25 | 27.4 ft. lbs. | 37 Nm |
| Rear M10x1.25  | 27.4 ft. lbs. | 37 Nm |

**NOTE: All nuts that have a cotter pin installed must be serviced by an authorized Dealer.**

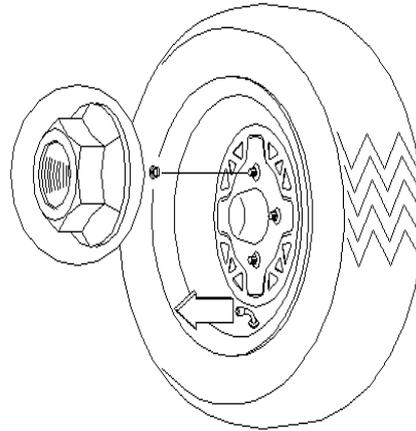
### Front Wheel Hub Tightening

Front wheel bearing tightness and spindle nut retention are critical component operations. Service work must be performed by an authorized dealer.



Front

Flange nuts: install with flat side against wheel

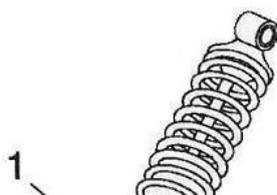


Rear

Flange nuts: install with flat side against wheel

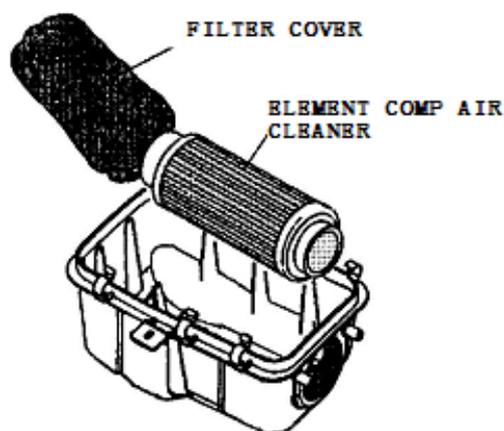
### Rear Spring Adjustment

The rear shock absorber spring is adjusted by rotating the adjuster (1) either clockwise or counterclockwise to increase or decrease spring tension.



## Air Filter Service

1. Remove seat.
2. Release clips and remove cover.
3. Loosen clamp and remove filter.
4. Remove fabric type pre-filter from main filter. Wash pre-filter in soapy water and dry it.
5. Reinstall pre-filter over main filter. Replace main filter as required.
6. Reinstall filter into air box and tighten clamp. Do not over tighten clamp or filter damage may occur.



## Steering Inspection

The steering assembly of the machine should be checked periodically for loose nuts and bolts. If loose nuts and bolts are found, have your dealer tighten them before riding your vehicle.

## Camber and Caster

The camber and caster are non-adjustable.



### WARNING

Do not attempt to adjust the tie rod for toe alignment. Severe injury or death can result from improper adjustment.

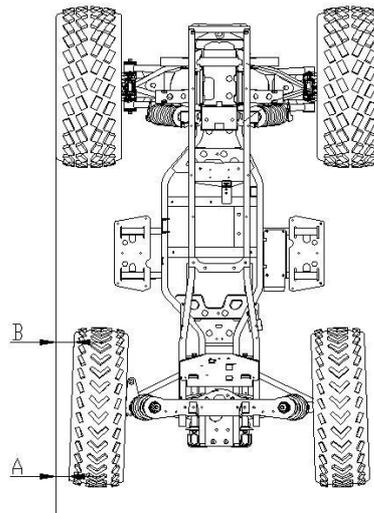
Contact your dealer. He/She has the training and tools to make these adjustments.

---

## Toe Alignment Check

The recommended toe alignment is  $1/8''$  to  $1/4''$  (3 to 6 mm) toe out.

1. Set the handlebars in a straight-ahead position and hold them in this position.
2. Measure A and B, A minus B should be  $1/16''$  to  $1/8''$  (1.5 to 3 mm).
3. If this measurement needs to be adjusted, contact your dealer for service.



## Front Brake



### WARNING

Once a bottle of brake fluid is opened, use what is necessary and discard the rest. Do not store or use a partial bottle fluid. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the

air. This causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the possibility of serious injury.

---

The front brake is hydraulic disc brakes which are depressing the foot pedal on the right floorboard. These brakes are self-adjusting and require no adjustment.

The following checks are recommended to keep the brake system in good operating condition. How often they need checking depends upon the type of driving that has been done.

- Keep fluid level in the master cylinder reservoirs as described see “7. Control and parts functions”. Normal functioning of the diaphragm is to extend into the reservoir as fluid level drops. If the fluid level is low and the diaphragm is not extended, a leak is indicated and the diaphragm should be replaced. Always fill the reservoir as indicated whenever the cover is loosened or removed to insure proper diaphragm operation. Use DOT 3 brake fluid.

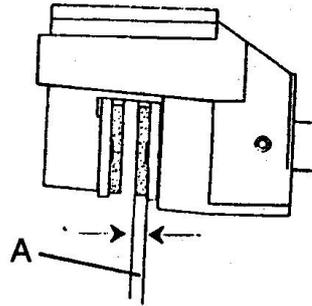
- Check brake system for fluid leaks.

- Check brake for excessive travel or spongy feel.

- Check friction pads for wear, damage and loosened.

- Check security and surface condition of the disc.

- Pads should be changed when friction material is worn to 3/64” (1 mm)(A).



## Rear and Auxiliary Brake

### Rear Brake

The rear brake is a hydraulic disc type brake which is activated by the same pedal which activates

the front brake system is self adjusting and requires no maintenance other than periodic checks of the pads for wear.

·Pads should be changed when the friction material is worn to 3/64” (1 mm).

·Inspect the brake disc spine and pad wear surface for excessive wear.

### **Auxiliary Brake Systems**

Your ATV's auxiliary brake system is intended to be used as a backup for the main brake system. Should the main system fail, the rear brake can be activated by the brake lever being moving toward the handlebar. The hydraulic brake system will not require adjustment.

**NOTE:** Since this is a rear brake only, it will not be as effective as the all wheel system.

### **Carburetor/Engine Idle RPM Adjustment**

If the engine idle speed is not satisfactory, and all other conditions are favorable, the carburetor can be adjusted as follows:

1. Warm up the engine by running the vehicle approximately five minutes.
2. Place the transmission in gear with the parking brake applied.
3. Adjust the carburetor idle screw in or out until the desired idle RPM is reached. Turning the screw in (clockwise) will raise RPM. Turning the screw out (counterclockwise) will lower RPM.
4. The standard idle RPM is  $1500 \pm 10\%$ .

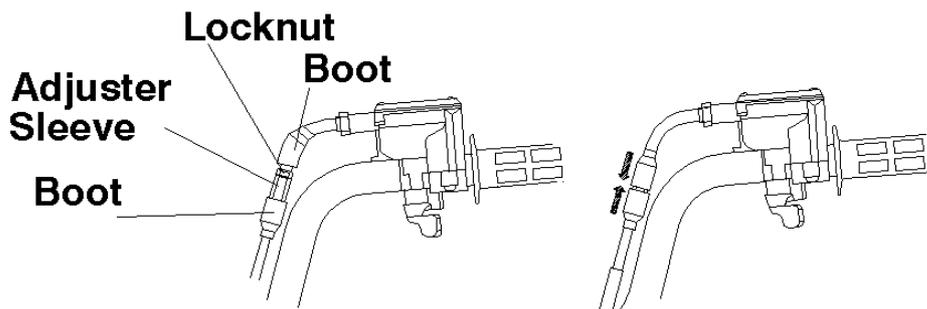
## Throttle Cable Free Play Adjustment

Throttle cable free play is adjusted at the handlebar.

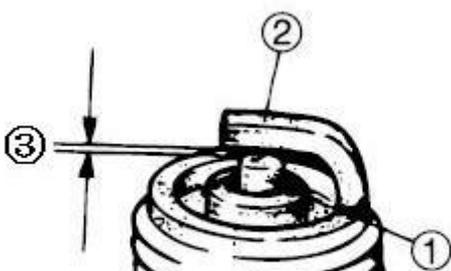
1. Slide the boots off the inline cable adjuster sleeve, loosen adjuster locknut.
2. Turn adjuster until  $1/16''$  to  $1/8''$  (2 to 3 mm) free play is achieved at the thumb lever.

**NOTE:** While adjusting free play, it is important you flip the throttle lever back and forth.

3. Tighten the locknut and slide the boots over the cable adjuster.



## Spark Plugs



Inspect:

·Insulator ①

Abnormal color: Replace.  
Normal color is a medium-  
to-light tan color.

·Electrode ②

Wear/damage: Replace.

Clean:

Standard spark plug

·Spark plug

DR8EA (NGK)

(with spark plug cleaner or wire brush)

Measure:

·Spark plug gap ③

Out of specification: Adjust gap.

## Spark Plug Removal and Replacement



### WARNING

Never attempt to remove a spark plug while the engine is warm. The exhaust system or engine could burn you causing severe injury.

---

Remove the spark plug by rotating counterclockwise.

Reverse the procedure for spark plug installation. Torque to 17 ft. lbs. (23 Nm)

## Oil and Filter Change

The recommended oil change interval is 30 hours, or every 3 months, whichever comes first. Suggested break in oil change is at 20 hours, or one month, whichever comes first. Severe use operation requires more frequent service. Severe use includes continuous duty in dusty or wet conditions, and cold weather riding.

**NOTE:** Severe use cold weather riding is all riding below 10°F (-12°C), AND RIDING BETWEEN 10°F (-12°C) AND 30°F (0°C) when most trips are slow speed and less than 5 mph (8 km/h). Be sure to change the oil filter whenever changing oil.



### CAUTION

Oil may be hot. Do not allow hot oil to come into contact with skin as severe burns may result.

---

1. Place vehicle on a level surface;
2. Run engine two or three minutes until warm, stop engine;
3. Clean area around drain plug;
4. Place a drain pan beneath engine crankcase and remove drain plug;
5. Allow oil to drain completely;
6. Replace sealing washer O-ring of drain plug;
7. Reinstall drain plug and torque to 14 ft. lbs. (19 Nm).

## Front Gear Case Oil

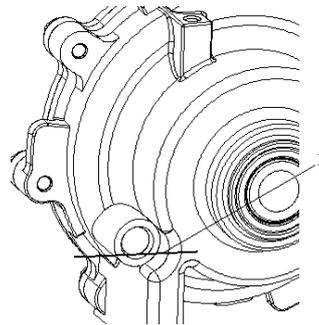
Always check and change the front gear case oil at the intervals outlined in “16. Maintenance”. Maintain the oil level even with the bottom of the fill hole threads (1). The correct gear case lubricant to use is SAE 15W/40SG. Use of other oils may result in improper operation of components.

### Oil Check

1. Position the vehicle on a level surface.
2. Remove the fill plug (2) and view the oil level.

1. Add the recommended gear case oil as needed to bring the level to the bottom of the fill hole threads.

4. Reinstall the fill plug. Torque to 14 ft. lbs. (19 Nm).



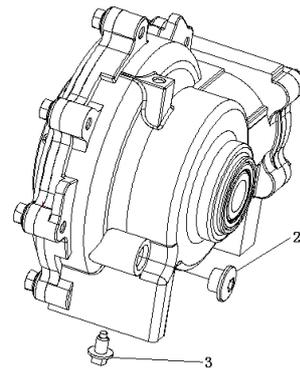
### Oil Change

1. Position the vehicle on a level surface and remove the fill plug.
2. Place a drain pan beneath the gear case, remove the gear case drain plug (3) located on the bottom right-hand side, and drain the oil.
3. Clean and reinstall the drain plug. Torque to 14 ft. lbs. (19 Nm).

4. Add 6 ounces (200 ml) of SAE 15W/40SG.

5. Reinstall the fill plug. Torque to 14 ft. lbs. (19 Nm).

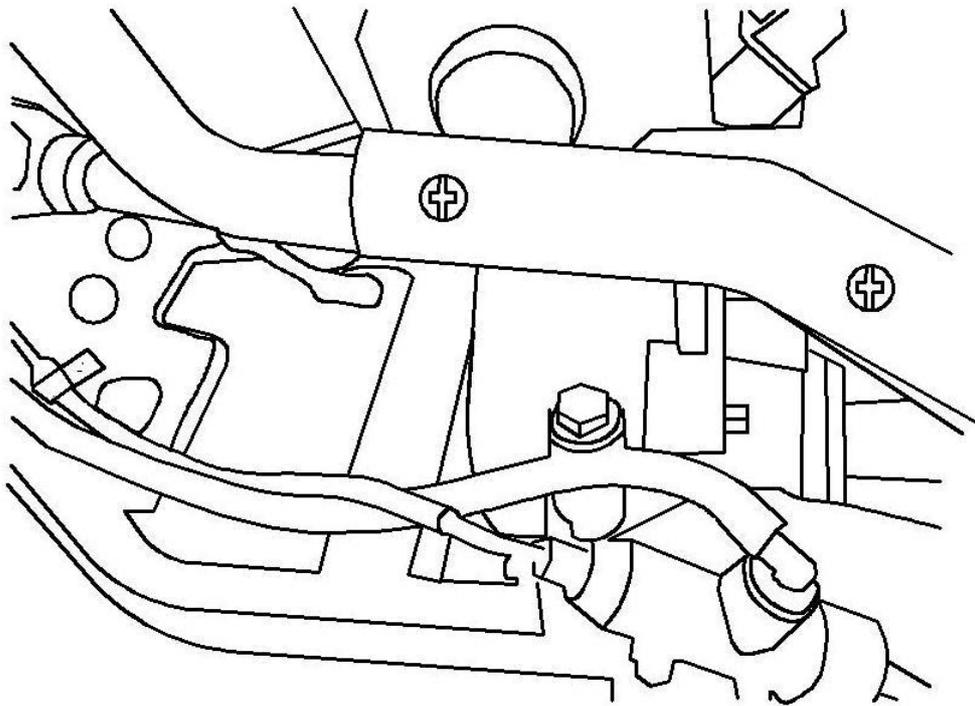
6. Check for leaks.



## Transmission Lubrication

The transmission fill plug is located on the right side of the machine.

The transmission lubricant level should be checked monthly or 20 hours, whichever comes first. Transmission oil should be changed annually. With the ATV on a level surface, remove fill plug (1) and check the lubricant level. The correct transmission lubricant to use is SEA 80W/90GL5 Lubricant. And see “16.Maintenance” for the correct fluid level.

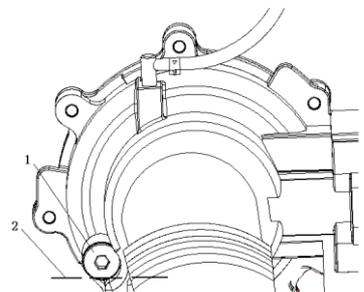


## **Transmission Oil Changing Procedure**

1. Remove the four screws on the footwall and gently pull outward for access.
2. Remove fill plug.
3. Remove transmission drain plug located on the bottom left hand side and drain the oil. Catch and discard used oil properly.
4. Clean and reinstall the drain plug torque to 14 ft. lbs. (19 Nm).
5. Add the correct amount of SEA 80W/90GL5 Lubricant until oil reaches the bottom of the filler hole.
6. Check for leaks.
7. Reinstall footwall and screws removed in step 1.

## Rear Gear Case Oil

The rear gear case has two fill plugs. The rear fill plug is located on the rear of the gear case and is not easily accessible. The side fill plug (1) is located on the left side of the gear case. Use the side fill plug when checking or changing oil. Always check and change the rear gear case oil at the intervals outlined in “16. Maintenance”. Maintain the oil level (2) even with the bottom of the side fill hole. The correct gear case lubricant to use is SEA 80W/90GL5 Weight Gear Lube.



### Oil Check

1. Position the vehicle on a level surface.
2. Remove the side fill plug and view the oil level through the fill plug hole.
3. Add the recommended gear case oil as needed.
4. Reinstall the fill plug. Torque to 14 ft. lbs. (19 Nm).

### Oil Change

1. Place a drain pan beneath the drain and remove the drain plug. Catch and discard used oil properly.

2. Clean and reinstall the drain plug with a new sealing washer. Torque to 14 ft. lbs (19 Nm).
3. Remove the side fill plug and add 10 ounces (300 ml) of SEA 80W/90GL5 Weight Gear Lube.
4. Check the oil level. Maintain the oil level at the bottom of the fill plug hole.
5. Reinstall the fill plug. Torque to 14 ft. lbs. (19 Nm).
6. Check for leaks.



## WARNING

Operating your ATV with worn tires, improperly inflated tires, non-standard tires or improperly installed tire will affect vehicle handling which could cause an accident resulting in serious injury or death.

Follow the safeguards listed below to prevent this type of situation.

---

### Important Safeguards

Maintain proper tire pressure according to charts below. Improper tire inflation may affect ATV maneuverability.

Do not use improper tires. The use of non-standard size or type tires may affect ATV handling.

Make certain the wheels are installed properly. If wheels are improperly installed it could affect vehicle handling and tire wear.

### Wheel Removal Procedure

1. Stop the engine, place the transmission in gear and lock the parking brake.
2. Loosen the wheel nuts slightly.
3. Elevate the side of the vehicle by placing a suitable stand under the footrest frame.
4. Remove the wheel nuts and remove the wheel.

| Tire Pressure  |                |
|----------------|----------------|
| front          | rear           |
| 40 kPa/5.8 PSI | 40 kPa/5.8 PSI |

## Wheel Installation

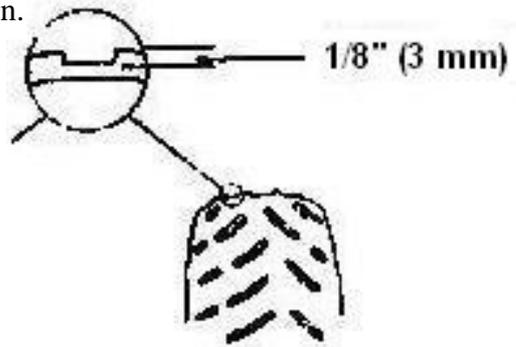
1. With the transmission in gear and the parking brake locked, place the wheel in the correct position on the wheel hub. Be sure the valve stem is toward the outside and rotation arrows on the tire point toward rotation.

2. Attach the wheel nuts and finger tighten them.

3. Lower the vehicle to the ground.

4. Securely tighten the wheel nuts according to the chart found in

“16. MAINTENANCE/Wheel Nut Torque”.



## Tire Inspection

When replacing a tire always use original equipment size and type.

## Tire Tread Depth

Always replace tires when tread depth is worn to 1/8” (3 mm) (1) or less. Please refer to your Owner’s Manual for tire specifications.

## Headlight Lamp Replacement



### WARNING

Keep your headlights and taillights clean. Poor light while riding can result in an accident causing severe injury or death.

---



### CAUTION

Do not service while headlight is hot. Serious burns may result.

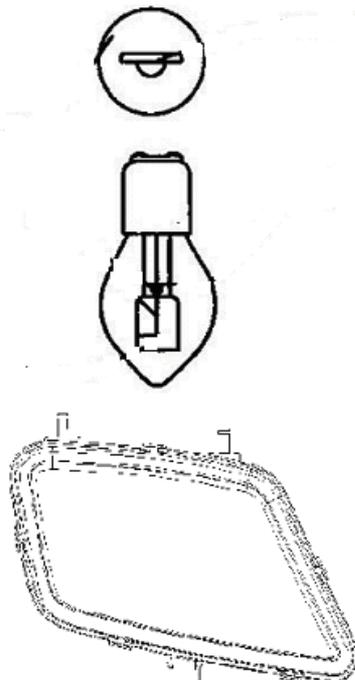
Do not touch a halogen lamp with bare fingers. Oil from your skin leaves a residue, causing a hot spot which will shorten the life of the lamp.

---

### Lamp Replacement

Headlight Lamp Replacement

1. Use bulb 12V 35W.
2. Turn the M4x30 bolt and remove it.
3. Dismantle the hoop.
4. Remove the lens together with the reflecting mirror.
5. Change the bulb.

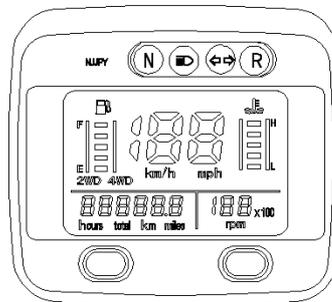


6. Fix the replacing bulb  
12V 35W into the iron light  
basis of the reflecting mirror,  
and make sure the bulb's points  
fit the light basis's inside roles.
7. Place the whole reflecting mirror  
and the lens.
8. Place the hoop and the M4x30 bolt.

## Taillight/Brakelight Lamp Replacement

If the taillight/brake light does not work, the lamp may need to be replaced.

1. Remove the lens.
2. Remove lamp and replace it with  
recommended lamp.
3. Test the taillight/brake light to see  
that it's working.
4. Reinstall the lens.



## Indicator Lamp Replacement

1. Remove mounting panel.
2. Unplug light from harness, depress  
locking tabs and remove from pod.
3. Install new light and reassemble panel.

## High Beam Headlight Adjustment

The headlight beam can be adjusted up and down.

1. Place the vehicle on a level surface with the headlight approximately 25 ft. (7.6 m)  
from a wall.
2. Measure the distance from the floor to the center of the headlight and make a mark

on the wall at the same height.

3. Start the engine and turn the headlight switch to high beam.

4. Observe headlight aim. The most intense part of the headlight beam should be aimed 2 inches (51 mm) below the mark placed on the wall in step 2.

**NOTE:** Rider weight must be included on the seat.

5. Loosen pivot bolt and adjust beam to desired position.

6. Tighten nut and bolt.

## **Cleaning Your ATV**

Keeping your ATV clean will extend the life of various components.

### **Washing**

Never use a high pressure type car wash system, it can damage the wheel bearings, transmission seals, body panels, brakes and warning labels, and water might enter the engine or exhaust system.

The best and safest way to clean your ATV is with a garden hose and a pail of mild soap and water. Use a professional type washing mitten, cleaning the upper body first and lower parts last. Rinse with water frequently and dry with a chamois to prevent water spots.

**NOTE:** If warning labels are damaged, contact your dealer for replacement.

### **Waxing**

Your ATV can be waxed with any non-abrasive automotive paste wax. Avoid the use of harsh cleaners since they can scratch the body finish.



**CAUTION**

Certain products, including insect repellants and chemicals, will damage plastic surfaces. Care must be taken when using these products.

## Storage Tips



### CAUTION

Do not start the engine during the storage period. This will disturb the protective film created by fogging.

**Cleaning**—Clean the ATV thoroughly.

**Fuel**—Turn the fuel valve to “OFF” and drain the carburetor bowl completely.

**Oil Add and Filter Change**—Warm the engine and change oil and filter.

**Air Filter/Air Box**—Inspect and clean or replace the pre-cleaner and air filter. Clean the air box and drain the sediment tube.

**Inspect All Fluid Levels**—Inspect the following fluid levels and change if necessary: transmission, brake fluid (change every two years or as required if fluid looks dark or contaminated).

**Fog the Engine**—Spray light oil into the cylinder through the spark plug hole.

**Check and Lubricate Cables/Grease**—Inspect all cables and lubricate.

**Battery Maintenance**—Remove the battery and add distilled water as required to the proper level. Do not use tap water which may contain minerals that reduce battery life. Apply dielectric Grease to the terminal bolts and terminals. Charge the battery.

**Storage Area/Covers**—Set tire pressure and safely support the ATV with the tires 1-2” (25-50 mm) off the ground. Be sure the storage area is well ventilated. Cover the machine with an ATV cover.

**NOTE:** Do not use plastic or coated materials. They do not allow enough ventilation to prevent condensation, and may promote corrosion and oxidation.

## Transporting

Whenever the ATV is to be transported, the following measures should be taken.

1. Turn off the engine and remove the key.
2. Turn the fuel valve to off.
3. Be certain the fuel cap, oil cap, and seat are installed correctly.
4. Always tie the frame of the ATV to the transporting until securely using suitable straps or rope.
5. Always place the transmission in gear and lock the parking brake.

## 17. TROUBLE SHOOTING

### Issues of Improper Operation Belt Burning

| Possible Causes  | Solutions   |
|--|---|
| Loading the ATV into a pickup or tall trailer when in high range.            | Shift transmission to low range during loading of the ATV to prevent belt burning.  |
| Starting out going up a steep incline.                                       | When starting out on an incline, use low range, or dismount the ATV after first applying the park brake and perform the “K” turn as described in this manual.                                       |
| Driving at low RPM or low ground speed (at approximately 3-7 MPH/5-12 km/h ) | Drive at higher speed or use low range. The use of low range is highly recommended for cooler CVT operating temperatures and longer component life.   |
| Insufficient warm-up of ATV’s exposed to low ambient temperatures.           | Warm engine at least 5 min., with the transmission in neutral, advance throttle to approx. 1/8 throttle in short bursts, 5 to 7 times. The belt will become more flexible and prevent belt burning. |
| Slow and easy clutch engagement.   | Fast, effective use of the throttle for efficient engagement.   |

|  |   |
|--|---|
| Towing/Pushing at low RPM /low ground speed.       | Use low range only.   |
| Stuck in mud or snow.                              | Shift the transmission to low range carefully use fast, aggressive throttle application to engage clutch.<br><b>WARNING:</b> Excessive throttle may cause loss of control and vehicle overturn. |
| Climbing over large objects from stopped position. | Shift the transmission to low range carefully use fast, aggressive throttle application to engage clutch.<br><b>WARNING:</b> Excessive throttle may cause loss of control and vehicle overturn. |

## Battery Wane

| Possible Causes                                     | Solutions  |
|---|--|
| Starting a faulty engine for a long time.           | See “8. STARTING THE ENGINE” and check the fuel/air/ignition/compression system. |
| Let the main switch (key) on while parking the ATV. | When stopping the engine, turn off the main switch (key) off at once.            |



### **WARNING**

This ATV only equipped with an electric start system. If the battery is under charging, the ATV will not run.

---

### **NOTE:**

The following troubleshooting does not cover all the possible causes of trouble. It should be helpful, however, as a guide to troubleshooting. Refer to the relative procedure in this manual for inspection, adjustment and replacement of parts. Adjustment and replacement must be done by your dealer.

# **STARTING FAILURE/HARD STARTING**

## **FUEL SYSTEM**

### **Fuel tank**

- Empty
- Clogged fuel tank breather hole
- Deteriorated fuel or fuel containing water or foreign material

### **Carburetor**

- Deteriorated fuel or fuel containing water or foreign material
- Clogged pilot jet
- Clogged air passage
- Improperly set pilot air screw
- Clogged pilot air passage
- Improperly sealed valve seat
- Improperly adjusted fuel level
- Clogged starter jet
- Sucked-in air

## **COMPRESSION SYSTEM**

### **Cylinder and cylinder head**

- Loose spark plug
- Loose cylinder head
- Broken cylinder head gasket
- Broken cylinder gasket
- Worn, damaged or seized cylinder

### **Piston and cylinder head**

- Worn piston
- Worn, fatigued or broken piston ring
- Seized piston ring
- Seized or damaged piston

## **IGNITION SYSTEM**

### **Battery**

- Improperly charged battery
- Faulty battery

### **Fuse**

- Burnt out, improper connection

### **Spark plug**

- Improper plug gap
- Worn electrodes
- Wire between terminals broken

### **Auto choke**

- Starter plunger malfunction
- Wax malfunction

### **Air cleaner**

- Clogged air cleaner element
- Improper air cleaner setting

### **Valve system**

- Improperly adjusted valve clearance
- Improperly sealed valve
- Improperly contacted valve and valve seat
  - Improper valve timing
- Broken valve spring
- Seized valve

### **Ignition system**

- Faulty igniter unit
- Faulty pick up coil
  - Broken magneto woodruff key

### **Switch**

- Faulty main switch
- Faulty "ENGINE STOP" switch

- Improper heat range
- Faulty spark plug cap

### **Ignition coil**

- Broken or shorted primary/secondary coil
- Faulty high tension cord
- Broken ignition coil body

- Faulty brake switch

### **Wiring**

- Loose battery terminal
- Loose coupler connection
- Improperly grounded
- Broken wire harness

## **POOR IDLE SPEED PERFORMANCE**

### **Carburetor**

- Loose or clogged pilot jet
- Damaged carburetor joint
- Improperly tightened carburetor
- Joint clamp hose
- Improperly adjusted idle speed (Pilot screw), (Throttle stop screw)
- Improperly adjusted throttle cable
- Flooded carburetor

### **Auto choke**

- Faulty start plunger
- Improper wax operation

### **Air cleaner**

- Clogged air cleaner element

### **Ignition system**

- Fault spark plug
- Fault high tension cord
- Fault igniter unit
- Fault pick up coil
- Fault ignition coil

### **Valve system**

- Improperly adjusted
- Valve clearance

## **POOR MEDIUM AND HIGH SPEED PERFORMANCE**

### **Carburetor**

- Improperly adjusted fuel level
- Clogged main nozzle
- Clogged or loose pilot jet

### **Air cleaner**

- Clogged air cleaner element

## **POOR SPEED PERFORMANCE**

### **Ignition system**

- Dirty spark plug
- Improper heat range
- Faulty igniter unit
- Faulty pick up coil

### **Fuel system**

- Clogged fuel tank breather hole
- Clogged air cleaner element
- Clogged jet
- Improperly adjusted fuel level
- Improper carburetor air vent hose setting

### **Compression system**

- Worn cylinder
- Worn or seized piston ring
- Cylinder head gasket broken
- Cylinder gasket broken
- Carbon deposit build up
- Improperly adjusted valve clearance
- Improperly contacted valve and valve seat
- Faulty valve timing

### **Clutch**

- Refer to “CLUTCH SLIPPING /DRAGGING” section

### **Engine oil**

- Improperly oil level (low or

over oil level)

### **Ignition system**

- Faulty spark plug
- Faulty high tension cord
- Faulty ignitor unit
- Faulty pick up coil
- Faulty ignition coil
- Valve system
- Improperly adjusted valve clearance

## **OVER HEATING OR OVER-COOLING**

### **OVER HEATING**

#### **Ignition system**

- Improperly spark plug gap
- Improper spark plug heat rang
- Faulty ignitor unit

#### **Fuel system**

- Improper carburetor setting
- Clogged air cleaner element

#### **Compression system**

- Heavy carbon deposit build-up
- Improperly adjusted valve timing
- Improperly adjusted valve clearance

#### **Engine oil**

- Incorrect engine oil level
- Improper engine oil quality (high viscosity)
- Low engine oil quality

#### **Brakes**

- Dragging brake

#### **Cooling system**

- Inoperative fan motor
- Faulty thermostat
- Faulty thermo switch
- Incorrect coolant level (low coolant level)
- Faulty radiator (clogged, damage)
- Faulty radiator cap
- Impeller shaft gear malfunction (bent dowel pin, gear)
- Damaged impeller shaft
- Disconnected fan motor connector

### **OVER-COOLING**

#### **Cooling system**

- Faulty thermostat
- Faulty thermo switch

- Improper fuel level adjustment

## **FAULTY CLUTCH**

## **WHEN ENGINE RUN, ATV DOES NOT RUN**

### **V belt**

- Worn/bent/slipping

### **Cam, slider**

- Worn/damaged

### **Compression spring**

- Damage

### **Gears**

- Damage

## **CLUTCH SLIPPING**

### **Clutch weight spring**

- Worn/damaged

### **Clutch shoe**

- Worn/ damaged

### **Primary sliding sheave**

- Seized

## **POORSTARTING PERFORMANCE**

### **V-belt**

- Slipping/Oily V-belt

### **Primary sliding sheave**

- Improper operation
- Damage
- Compressing spring

### **Secondary sliding sheave**

- Improper operation

### **Worn guide pin groove**

- Worn guide pin

### **Clutch shoe**

- Worn/bent

## **POOR SPEED PERFORMANCE**

### **V-belt**

- Worn
- Oil V belt

### **Roller weight**

- Worn/improper operation

- Primary/secondary/sheave

## **CVT SYSTEM**

### **Incorrect Primary Clutch Position**

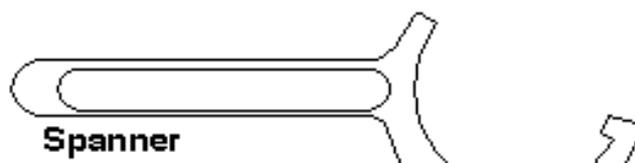
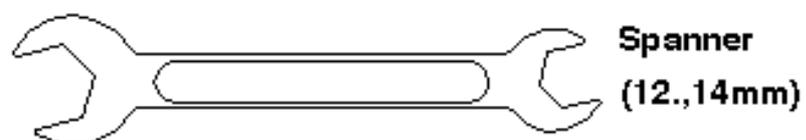
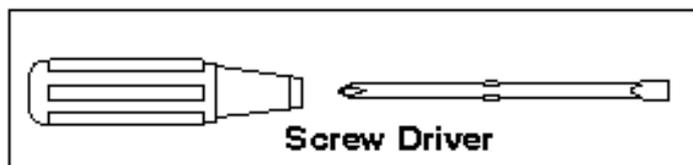
- Incorrect engine mount  
(see 13. CVT system)

## **FAULTY BRAKE**

### **POOR BRAKING EFFECT**

- Worn front hub bearing
- Worn brake pad
- Worn brake disc
- Air in brake fluid
- Leaking brake fluid
- Faulty master cylinder kit
- Faulty caliper seal kit
- Loose union bolt
- Broken brake hose
- Oily or greasy brake pad
- Oily or greasy brake disc

## 18. Tool



## 19. SPECIFICATION

| <b>Capacities</b>   |        |
|---------------------|--------|
| Fuel capacity       | 14.5 L |
| Engine Oil Capacity | 1.6 L  |
| Ground Clearance    | 183 mm |

|  |         |
|--|---------|
| Height                                   | 1237 mm |
| Length                                   | 2016 mm |
| Width                                    | 1180 mm |
| Seat height                              | 895 mm  |
| Wheel Base                               | 1280 mm |
| Turn Radius                              | 3280 mm |
| Dry Weight                               | 292 kg  |
| Front Rack                               | 18 kg   |
| Rear Rack                                | 36 kg   |
| Load Capacity (Combined Rider & Payload) | 156 kg  |
| Tongue Weight                            | 11 kg   |
| Tow Capacity                             | 200 kg  |

### Drive System

|                      |          |         |
|----------------------|----------|---------|
| Drive System         | CVT      |         |
| Front Tire           | 25x8-12  |         |
| Rear Tire            | 25x10-12 |         |
| Tire Pressure(front) | 40 kPa   | 5.8 PSI |
| Tire Pressure(rear)  | 40 kPa   | 5.8 PSI |

### Brake System

|                 |             |                |
|-----------------|-------------|----------------|
| Service Brake   | Front Brake | Hydraulic Disc |
|                 | Rear Brake  |                |
| Parking Brake   | Axle        | Hydraulic Lock |
| Auxiliary Brake | Rear Brake  | Hydraulic Disc |

### Engine

|                |  |
|----------------|--|
| Engine Type    | FS1P73MN 4 Stroke, Single Cylinder, SOHC |
| Bore x Stroke  | 72.5 mmx66.8 mm                          |
| Displacement   | 276cc                                    |
| Starter System | Electric Starter                         |

|                    |               |
|--------------------|---------------|
| Engine Cooling     | Liquid-Cooled |
| Lubrication System | Wet Sump      |
| Carburetor         | CVK052        |
| Ignitions          | T.C.I         |
| Spark Plug Type    | DR8EA ( NGK ) |

| <b>Electrical Equipment</b> |          |
|-----------------------------|----------|
| Battery                     | 12V 14AH |
| Head Light                  | 35W/35W  |
| Brake/Tail Light            | 21W/5W   |
| Reverse Indicator           | 12V 0.5W |
| High Beam Light             | 12V 0.5W |
| Neutral Position Light      | 12V 0.5W |

## 20. WIRING DIAGRAM

