

**READ THIS MANUAL CAREFULLY!**  
It contains important safety information

**CF500**

**4 × 4**

**OWNER'S MANUAL**

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

# **WARNING**

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



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



**NEVER CARRY  
PASSENGERS**



**NEVER USE  
WITH DRUGS  
OR ALCOHOL**

**NEVER:**

- Operate without proper training or instruction.
- Operate at speeds too fast for your skills or the conditions.
- Use ALCOHOL or DRUGS before or while operating this vehicle.
- Carry passengers.

**ALWAYS:**

- Avoid paved surfaces, which may adversely affect handling and control.
- Use proper RIDING TECHNIQUES to avoid vehicle overturns on hills and rough terrain, and in turns.
- Wear eye protection, helmet and protective apparel.

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

 **WARNING**

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

A card containing important ATV safety information should be attached to the owner's manual on the next page. If you cannot locate this card, or if it has been removed, please contact your dealer.



# INTRODUCTION

Congratulations on your purchase of the ATV.

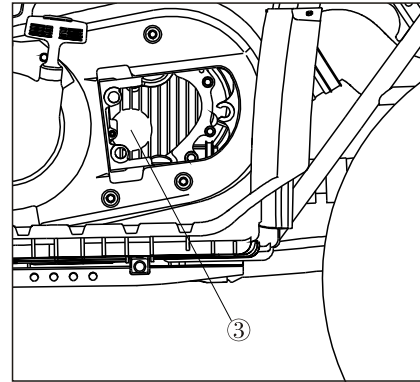
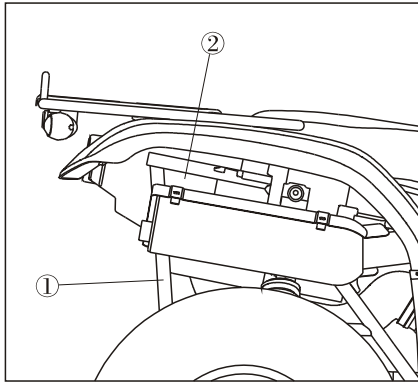
This manual will provide you with a good basic understanding of the features and operation of this ATV. **This manual includes important safety information. It provides information about special techniques and skills necessary to ride your ATV.** It also includes basic maintenance and inspection procedures. If you have any questions regarding the operation or maintenance of your ATV, please consult your dealer.

# TABLE OF CONTENTS

VEHICLE IDENTIFICATION NUMBERS .....	1
SAFETY .....	3
FEATURES AND CONTROLS.....	39
OPERATION.....	57
MAINTENANCE AND LUBRICATION.....	81
CLEANING AND STORAGE.....	121
TROUBLESHOOTING .....	127
SPECIFICATIONS.....	135
ELECTRICAL DIAGRAM.....	140

# VEHICLE IDENTIFICATION NUMBERS

Record your ATV's identification numbers in the spaces provided. Remove the spare key and store it in a safe place. Your key can be duplicated only by mating a key blank with one of your existing keys, so if both keys are lost, the ignition switch must be replaced.



# VEHICLE IDENTIFICATION NUMBERS

① Frame VIN: \_\_\_\_\_

② Vehicle Model Number: \_\_\_\_\_

③ Engine Serial Number: \_\_\_\_\_

# SAFETY

## Operator Safety

### **⚠ WARNING**

Failure to follow the warnings contained in this manual can result in serious injury or death.

An ATV is not a toy and can be hazardous to operate. This vehicle handles differently from other vehicles, such as motorcycles and cars. A collision or rollover can occur quickly, even during routine maneuvers like turning, or driving on hills or over obstacles, if you fail to take proper precautions.

Read and understand your owner's manual and all warnings before operating an ATV.

## Age Restrictions

This vehicle is an ADULT VEHICLE ONLY. Operation is prohibited for anyone under the age of 16.

## Know Your Vehicle

As the operator of the vehicle, you are responsible for your personal safety, the safety of others, and the protection of our environment. Read and understand your owner's manual, which includes valuable information about all aspects of your vehicle, including safe operating procedures.

## Safety Training

When you purchased your new ATV, your dealer offered a hands-on safety training course that covers all aspects of vehicle safety. You were also provided with printed materials that explain safe operating procedures.

# SAFETY

## Operator Safety

You should review this information on a regular basis.

If you purchased a used ATV from a party other than a dealer, you can request this free safety training from any authorized dealer.

Familiarize yourself with all laws and regulations concerning the operation of this vehicle in your area.

We strongly advise you to strictly follow the recommended maintenance program outlined in your owner's manual. This preventive maintenance program is designed to ensure that all critical components on your vehicle are thoroughly inspected at specific intervals.

The following signal words and symbols appear throughout this manual and on your ATV. Your safety is involved when these words and symbols are used. Become familiar with their meanings before reading the manual.



The *safety alert symbol*, on your vehicle or in this manual, alerts you to the potential for personal injury.

### **WARNING**

The *safety alert warning* indicates a potential hazard that may result in serious injury or death.

# SAFETY

## Operator Safety

### ⚠ CAUTION

The *safety alert caution* indicates a potential hazard that may result in minor personal injury or damage to the vehicle.

### CAUTION

A *caution* indicates a situation that may result in damage to the vehicle.

### NOTE:

A *note* will alert you to important information or instructions.

# SAFETY

## Operator Safety

### **▲ WARNING**

Serious injury or death can result if you do not follow these instructions and procedures, which are outlined in further detail within your owner's manual.

- 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 under 16 years of age to operate this ATV.
- Never permit a guest to operate the ATV unless the guest has read this manual and all product labels and has completed a certified safety training course.
- Never operate an ATV without wearing an approved helmet that fits properly. Always 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 an ATV.
- Never operate at excessive speeds. Travel at speeds appropriate for the terrain, visibility and operating conditions, and your experience
- Never attempt wheelies, jumps or other stunts.
- Always inspect your ATV before each use to make sure it's in safe operating condition. Always follow the inspection and maintenance procedures and schedules outlined in your owner's manual.



# SAFETY

## Operator Safety

- Always keep both hands on the handlebars and both feet on the foot-rests of the ATV during operation.
- Always travel slowly and use extra caution when operating on unfamiliar terrain. Be alert to changing terrain conditions.
- Never operate on excessively rough, slippery, or loose terrain.
- Always follow proper turning procedures 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 inspected by an authorized dealer if it's been involved in an accident.
- Never operate 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. Check the terrain carefully before ascending a 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 a hill at high speed.
- Always follow proper procedures for going downhill and for braking on hills. Check the terrain carefully before you start down a 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. Travel straight down the hill when possible.
- Always follow proper procedures for crossing the side of a hill. 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

# SAFETY

## Operator Safety

any hill until you've mastered (on level ground) the turning technique outlined in this manual. Avoid crossing the side of a steep hill when possible.

- Always use proper procedures if you stall or roll backwards while 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. Always dismount on the uphill side, or to either side if the ATV is 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 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 like ice, travel slowly and use extra caution to reduce the chance of skidding or sliding out of control.
- Avoid operating the ATV through deep or fast-flowing water . If it's unavoidable, travel slowly , balance your weight carefully, avoid 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 allow friction to dry out the pads.
- Always check for obstacles or people behind the ATV before operating in reverse. When it's safe to proceed

# **SAFETY**

## **Operator Safety**

in reverse, move slowly and avoid turning at sharp angles.

- Always use the size and type of tires specified for your ATV, and always maintain proper tire pressure.
- Never modify an ATV through improper installation or use of accessories.
- Never exceed the stated load capacity for your ATV. Cargo must be properly distributed and securely attached. Reduce speed and follow the instructions in this manual for carrying cargo or towing. Allow a greater distance for braking.
- Always remove the ignition key when the vehicle is not in use to prevent unauthorized use or accidental starting.
- Child or pets shall not be carried on the brackets.
- Never touch running parts, such as wheels, drive shaft, etc.

**FOR MORE INFORMATION ABOUT ATV SAFETY, PLEASE CONTACT WITH YOUR DEALER.**

# **SAFETY**

## **Operator Safety**

### **Equipment Modifications**

We are concerned with the safety of our customers and for the general public. Therefore, we strongly recommend that consumers do not install on an ATV any equipment that may increase the speed or power of the vehicle, or make any other modifications to the vehicle for these purposes. Any modifications to the original equipment of the vehicle create a substantial safety hazard and increase the risk of body injury.

The warranty on your ATV is terminated if any equipment has been added to the vehicle, or if any modifications have been made to the vehicle, that increase its speed or power.

**NOTE:** The addition of certain accessories, including (but not limited to) mowers, blades, tires, sprayers, or large racks, may change the handling characteristics of the vehicle. Use only approved accessories, and familiarize yourself with their function and effect on the vehicle.

# SAFETY

## Operator Safety

### **⚠ 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 offered by dealer. Operators should regularly practice the skills learned in the course and the operating techniques described in the owner's manual.

For more information about the training course, contact an authorized ATV dealer.

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Failure to follow the age recommendations for this ATV.

# SAFETY

## Operator Safety

### WHAT CAN HAPPEN

Severe injury and/or death could occur if a child under the minimum age recommendation operates an ATV.

Even though a child may be within the recommended age group for operating some ATVs, he/she may not have the skills, abilities, or judgment needed to operate an ATV safely and could be susceptible to accident or injury.

### HOW TO AVOID THE HAZARD

No one under the age of 16 should operate this ATV.

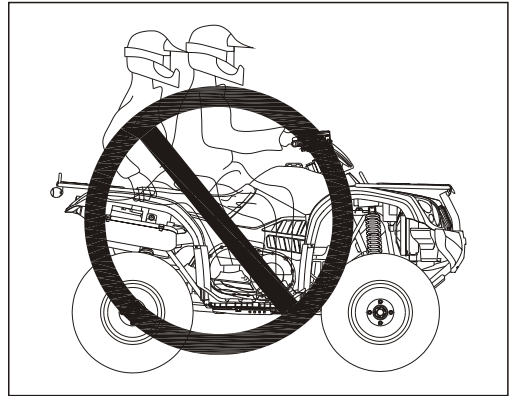
### **▲ WARNING**

### POTENTIAL HAZARD

Carrying a passenger on an ATV.

### WHAT CAN HAPPEN

Carrying a passenger greatly reduces the operator's ability to balance and control the ATV, which could cause an accident and injury to the operator and/or passenger.



# SAFETY

## Operator Safety

### HOW TO AVOID THE HAZARD

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

# SAFETY

## Operator Safety

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

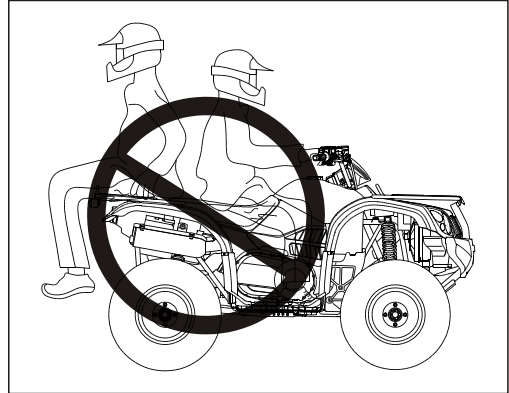
Carrying a passenger in the rear rack.

#### **WHAT CAN HAPPEN**

A passenger riding in the rear rack could be ejected from the vehicle unexpectedly or may contact moving components, both of which can result in severe injury or death.

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

Never allow passengers to ride in the rear rack.





# SAFETY

## Operator Safety

### **⚠ WARNING**

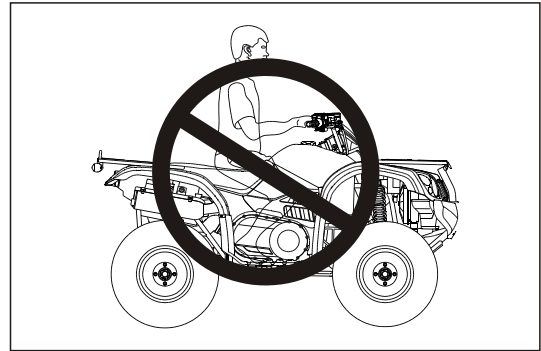
#### **POTENTIAL HAZARD**

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

#### **WHAT CAN HAPPEN**

Operating an ATV without an approved helmet increases the risk of a severe head injury or death in the event of an accident.

Operating without eye protection could result in an accident and could increase the chance of a severe injury in the event of an accident.



# SAFETY

## Operator Safety

### HOW TO AVOID THE HAZARD

Always wear an approved helmet that fits properly.

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

### **⚠ WARNING**

### POTENTIAL HAZARD

Operating the ATV after consuming alcohol or drugs.

### WHAT CAN HAPPEN

Consumption of alcohol and/or drugs could seriously affect operator judgment. Reaction time may be slower and operator balance and perception could be affected.

Consuming alcohol and/or drugs before or while operating an ATV could result in an accident causing severe injury or death.

### HOW TO AVOID THE HAZARD

Never consume alcohol or drugs before or while operating an ATV.



# SAFETY

## Operator Safety

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Operating the ATV at excessive speeds.

#### **WHAT CAN HAPPEN**

Excessive speed increases the operator's chance of losing control of the ATV, which can result in an accident.

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

Always operate the ATV at a speed that's proper for the terrain, visibility and operating conditions, and your experience.

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

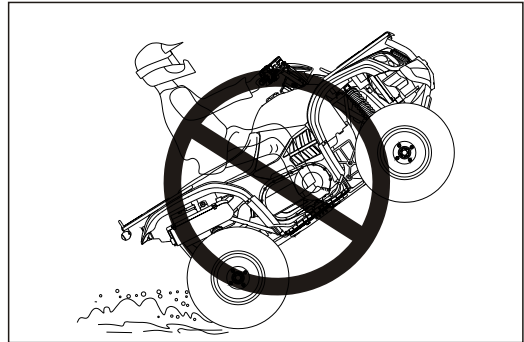
Attempting wheelies, jumps and other stunts.

#### **WHAT CAN HAPPEN**

Attempting stunts increases the chance of an accident, including an overturn.

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

Never attempt wheelies, jumps, or other stunts.  
Avoid exhibition driving.



# SAFETY

## Operator Safety

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Failure to inspect the ATV before operating. Failure to properly maintain the ATV.

#### **WHAT CAN HAPPEN**

Poor maintenance increases the possibility of an accident or equipment damage.

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

Always inspect your ATV before each use to make sure it's 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 ability to control the vehicle or could cause loss of balance and ejection from the ATV.

If the operator's foot is not firmly planted on the footrest, it could come into contact with the rear

# SAFETY

## Operator Safety

Wheels and lead to accident or injury.

### HOW TO AVOID THE HAZARD

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

### **▲ WARNING**

#### POTENTIAL HAZARD

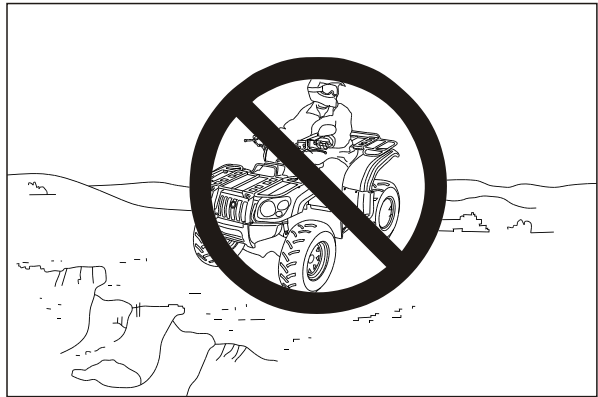
Failure to use extra caution when operating the ATV on unfamiliar terrain.

#### WHAT CAN HAPPEN

Unfamiliar terrain may contain hidden rocks, bumps, or holes that could cause loss of control or overturn.

#### HOW TO AVOID THE HAZARD

Travel slowly and use extra caution when operating on unfamiliar terrain. Always be alert to changing terrain conditions.



# SAFETY

## Operator Safety

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

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

#### **WHAT CAN HAPPEN**

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

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

Do not operate on excessively rough, slippery or loose terrain until you've learned and practiced the skills necessary to control the ATV on such terrain. Always use extra caution on rough, slippery or loose terrain.

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Turning improperly.



# SAFETY

## Operator Safety

### WHAT CAN HAPPEN

Improper turns could cause loss of control and lead to a collision or overturn.

### HOW TO AVOID THE HAZARD

Always follow proper procedures for turning as described in the owner's manual.

Practise turning at slow speeds before attempting to turn at faster speeds.

Never turn at excessive speed.

## **⚠ WARNING**

### POTENTIAL HAZARD

Operating on excessively steep hills.

### WHAT CAN HAPPEN

The vehicle may overturn.

### HOW TO AVOID THE HAZARD

Never operate on hills too steep for the ATV or for your abilities. Never operate the ATV on hills steeper than 25° .

Practice on smaller hills before attempting large hills.

# SAFETY

## Operator Safety

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Climbing hills improperly.

#### **WHAT CAN HAPPEN**

Improper hill climbing could cause loss of control or overturn.

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

Always follow proper procedures for climbing hills as described in the owner's manual.

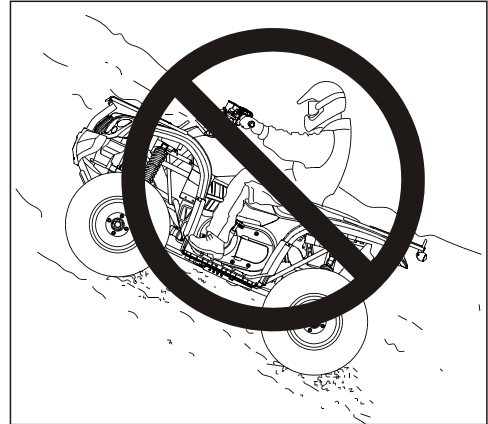
Always check the terrain carefully before ascending any hill.

Never operate the ATV on hills steeper than 25° .

Never climb hills with excessively slippery or loose surfaces. Shift your weight forward.

Never open the throttle suddenly while traveling uphill. 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.





# SAFETY

## Operator Safety

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Traveling downhill improperly.

#### **WHAT CAN HAPPEN**

Improperly descending a hill could cause loss of control or overturn.

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

Always follow proper procedures for traveling down hills as described in the owner's manual.



**NOTE:** A special technique is required when braking while traveling downhill. See page 73.

Always check the terrain carefully before descending a hill. Shift your weight backward.

Never travel down a hill at high speed.

Avoid traveling down a hill at an angle, which would cause the vehicle to lean sharply to one side. Travel straight down the hill when possible.

# SAFETY

## Operator Safety

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Improperly crossing hills and turning on hills.

#### **WHAT CAN HAPPEN**

Improperly crossing or turning on hills could cause loss of control or overturn.

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

Never attempt to turn the ATV around on any hill until you've mastered the turning technique (on level ground) as described in the owner's manual. See page 73. Use extra caution when turning on any hill.

Avoid crossing the side of a steep hill.

#### **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.



# SAFETY

## Operator Safety

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

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

#### **WHAT CAN HAPPEN**

The vehicle could overturn.

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

Maintain steady speed when climbing a hill.

#### **If all forward speed is lost:**

Keep your weight uphill.

Apply the front brake (or the single lever brake, gradually). When fully stopped, apply the rear brake as well, then shift the gear to parking.

#### **If the ATV begins rolling backwards:**

Keep weight uphill.

Never apply engine power.



# SAFETY

## Operator Safety

Never apply the rear brake while rolling backwards. Apply the front brake (or single lever brake) gradually.

When fully stopped, apply the rear brake as well, and shift the gear to parking.

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

Turn the ATV around and remount, following the procedure described in the owner's manual. See page 73.

### **▲ WARNING**

#### **POTENTIAL HAZARD**

Improperly operating over obstacles.

#### **WHAT CAN HAPPEN**

Operating over obstacles could cause loss of control or overturn.

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

Before operating in a new area, check for obstacles.

Avoid operating over large obstacles such as rocks and fallen trees when possible. If unavoidable, use extreme caution and always follow proper procedures as outlined in the owner's manual.

# SAFETY

## Operator Safety

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Skidding or sliding.

#### **WHAT CAN HAPPEN**

Skidding or sliding can cause loss of control. If the tires regain traction unexpectedly, the ATV could overturn.

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

On slippery surfaces such as ice, travel slowly and use extra caution to reduce the chance of skidding or sliding out of control.

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Overloading the ATV or carrying/towing cargo improperly.

#### **WHAT CAN HAPPEN**

Overloading and towing can cause changes in vehicle handling, which could lead to loss of control or an accident.

# SAFETY

## Operator Safety

### 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. See page 66.

### **⚠ WARNING**

#### POTENTIAL HAZARD

Operating the 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 or overturn.

#### HOW TO AVOID THE HAZARD

Avoid operating the ATV through deep or fast-flowing water. If it's unavoidable to enter water that exceeds the recommended maximum depth (see page 74), travel slowly, balance your weight carefully, avoid sudden movements, and maintain a slow and steady forward motion. Do not make sudden turns or stops, and do not make sudden throttle changes.

# SAFETY

## Operator Safety

Wet brakes may have reduced stopping ability. Always test the brakes after leaving water. If necessary, apply brakes several times to dry out the pads.

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Improperly operating in reverse.

#### **WHAT CAN HAPPEN**

The ATV could collide with an obstacle or person, resulting in severe injury.

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

Before shifting into reverse gear, always check for obstacles or people behind the ATV. When it's safe to proceed, back slowly.

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

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

#### **WHAT CAN HAPPEN**

Use of improper tires, or operation of the ATV with improper or uneven tire pressure, could cause loss of control or accident.

# SAFETY

## Operator Safety

### HOW TO AVOID THE HAZARD

Always use the size and type of tires specified in the owner's manual for the ATV.  
Always maintain proper tire pressure.

### **⚠ WARNING**

#### POTENTIAL HAZARD

Operating the ATV with improper modifications.

#### WHAT CAN HAPPEN

Improper installation of accessories or modification of the ATV may cause changes in handling which could lead to an accident.

#### HOW TO AVOID THE HAZARD

Never modify the ATV through improper installation or use of accessories. All parts and accessories added to the vehicle must be genuine parts or equivalent components designed for use on this ATV and should be installed and used according to approved instructions. Consult your dealer for more information.



# SAFETY

## Operator Safety

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

Operating on frozen bodies of water.

#### **WHAT CAN HAPPEN**

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

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

Never operate the ATV on a frozen body of water.

### **⚠ WARNING**

Leaving the keys in the ignition can lead to unauthorized use of the vehicle resulting in serious injury or death. Always remove the ignition key when the vehicle is not in use.

### **⚠ WARNING**

After any overturn or accident, have a qualified service dealer inspect the entire vehicle for possible damage, including (but not limited to) brakes, throttle and steering systems.

# SAFETY

## Operator Safety

### **⚠ WARNING**

Safe operation of this rider-active vehicle requires good judgement and physical skills.

Persons with cognitive or physical disabilities who operate this vehicle have an increased risk of overturn and loss of control, which could result in severe injury or death.

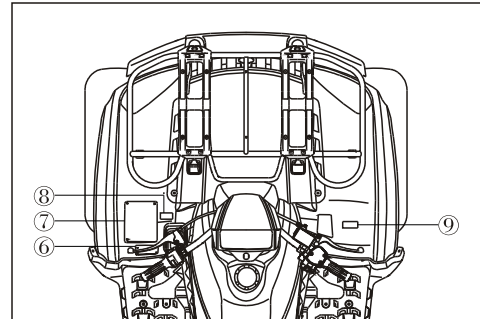
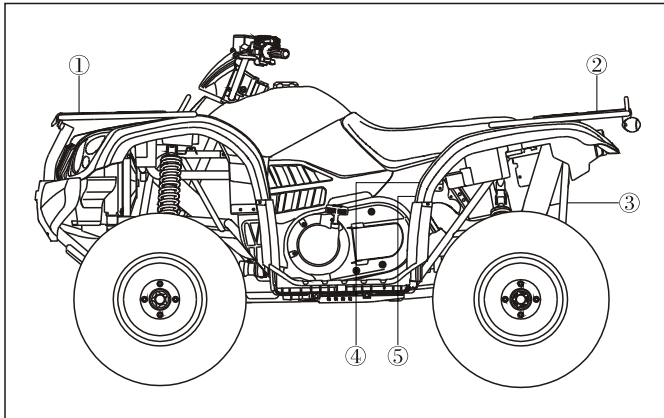
### **⚠ WARNING**

Exhaust system components are very hot during and after use of the vehicle. Hot components can cause serious burns and fire. Do not touch hot exhaust system components. Always keep combustible materials away from the exhaust system. Use caution when traveling through tall grass, especially dry grass.

# SAFETY

## Safety decals and locations

Warning decals have been placed on the ATV for your protection. Read and follow the instructions on each decal carefully. If a decal becomes illegible or comes off, contact your dealer to purchase a replacement.



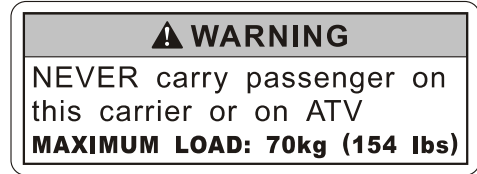
# SAFETY

## Safety decals and locations

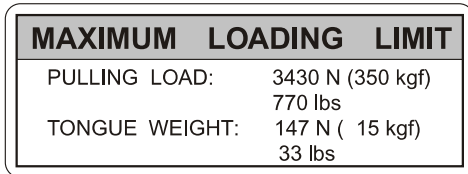
①



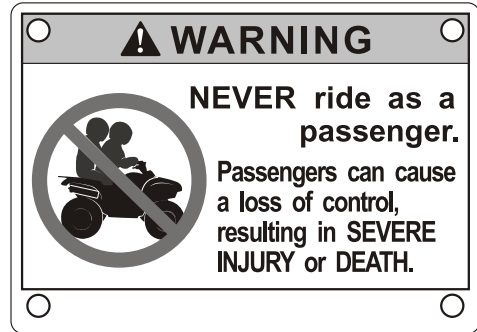
②



③



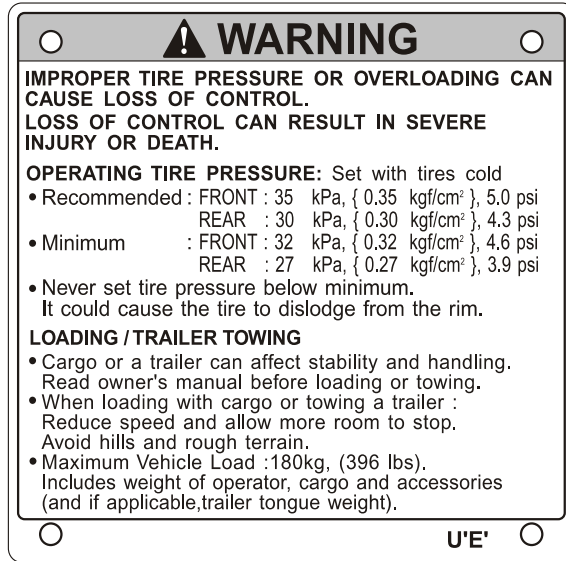
④



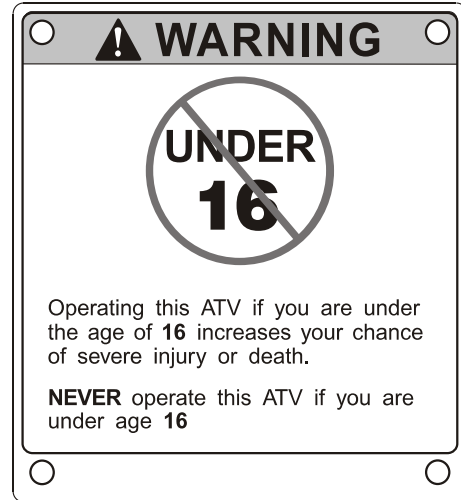
# SAFETY

## Safety decals and locations

⑤



⑥




# SAFETY

## Safety decals and locations

⑦

**⚠ WARNING**


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



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



**NEVER CARRY PASSENGERS**



**NEVER USE WITH DRUGS OR ALCOHOL**

**NEVER** operate :

- without proper training or instruction.
- at speeds too fast for your skills or the conditions.
- with a passenger-passengers affect balance and steering and increase risk of losing control.

**ALWAYS** :

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

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

E'

⑧

**DRIVE SELECT LEVER**

- Read owner's manual carefully before operating.
- **ATV MUST** be stopped before shifting select lever.
- Shifting into or from reverse or park is impossible without applying rear brake

⑨

**⚠ WARNING**

Turning the ATV in 4WD-LOCK("DIFF.LOCK") takes more effort

Operate at a slow speed and allow extra time and distance for maneuvers to avoid loss of control

# SAFETY

## Safe riding gear

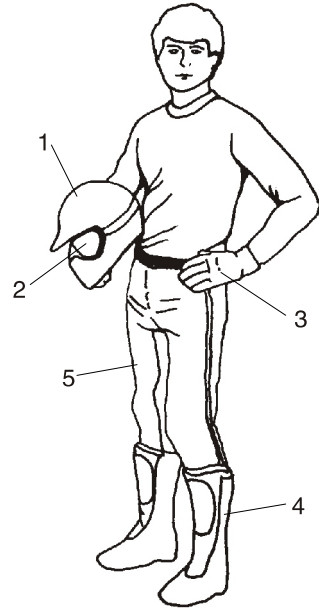
Always wear clothing suited to the type of riding. ATV riding requires special protective clothing for comfort and to reduce the chance of injury.

### 1. Helmet

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

### 2. Eye protection

Do not depend on sunglasses for proper eye protection. A pair of goggles or a helmet face shield offers the best protection for your eyes. They should be kept clean and be shatterproof design.



# **SAFETY**

## **Safe riding gear**

### **3. Gloves**

Off-road style gloves with knuckle pads are the best for comfort and protection.

### **4. Boots**

The best footwear is a pair of strong over-the-calf boots with heels, like moto-cross boots.

### **5. Clothing**

Always wear long sleeves and long pants to protect arms and legs. Riding pants with kneepads and a jersey with shoulder pads provide the best protection.



# FEATURES AND CONTROLS

## Electrical Switches

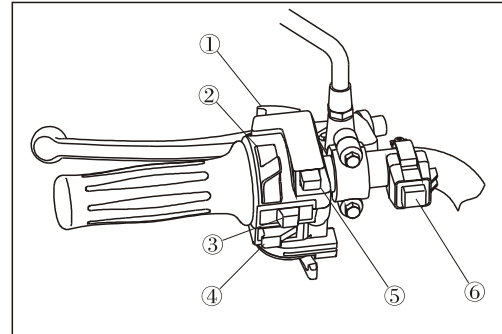
### ⚠ WARNING

Activating the override switch while the throttle is open can cause loss of control, resulting in severe injury or death. Do not activate the override switch while the throttle is open.

#### ① Override Switch

Top speed is normally limited when operating in 4WD-LOCK. If conditions require more engine power when riding forward, push and hold this switch to override the 4WD-LOCK speed limiting function. (See page 49-52 for a detailed explanation about the front gear lock switch and its function.)

Releasing the switch restores the speed limiting function. While this switch is pushed, the override indicator light will come on.



#### ② Headlight switch

The headlight switch consists of three positions: “☀”、“☀☀”、“●”

☀ : When the switch is at this position, headlight, the front pilot light , the rear pilot light and instrument light are on.

# FEATURES AND CONTROLS

## Electrical Switches

☺☺☺ : When the switch is at this position, the front pilot light, the rear pilot light and instrument light are on.

- : When the switch is at this position, headlight, the front pilot light, the rear pilot light and instrument light are off.

### ③Turning light switch


Press the switch to , the left turning indicator and left turning light are on.


Press the switch to , the right turning indicator and right turning light are on.

### ④Horn switch button

Press the button, the horn will sound.

### ⑤Headlight illumination switch

Press  button, the high beam is on.

Press  button, the low beam is on.

### ⑥Start switch

Press this button, the engine can be started.

## CAUTION

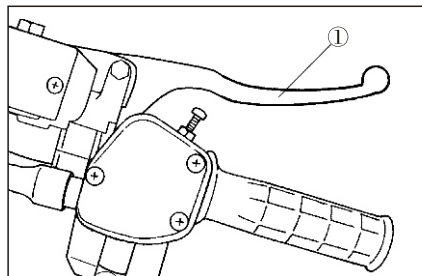
Do not use the headlights with the engine turned off for more than thirty minutes. The battery may discharge to the point that the starter motor will not operate properly. If this should happen, remove the battery and recharge it.

# FEATURES AND CONTROLS

## Brake

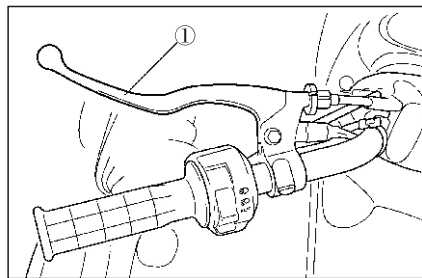
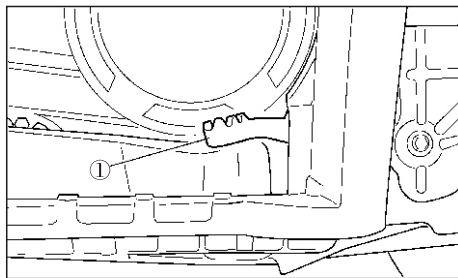
### Front brake lever

The front brake lever ① is located on the right handlebar. Pull it toward the handlebar to apply the front brake.



### Rear brake pedal and lever

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



# FEATURES AND CONTROLS

## Brake

### ⚠ WARNING

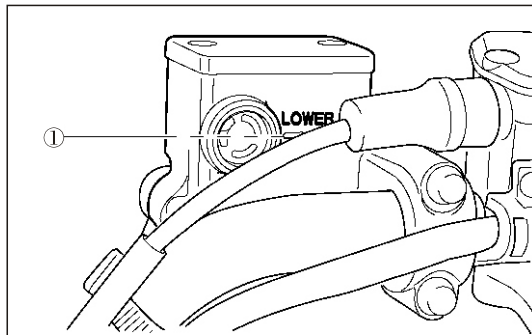
Operating the ATV with a spongy brake lever can result in loss of braking, which could cause an accident. Never operate the ATV with a spongy-feeling brake lever.

Always test brake lever travel and master cylinder 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.

### Brake fluid

Check the brake fluid level in the front brake master cylinder and in the rear brake cup before each use of the ATV. The front brake master cylinder is located on the right handlebar. The rear brake cup is near the rear brake pedal.

The front brake fluid level can be seen through an indicator window on the side of the master cylinder. When fluid level is lower the “lower” line, refill with the same type of brake fluid.



# FEATURES AND CONTROLS

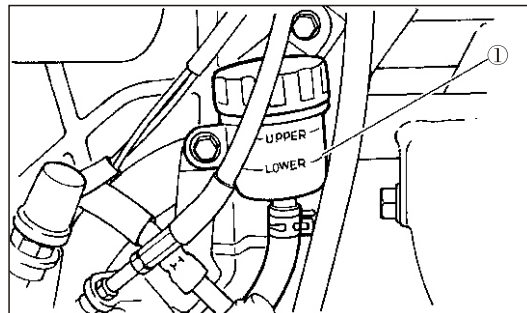
## Brake

### ⚠ WARNING

An over-full master cylinder may cause brake drag or brake lock-up, which could result in serious injury or death. Maintain brake fluid at the recommended level. Do not overfill.

**NOTE:** When checking the fluid level, the ATV must be on level ground with the handlebars straight. If the fluid level is low, add DOT3 brake fluid only.

**DO NOT OVERFILL.**



### ⚠ WARNING

Never store or use a partial bottle of brake fluid. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the air. The moisture causes the drop of boiling temperature of the brake fluid, which can lead to early brake fade and the possibility of accident or severe injury. After opening a bottle of brake fluid, always discard any unused portion.

# FEATURES AND CONTROLS

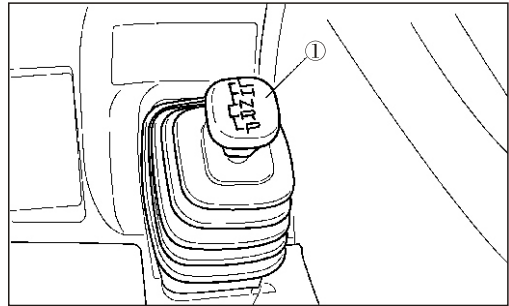
## Brake

### Parking Brake

When parking, stop the engine and shift the gear selector Lever ① into the park position.

### ⚠ WARNING

Operating the ATV while the parking brake is engaged could result in an accident and serious injury or death. Always check to be sure the parking brake is disengaged before operating.



### Important Safeguards

- The parking brake may relax if left on for a long period of time. Always block the wheels to prevent rolling.
- Never depend on the parking brake alone if the ATV is parked on a hill. Always block the wheels on the downhill side of the ATV to prevent rolling. Another option is to park the ATV in a sidehill position.

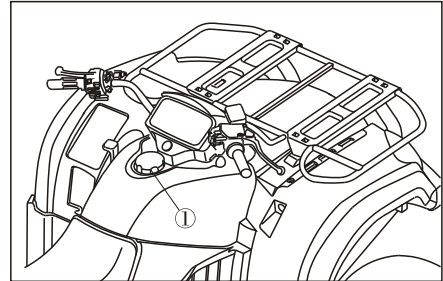
# FEATURES AND CONTROLS

## Choke

The choke assists in starting a cold engine. Refer to the engine starting procedure on page 60 for correct choke and throttle settings during starting.

## Fuel tank

The fuel tank filler cap ① is located directly below the handlebar. Remove the fuel tank filler cap by turning it counterclockwise. Install the fuel tank filler cap by turning it clockwise.



# FEATURES AND CONTROLS

## Fuel safety

### **⚠ 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.
- Never fill a gas plastic container while it's in the racks. Static electricity between the rack and container could cause a spark.
- 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 gasoline spills 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. Engine exhaust fumes are poisonous and can cause loss of consciousness or death in a short time.

### **⚠ WARNING**

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

Operate this vehicle only outdoors or in well-ventilated areas.



# FEATURES AND CONTROLS

## Automatic Transmission Gear Selector

The transmission gear selector ① is located on the left side of the vehicle.

L: Low Gear

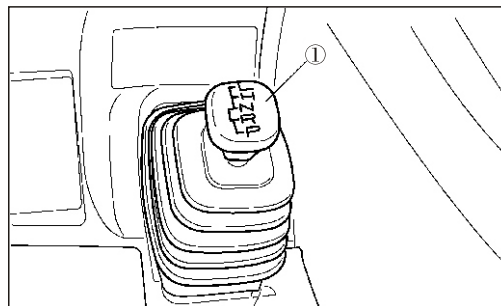
H: High Gear

N: Neutral

R: Reverse

P: Park

To shift into Reverse or Park, you must first apply the rear brake lever or pedal to activate the lock-out mechanism. When shifting out of Reverse or Park, it's necessary to apply the rear brake lever or pedal.



### CAUTION

Shifting gears with the engine speed above idle or while the vehicle is moving could cause transmission damage. To change gears, stop the vehicle, and with the engine idling, move the lever to the desired gear. Apply the rear brake before attempting to shift into reverse or park.

Whenever the ATV is left unattended, always place the transmission in the park position.

Maintaining shift linkage adjustment is important to assure proper transmission function. See your dealer if you experience any shifting problems.

# FEATURES AND CONTROLS

## Belt Life

To extend belt life, use low forward gear in heavy pulling situations and when operating at less than seven miles per hour for extended periods of time.

If towing the vehicle is necessary, shift the transmission into neutral for better mobility and to prevent damage to the belt.

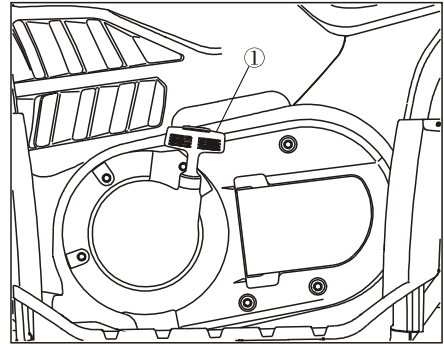
## Recoil starter

If the battery is weak and cannot start the engine, use the recoil starter ① will allow vehicle operation until repairs can be made.

The recoil starter is located on the left side of the machine.

The engine is equipped with automatic decompressor. This makes recoil starting possible by allowing compression to “leak” at cranking speeds. The decompressor senses when the engine is spinning fast enough to start and restores compression for starting.

1. Position the vehicle on a level surface, place the transmission in park.
2. Grasp the recoil starter rope handle tightly and pull slightly until the starter mechanism engages.
3. Pull the rope abruptly to start the engine.



# FEATURES AND CONTROLS

## Recoil starter

### CAUTION

Extending the starter rope too far will cause damage to the recoil assembly. Do not extend the starter rope so far that it stops.

If the starter rope handle is not seated properly, water may enter the recoil housing and damage components. Make sure the handle is fully seated on the recoil housing, especially when driving in wet areas.

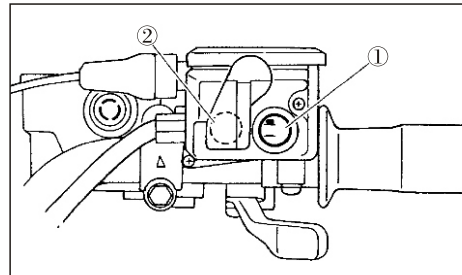
## All wheel drive (AWD) system

### On-command four-wheel drive and front gear lock switches

This ATV is equipped with an on-command four-wheel drive switch “2WD” / “4WD” ① and a front gear lock switch “LOCK” / “4WD” ②.

Select the appropriate drive according to terrain and the conditions.


- Two-wheel drive (2WD): Power is supplied to the rear wheels only.
- Four-wheel drive (4WD): Power is supplied to the rear and front wheels.
- Four-wheel drive with the front gear locked (4WD-LOCK): Power is supplied to the rear and front wheels when the front gear is locked ( “DIFF.LOCK” ). Unlike the 4WD mode, all wheels turn at the same speed.

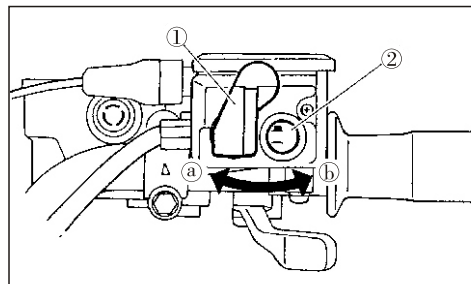


# FEATURES AND CONTROLS


## All wheel drive (AWD) system

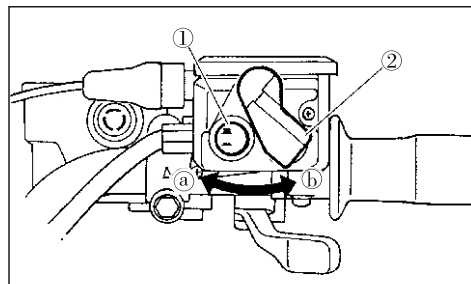
### On-command four-wheel drive switch “2WD” / “4WD” ②

To change from 2WD to 4WD, stop the ATV, and then set the switch to “4WD”. When the ATV is in 4WD, the 4WD indicator “” will come on in the dashboard display. To change from 4WD to 2WD, stop the ATV, be sure the lever ① is set to position (a), and then set the switch to “2WD”.



### Front gear lock switch “LOCK” / “4WD” ①

To lock the front gear in 4WD, make sure the on-command four-wheel-drive switch is set to “4WD”, stop the ATV, move the lever ② to position (b), and then set the switch to “LOCK”. When the front gear is locked, the front gear lock indicator (“DIFF.LOCK”) light will come on along with the indicator “” in the dashboard display.



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

# FEATURES AND CONTROLS

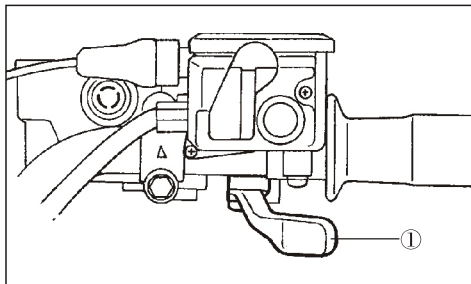
## All wheel drive (AWD) system

### NOTE

- When the switch is set to “LOCK” , the front gear lock indicator light will flash until the front gear is locked.
- When the indicator light is flashing, turning the handlebar left and right will help the front gear lock to engage.
- Riding before the front gear lock is properly engaged (e.g., when the indicator light is flashing) will cause the engine speed to be limited until engagement is complete.
- When the ATV is in 4WD-LOCK, the maximum traveling speed is limited to 35 km/h (22 mph).
- However, if conditions require full engine power to be available, push and hold the override switch to disable the 4WD-LOCK speed limiter.

### Throttle lever①

Once the engine is running, movement of the throttle lever will increase the engine speed. Regulate the speed of the machine by varying the throttle position. Because the throttle is spring-loaded, the machine will decelerate, and the engine will return to an idle any time the hand is removed from the throttle lever. Before starting the engine, check the throttle to be sure it is operating smoothly. Make sure it returns to the idle position as soon as the lever is released.



# FEATURES AND CONTROLS

## All wheel drive (AWD) system

### CAUTION

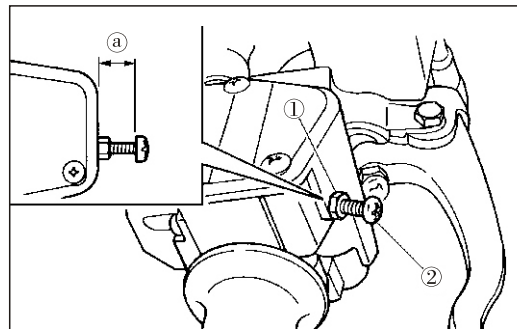
Check the operation of the throttle lever before you start the engine. If it does not work smoothly, check for the cause. Correct the problem before riding the ATV. Consult your dealer if you can't find or solve the problem yourself.

### Speed limiter

The speed limiter keeps the throttle from fully opening, even when the throttle lever is pushed to the maximum. Turning in the adjusting screw ② limits the maximum engine power available and decreases the maximum speed of the ATV.

### CAUTION

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



# FEATURES AND CONTROLS

## Main switch

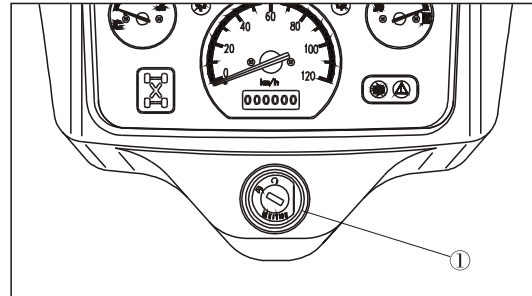
Functions of the respective switch positions are as follows:

ON:

The engine can be started only at this position and the headlights and taillight come on when the light switch is on. The key can not be removed in this position.

OFF:


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




# FEATURES AND CONTROLS

## Indicator and warning lights

### Four-wheel-drive indicator①

 : This indicator comes on when the “2WD” / “4WD” switch is set to the “4WD” position.

 : The front lock indicator “DIFF.LOCK” in the four-wheel-drive indicator comes on when the “LOCK” — “4WD” switch is set to the “LOCK-4WD” position.

### NOTE

Due to the synchronizing mechanism in the front gear case, the four-wheel drive indicator may not come on until the ATV starts moving.

### Left turning indicator②

This indicator light comes on when press the turning switch to “”

### Low-range indicator light “L” ③

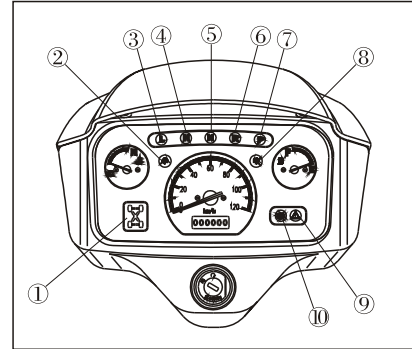
This indicator light comes on when the gear selector is in the “L” position.

### High-range indicator light “H” ④

This indicator light comes on when the gear selector is in the “H” position

### Neutral indicator light “N” ⑤

This indicator light comes on when the gear selector is in the “N” position.





# FEATURES AND CONTROLS

## Indicator and warning lights

### Reverse indicator light “R” ⑥

This indicator light comes on when the gear selector is in the “R” reverse position.

### Park indicator light “P” ⑦

This indicator light comes on when the gear selector is in the “P” (park) position.

### Right turning indicator ⑧

This indicator light comes on when press the turning switch to “⇒”

### Override indicator ⑨

This indicator light comes on when press the override switch.

### High beam indicator ⑩

This indicator light comes on when press the headlight illumination switch to ≡○ .

## NOTE

If the indicator light flashes or the speedometer does not show the speed while riding, have your dealer check the speed sensor circuit.

# FEATURES AND CONTROLS

## Dashboard

### Coolant temperature indicator “”

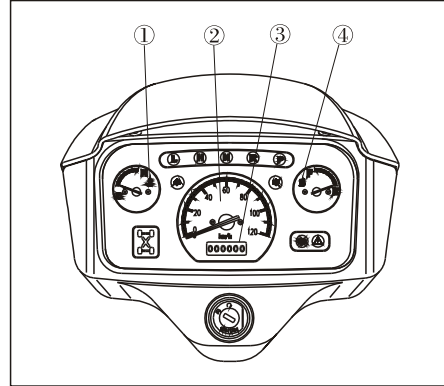
when the temperature indicator is in the white area of side C, it means that the temperature is normal. The red area of side H indicates that the temperature is high. In that case please stop the engine until the coolant temperature goes down. In case the temperature frequently goes high, check coolant capacity or consult the local dealer.

### CAUTION

- The engine may overheat if the ATV is overloaded. If this happens, reduce the load to specification.
- After restarting, make sure that the temperature indicator is in the white area of side C. Continuous use while the temperature indicator is in the red area of side H may cause damage to the engine.

**Speedometer :** shows the riding speed. **Odometer :** shows the total distance traveled.

**Fuel gauge :** indicates the remaining amount of the gasoline in the fuel tank. “F” indicates the total amount of fuel is 19L. When the indicator reaches the first point of red mark, fuel should be refilled as soon as possible. The red mark indicates that the remaining fuel is only about 4.0L.



# OPERATION

## Break-In Period

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

### CAUTION

Excessive heat build-up during the first three hours of operation will damage close-fitted engine parts. Do not operate at full throttle or high speeds for extended periods during the first three hours of use.

Use of any oils other than those recommended may cause serious engine damage. We recommend the use of 4 Synthetic Oil for your 4-cycle engine.

1. Fill the fuel tank with gasoline.
2. Check the oil level on the dipstick.  
Add 4 Synthetic Oil if necessary to maintain the oil level between the minimum and maximum level marks.
3. Drive slowly at first. Select an open area that allows room to familiarize yourself with vehicle operation and handling.
4. Vary throttle positions. Do not operate at sustained idle.
5. Perform regular checks on fluid levels, controls and areas outlined on the daily pre-ride inspection checklist.  
See page 58.

# OPERATION

## Break-In Period

6. Pull only light loads.
7. During the break-in period, change both the oil and the filter at 25 hours or one month.

## Pre-Ride Inspection

### ▲ WARNING

If a proper inspection is not done before each use, severe injury or death could result. Always inspect the vehicle before each use to ensure it's in proper operating condition.

Pre-Ride Checklist		
Item	Remarks	See Page
Brake system / lever travel	Ensure proper operation	41, 109
Brake fluid	Ensure proper level	42
Front suspension	Inspect, lubricate if necessary	119
Rear suspension	Inspect, lubricate if necessary	119
Steering	Ensure free operation	—
Tires	Inspect condition and pressure	35
Wheels / fasteners	Inspect, ensure fastener tightness	113

# OPERATION

## Pre-Ride Inspection

Frame nuts, bolts, fasteners	Inspect, ensure tightness	—
Fuel and oil	Ensure proper levels	89
Coolant level	Ensure proper level	94
Coolant hoses	Inspect for leaks	—
Throttle	Ensure proper operation	51
Indicator lights / switches	Ensure operation	39, 54
Air filter, pre-filter	Inspect, clean	100
Air box sediment tube	Drain deposits whenever visible	—
Headlamp	Check operation	116
Brake light / tail lamp	Check operation	118
Riding gear	Wear helmet, goggles, protective clothing	37

# OPERATION

## Starting the Engine

### Starting a Cold Engine

#### **▲ WARNING**

Engine exhaust contains poisonous carbon monoxide and can cause loss of consciousness resulting in severe injury or death. Never run an engine in an enclosed area.

#### **CAUTION**

Operating the vehicle immediately after starting could cause engine damage. Allow the engine to warm up for several minutes before operating the vehicle.

1. Apply the rear brake pedal.
2. Turn the main switch to “ON” .
3. Shift the gear selector into the neutral or park position.

#### **NOTE**

- When the gear selector is in the neutral or park position, if either indicator light does not come on, ask your dealer to inspect its electric circuit.
  - The engine can be started in any gear if the rear brake pedal is applied. However, it is recommended to shift into neutral or park before starting the engine.
4. Use the starter (choke) in reference to the figure:  
Position ① : Cold engine start ambient temperature below 5 °C(40 °F).  
Position ② : Cold engine start ambient temperature at 0 °C(30 °F)—30 °C (90 °F) and warming up position.

# OPERATION

## Starting the Engine

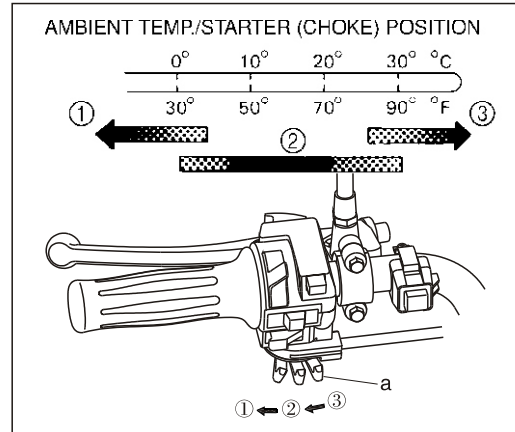
Position ③ : Cold engine start ambient temperature Above 25 °C (80 °F) and warm engine start position.

5. Completely close the throttle lever and start the engine by pushing the start switch.

### NOTE

- If the engine fails to start, release the start switch, then push the start switch again. Pause a few seconds before the next attempt. Each cranking should be as short as possible to preserve battery energy. Do not crank the engine more than 10 seconds on each attempt.
- If the battery is discharged, pull the recoil starter to start the engine.

6. If the engine is started with the starter (choke) in position ①, the starter (choke) should be returned to position ② to warm up the engine. If the engine is started with the starter (choke) in position ②, keep the starter (choke) in this position to warm up the engine.
7. Continue warming up the engine until it idles smoothly and return the starter (choke) to position ③ before riding.



# OPERATION

## Starting the Engine

### CAUTION

See the “Break-In Period” section prior to operating the engine for the first time.

### Starting a warm engine

To start a warm engine, refer to the “Starting a cold engine” section. The starter (choke) should not be used. The throttle should be opened slightly.

### Gear selector operation and reverse driving

### CAUTION

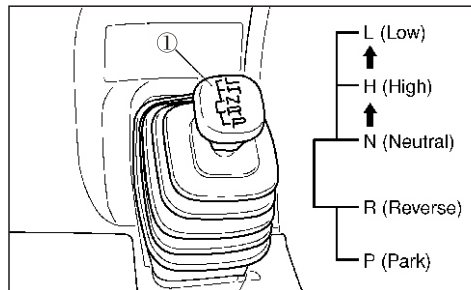
Before shifting, you must stop the machine and return the throttle lever to the closed position. Otherwise, the transmission may be damaged.

Shifting: Neutral to High and High to Low

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

### NOTE

Make sure that the gear selector is completely shifted into position.





# OPERATION

## Starting the Engine

3. Open the throttle lever gradually.

Shifting: Neutral to Reverse and Reverse to Park

### NOTE

The gear selector cannot be shifted into reverse (R) or park(P) without applying the rear brake.

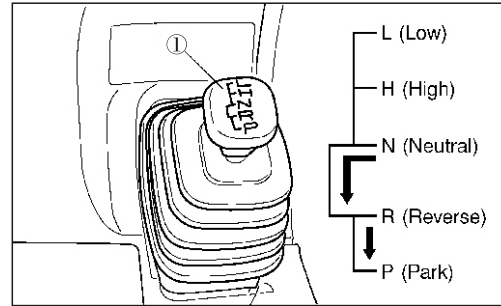
1. Bring the machine to a complete stop and return the throttle lever to the closed position.
2. Apply the rear brake pedal.
3. Shift from neutral to reverse or from reverse to park and vice versa by moving the gear selector along the shift guide.

### NOTE

- When in reverse, the reverse indicator light should be on. If the light does not come on, ask your dealer to inspect the reverse indicator light electrical circuit.
  - Due to the synchronizing mechanism in the engine, the light may not come on until the ATV starts moving.
4. Check behind for people or obstacles, then release the rear brake pedal.
  5. Open the throttle lever gradually and continue to watch rear while moving backward.

### ⚠ WARNING

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



# OPERATION

## Hauling Cargo

### **▲ WARNING**

Overloading the vehicle or carrying or towing cargo improperly can alter vehicle handling and may cause loss of control or brake instability. Always follow these precautions when hauling cargo:

- Never exceed the stated load capacity for this vehicle.
- Reduce speed and allow a greater distance for braking.
- When operating over rough or hilly terrain, reduce speed and cargo to maintain stable driving conditions.

#### ● **WEIGHT DISTRIBUTION**

In the rear rack should be as far forward and as low as possible. Carrying a high load raises the center of gravity and creates a less stable operating condition. Reduce load weight when cargo is high. When handling off-centered loads that cannot be centered, secure the load and operate with extra caution.

#### ● **ALL LOADS MUST BE SECURED BEFORE OPERATING.**

Unsecured loads may shift and create unstable operating conditions, which could result in loss of control of the vehicle. Always be sure that the rear rack is lowered.

#### ● **EXTREME CAUTION MUST BE USED**

when operating with loads extending beyond the rack. Stability and maneuverability may be adversely affected, causing the machine to overturn.

# OPERATION

## Hauling Cargo

- Carrying a load on only the front rack or the rear rack may cause an imbalanced condition and increases the possibility of vehicle overturn. Balance loads proportionally between the front rack and the rear rack, but do not exceed the stated load capacity.
- Use extreme caution when applying brakes with a loaded vehicle. Avoid terrain or situations that may require backing down- hill.
- Always attach the tow load to the hitch point.
- The vehicle should never exceed 10 mph (16 km/h) while towing a load on a level surface. Vehicle speed should never exceed 5mph (8 km/h) when towing loads in rough terrain, while cornering, or while ascending or descending a hill.
- Do not obstruct the headlight when loading the front rack.

# OPERATION

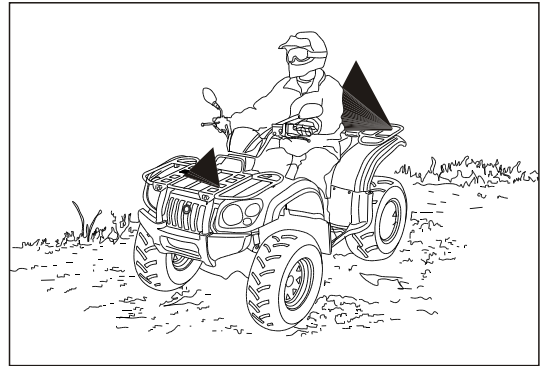
## Hauling Cargo

### Load Distribution

Your ATV has been designed to carry or tow a certain amount of load. Always read and understand the load distribution warnings listed on the warning labels, and never exceed the specified weights.

Cargo weight should be mounted as low as possible. When operating over rough or hilly terrain, reduce speed and cargo to maintain stable driving conditions.

1. Always load the cargo as far forward as possible.
2. Always operate the vehicle with extreme caution whenever hauling or towing loads. Balance, handling, and control may be affected.
3. Slow down.

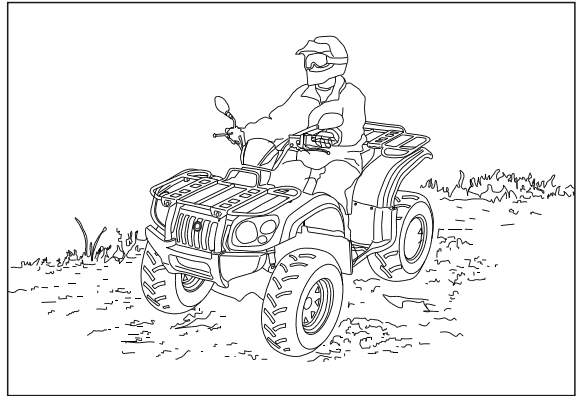


# OPERATION

## Driving Safely

### Driving Procedures

1. Sit upright with both feet on the footrests and both hands on the handlebars.
2. Start the engine and allow it to warm up, apply the brakes, then shift the transmission into gear.
3. Check your surroundings and determine your path of travel.
4. Release the brakes.
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.



# OPERATION

## Driving Safely

### Making Turns

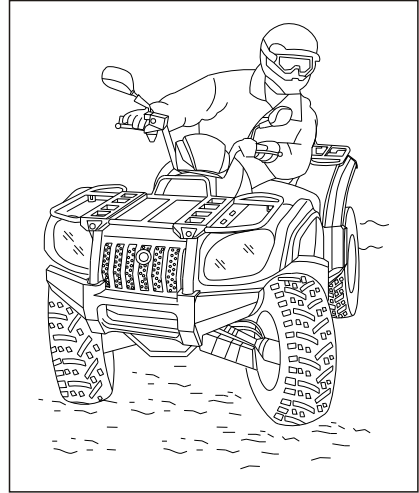
To make a turn, steer in the direction of the turn, leaning your upper body to the inside of the turn while supporting your weight on the outer footrest. This technique alters the balance of traction between the wheels, allowing the turn to be made smoothly. The same leaning technique should be used for turning in reverse.

#### **NOTE:**

Practice making turns at slow speeds before attempting to turn at faster speeds.

#### **⚠ WARNING**

Turning at sharp angles or at excessive speeds can result in vehicle overturn and lead to serious injury. Avoid turning at sharp angles. Never make turns at high speeds.



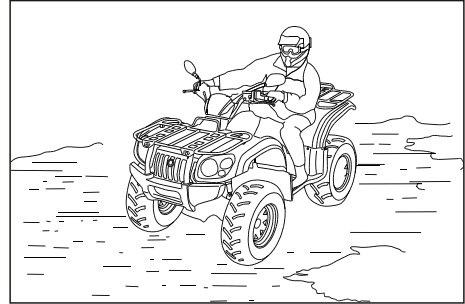
# OPERATION

## Driving Safely

### Driving on Slippery Surfaces

Whenever riding on slippery surfaces such as wet trails or loose gravel, or during freezing weather, follow these precautions:

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. Driving with AWD engaged can assist in controlling the vehicle in slippery areas.



### CAUTION

Severe damage to drive train may occur if the AWD is engaged while the wheels are spinning.

Always engage AWD when the wheels have traction or are at rest.

### ⚠ WARNING

Failure to exercise care when operating on slippery surfaces can result in loss of tire traction and cause loss of control, accident, and serious injury or death.

Never apply the brakes during a skid.

Do not operate on excessively slippery surfaces. Always reduce speed and use additional caution.

# OPERATION

## Driving Safely

### Driving Uphill

Whenever traveling uphill, follow these precautions:

1. Always travel straight uphill.
2. Avoid steep hills (25° maximum).
3. Keep both feet on the footrests.
4. Shift your weight forward.
5. Proceed at a steady rate of speed and throttle opening.
6. Remain alert and be prepared to take emergency action. This may include quick dismounting of the vehicle.

*If all forward speed is lost:*

Keep your weight uphill.

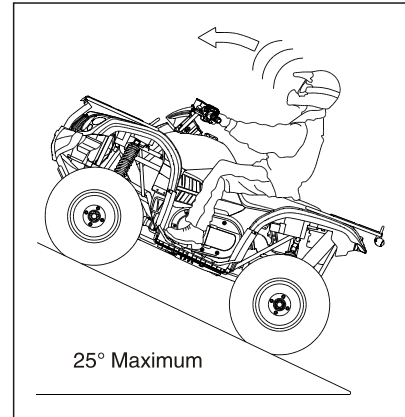
Apply the front brake. When fully stopped, apply rear brake as well, then shift gear selector into park position.

*If the ATV begins rolling backwards:*

Keep your weight uphill. Never apply engine power. Never apply the rear brake while rolling backwards.

Apply the front brake. When fully stopped, apply the rear brake as well, and then shift gear selector into park position.

Dismount on uphill side, or to either side if ATV is pointed straight uphill. Turn the ATV around and remount, following the procedure described on page 73.





# OPERATION

## Driving Safely

### Driving Uphill

#### **⚠ WARNING**

Braking and handling are greatly affected when operating in hilly terrain. Improper procedure could cause loss of control or overturn and result in serious injury or death.

Avoid climbing steep hills (25° maximum).

Use extreme caution when operating on hills, and follow proper operating procedures outlined in the owner's manual.

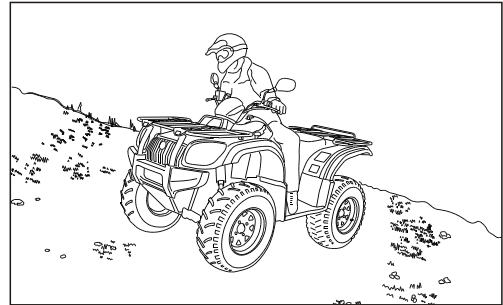
### Sidehilling

#### **⚠ WARNING**

Improperly crossing hills or turning on hills can result in loss of control or vehicle overturn, resulting in severe injury or death. Avoid crossing the side of a hill when possible. Follow proper procedures as outlined in the owner's manual.

Sidehilling can be a dangerous type of driving and should be avoided if at all possible. If you do enter into a situation where sidehilling is necessary, follow these precautions:

1. Slow down.



# OPERATION

## Driving Safely

### Sidehilling

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.

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

### Driving Downhill

Whenever descending a hill, follow these precautions:

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

Familiarize yourself with operation of the auxiliary rear brake lever.

### **⚠ WARNING**

Excessive speed can cause loss of control and lead to serious injury or death. Always operate slowly when traveling downhill.



# OPERATION

## Driving Safely

### Turning Around on a Hill

#### **⚠ WARNING**

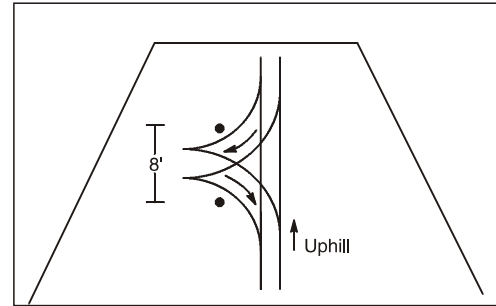
Improper hill climbing procedures could cause loss of control or overturn and result in serious injury or death.

Avoid climbing steep hills (25° maximum).

Use extreme caution when operating on hills, and follow proper operating procedures outlined in the owner's manual.

If the vehicle stalls while climbing a hill, never back it down the hill! One maneuver that can be used when it's necessary to turn around while climbing a hill is the K-turn:

1. Stop and shift the gear selector lever to the parking position while keeping body weight uphill.
2. Shut off the engine.
3. Dismount on the uphill side of the vehicle, or on the left if the vehicle is pointing straight uphill.
4. Staying uphill of the vehicle, turn the handlebars full left.
5. While holding the brake lever, shift the gear selector lever to the low gear position and slowly allow the vehicle to roll around to your right until it's pointing across the hill or slightly downward.
6. Shift the gear selector lever to the parking position and remount the vehicle from the uphill side, keeping body weight uphill.



# OPERATION

## Driving Safely

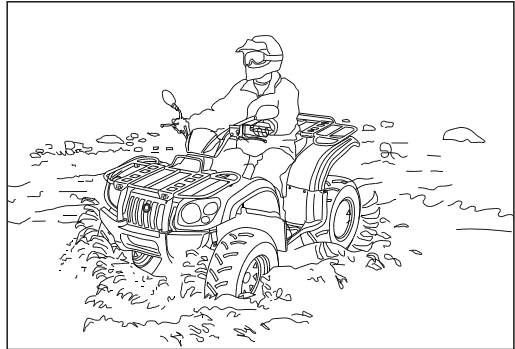
### Turning Around on a Hill

7. Restart the engine, while holding the brake lever, shift the gear selector lever to low gear position.
8. Release the brake and proceed slowly, controlling speed with the brake, until the vehicle is on more level ground.

### Driving Through Water

Your ATV can operate through water with a maximum recommended depth equal to the bottom of the footrests .  
Follow these procedures when operating through water:

1. Determine water depths and current before crossing.
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.



# OPERATION

## Driving Safely

### Driving Through Water

**NOTE:** Avoid operating the vehicle through deep or fast-flowing water. If you cannot avoid water that exceeds the recommended maximum depth, go slowly, balance your weight carefully, avoid sudden movements, and maintain a slow and steady forward motion. Do not make sudden turns or stops, and do not make sudden throttle changes.

After running the vehicle in water, it's critical to have it serviced as outlined in the maintenance chart. See page 120. The following areas need special attention: engine oil, transmission oil, front and rear gear cases and all grease fittings.

**NOTE:** If water has been ingested into the CVT, follow the procedure on page 104 for drying out the CVT.

If your vehicle becomes immersed, and it's impossible to take it to your dealer before starting it, follow the steps described on page 120. Have the vehicle serviced by your dealer promptly.

### **⚠ WARNING**

Major engine damage can result if the vehicle is not thoroughly inspected after operation in water. Perform the services outlined in the maintenance chart.

If your vehicle becomes immersed or is operated in water that exceeds the footrest level, take it to your dealer for service before starting the engine.

# OPERATION

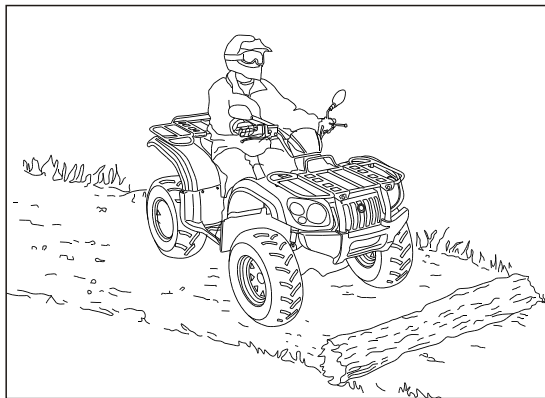
## Driving Safely

### Driving Over Obstacles

Be alert! Look ahead and learn to read the terrain. Be constantly alert for hazards such as logs, rocks and low hanging branches.

### **▲ WARNING**

Severe injury or death can result if your vehicle comes in contact with a hidden obstacle. Not all obstacles are immediately visible. Travel with caution in unfamiliar terrain.



# OPERATION

## Driving Safely

### Driving in Reverse

Follow these precautions when operating in reverse:

1. Always avoid backing downhill.
2. 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.

### **⚠ WARNING**

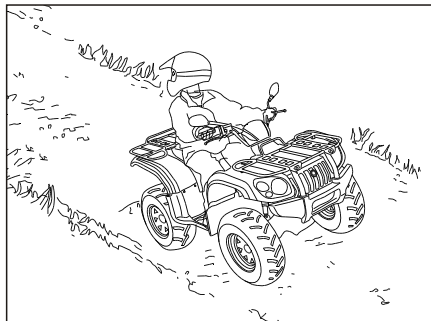
Failure to use caution when operating in reverse can result in serious injury or death. Before shifting into reverse, always check for obstacles or people behind the vehicle. When it's safe to proceed, back slowly.

Do not use the override switch unless additional power is required for vehicle movement. Use with caution. Avoid backing on inclines, and avoid turning at sharp angles.

**NOTE:** Your ATV is equipped with a reverse speed limiter. The override button should be used with caution as rearward vehicle speed is greatly increased. Do not operate at wide open throttle. Open the throttle just enough to maintain a desired speed.

### **CAUTION**

Excessive throttle operation while in the speed limit mode may cause fuel to build in the exhaust, resulting in engine popping and/or engine damage.



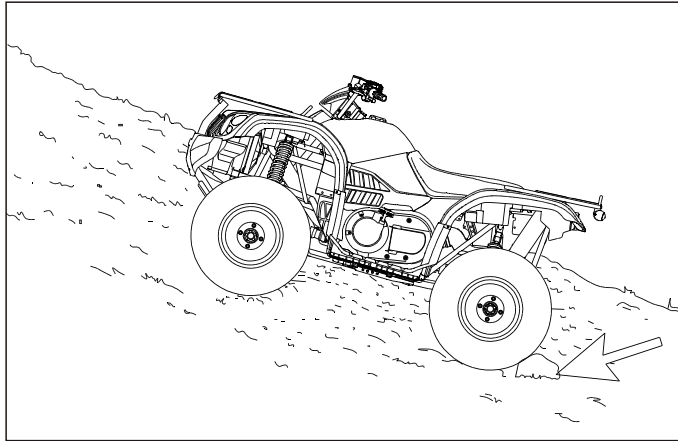
# OPERATION

## Driving Safely

### Parking on an Incline

Avoid parking on an incline if possible. If it's unavoidable, follow these precautions:

1. Turn the engine off.
2. Place the gear selector to parking position.
3. Always block the rear wheels on the downhill side as illustrated.





# OPERATION

## Driving Safely

### TURNING YOUR ATV

To achieve maximum traction while riding in 2WD or 4WD, the two rear wheels are mounted solidly on one axle and turn together at the same speed. Furthermore, when riding in 4WD-LOCK ( “DIFF. LOCK” ), the front wheels also turn together at the same speed. Therefore, unless the wheel on the inside of the turn is allowed to slip or lose some traction, the ATV will resist turning. A special turning technique must be used to allow the ATV to make turns quickly and easily. It is essential that this skill be learned first at low speed.

### **⚠ WARNING**

Always follow proper procedures for turning as described in this Owner's Manual. Practice turning at low speeds before attempting to turn at faster speeds. Do not turn at speeds too fast for your skills or the conditions. Operate at a slow speed and allow extra time and distance for maneuvers when in 4WD- LOCK ( “DIFF. LOCK” ).

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

# OPERATION

## Driving Safely

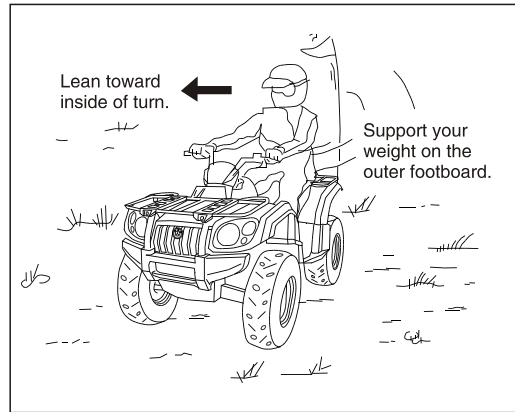
### TURNING YOUR ATV

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

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

Improper riding procedures such as abrupt throttle changes, excessive braking, incorrect body movements, or too much speed for the sharpness of the turn may cause the ATV to tip. If the ATV begins to tip over to the outside while negotiating a turn, lean more to the inside. It may also be necessary to gradually let off on the throttle and steer to the outside of the turn to avoid tipping over.

Remember: Avoid higher speeds until you are thoroughly familiar with the operation of your ATV.



# MAINTENANCE AND LUBRICATION

## Accessories

Auxiliary power outlets provide 12V power for operating accessories such as hand held spot lights. See your dealer.

## Periodic Maintenance Chart

Careful periodic maintenance will help keep your vehicle in the safest, most reliable condition.

Inspection, adjustment and lubrication of important components are explained in the periodic maintenance chart.

Inspect, clean, lubricate, adjust and replace parts as necessary. When inspection reveals the need for replacement parts, use genuine parts available from your dealer.

**NOTE:** Service and adjustments are critical. If you're not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

Maintenance intervals in the following chart are based upon average riding conditions and an average vehicle speed of approximately 10 miles per hour. Vehicles subjected to severe use must be inspected and serviced more frequently.

# MAINTENANCE AND LUBRICATION

## Severe Use Definition

- Frequent immersion in mud, water or sand
- Racing or race-style high RPM use
- Prolonged low speed, heavy load operation
- Extended idle
- Short trip cold weather operation

Pay special attention to the oil level. A rise in oil level during cold weather can indicate contaminants collecting in the oil sump or crankcase. Change oil immediately if the oil level begins to rise. Monitor the oil level, and if it continues to rise, discontinue use and determine the cause or see your dealer.

## Maintenance Chart Key

- ▶ Perform these procedures more often for vehicles subjected to severe use.
- Have an authorized dealer perform these services.

Improperly performing the procedures marked with a “ ■ ” could result in component failure and lead to serious injury or death. Have an authorized dealer perform these services.

# MAINTENANCE AND LUBRICATION

## Periodic Maintenance Chart

Perform all services at whichever maintenance interval is reached first.

Item		Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Miles(km)	
■	Steering		Pre-Ride		Make adjustments as needed. See Pre-Ride Checklist on page 58.
▶	Front suspension		Pre-Ride		
▶	Rear suspension		Pre-Ride		
	Tires		Pre-Ride		
▶	Brake fluid level		Pre-Ride		
▶	Brake lever/pedal travel		Pre-Ride		
	Brake systems		Pre-Ride		
	Wheels/fasteners		Pre-Ride		
	Frame fasteners		Pre-Ride		
▶	Engine oil level		Pre-Ride		
▶	Air filter, pre-filter		Daily		Inspect; clean often
▶	Air box sediment tube		Daily		Drain deposits when visible

# MAINTENANCE AND LUBRICATION

## Periodic Maintenance Chart

	Coolant		Daily		Check level daily, change coolant every 2 years
	Headlamp/tail lamp		Daily		Check operation; apply dielectric grease if replacing
▶	Air filter, main element		Weekly		Inspect; replace as needed
	Recoil housing		Weekly		Drain water as needed, check often if operating in wet conditions
▶	Brake pad wear	10H	Monthly	60 (100)	Inspect periodically
	Battery	20H	Monthly	125 (200)	Check terminals; clean; test
▶	Front gear case oil	25H	Monthly	155 (250)	Inspect level; change yearly
▶	Rear gear case oil	25H	Monthly	155 (250)	Inspect level; change yearly
▶	Transmission oil	25H	Monthly	155 (250)	Inspect level; change yearly
▶	Engine oil change (break-in)	25 H	1 M	155 (250)	Perform a break-in oil change at one month
▶	General lubrication	50 H	3 M	310 (500)	Lubricate all fittings, pivots, cables, etc.

# MAINTENANCE AND LUBRICATION

## Periodic Maintenance Chart

	Shift Linkage	28H	1 M	310 (500)	Inspect, lubricate, adjust
■	Steering	50H	3 M	310 (500)	Lubricate
▶	Front suspension	50H	6 M	310 (500)	Lubricate
▶	Rear suspension	50H	6 M	310 (500)	Lubricate
	Carburetor float bowl	50H	6 M	310 (500)	Drain bowl periodically and prior to storage
■	Throttle Cable/ ETC Switch	50H	6 M	310 (500)	Inspect; adjust; lubricate;replace if necessary
■	Choke cable	50H	6 M	310 (500)	Inspect; adjust; lubricate;replace if necessary
	Carburetor air intake ducts/ flange	50 H	6 M	310 (500)	Inspect ducts for proper sealing/air leaks
	Drive belt	50H	6 M	310 (500)	Inspect; adjust; replace as needed
	Cooling system	50H	6 M	310 (500)	Inspect coolant strength seasonally; pressure test system yearly
▶	Engine oil change	100H	6 M	620 (1000)	Perform a break-in oil change at 25 hours/one month

# MAINTENANCE AND LUBRICATION

## Periodic Maintenance Chart

■	Oil filter change	100H	6 M	620 (1000)	Replace with oil change
▶	Oil tank vent hose	100H	12 M	620 (1000)	Inspect routing, condition
▶	Valve clearance	100H	12 M	620 (1000)	Inspect; adjust
■	Fuel system	100H	12 M	620 (1000)	Check for leaks at tank cap, lines, fuel valve, filter, carburetor; replace lines every two years
■	Fuel filter	100H	12 M	620 (1000)	Replace yearly
▶	Radiator	100H	12 M	620 (1000)	Inspect; clean external surfaces
▶	Cooling hoses	100H	12 M	620 (1000)	Inspect for leaks
▶	Engine mounts	100H	12 M	620 (1000)	Inspect
	Exhaust muffler/pipe	100H	12 M	620 (1000)	Inspect
■	Spark plug	100H	12 M	620 (1000)	Inspect; replace as needed
■	Ignition Timing	100H	12 M	620 (1000)	Inspect
▶	Wiring	100H	12 M	620 (1000)	Inspect for wear, routing, security; apply dielectric grease to connectors subjected to water, mud, etc.



# MAINTENANCE AND LUBRICATION

## Periodic Maintenance Chart

■	Clutches (drive and driven)	100H	12 M	620 (1000)	Inspect; clean; replace worn parts
■	Wheel bearings	100 H	12 M	1000 (1600)	Inspect; replace as needed
■	Brake fluid	200 H	24 M	1240 (2000)	Change every two years
	Spark arrestor	300 H	36 M	1860 (3000)	Clean out
	Idle speed				Adjust as needed
■	Toe adjustment				Inspect periodically; adjust when parts are replaced
▶ ■	Auxiliary brake				Inspect daily; adjust as needed
	Headlight aim				Adjust as needed

# MAINTENANCE AND LUBRICATION

## Lubrication Recommendations

Check and lubricate all components at the intervals outlined in the Periodic Maintenance Chart beginning on page 83. Items not listed in the chart should be lubricated at the General Lubrication interval.

## Lubrication Chart Key

- ▶ More often under severe use, such as wet or dusty conditions
- ★ All Season Grease
- Use U-Joint Lube every 500 miles, before long periods of storage, or after pressure washing or submerging

Item	Lube	Method
Engine	SAE15W-40/SF	Add to proper level on dip- stick.
Brakes	DOT3 or DOT4 fluid	Maintain level between fill lines. See page 42.
Front Gear case	SAE15W/40 SF or SAE80W/90 GL-4	See Page 93.
Rear Gear case	SAE15W/40 SF or SAE80W/90 GL-4	See page 92.
Ball Joint	Grease	Locate fitting on back side of struts and grease with grease gun.

# MAINTENANCE AND LUBRICATION

## Lubrication Recommendations

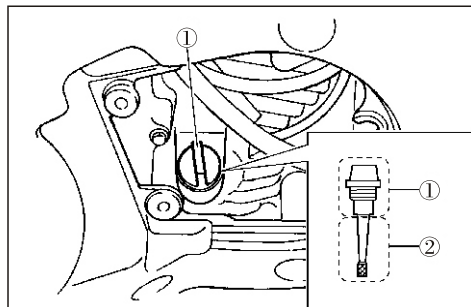
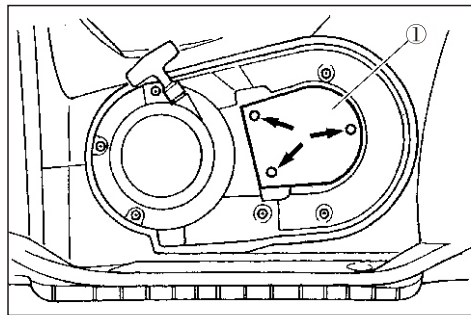
### Engine Oil

Always check and change the engine oil at the intervals outlined in the Periodic Maintenance Chart beginning on page 83. Always change the oil filter whenever changing oil.

### Engine Oil Check

1. Pull outward on the areas shown ①.
2. Position the ATV on a level surface.
3. Start the engine and let it idle for 20-30 seconds. Stop the engine.
4. Wait a few minutes until the oil settles.
5. Remove the engine oil filler cap ① and wipe off the dipstick ② with a clean rag.
6. Insert the dipstick in the oil filler hole and screwing it in, then remove it again to check the oil level.

**NOTE:** The engine oil should be between the upper and lower limit marks.



# MAINTENANCE AND LUBRICATION

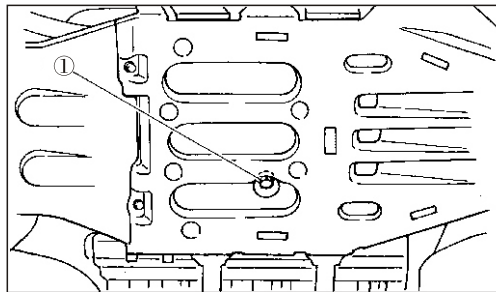
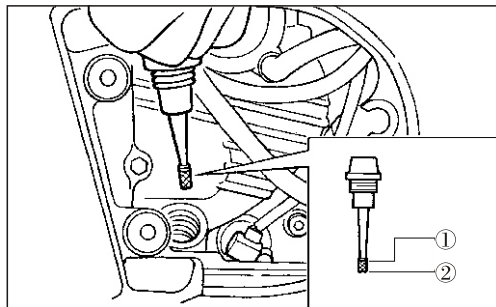
## Engine Oil Check

7. If the engine oil is at or below the lower limit mark, add sufficient oil of the recommended type to raise it to the correct level.
8. Insert the dipstick into the oil filler hole, and then tighten the oil filler cap.
9. Install the panel.

## To change the engine oil

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

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



# MAINTENANCE AND LUBRICATION

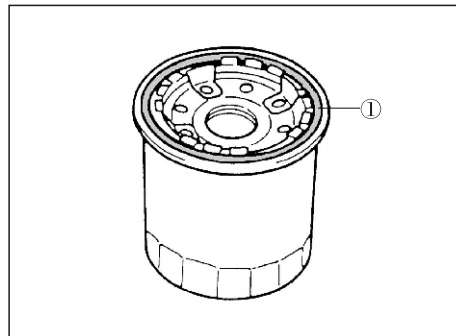
## To change the engine oil

7. Apply a light coat of engine oil to the O-ring① of the new oil filter cartridge.

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

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

**NOTE:** Oil filter cartridge tightening torque: 17 N · m (1.7 m · kgf, 12 ft · lbf)



10. Install the engine oil drain bolt, and then tighten it to the specified torque.

**NOTE:** Engine oil drain bolt tightening torque: 30 N · m (3.0 m · kgf, 22 ft · lbf)

11. Add the specified amount of recommended engine oil, and then install the engine oil filler cap and tighten it.

**NOTE:** Without oil filter cartridge replacement oil quantity: 1.8 L (1.58 Imp qt, 1.90 US qt)

With oil filter cartridge replacement oil quantity: 1.9 L (1.67 Imp qt, 2.01 US qt)

12. Start the engine and warm it up for several minutes. While warming up, check for oil leakage. If oil leakage is found, turn the engine off immediately and check for the cause.

13. Turn the engine off, and then check the oil level and correct it if necessary.

# MAINTENANCE AND LUBRICATION

## Rear gear case oil

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

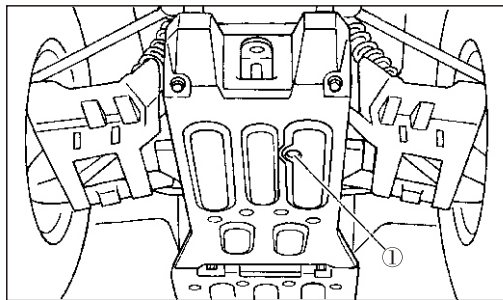
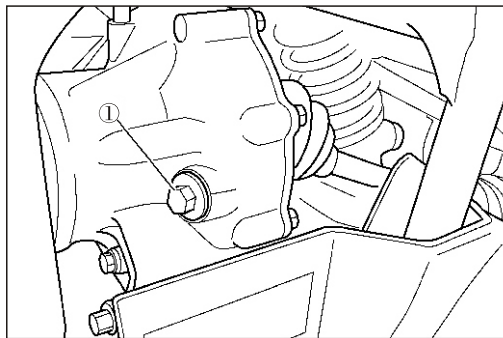
## Rear gear case oil replacement

1. Place the machine on a level place.
2. Place a container under the rear gear case to collect the used oil.
3. Remove the oil filler bolt and the drain bolt to drain the oil.
4. Install the drain bolt and tighten it to the specified torque.

**NOTE:** Drain bolt (rear gear case) tightening torque: 23  
N · m (2.3 m · kgf, 16 ft · lbf)

5. Fill the rear gear case with oil.

**NOTE:** Periodic oil change oil quantity:  
0.25 L (0.22 Imp qt, 0.26 US qt)  
Total amount oil quantity:  
0.30 L (0.26 Imp qt, 0.32 US qt)



# MAINTENANCE AND LUBRICATION

## Rear gear case oil replacement

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

**NOTE:** Filler bolt (rear gear case) tightening torque: 23 N · m (2.3 m · kgf, 16 ft · lbf)

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

**NOTE:** Be sure no foreign material enters the rear gear case.

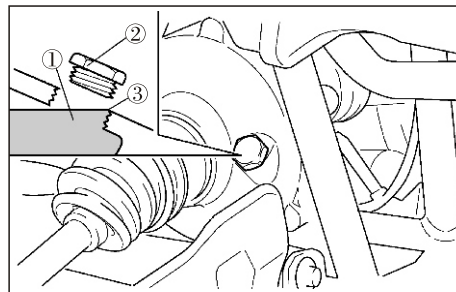
## Front gear case oil measurement

1. Place the machine on a level place.

2. Remove the oil filler bolt and check the oil level. It should be up to the brim of the hole. If the level is low, add sufficient oil to raise it to the specified level.

3. Install the oil filler bolt and tighten it to the specified torque.

**NOTE:** Oil filler bolt tightening torque: 2 · 3 Nm (2.3 m · kgf, 16 ft · lbf)



## Front gear case oil replacement

1. Place the machine on a level place.

2. Place a container under the front gear case to catch the oil.

3. Remove the filler bolt and drain bolt to drain the oil.

# MAINTENANCE AND LUBRICATION

## Front gear case oil replacement

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

**NOTE:** Drain bolt tightening torque:

10 N · m (1.0 m · kgf, 7.2 ft · lbf)

5. Fill the front gear case with oil.

**NOTE:** Periodic oil change oil quantity:

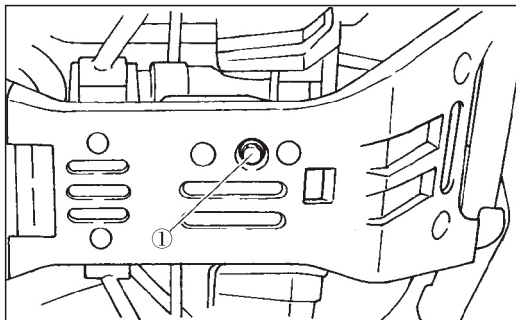
0.28 L (0.25 Imp qt, 0.3 US qt)

Total amount oil quantity:

0.33 L (0.29 Imp qt, 0.35 US qt)

6. Install the filler bolt and tighten it to the specified torque.
7. Check for oil leakage. If oil leakage is found, check for the cause.

**NOTE:** Be sure no foreign material enters the front gear case.



## Cooling system

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

**NOTE:** The coolant should be between the upper and lower limit marks.



# MAINTENANCE AND LUBRICATION

## Cooling system

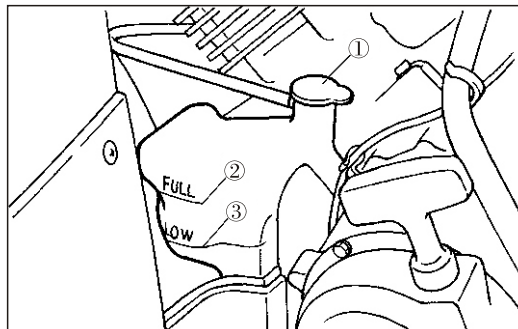
3. If the coolant is at or below the lower limit mark, remove the reservoir cap, add coolant to the upper limit mark, install the reservoir cap, and then install the panel.

**NOTE:** Coolant reservoir capacity(up to the upper limit mark):0.3 L (0.26 Imp qt, 0.32 US qt)

### CAUTION

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

**NOTE:** If water is added, have your dealer check the antifreeze content of the coolant as soon as possible. The radiator fan operation is completely automatic. It is switched on or off according to the coolant temperature in the radiator.



## Changing the coolant

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

# MAINTENANCE AND LUBRICATION

## Changing the coolant

5. Disconnect the hose on the coolant reservoir side, and then drain the coolant from the coolant reservoir.
6. After draining the coolant, thoroughly flush the cooling system with clean tap water.
7. Replace the coolant drain bolt washer if it is damaged, and then tighten the coolant drain bolt to the specified torque.

**NOTE:** Coolant drain bolt tightening torque:

10 N · m (1.0 m · kgf, 7 ft · lbf)

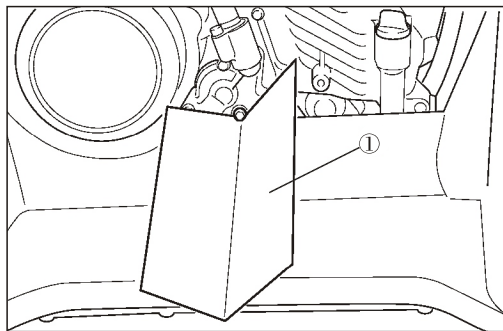
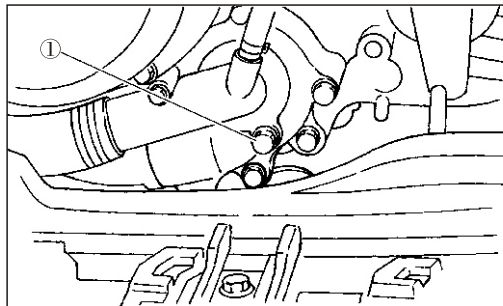
10. Install the coolant reservoir hose.
11. Fill the recommended coolant into the radiator until it is full.

**NOTE:** Recommended antifreeze:

High quality ethylene glycol antifreeze containing corrosion inhibitors for aluminum engines.

Antifreeze and water mixing ratio:1:1

Total amount:1.9 L (1.67 Imp qt, 2.00 US qt)



# MAINTENANCE AND LUBRICATION

## Changing the coolant

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

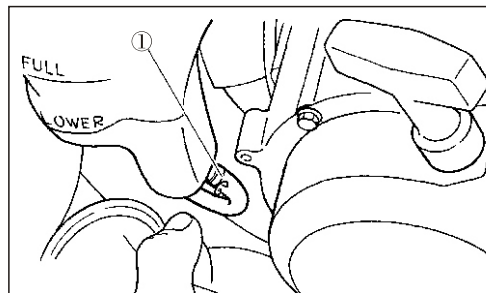
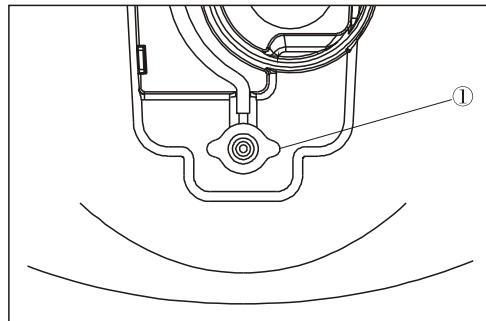
### CAUTION

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

12. Install the radiator cap.
13. Start the engine and let it idle for several minutes. Stop the engine, and then check the coolant level in the radiator. If it is low, add more coolant until it reaches the top of the radiator.
14. Fill the coolant reservoir with coolant up to the upper limit.
15. Install the coolant reservoir cap and check for coolant leakage.

**NOTE:** If any leakage is found, have your dealer check the cooling system.

16. Install the panels and the front rack.

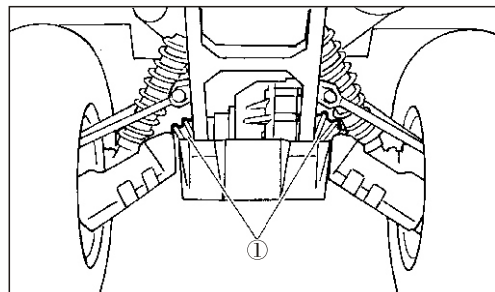
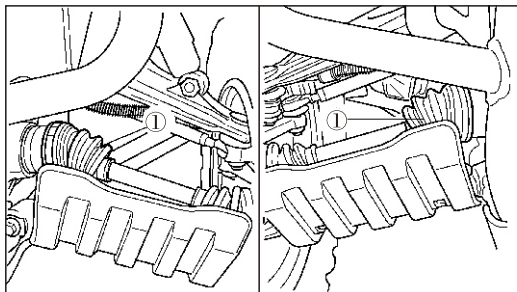


# MAINTENANCE AND LUBRICATION

## Axle boots

Check the protective boots for holes or tears.

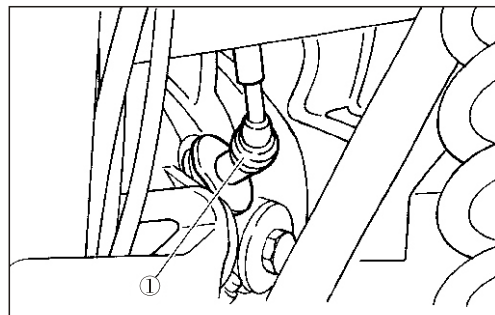
If any damage is found, have them replaced by your dealer.



## Spark plug inspection

Removal

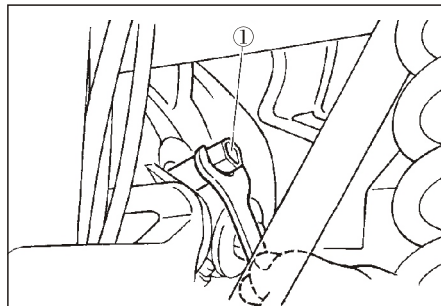
1. Remove panel.
2. Remove the spark plug cap.
3. Use the spark plug wrench in the tool kit to remove the spark plug as shown.



# MAINTENANCE AND LUBRICATION

## Inspection

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



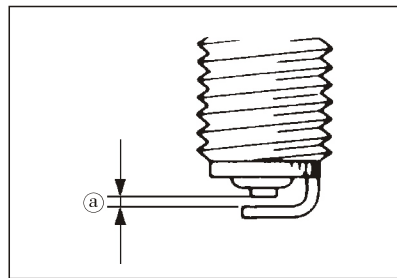
**NOTE:** Specified spark plug: DPR7EA-9 (NGK)

## Installation

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

**NOTE:** Spark plug gap: 0.8—0.9 mm (0.031—0.035 in)

2. Clean the gasket surface. Wipe off any grime from the threads.



# MAINTENANCE AND LUBRICATION

## Installation

3. Install the spark plug and tighten it to the specified torque.

**NOTE:** Spark plug tightening torque: 17.5 N · m (1.75 m · kgf, 12.5 ft · lbf)

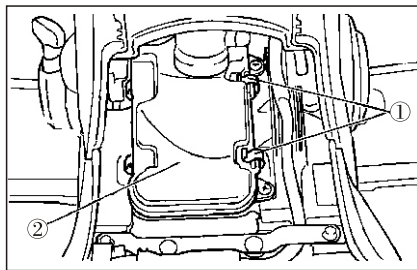
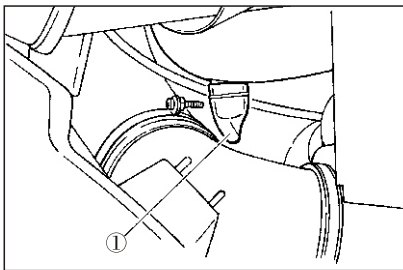
If a torque wrench is not available when you are installing a spark plug, a good estimate of the correct torque is 1/4 to 1/2 turn past finger tight. Have the spark plug tightened to the specified torque as soon as possible.

4. Install the spark plug cap.

5. Install the panel.

## Air filter element cleaning

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



# MAINTENANCE AND LUBRICATION

## Air filter element cleaning

1. Remove the seat.
2. Remove the air filter case cover by unhooking the holders.
3. Remove the air filter element.
4. Remove the air filter element from its frame.
5. Wash the air filter element gently but thoroughly in solvent.
6. Squeeze the excess solvent out of the air filter element and let it dry.

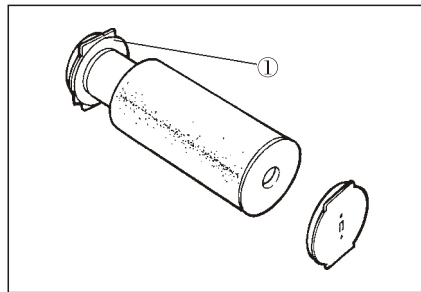
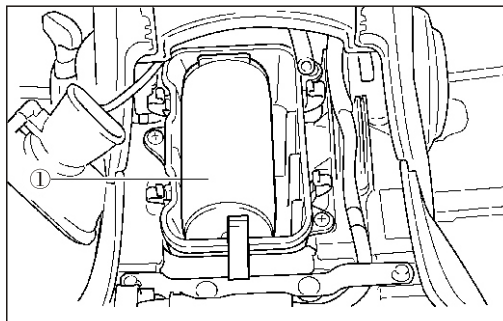
### CAUTION

Do not twist the air filter element when squeezing it.

7. Inspect the air filter element and replace it if damaged.
8. Apply foam air filter oil or other quality foam air filter oil to the air filter element. If foam air filter oil is not available, engine oil may be used.

**NOTE:** The air filter element should be wet but not dripping.

9. Pull the air filter element over its frame.
10. Install the air filter element.
11. Install the air filter case cover and be sure to connect the hose.



# MAINTENANCE AND LUBRICATION

## Air filter element cleaning

12. Install the seat.

**NOTE:** The air filter element should be cleaned every 20—40 hours. It should be cleaned and lubricated more often if the machine is operated in extremely dusty areas. Each time air filter element maintenance is performed, check the air inlet to the air filter case for obstructions. Check the air filter element rubber joint to the carburetor and manifold fittings for an airtight seal. Tighten all fittings securely to avoid the possibility of unfiltered air entering the engine.

### CAUTION

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

## Spark arrester cleaning

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

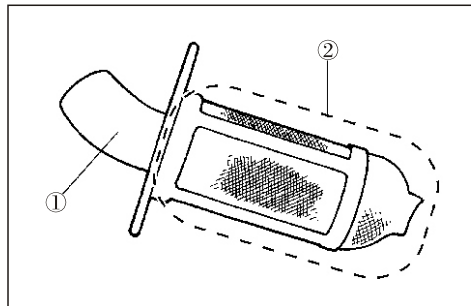
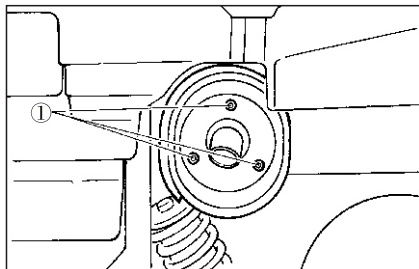
1. Remove the bolts.
2. Remove the tailpipe by pulling it out of the muffler.
3. Tap the tailpipe lightly, and then use a wire brush to remove any carbon deposits from the spark arrester portion of the tailpipe.



# MAINTENANCE AND LUBRICATION

## Spark arrester cleaning

4. Insert the tailpipe into the muffler and align the bolt holes.
5. Install and tighten the bolts.

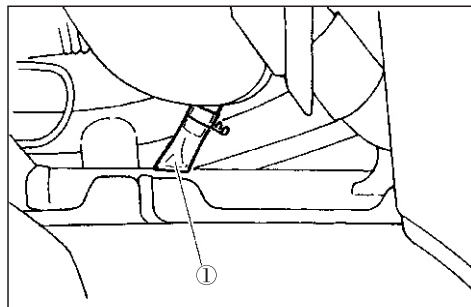


## **▲ WARNING**

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

## V-belt cooling duct check hose

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

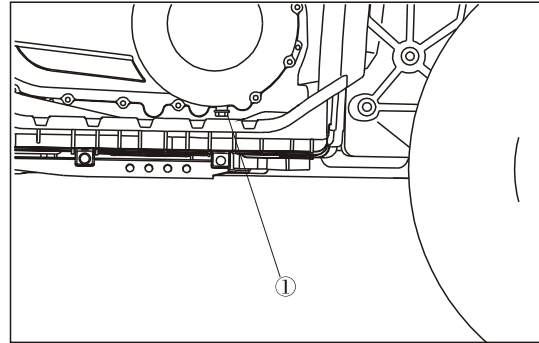


# MAINTENANCE AND LUBRICATION

## V-belt case drain bolt

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

**NOTE:** If water drains from the V-belt case after removing the bolt, have your dealer inspect the ATV as the water may affect other engine parts.



## Carburetor adjustment

The carburetor is a vital part of the engine and requires very sophisticated adjustment. Most adjusting should be left to your dealer who has the professional knowledge and experience to do so. However, the idling speed may be performed by the owner as a part of the usual maintenance routine.

## CAUTION

The carburetor was set at the factory after many tests. If the settings are disturbed by someone without sufficient technical knowledge, poor engine performance and damage may result.

# MAINTENANCE AND LUBRICATION

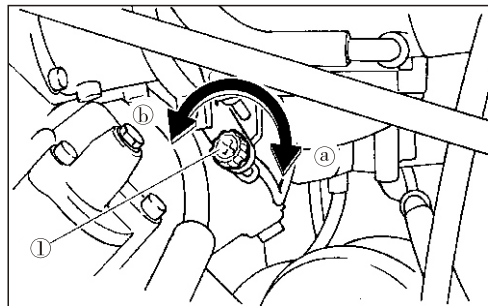
## Idle speed adjustment

**NOTE:** A diagnostic tachometer must be used for this procedure.

1. Start the engine and warm it up for a few minutes at approximately 1,000 to 2,000r/min. Occasionally rev the engine to 4,000 to 5,000 r/min. The engine is warm when it quickly responds to the throttle.
2. Remove panel.
3. Connect the tachometer to the spark plug lead, and then set the idle to the specified idling speed by adjusting the throttle stop screw. Turn the screw in direction (a) to increase the engine speed, and in direction (b) to decrease the engine speed.

**NOTE:** Specified idle speed:1,200—1,400 r/min

4. Install the panel.



## Valve clearance adjustment

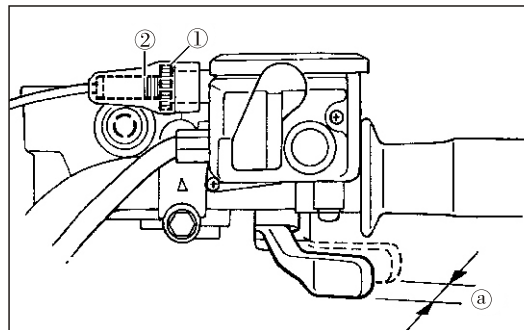
The correct valve clearance changes with use, resulting in improper fuel/air supply or engine noise. To prevent this, the valve clearance must be adjusted regularly. This adjustment however, should be left to a professional service technician.

# MAINTENANCE AND LUBRICATION

## Throttle lever adjustment

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

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

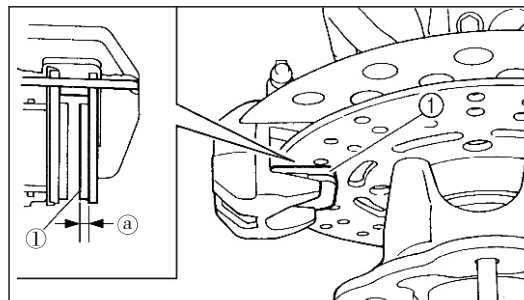


## Front brake pad check

Check the brake pads for damage and wear.

If a brake pad thickness is less than 2 mm (0.08 in), have your dealer replace the pads as a set.

**NOTE:** The wheels need to be removed to check the brake pads.



# MAINTENANCE AND LUBRICATION

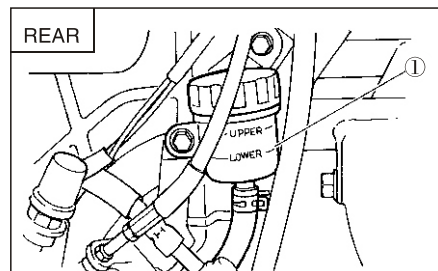
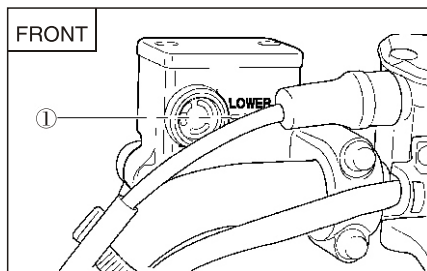
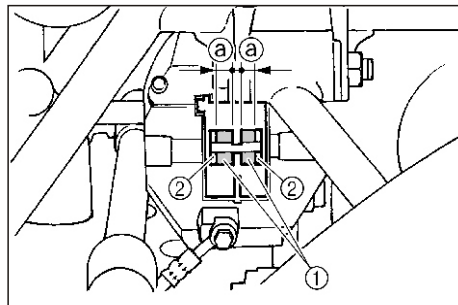
## Rear brake pad inspection

Inspect the brake pads for damage and wear.

If the thickness is less than 4 mm(0.16 in), have your dealer replace the pads.

## Inspecting the brake fluid level

Insufficient brake fluid may let air enter the brake system, possibly causing the brakes to become ineffective. Before riding, check that the brake fluid is above the lower level and replenish when necessary. The front brake fluid master cylinder reservoir is located the right of the handlebar. The rear brake fluid master cylinder reservoir is near the rear brake pedal.



# MAINTENANCE AND LUBRICATION

## Inspecting the brake fluid level

Observe these precautions:

1. When checking the fluid level, make sure the top of the master cylinder reservoir is level by turning the handlebars.
2. Use only the designated quality brake fluid. Otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.

**NOTE:** Recommended brake fluid: DOT3 or DOT 4.

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

# MAINTENANCE AND LUBRICATION

## Brake fluid replacement

Complete fluid replacement should be done only by trained service personnel. Have your dealer replace the following components during periodic maintenance or when they are damaged or leaking.

- Replace the oil seals every two years.
- Replace the brake hoses every four years.

## Front brake lever free play

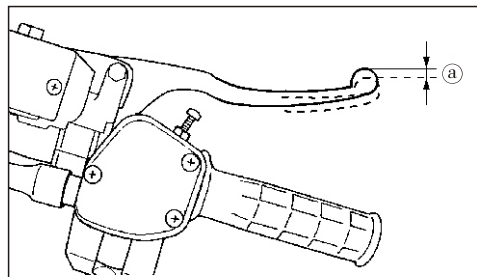
The front brake lever should have a free play of zero mm (zero in) at the lever end. If not, have your dealer check the brake system.

## **▲ WARNING**

After servicing:

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

Replacement of brake components requires professional knowledge. These procedures should be performed by your dealer.



# MAINTENANCE AND LUBRICATION

## Rear brake lever and pedal adjustment

### Rear brake lever free play adjustment

The rear brake lever free play  $\textcircled{c}$  should be 0.5—2 mm (0.02—0.08 in).

1. Loosen the locknut $\textcircled{1}$ .
2. Turn the adjusting bolt $\textcircled{2}$  in direction  $\textcircled{a}$  to increase free play, and in direction  $\textcircled{b}$  to decrease free play.
3. Tighten the locknut $\textcircled{1}$ .

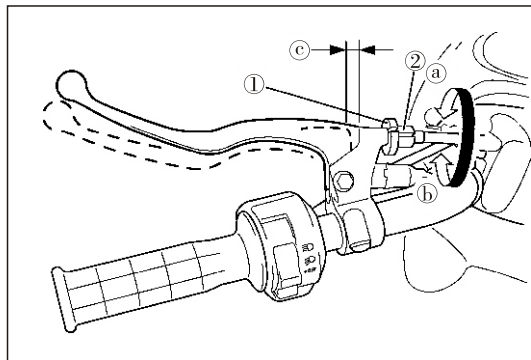
If correct free play cannot be obtained, ask your dealer to make that adjustment.

**NOTE:** When adjusting the rear brake lever free play:

- Be sure not to step on the brake pedal.
- Make sure the brake pedal does not move.

### Rear brake pedal height adjustment

**NOTE:** Adjust the rear brake before inspecting the rear brake pads.





# MAINTENANCE AND LUBRICATION

## Rear brake pedal height adjustment

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

### **▲ WARNING**

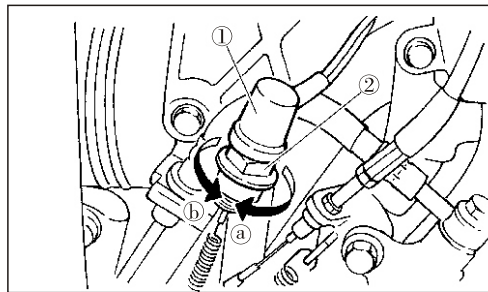
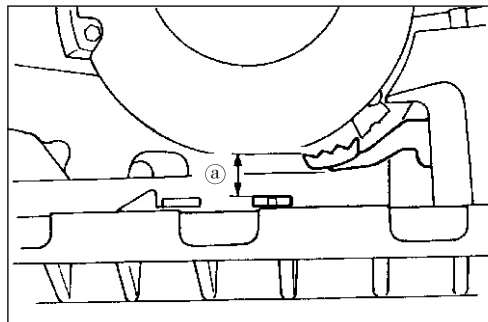
After servicing:

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

Replacement of brake components requires professional knowledge. These procedures should be performed by your dealer.

## Adjusting the rear brake light switch

The rear brake light switch, which is activated by the brake pedal and brake levers, is properly adjusted when the brake light comes on just before braking takes effect. If necessary, adjust the brake light switch as follows.



# MAINTENANCE AND LUBRICATION

## Adjusting the rear brake light switch

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

## Cable inspection and lubrication

### ▲ WARNING

Inspect cables frequently. Replace damaged cables.

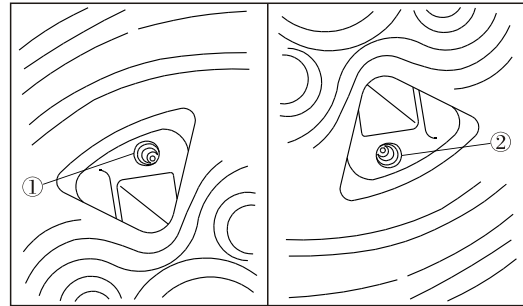
Lubricate the inner cables and the cable ends. If the cables do not operate smoothly, ask your dealer to replace them.

**NOTE:** Recommended lubricant: SAE 10W30 motor oil

## Rear knuckle upper and lower pivot lubrication

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

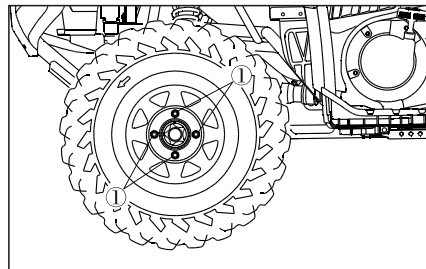
**NOTE:** Recommended lubricant:  
Lithium-soap-based grease



# MAINTENANCE AND LUBRICATION

## Wheel removal

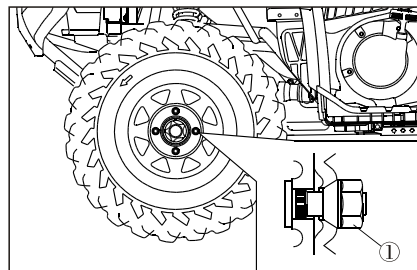
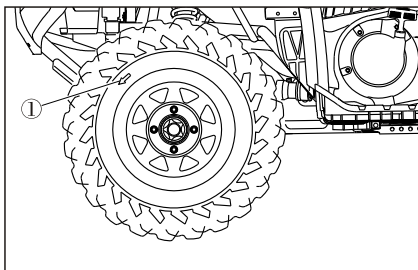
1. Loosen the wheel nuts.
2. Elevate the ATV and place a suitable stand under the frame.
3. Remove the nuts from the wheel.
4. Remove the wheel.



## Wheel installation

1. Install the wheel and the nuts.

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



# MAINTENANCE AND LUBRICATION

## Wheel installation

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

**NOTE:** Wheel nut torque: Front: 55 N · m (5.5 m · kgf, 40 ft · lbf). Rear: 55 N · m (5.5 m · kgf, 40 ft · lbf)

## Battery

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

### **CAUTION**

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

### **⚠ WARNING**

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

Antidote:

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

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

# MAINTENANCE AND LUBRICATION

## Battery maintenance

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

### CAUTION

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

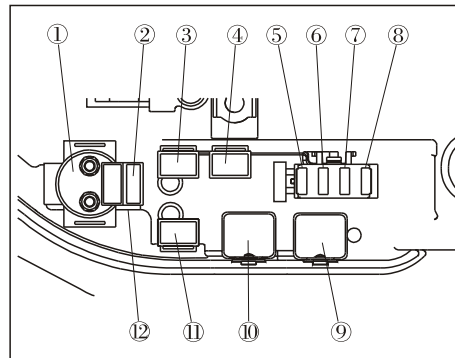
2. Always make sure the connections are correct when putting the battery back in the machine.

## Fuse replacement

1. The main fuse case and the fuse box are located under the seat.
2. If a fuse is blown, turn off the main switch and install a new fuse of the specified amperage. Then turn on the switches. If the fuse immediately blows again, consult your dealer.

### ⚠ WARNING

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



- |                  |                         |
|------------------|-------------------------|
| 1. Start relay   | 2. Main fuse(20A)       |
| 3. 2WD-4WD relay | 4. 4WD-DIFF. Lock relay |
| 5. fuse(10A)     | 6. fuse(15A)            |
| 7. fuse(10A)     | 8. fuse(10A)            |
| 9. Fan relay     | 10. Headlight relay     |

# MAINTENANCE AND LUBRICATION

## Fuse replacement

### CAUTION

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

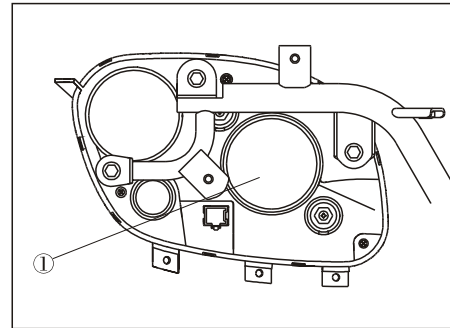
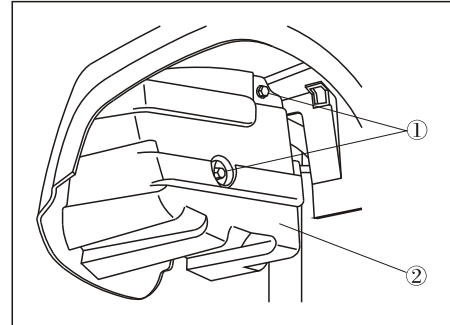
## Replacing a headlight bulb

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

1. Remove the bolts① and pulling headlight cover② off.
2. Remove the rubber cover at the rear of the headlight by pulling it off.
3. Remove the headlight lock spring.
4. Pull headlight bulb out from the headlight bulb holder.

### ▲ WARNING

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



# MAINTENANCE AND LUBRICATION

## Replacing a headlight bulb

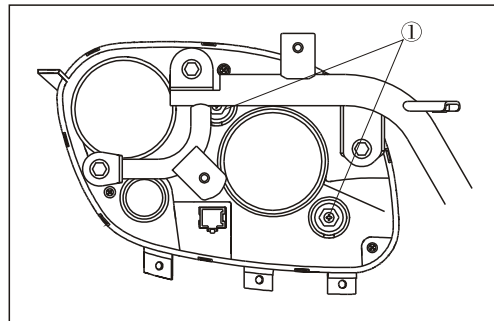
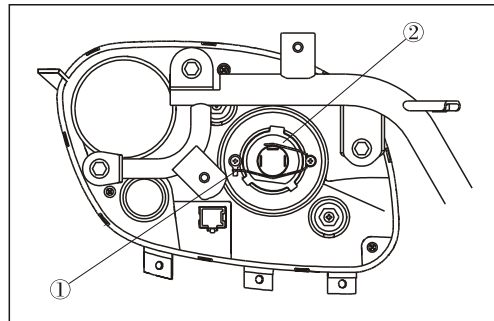
5. Insert a new headlight bulb into the headlight bulb holder, and then lock it by spring.
6. Install the bulb holder by turning it clock-wise.
7. Install the rubber cover at the rear of the headlight.
8. Install the headlight cover with the bolts.

## Headlight beam adjustment

### CAUTION

It is advisable to have your dealer make this adjustment.

Turn the adjusting screws ① can raise or lower the beam.

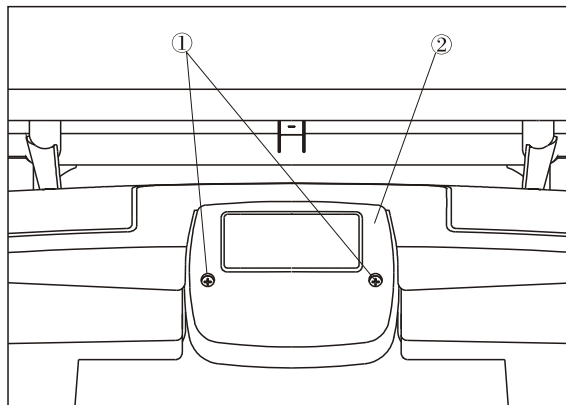


# MAINTENANCE AND LUBRICATION

## Tail/brake light bulb replacement

If the tail/brake light bulb burns out, replace it as follows:

1. Remove the screws①, and then pull tail/brake light cover② out.
2. Remove the tail/brake light bulb by pushing it in and turning it counter-clockwise.
3. Insert a new tail/brake light bulb, push it in, and the turning it clockwise.
4. Install the tail/brake light cover with the screws.





# MAINTENANCE AND LUBRICATION

## Front and rear suspension adjustment

The spring preload can be adjusted to suit the rider's weight and riding conditions.

**NOTE:** When adjusting the rear shock absorbers, the rear wheels need to be removed.

Adjust the spring preload as follows.

To increase the spring preload, turn the adjusting ring in direction (a).

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

**NOTE:** A special wrench can be obtained at a dealer to make this adjustment.

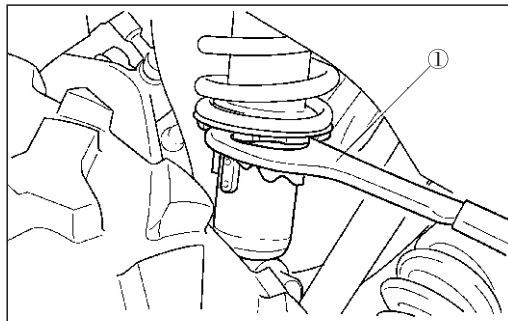
Standard position: B

A- Minimum (soft)

E- Maximum (hard)

## ▲ WARNING

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



# MAINTENANCE AND LUBRICATION

## Vehicle Immersion

### CAUTION

If your vehicle becomes immersed, major engine damage can result if the machine is not thoroughly inspected. Take the vehicle to your dealer before starting the engine.

If it's impossible to take your ATV to a dealer before starting it, follow the steps outlined below.

1. Move the ATV to dry land or at the very least, to water below the footrests.
2. Remove the spark plug.
3. Check the air box and drain if water is present.
4. Loosen the carburetor drain screw.
5. Turn the engine over several times using the electric start.
6. Dry the spark plug and reinstall, or replace it with a new plug.
7. Tighten the carburetor drain screw.
9. Attempt to start the engine. If necessary, repeat the drying procedure.
10. Take the ATV to your dealer for service as soon as possible, whether you succeed in starting it or not.

**NOTE:** If water has been ingested into the CVT, follow the procedure on page 104 for drying out the CVT.

# CLEANING AND STORAGE

## Cleaning the ATV

Keeping your ATV clean will not only improve its appearance but it can also extend the life of various components. With a few precautions, your ATV can be cleaned much like an automobile.

## Washing the ATV

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 mitt, cleaning the upper body first and the lower parts last. Rinse with water frequently and dry with a chamois to prevent water spots.

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

Your ATV does not recommend the use of a high pressure type car wash system for washing the ATV. If a high pressure system is used, exercise extreme care to avoid water damage to the wheel bearings, transmission seals, body panels, brakes and warning labels.

**NOTE:** Grease all zerk fittings immediately after washing, and allow the vehicle to run for a while to evaporate any water that may have entered the engine or exhaust system.

## Waxing the ATV

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. Use caution when using these products near plastic surfaces.

# CLEANING AND STORAGE

## **CAUTION**

Starting the engine during the storage period will disturb the protective film created by fogging and damage could occur. Never start the engine during the storage period.

## **Clean the Exterior**

Make necessary repairs and then clean the ATV thoroughly with mild soap and warm water to remove all dirt and grime. Don't use harsh detergents or high pressure washers. Some detergents deteriorate rubber parts. Use dish soap type cleaners only. High pressure washers may force water past seals.

## **Stabilize the Fuel**

Fill the fuel tank. Add Carbon Clean Fuel Treatment or Fuel Stabilizer. Follow the instructions on the container for the recommended amount. (Carbon clean will also reduce the possibility of bacterial growth in the fuel system.) Allow 15-20 minutes of operation for the stabilizer to disperse through the fuel in the tank and carburetor and then drain the carburetor bowl.

## **Oil and Filter**

Warm the engine and change the oil and filter.

# CLEANING AND STORAGE

## **Air Filter / Air Box**

Inspect and clean or replace the pre-cleaner and air filter. Clean the air box and drain the sediment tube.

## **Breather Filter**

Inspect and clean or replace the breather filter.

## **Fluid Levels**

Inspect the following fluid levels and change if necessary: front gear case; transmission; brake fluid (change every two years or as required if fluid looks dark or contaminated).

## **Fog the Engine**

Remove the spark plug and add 2—3 tablespoons of 4 Synthetic 0W40 engine oil. To access the plug hole, use a section of clear 1/4" hose and a small plastic squeeze bottle filled with the pre-measured amount of oil.

**NOTE:** Do this carefully! If you miss the plug hole, oil will drain from the spark plug cavity into the hole at the front of the cylinder head, and appear to be an oil leak. Install the spark plug and pull the engine over slowly with the recoil starter. Oil will be forced in and around the piston rings and ring lands, coating the cylinder with a protective film of fresh oil.

# **CLEANING AND STORAGE**

## **Fog the Engine**

If you choose not to use Fogging Oil, perform the following procedure.

1. Support the front end of the machine so the engine is level or tilted slightly rearward.
2. Remove the spark plug. Rotate the piston to BDC and pour approximately two ounces of oil into the cylinder.
3. Apply dielectric grease to the inside of the spark plug cap and install the cap onto the plug.
4. Turn the engine over several times to ensure coverage of piston rings, cylinder walls and crankshaft bearings.
5. Treat the fuel system with Carbon Clean.
6. If fuel system additive is not used, fuel tank, fuel lines, and carburetor should be completely drained of gasoline. To eliminate any fuel remaining in the carburetor, run the engine until it stops.

## **Lubricate**

Inspect all cables and lubricate with Cable Lubricant. Follow lubrication guidelines in the maintenance section of the service or owner's manual to completely grease and lubricate the entire vehicle with All Season Grease.

# CLEANING AND STORAGE

## Battery Storage

Remove the battery from the vehicle and ensure that it's fully charged before placing it in storage.

Engine Anti-Freeze

Test engine coolant strength and change if necessary. Coolant should be replaced every two years.

## Storage Area/Covers

Set the tire pressure and safely support the ATV with the tires 1—2" off the ground. Be sure the storage area is well ventilated, and cover the machine with a 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 the ATV

Follow these procedures when transporting the vehicle.

1. Turn off the engine and remove the key to prevent loss during transporting.
2. Always place the transmission in park.
3. Be sure the fuel cap, oil cap and seat are installed correctly.
4. Always tie the frame of the ATV to the transporting unit securely using suitable straps or rope.

# **CLEANING AND STORAGE**

## **Chrome Wheel Care (if equipped)**

Proper maintenance will protect chrome wheels from corrosion, preserve wheel life and ensure a “like new” appearance for many years.

1. Wash chrome rims frequently. Use a mild detergent to remove any salt, dirt, mud or grime. Never use abrasive cleaners on plated or painted surfaces.
2. Polish the clean chrome wheels periodically. Use an automotive grade chrome polish.
3. Routinely and liberally apply a weather resistant wax to each polished chrome wheel.  
Choose a product suitable for chrome finishes. Read and follow the product labels and instructions.
4. Chrome wheels exposed to road salt ( or salt in the air in coastal areas ) are more susceptible to corrosion if not properly cleaned. Clean chrome wheels more often if they're exposed to salt or other corrosive elements.

## **Removing Corrosion**

If light rust is found on the chrome finish, use steel wool ( # 0000 — OTT grade ) to remove it. Gently rub the affected areas with the steel wool until the corrosion has been removed. Clean and polish the wheel as outlined above.



# TROUBLESHOOTING

## Drive belt and cover problems

Possible Cause	Solution
Driving the ATV onto a pickup or tall trailer 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 on page 73.
Driving at low RPM or low ground speed (at approximately 3-7 MPH).	Drive at a higher speed or use low range more frequently. The use of low range is highly recommended for cooler CVT operating temperatures and longer component life.
Insufficient warm-up of ATVs exposed to low ambient temperatures.	Warm the engine at least 5 minutes. With the transmission in park, advance the throttle to about 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.	Use the throttle quickly and effectively for efficient engagement.
Towing/pushing at lowRPM/low ground speed.	Use low range only.
Utility use/plowing snow, dirt, etc.	Use low range only.

# TROUBLESHOOTING

## Drive belt and cover problems

Possible Cause	Solution
Stuck in mud or snow.	Shift the transmission to low range, and carefully use fast, aggressive throttle application to engage clutch. <b>WARNING:</b> Excessive throttle may cause loss of control and vehicle overturn.
Climbing over large objects from a stopped position.	Shift the transmission to low range, and carefully use fast, brief, aggressive throttle application to engage clutch. <b>WARNING:</b> Excessive throttle may cause loss of control and vehicle overturn.
Belt slippage from water or snow ingestion into the CVT system.	Shift the transmission to park. Using the throttle, vary the engine RPM from idle to full throttle. Repeat several times as required. During this procedure, the throttle should not be held at the full position for more than 10seconds. Clutch seals should be inspected for damage if repeated leaking occurs.
Clutch malfunction.	Contact your dealer for inspection of clutch components.
Poor engine performance.	Check for fouled plugs or foreign material in gas tank, fuel lines, or carburetor. Contact your dealer for service.

# TROUBLESHOOTING

Contact your dealer for service if you're unable to identify solutions using the following charts.

## Engine Doesn't Turn Over

Possible Cause	Solution
Tripped circuit breaker	Reset the breaker
Low battery voltage	Recharge battery to 12.5 VDC
Loose battery connections	Check all connections and tighten
Loose solenoid connections	Check all connections and tighten

## Engine Turns Over, Fails to Start

Possible Cause	Solution
Out of fuel	Refuel
Clogged fuel valve or filter	Inspect and clean or replace
Water is present in fuel	Drain the fuel system and refuel
Fuel valve is out of use	Replace
Old or non-recommended fuel	Replace with new fuel
Fouled or defective spark plug(s)	Inspect plug(s), replace if necessary
No spark to spark plug	Inspect plug(s), verify stop switch is on

# TROUBLESHOOTING

## Engine Turns Over, Fails to Start

Possible Cause	Solution
Crankcase filled with water or fuel	Immediately see your dealer
Overuse of choke	Inspect, clean and/or replace spark plugs
Clogged fuel filter	Replace the filter
Low battery voltage	Recharge battery to 12.5 VDC
Mechanical failure	See your dealer

## Engine Pings or Knocks

Possible Cause	Solution
Poor quality or low octane fuel	Replace with recommended fuel
Incorrect ignition timing	See your dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs

# TROUBLESHOOTING

## Engine Backfires

Possible Cause	Solution
Weak spark from spark plugs	Inspect, clean and/or replace spark plugs
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs
Old or non-recommended fuel	Replace with new fuel
Incorrectly installed spark plug wires	See your dealer
Incorrect ignition timing	See your dealer
Mechanical failure	See your dealer

## Engine Runs Irregularly, Stalls or Misfires

Possible Weak Spark Cause	Solution
Fouled or defective spark plugs	Inspect, clean and/or replace spark plugs
Worn or defective spark plug wires	See your dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with new fuel
Low battery voltage	Recharge battery to 12.5 VDC

# TROUBLESHOOTING

## Engine Runs Irregularly, Stalls or Misfires

<b>Possible Weak Spark Cause</b>	<b>Solution</b>
Kinked or plugged fuel vent line	Inspect and replace
Incorrect fuel	Replace with recommended fuel
Clogged air filter	Inspect and clean or replace
Reverse speed limiter malfunction	See your dealer
Electronic throttle control malfunction	See your dealer
Other mechanical failure	See your dealer
<b>Possible Lean Fuel Mixture Cause</b>	<b>Solution</b>
Low or contaminated fuel	Add or change fuel, clean the fuel system
Low octane fuel	Replace with recommended fuel
Clogged fuel filter	Replace filter
Incorrect jetting	See your dealer
<b>Possible Rich Fuel Mixture Cause</b>	<b>Solution</b>
Overuse of choke	Inspect, clean and/or replace spark plugs
Fuel is very high octane	Replace with lower octane fuel
Incorrect jetting	See your dealer

# TROUBLESHOOTING

## Engine Stops or Loses Power

Possible Cause	Solution
Out of fuel	refuel
Kinked or plugged fuel vent line	Inspect and replace
Water present in fuel	Replace with new fuel
Overuse of choke	Inspect, clean and/or replace spark plugs
Fouled or defective spark plugs	Inspect, clean and/or replace spark plugs
Worn or defective spark plug wires	See your dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs
Loose ignition connections	Check all connections and tighten
Low battery voltage	Recharge battery to 12.5 VDC
Incorrect fuel	Replace with recommended fuel
Clogged air filter	Inspect and clean or replace
Reverse speed limiter malfunction	See your dealer
Electronic throttle control malfunction	See your dealer
Other mechanical failure	See your dealer

# TROUBLESHOOTING

## Engine Stops or Loses Power

<b>Possible Cause</b>	<b>Solution</b>
Overheated engine	Clean radiator screen and core if equipped Clean engine exterior See your dealer



# SPECIFICATIONS

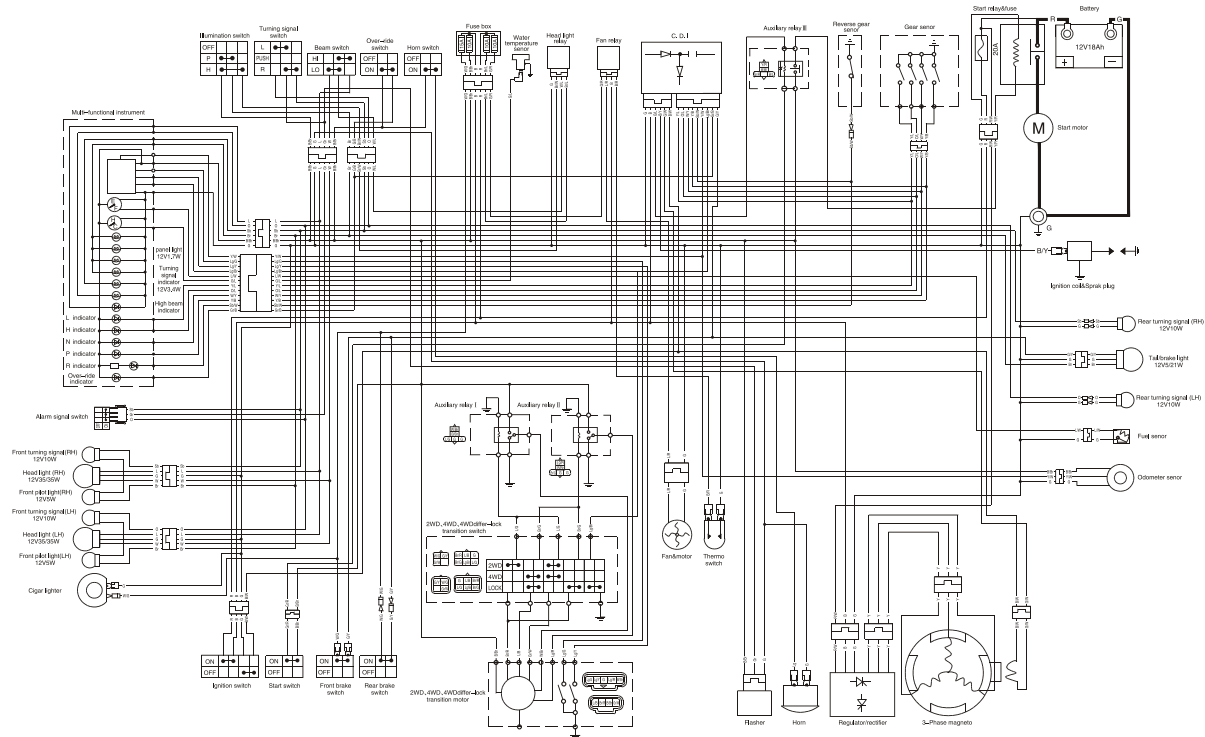
Model	Parameter
Dimensions: Overall length Overall width Overall height Seat height Wheelbase Minimum ground clearance Minimum turning radius	 2,120 mm (83.5 in) 1,170 mm (46.1 in) 1,230 mm (48.4 in) 900 mm (35.4 in) 1,290 mm (50.8 in) 275 mm (10.8 in) 4,000 mm (157.5 in)
Basic weight: With oil and full fuel tank	 337 kg (743 lb)
Engine: Engine type Cylinder arrangement Displacement Bore × stroke Compression ratio Starting system Lubrication system	 Liquid-cooled 4-stroke, SOHC Forward-inclined single cylinder 493 cm <sup>3</sup> 87.5 × 82 mm (3.44 × 3.23 in) 10.2 :1 Electric and recoil starter Pressure spray

Model	Parameter
Engine oil: Type Quantity: Without oil filter cartridge replacement With oil filter cartridge replacement	SAE15W-40/SF  1.8 L (1.58 Imp qt, 1.90 US qt) 1.9 L (1.67 Imp qt, 2.01 US qt)
Rear gear case oil: Type Quantity: Periodic oil change Total amount	AE15W/40 SF or SAE80W/90 GL-4  0.25 L (0.22 Imp qt, 0.26 US qt) 0.30 L (0.26 Imp qt, 0.32 US qt)
Front gear case oil: Type Quantity: Periodic oil change Total amount	SAE15W/40 SF or SAE80W/90 GL-4  0.28 L (0.25 Imp qt, 0.30 US qt) 0.33 L (0.29 Imp qt, 0.35 US qt)
Air filter:	Wet type element
Fuel: Type Fuel tank capacity Fuel reserve amount	UNLEADED GASOLINE ONLY 20 L (4.18 Imp gal, 5.02 US gal) 4.0 L (0.88 Imp gal, 1.06 US gal)

<b>Model</b>	<b>Parameter</b>
Carburetor: Type / quantity Manufacturer	BSR36-89 MIKUNI
Spark plug: Type/manufacturer Spark plug gap	DPR7EA-9 / NGK 0.8—0.9 mm (0.031—0.035 in)
Clutch type:	Wet, centrifugal automatic
Transmission: Primary reduction system Secondary reduction system Transmission type Operation Reverse gear Sub transmission ratio          low high	V-belt Shaft drive V-belt automatic Left hand operation 9.79~39.12 14.96~59.774 8.98~35.93
Chassis: Frame type Caster angle Trail	Steel tube frame 5° 26 mm (1.02 in)

Model	Parameter
Tire: Type Size  front rear	Tubeless AT25 × 8—12 AT25 × 10—12
Brake: Front brake  Rear brake  type operation type operation	Dual disc brake Right hand operation Single disc brake Left hand and right foot operation
Suspension: Front suspension Rear suspension	Double wishbone Double wishbone
Shock absorber: Front shock absorber Rear shock absorber	Coil spring / oil damper Coil spring / oil damper
Wheel travel: Front wheel travel Rear wheel travel	170 mm (6.69 in) 225 mm (8.86 in)

Model	Parameter
Electrical: Ignition system Generator system Battery capacity	DC. C.D.I. A.C. magneto 12 V, 18 Ah
Headlight type: Bulb voltage, wattage x quantity: Headlight Front turn light	12 V, 35 W / 35 W x 2 12V, 10W x 2
Front position light Rear turn light Tail/brake light Indicator light: Neutral indicator light Reverse indicator light Park indicator light High-range indicator light Low-range indicator light Differential gear lock indicator light Turn indicator light High beam indicator light Override indicator light	12V, 5W x 2 12V, 10W x 2 12 V, 5 W / 21 W x 1 LED x 1 LED x 1 LED x 1 LED x 1 LED x 1 LED x 3 12V, 3.4W x 2 LED x 1 LED x 1



R-Red B-Black G-Green L/R-Blue/Red G/Y-Green/Yellow Y/R-Yellow/Red Br-Brown Y-Yellow L-Blue W-White O-Orange B/Br-Black/Brown Br/L-Brown/Blue W/G-White/Green G/B-Green/Black BL-Black/Blue Y/W-Yellow/White G/W-Green/White G/B-Green/Black L/B-Blue/Black B/W-Black/White B/Y-Black/Yellow W/Y-White/Yellow Lg-Light green Gr-Gray G/L-Green/Blue G/R-Green/Red S-Sky blue W/L-White/Blue G/RW-Red/White B/R-Black/Red Y/B-Yellow/Black L/W-Blue/White Y/B-Yellow/Blue Gr/R-Gray/Red G/W-Gray/White Br/R-Brown/Red L/B-Blue/Black Br/G-Brown/Green Lg/R-Light Green/Red L/G-Blue/Green W/Br-White/Brown Lg/G-Light Green/Green Lg/Y-Light Green/Yellow Lg/L-Light Green/Blue Gr/B-Gray/Black O/L-Orange/Blue S/W-Sky blue/White