



**POLARIS®**

**2001  
ATV**

**Universal Owner's Safety  
and Maintenance Manual**

Read this manual carefully. It contains important safety information.

This is an adult vehicle only.

Operation is prohibited for those under 16 years of age.

 **WARNING**

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

# FOREWORD

Congratulations and thank you from Polaris Industries Inc. for purchasing one of our all-terrain vehicles (ATVs). Built with American engineering and manufacturing know-how, it is designed to provide superior riding comfort, enjoyment, and safety.

This manual is furnished to ensure that the operator is aware of safe operating procedures. It also includes information about the general care and maintenance of your ATV.

Carefully read the following pages. If you have any questions regarding this ATV contact a Polaris dealer for assistance. Remember, Polaris dealers have the knowledge and facilities to provide you with the best service possible.

## **PROTECT YOUR SPORT**

Know all local, state/province riding laws;

Respect your vehicle;

Respect the environment; and

You will gain the respect of others.

We also advise you to strictly follow the recommended maintenance program as outlined. This preventive maintenance program is designed to ensure that all critical components on this ATV are thoroughly inspected at various intervals.

All information in this manual is based upon the latest product data and specifications available at the time of printing. Polaris Industries Inc. reserves the right to make product changes and improvements which may affect illustrations or explanations.

No part of this manual shall be reproduced or used without the written permission of Polaris Industries Inc.

**Illustrations included in this manual are general representations of parts having a similar function. Your model may differ.**

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



**SERIOUS INJURY OR DEATH** can result if you do not follow these instructions:

- Read this manual and all labels carefully and follow the operating procedures described.
- Never operate an ATV without proper instruction. **Take a training course.** Beginners should receive training from a certified instructor. Contact an authorized Polaris ATV dealer or call Polaris at 1-800-342-3764 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 this ATV unless the guest has read this manual and all product labels, and has completed a certified training course.
- Always avoid operating an ATV on any paved surfaces, including sidewalks, driveways, parking lots and streets.
- Never operate an ATV on any public street, road or highway, even a dirt or gravel one.
- Never operate an ATV without wearing an approved helmet that fits properly. You should also wear eye protection (goggles or face shield), gloves, boots, long-sleeved shirt or jacket, and long pants.
- Never consume alcohol or drugs before or while operating this ATV.
- Never operate at excessive speeds. Always travel at a speed which is proper for the terrain, visibility and operating conditions, and your experience.
- Never attempt wheelies, jumps or other stunts.

- Always inspect your ATV each time you use it to make sure it is in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in this manual.
- Always keep both hands on the handlebars and both feet on the footrests of the ATV during operation.
- Always go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating the ATV.
- Never operate on excessively rough, slippery or loose terrain.
- Always follow proper procedures for turning as described in this manual. Practice turning at low speeds before attempting to turn at faster speeds. Do not turn at excessive speed.
- Always have the ATV checked by an authorized Polaris dealer if it has been involved in an accident.
- Never operate the ATV on hills too steep for the ATV or for your abilities. Practice on smaller hills before attempting larger hills.
- Always follow proper procedures for climbing hills as described in this manual. Check the terrain carefully before you start up any hill. Never climb hills with excessively slippery or loose surfaces. Shift your weight forward. Never open the throttle suddenly or make sudden gear changes. Never go over the top of any hill at high speed.
- Always follow proper procedures for going down hills and for braking on hills as described in this manual. Check the terrain carefully before you start down any hill. Shift your weight backward. Never go down a hill at high speed. Avoid going down a hill at an angle which would cause the vehicle to lean sharply to one side. Go straight down the hill where possible.
- Always follow proper procedures for crossing the side of a hill as described in this manual. Avoid hills with excessively slippery or loose surfaces. Shift your weight to the uphill side of the ATV. Never attempt to turn the ATV around on any hill until you have mastered the turning technique described in this manual on level ground. Avoid crossing the side of a steep hill if possible.

- Always use proper procedures if you stall or roll backwards when climbing a hill. To avoid stalling, maintain a steady speed when climbing a hill. If you stall or roll backwards, follow the special procedure for braking described in this manual. Dismount on the uphill side or to either side if pointed straight uphill. Turn the ATV around and remount, following the procedure described in this manual.
- Always check for obstacles before operating in a new area. Never attempt to operate over large obstacles, such as large rocks or fallen trees. Always follow proper procedures when operating over obstacles as described in this manual.
- Always be careful of skidding or sliding. On slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chance of skidding or sliding out of control.
- Avoid operating the ATV through deep or fast flowing water. If you cannot avoid water which exceeds the recommended maximum depth (pg. NO TAG), go slowly, balance your weight carefully avoiding sudden movements, maintain a slow and steady forward motion, do not make sudden turns or stops, and do not make sudden throttle changes.
- Wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary apply them lightly several times to let friction dry out the pads.
- Always be sure there are no obstacles or people behind you when you operate in reverse. When it is safe to proceed in reverse, go slowly. Avoid turning at sharp angles in reverse.
- Always use the size and type tires specified in this manual. Always maintain proper tire pressure as described in this manual.
- Never modify an ATV through improper installation or use of accessories.
- Never exceed the stated load capacity for an ATV. Cargo should be properly distributed and securely attached. Reduce speed and follow instructions in this manual for carrying cargo or pulling a trailer. Allow greater distance for braking.

FOR MORE INFORMATION ABOUT ATV SAFETY, call the Consumer Product Safety Commission at 1-800-638-2772, or Polaris at 1-800-342-3764.

## **Additional Important Information...**

Due to our concern for the safety of our customers and the general public, Polaris hereby strongly recommends and requests that consumers not have installed on a Polaris ATV any equipment which is intended to 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 ATV substantially increase the risk of bodily injury. Please be aware that these modifications may create a substantial safety hazard.

Polaris hereby informs you that the warranty on your ATV is terminated if any such equipment has been added to the ATV or any modifications have been made to the ATV which increase its speed or power.

We also advise you to strictly follow the recommended maintenance program outlined in this manual. This preventive maintenance program is designed to ensure that all critical components on the ATV are thoroughly inspected by your dealer at various mileage intervals.

### **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 ATV.

Be certain any accessories added to this ATV have been approved by Polaris.

Familiarize yourself with their function and affect on the ATV.



## The Polaris Preferred Registered Owners (PRO) Family Your Owners Program

As the owner of a new Polaris vehicle, you are entitled to a FREE two- year membership in the Polaris PRO Family--the Preferred Registered Owners Family. It's an owners program for Polaris owners like you, people who have chosen the finest recreational vehicle available, people who share an interest in Polaris and its products.

Once your new vehicle's warranty is registered, you will receive a PRO Family membership packet that will include:

- ★ A letter of welcome to the PRO Family
- ★ A PRO Family card with your name and membership number
- ★ A colorful sticker of the PRO logo
- ★ A PRO merchandise brochure and order form.

As a PRO Family member, you're entitled to opportunities such as:

- ★ A free subscription to PRO *Spirit*, the official magazine of the PRO Family
- ★ The chance to buy insurance for your Polaris vehicle. The toll-free insurance telephone number is: 1-800-473-0111
- ★ The chance to arrange travel through the Polaris Travel Center. The toll-free travel telephone number is: 1-800-267-1915
- ★ The chance to apply to serve on PRO Consumer Councils that provide input into the Polaris vehicles of the future
- ★ The chance to serve as a PRO Field Evaluator and provide feedback on your new vehicle
- ★ The chance to take part in national PRO snowmobile, ATV or personal watercraft rides
- ★ The chance to purchase exclusive PRO Family merchandise
- ★ And more!



To order PRO merchandise, complete the order form you receive with your membership packet, take the form to your Polaris dealer and pay for the merchandise. The merchandise will be shipped directly to your home from the PRO merchandise fulfillment center.

Watch for your PRO membership packet and the next issue of PRO *Spirit* magazine. This quarterly magazine will keep you informed about Polaris news and events, and special PRO merchandise, travel, and ride opportunities.

Enjoy your new Polaris vehicle, and welcome to the family--The Polaris PRO Family.



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# UNDERSTANDING WARNINGS

## ATTENTION:

This is an **ADULT VEHICLE ONLY**; not a toy. Operation is prohibited for anyone under 16 years of age. **READ AND UNDERSTAND WARNINGS AND OWNER'S MANUAL BEFORE OPERATION.**



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

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



## **SAFETY TRAINING**

When you purchased this vehicle your dealer presented a hands-on safety training course covering all aspects of ATV safety. In addition, you were provided with certain printed material which instructs you on safe operating procedures.

You should review this information on a regular basis. In the event you purchased a used Polaris ATV from a party other than a Polaris dealer, you can obtain this safety training at no charge from any authorized Polaris dealer.

Failure to follow the warnings contained in this manual can result in **SEVERE INJURY OR DEATH.**

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

# UNDERSTANDING WARNINGS

## SAFETY ALERT

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

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



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

## **WARNING**

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

## **CAUTION**

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

## **CAUTION**

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

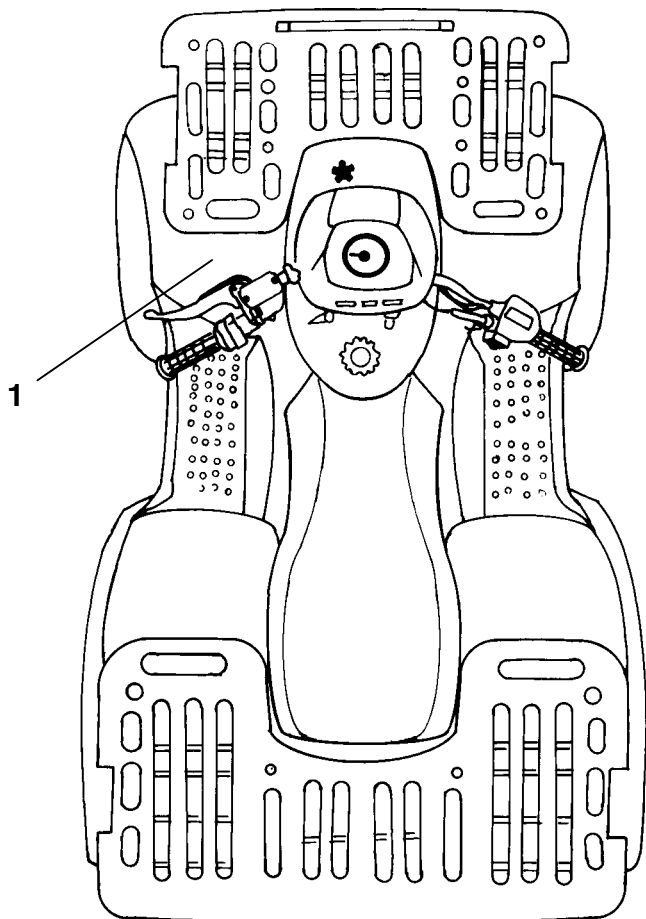
## **NOTE**

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

# SAFETY WARNING AND OPERATION DECALS

## NOTE:

Warning decals have been placed on the vehicle for your protection. Read and follow the instructions on each decal carefully. In the event any decal becomes illegible or comes off, contact your Polaris dealer for a replacement. Any safety decal needing replacement will be provided by Polaris at no charge. The part number is printed on the decal.



# SAFETY WARNING AND OPERATION DECALS

1

## **WARNING**

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



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



**NEVER USE  
ON PUBLIC  
ROADS**



**NEVER CARRY  
PASSENGERS**



**NEVER USE  
WITH DRUGS  
OR ALCOHOL**

**NEVER** operate:

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

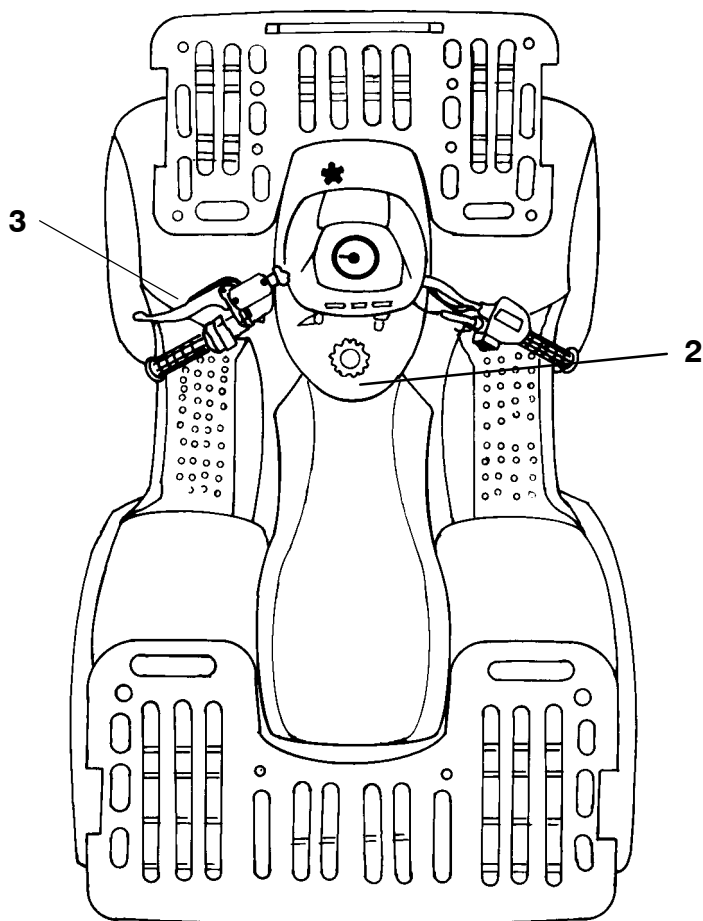
**ALWAYS:**

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

**LOCATE AND READ OWNER'S MANUAL.  
FOLLOW ALL INSTRUCTIONS AND WARNINGS.  
IF OWNER'S MANUAL IS MISSING, CONTACT  
YOUR POLARIS DEALER FOR A REPLACEMENT.**

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# SAFETY WARNING AND OPERATION DECALS






# SAFETY WARNING AND OPERATION DECALS

2

 **WARNING**





Operating this ATV if you are under the age of 16 increases your chance of severe injury or death.

NEVER operate this ATV if you are under age 16.

7078253

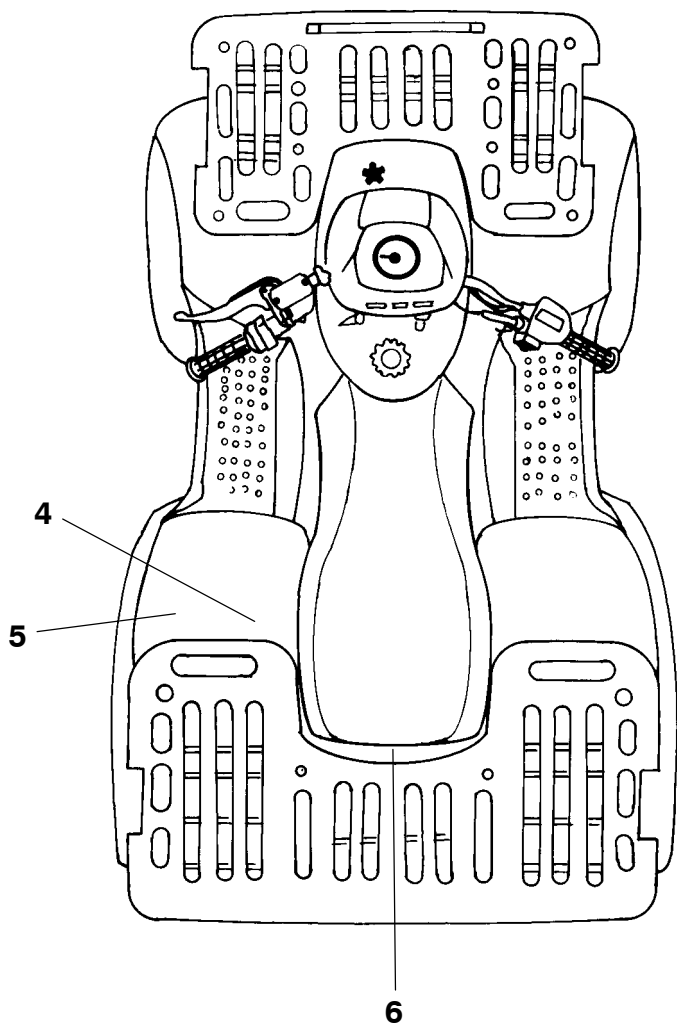
3

 **WARNING**

- Never operate this ATV on HILLS steeper than 25 degrees  25°  
To prevent flipover on hilly terrain, when going up or down, use throttle and brakes gradually.
- REVERSE operation can be dangerous even at low speeds. Steering becomes difficult. To prevent flipover, avoid sudden braking or sharp turns.
- Use OVERRIDE for reverse speed limiter with caution. To prevent loss of control, never activate override button with open throttle.
- PARKING BRAKE may relax when used for more than 5 minutes. When parking on grades, leave shift in forward.

7079085

# SAFETY WARNING AND OPERATION DECALS



# SAFETY WARNING AND OPERATION DECALS



**NO PASSENGER  
PASSAGERS INTERDITS**

(on rear of seat)

4



5

## **! WARNING**

IMPROPER TIRE PRESSURE OR OVERLOADING can cause loss of control resulting in SEVERE INJURY OR DEATH.

**TIRE PRESSURE (PSI):** FRONT \_\_\_ REAR \_\_\_

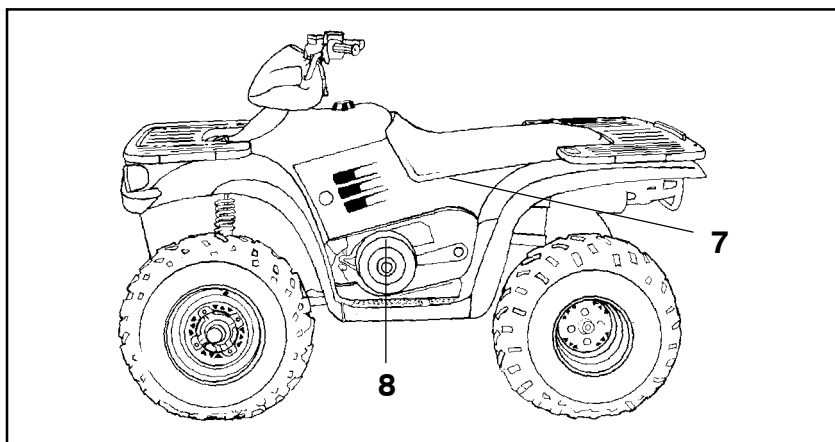
**MAXIMUM WEIGHT CAPACITY** (Gross Vehicle Weight)  
INCLUDING MACHINE, DRIVER AND CARGO IS \_\_\_ LBS.

Reduce speed and allow greater distance for braking when carrying cargo. Overloading or carrying tall, off-center, or unsecured loads will increase your risk of losing control. Loads should be centered, carried as low as possible, and firmly secured to the racks. with dual racks, load distribution 1/3 front 2/3 rear is best. For stability on rough or hilly terrain, reduce speed and cargo. Do not block headlight. Be careful if load extends over the side of the rack.

Read Owner's Manual for more detailed loading information

(Refer to your Owner's Manual Supplement for your vehicle's specifications.)

# SAFETY WARNING AND OPERATION DECALS



7

## ATTENTION

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>● OPERATION OF THIS VEHICLE WITHOUT THE FILTER ELEMENT WILL SEVERELY DAMAGE THE ENGINE.</li><li>● CLEAN AIR FILTER OFTEN, MORE FREQUENT CLEANING REQUIRED IN DUSTY CONDITIONS.</li></ul> | <ul style="list-style-type: none"><li>● L'utilisation de ce véhicule sous l'élément filtre endommage sévèrement le moteur.</li><li>● Nettoyer souvent le filtre à air, surtout dans des situations poussiéreuses.</li></ul> |
|--|---|

7072791

(Under Seat)

## WARNING

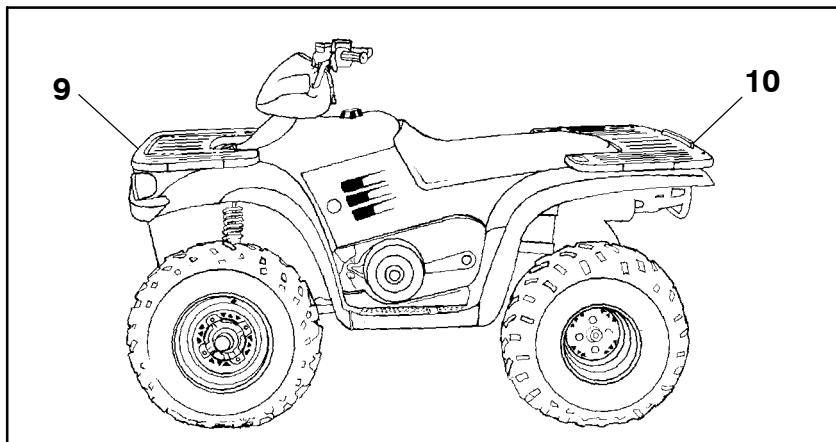
8 Moving parts hazard under belt-clutch guard. To prevent serious injury, do not operate vehicle with guard removed.

Do not modify engine or clutch. Doing so can cause part failure, possible imbalance, and excessive engine RPM which can result in serious injury or death.

## NO STEP

7078689

# SAFETY WARNING AND OPERATION DECALS



## **WARNING**

9

DO NOT TOW FROM RACK OR BUMPER.  
vehicle damage or tipover may result causing severe  
injury or death. Tow only from tow hooks or hitch.

Maximum Front Rack Load 90 lbs.

7079102

## **WARNING**

10

DO NOT TOW FROM RACK OR BUMPER.  
vehicle damage or tipover may result causing severe  
injury or death. Tow only from tow hooks or hitch.

Maximum Rear Rack Load 180 lbs.

7079110

# SAFETY WARNING AND OPERATION DECALS

## ATTENTION

Specific carburetor jetting and adjustments are required depending on temperature and altitude. See your Owner's Manual.

### Factory setting:

40° to 80° F. at 0-3000 feet. (+5° to 26° C. at 0-900 meters). 7073761

### VERRIDE SWITCH

Reverse override and all wheel drive activation in reverse is controlled by the override switch. See your Owner's Manual.

7076273

AWD Models

### VERRIDE SWITCH

Reverse Speed is limited. Reverse override is controlled by the override switch. See your Owner's Manual.

7076274

2WD Models



MANUFACTURED BY: POLARIS IND

DATE:

VIN:

THIS VEHICLE IS AN ALL TERRAIN VEHICLE AND IS NOT INTENDED FOR USE ON PUBLIC ROADS.

CE VÉHICULE EST UN VÉHICULE TOUT TERRAIN QUI N'EST PAS DESTINÉ À ÊTRE UTILISÉ SUR LES CHEMINS PUBLICS.

PRINTED IN U.S.A.

7077185

### ALL WHEEL DRIVE SWITCH

Do not push switch to engage AWD if the rear wheels are spinning. This may cause severe drive shaft and clutch damage. See your Owner's Manual.

7074935

TRAILER MAX. WEIGHT 850 LBS.

HITCH MAX. VERTICAL WEIGHT 30 LBS.

POIDS MAX. DE REMORQUE 386 KG.

POIDS MAX. VERTICAL D'ATTACHE 14 KG.

7072533

TRAILER MAX WEIGHT:  
1225 LBS. (556 KG) ON LEVEL GROUND  
850 LBS. (388 KG) UP TO 15° GRADE

HITCH MAX. VERTICAL WEIGHT: 35 LBS. (16KG)

7077542

Chain Freeplay Is Important. Adjust Freeplay to 3/16" - 3/8" DO NOT Overtension. See Owner's Manual.

Torque Nut on Eccentric Bolts:  
To 30 Ft. Lbs. (For models without a hitch).  
To 60 Ft. Lbs. (For models with a hitch).

7078572

# DAILY PRE-RIDE INSPECTION

## **WARNING**

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

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

### **Item/Inspection Procedure**

1. Tires - check condition and pressures
2. Fuel and oil tanks - fill both tanks to their proper levels
3. All brakes - check operation, adjustment and fluid level (includes auxiliary brake)
4. Throttle - check for free operation and closing
5. Headlight/Taillight/Brakelight - check operation of all indicator lights and switches
6. Engine stop switch - check for proper function
7. Wheels - check for tightness of wheel nuts and axle nuts; check that axle nuts are secured by cotter pins
8. Drive chain - condition and slack; refer to drive chain adjustment
9. Air cleaner element - check for dirt; clean or replace
10. Steering - check for free operation noting any unusual looseness in any area
11. Loose parts - visually inspect vehicle for any damaged components or loose nuts/bolts or fasteners
12. Operators helmet, goggles and clothing
13. Engine coolant - (Liquid Cooled Models Only) check for proper level at the recovery bottle

## OPERATION WARNINGS

### **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 Polaris Industries Inc. They should then 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 or call Polaris at 1-800-342-3764.

### **WARNING**

#### POTENTIAL HAZARD

Failure to follow the age recommendations for this ATV.

#### WHAT CAN HAPPEN

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

Even though a child may be within the age group for which some ATVs are recommended, he or she may not have the skills, abilities, or judgment needed to operate the ATV safely and may be involved in a serious accident.

#### HOW TO AVOID THE HAZARD

No one under 16 should operate a Polaris ATV.



# WARNING



### POTENTIAL HAZARD

Carrying a passenger on this ATV.

### WHAT CAN HAPPEN

Greatly reduces your ability to balance and control this ATV.

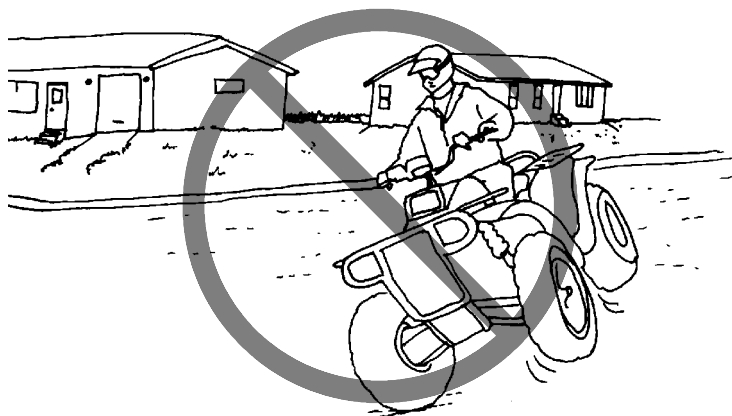
Could cause an accident, resulting in harm to you and/or your passenger.

### HOW TO AVOID THE HAZARD

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

## OPERATION WARNINGS

# WARNING



### POTENTIAL HAZARD

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

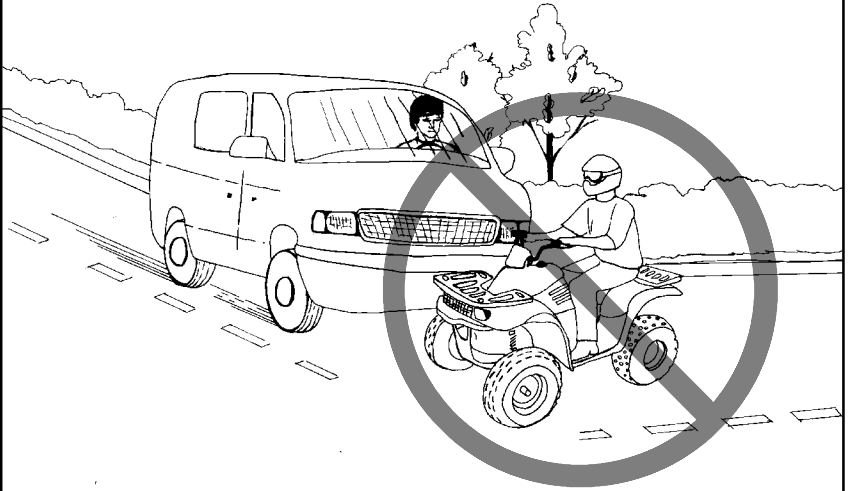
### WHAT CAN HAPPEN

The ATV tires are designed for off-road use. Paved surfaces may seriously affect handling and control of the ATV, and may cause the vehicle to go out of control.

### HOW TO AVOID THE HAZARD

Avoid operating the ATV on pavement whenever possible. If you must ride on a paved surface, go slowly and do not make sudden turns or stops.

# WARNING



### POTENTIAL HAZARD

Operating this ATV on public streets, roads or highways.

### WHAT CAN HAPPEN

You can collide with another vehicle.

### HOW TO AVOID THE HAZARD

Never operate this ATV on any public street, road or highway, even a dirt or gravel one.

In many states it is illegal to operate ATVs on public streets, roads and highways.

## OPERATION WARNINGS

# WARNING



### POTENTIAL HAZARD

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

### WHAT CAN HAPPEN

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

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

### HOW TO AVOID THE HAZARD

Always wear an approved helmet which fits properly.

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

# WARNING

### POTENTIAL HAZARD

Operating this ATV after consuming alcohol or drugs.

### WHAT CAN HAPPEN

Could seriously affect your judgment.

Could cause you to react more slowly.

Could affect your balance and perception.

Could result in an accident.

### HOW TO AVOID THE HAZARD

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

# WARNING

### POTENTIAL HAZARD

Operating this ATV at excessive speeds.

### WHAT CAN HAPPEN

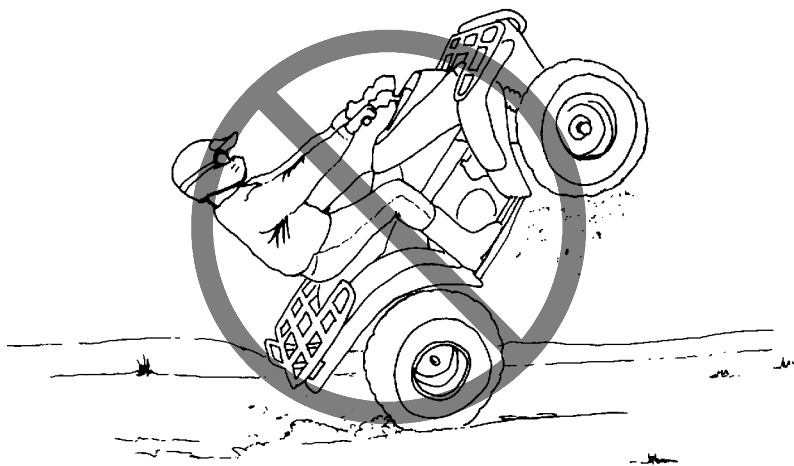
Increases your chances of losing control of the ATV, which can result in an accident.

### HOW TO AVOID THE HAZARD

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

## OPERATION WARNINGS

# WARNING



### POTENTIAL HAZARD

Attempting wheelies, jumps and other stunts.

### WHAT CAN HAPPEN

Increases the chance of an accident, including an overturn.

### HOW TO AVOID THE HAZARD

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

# WARNING

### POTENTIAL HAZARD

Failure to inspect the ATV before operating.

Failure to properly maintain the ATV.

### WHAT CAN HAPPEN

Increases the possibility of an accident or equipment damage.

### HOW TO AVOID THE HAZARD

Always inspect your ATV each time you use it to make sure the ATV is in safe operating condition.

Always follow the inspection and maintenance procedures and schedules described in the Owner's Manual.

# WARNING

### POTENTIAL HAZARD

Removing hands from handlebars or feet from footrests during operation.

### WHAT CAN HAPPEN

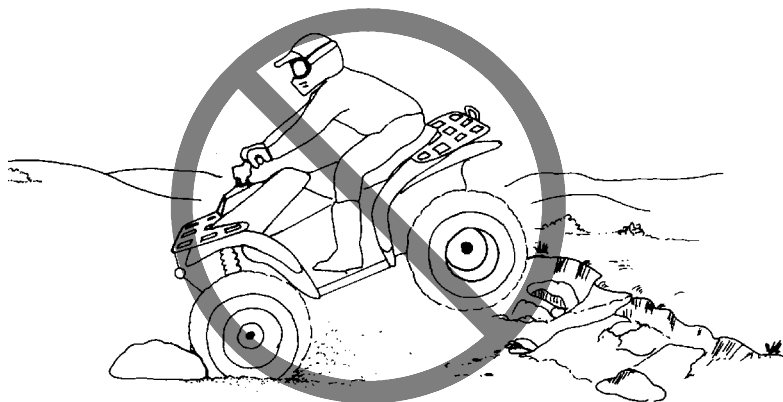
Removing even one hand or foot can reduce your ability to control the ATV or could cause you to lose your balance and fall off the ATV. If you remove a foot from the footrest, your foot or leg may come into contact with the rear wheels, which could injure you or cause an accident.

### HOW TO AVOID THE HAZARD

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

## OPERATION WARNINGS

# WARNING



### POTENTIAL HAZARD

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

### WHAT CAN HAPPEN

You can come upon hidden rocks, bumps, or holes, without enough time to react.

Could result in the ATV overturning or going out of control.

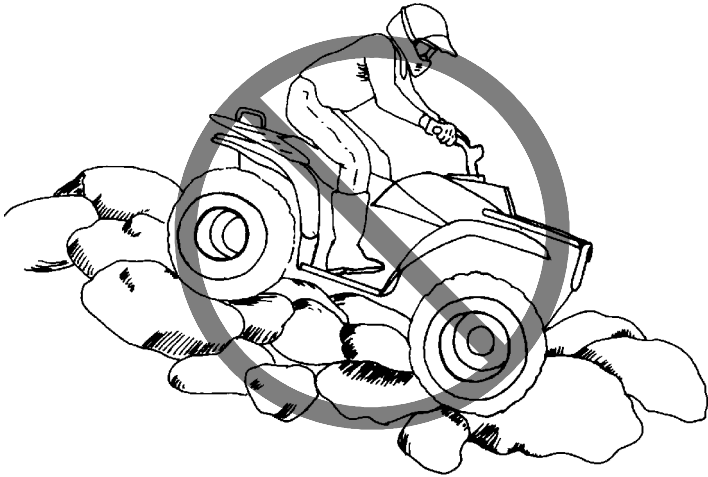
### HOW TO AVOID THE HAZARD

Go slowly and be extra careful when operating on unfamiliar terrain.

Always be alert to changing terrain conditions when operating the ATV.



# WARNING



### POTENTIAL HAZARD

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

### WHAT CAN HAPPEN

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

### HOW TO AVOID THE HAZARD

Do not operate on excessively rough, slippery or loose terrain until you have learned and practiced the skills necessary to control the ATV on such terrain.

Always be especially cautious on these kinds of terrain.

## OPERATION WARNINGS

### **WARNING**

#### POTENTIAL HAZARD

Turning improperly.

#### WHAT CAN HAPPEN

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

#### HOW TO AVOID THE HAZARD

Always follow proper procedures for turning as described in the Owner's Manual. See page 76 .

Practice turning at low speeds before attempting to turn at faster speeds.

Do not turn at excessive speed.

### **WARNING**

#### POTENTIAL HAZARD

Operating on excessively steep hills.

#### WHAT CAN HAPPEN

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

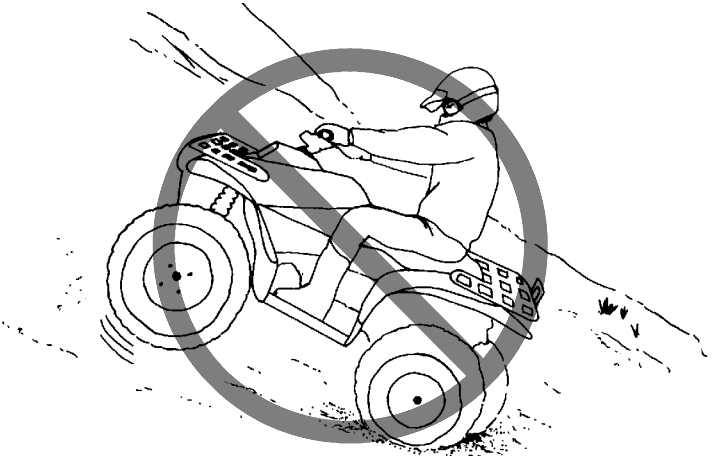
#### HOW TO AVOID THE HAZARD

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

Practice on smaller hills before attempting large hills.

Never operate ATV on hills steeper than 25°.

# WARNING



### POTENTIAL HAZARD

Climbing hills improperly.

### WHAT CAN HAPPEN

Could cause loss of control or cause ATV to overturn.

### HOW TO AVOID THE HAZARD

Always follow proper procedures for climbing hills as described in the Owner's Manual. See pages 79 through 82.

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

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

Never open the throttle suddenly. The ATV could flip over backwards.

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

## OPERATION WARNINGS

# WARNING



### POTENTIAL HAZARD

Going down a hill improperly.

### WHAT CAN HAPPEN

Could cause loss of control or cause ATV to overturn.

### HOW TO AVOID THE HAZARD

Always follow proper procedures for going down hills as described in the Owner's Manual. See page 81. **NOTE:** A special technique is required when braking as you go downhill.

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

Shift your weight backward.

Never go down a hill at high speed.

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

## **WARNING**



### POTENTIAL HAZARD

Improperly crossing hills or turning on hills.

### WHAT CAN HAPPEN

Could cause loss of control or cause ATV to overturn.

### HOW TO AVOID THE HAZARD

Never attempt to turn the ATV around on any hill until you have mastered the turning technique as described in the Owner's Manual on level ground. See page 82. Be very careful when turning on any hill.

Avoid crossing the side of a steep hill if possible.

### When crossing the side of a hill:

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

Avoid hills with excessively slippery or loose surfaces.

Shift your weight to the uphill side of the ATV.

## OPERATION WARNINGS

# WARNING



### POTENTIAL HAZARD

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

### WHAT CAN HAPPEN

Could result in ATV overturning.

### HOW TO AVOID THE HAZARD

Maintain steady speed when climbing a hill.

#### If you lose all forward speed:

Keep weight uphill.

Apply the brakes.

Lock parking brake after you are stopped.

#### If you begin rolling backwards:

Keep weight uphill; never apply engine power.

Never apply the rear brake while rolling backwards.

Apply the single-lever brake gradually.

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

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

Turn the ATV around and remount, following the procedure described in the Owner's Manual. See page 82.

# WARNING

### POTENTIAL HAZARD

Improperly operating over obstacles.

### WHAT CAN HAPPEN

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

### HOW TO AVOID THE HAZARD

Before operating in a new area, check for obstacles.

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

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

# WARNING

### POTENTIAL HAZARD

Skidding or sliding.

### WHAT CAN HAPPEN

You may lose control of the ATV.

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

### HOW TO AVOID THE HAZARD

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

## OPERATION WARNINGS

### **WARNING**

#### POTENTIAL HAZARD

Operating this ATV through deep or fast flowing water.

#### WHAT CAN HAPPEN

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

#### HOW TO AVOID THE HAZARD

Avoid operating the ATV through deep or fast flowing water. If you cannot avoid water which exceeds the recommended maximum depth (pg 83), go slowly, balance your weight carefully avoiding sudden movements, maintain a slow and steady forward motion, do not make sudden turns or stops, and do not make sudden throttle changes.

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

### **WARNING**

#### POTENTIAL HAZARD

Improperly operating in reverse.

#### WHAT CAN HAPPEN

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

#### HOW TO AVOID THE HAZARD

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



# WARNING

### POTENTIAL HAZARD

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

### WHAT CAN HAPPEN

Use of improper tires on this ATV, or operation of this ATV with improper or uneven tire pressure, may cause loss of control, and increases the risk of an accident.

### HOW TO AVOID THE HAZARD

Always use the size and type tires specified in the Owner's Manual Supplement for this vehicle.

Always maintain proper tire pressure as described in the Owner's Manual Supplement.

# WARNING

### POTENTIAL HAZARD

Operating this ATV with improper modifications.

### WHAT CAN HAPPEN

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

### HOW TO AVOID THE HAZARD

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

## OPERATION WARNINGS

### **WARNING**

#### POTENTIAL HAZARD

Overloading this ATV or carrying or towing cargo improperly.

#### WHAT CAN HAPPEN

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

#### HOW TO AVOID THE HAZARD

Never exceed the stated load capacity for this ATV.

Cargo should be properly distributed and securely attached.

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

Always follow the instructions in the Owner's Manual for carrying cargo or pulling a trailer. See pages 71 and 73.

### **WARNING**

#### POTENTIAL HAZARD

Riding on frozen lakes and rivers.

#### WHAT CAN HAPPEN

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

#### HOW TO AVOID THE HAZARD

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

# WARNING

### POTENTIAL HAZARD

Improperly operating over obstacles.

### WHAT CAN HAPPEN

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

### HOW TO AVOID THE HAZARD

Before operating in a new area, check for obstacles.

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

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

# WARNING

### POTENTIAL HAZARD

Skidding or sliding.

### WHAT CAN HAPPEN

You may lose control of the ATV.

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

### HOW TO AVOID THE HAZARD

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

## OPERATION WARNINGS

### **WARNING**

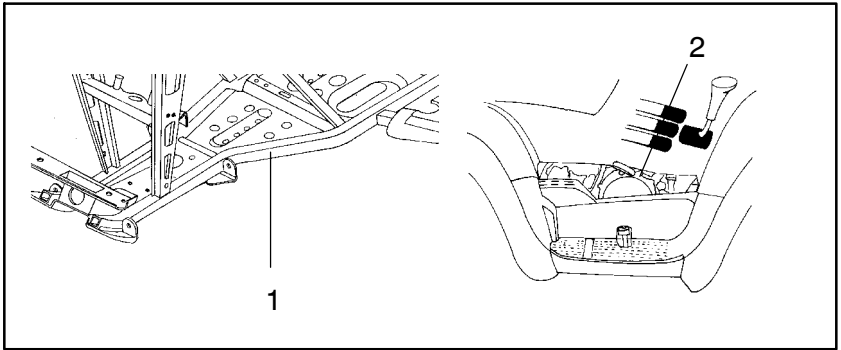
After a rollover or an accident, have a qualified service dealer check the complete machine including, but not limited to, brakes, throttle and steering for possible damage.

### **WARNING**

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

**CAUTION:** Keep combustible materials away from exhaust system. Fire may result.

# VEHICLE IDENTIFICATION NUMBERS



Record these numbers from your ATV in the spaces provided.

1. Frame VIN (found on the lower left side of the frame tube)

2. Engine Serial Number (Right front side of engine crankcase)

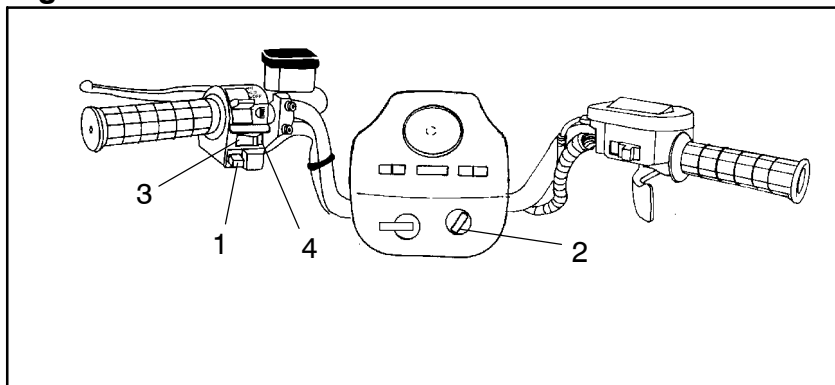
**Remove the spare key and store in a safe place.** Your key can be duplicated only by obtaining a key blank from Polaris and having it cut by mating it with your existing key.

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

Dealer Imprint

# CONTROL AND PARTS FUNCTIONS

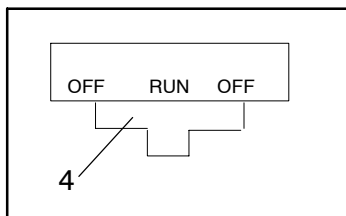
## Engine Electrical Switches



### 1. Override Switch (Reverse Speed Limiter) -

This vehicle is equipped with a reverse speed limiter system. To obtain additional power while backing up, depress the override button. **WARNING:** Never activate the override button

while throttle is open as loss of control may result, causing severe personal injury or death. **NOTE:** The override switch also allows activation of Demand 4 Drive (All Wheel Drive) in reverse, if Demand 4 Drive switch is on.



**2. Main Switch** - This key switch must be turned clockwise to the "on" position to start the engine (includes start feature on some models.).

**3. Emergency Engine Stop Switch** - The engine will not start or run when the switch is in its "off" position. Its purpose is to provide the operator with a quick means of engine shutdown in case of stuck throttle or other emergency. **NOTE:** Both the main switch and the emergency engine stop switch shut off all electrical power to the entire vehicle including lights. To stop the engine, slide the stop switch right or left to the "off" position.

**4. Engine Start Button** - To start the engine, slide the stop switch to the center "run" position and push up. Some models start by turning the main key switch clockwise past the "on" position.

## CONTROL AND PARTS FUNCTIONS

### **WARNING**

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

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

### **Important Safeguards**

- Always back slowly avoiding excessive speed and do not use the reverse speed override switch system unless additional power is required for vehicle movement.
- Avoid turning at sharp angles in reverse.
- Avoid backing on steep inclines.

### **Light Switches and Indicator Lights**

### **WARNING**

This ATV is not equipped with highway approved lighting. This ATV is designed for off-road use only and must not be ridden on streets or highways. Use caution and drive at reduced speeds in conditions of reduced visibility such as fog, rain and darkness.

### **Switches**

The light switch is located on the left hand handlebar. In addition to turning the lights on and off, it also switches the lights from Hi to Lo on models equipped with Hi-Lo beams. **NOTE:** Will not light unless the main switch is on.

# CONTROL AND PARTS FUNCTIONS

## Indicator Lights

Each Polaris ATV has indicator lights. The configuration of these lights differs with individual models and not every model is equipped with all the lights. The information in your Owner's Manual Supplement and in the following box will help you identify the lights on your machine and their function.

1. Transmission Neutral (Green)

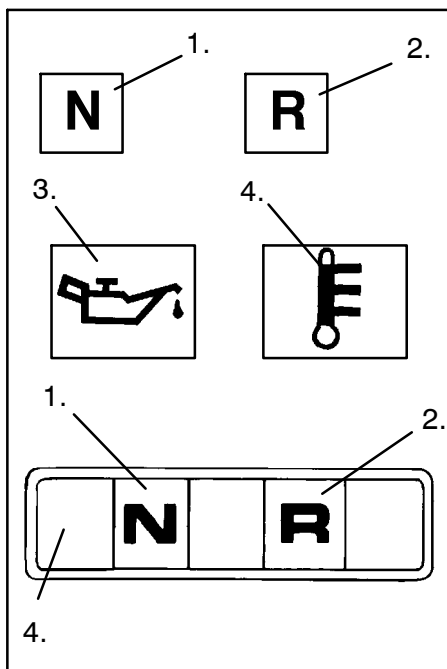
2. Transmission Reverse (Yellow)

3. Oil Warning (Red) On 2 cycle models, this light indicates a low oil level.

4. High Temp (Red) (Will light only if engine overheats)

5. All Wheel Drive (Red) (located on the LH handlebar) Refer to page 52.

6. High Beam Indicator (Blue) (located on the LH switch on models equipped with Hi-Lo beam lights)



With engine running, verify function of indicator lights each time ATV is used.

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



# CONTROL AND PARTS FUNCTIONS

## Electronic Speedometer

### CAUTION

Do not wash the electronic speedometer with a high pressure washer. Wash the unit by hand or with a garden hose. High water pressure may allow water to enter the speedometer and cause damage to the electronic components

Some Polaris ATVs are equipped with an electronic speedometer which senses vehicle speed from the right hand front wheel. The electronic speedometer measures distance in miles and kilometers as well as hours of operation. The speedometer also includes a reverse speed limit function that limits the ATV's speed in reverse after approximately 7 to 9 mph. Refer to page 35 for additional information.

To display each mode, press the button on the face of the speedometer once to "toggle" through the functions. Each function will be displayed as follows:

Miles	00000.0 M
Trip Miles	000.0 M
Hours	00000.0 H

#### To reset Trip Miles:

1. Toggle to Trip Miles
2. Hold down button approximately 4 seconds.

The speedometer also has additional features accessed through a sub-menu. These features are:

- Programmable service reminder based on hours
- Programmable service reminder based on distance
- Change distance measurement from Miles to Kilometers or vice versa.

Each service reminder is set to zero and must be programmed to activate the feature. One or both service reminders can be set. Whichever setting is reached first, the reminder will turn on in the LCD window.

## CONTROL AND PARTS FUNCTIONS

When the programmed hours are reached, **SEr hr** will light; when the programmed distance is reached, **SErDIS** will light. Each time the vehicle is started, the reminder will turn on and remain lit until the button is pushed or the speedometer is reprogrammed for the next service interval.

### Accessing Sub-menu Features

There are two methods for accessing the sub menu:

1. Press and hold the button and turn the power on
2. Press and hold the button for 8 seconds

Hold the button until the display shows **POLArS** then release the button. The speedometer is now in the sub-menu. To display each mode, press the button once to scroll through the four available functions. Each function will be displayed as follows:

Service Hours	<b>SET hr</b>
Service Distance	<b>SETdIS</b>
Miles to Kilometers	<b>COvrT</b>
No Menu Changes	<b>DOne</b>

### Changing Distance Measurement

1. Access the sub-menu
2. Select **COvrT** and release the button. If the last digit in the odometer display is K, the current measurement is kilometers; if the last digit is M, distance is being measured in miles.

### To Set Service Hours

1. Access the sub-menu
2. Toggle to **SET hr**, then release the button.
3. In 3 seconds, the LCD will display 5 digits, with the left-most digit flashing.
4. Within 4 seconds, press and release the button to change the digit. Once the digit is changed once, the button may be held to scroll through the digits from 0 to 9.
5. After the digit has been selected, do not push the button. After 4 seconds the next digit will flash.

## CONTROL AND PARTS FUNCTIONS

### Setting Service Hours (cont.)

6. Repeat step 4 and 5 to program the digits for the service interval selected. (i.e. for service interval of 50 hours set the display to show: **00050 H**)
7. To save the changes press and hold the button when any one of the digits is flashing.
8. The display will change to **DOnE**. At this time release the button and the changes are now saved.

### TO CHECK WHEN SERVICE IS DUE BY HOURS

Using the 50-hour service setting example from above, the speedometer will take the 50-hour setting and add it to the value of the hour-meter. This will be the value displayed when the operator checks when service is due for the ATV. For example, the hour meter reading is 132 hours, and the service interval was set for 50 hours, the 5-digit display will show 182 hours.

1. Access the sub-menu
2. Toggle to **SET hr** , then release the button
3. In 3 seconds, the LCD will display 5 digits, with the left-most digit flashing. As in the example above, the display would show **00182 H**.
4. Either turn the power off or not touch the button for 35 seconds to maintain the current settings.

## **CONTROL AND PARTS FUNCTIONS**

### **TO SET SERVICE DISTANCE**

Same as setting Service Hours, but toggle to **SET dis.**

### **TO CHECK WHEN SERVICE IS DUE BY DISTANCE**

Same as setting Service Hours, but toggle to **SET dis.**

### **TO CLEAR THE SERVICE REMINDER FROM THE DISPLAY**

The reminder will remain in the LCD window until the button is pushed or it is reprogrammed for the next service interval. When this is done the display will return to the normal menu showing odometer, trip meter and hour meter.

If the service interval isn't reprogrammed the reminder will be displayed each time the speedometer is powered up; again pushing the button can clear the display.

# CONTROL AND PARTS FUNCTIONS

## Engine Throttle and Choke

### **WARNING**

Do not start or operate an ATV with sticking or improperly operating throttle controls. A stuck or improperly operating throttle could cause an accident resulting in severe injury or death.

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

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

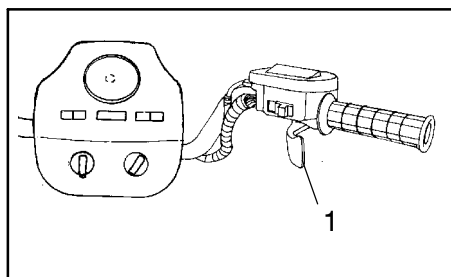
Always check the lever for free movement and return before starting the engine and occasionally during riding.

### **Throttle Lever**

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

This vehicle is equipped with a Polaris Electronic Throttle Control (ETC) which is designed to reduce the risk of a frozen or stuck throttle.

In the event the throttle cable should stick in an open position, the engine will stop and power to the rear wheels will cease when the operator releases the throttle lever.



### **Choke**

Refer to the engine starting procedure on page 65 for correct choke (2) and throttle settings during starting.

## CONTROL AND PARTS FUNCTIONS

### **WARNING**

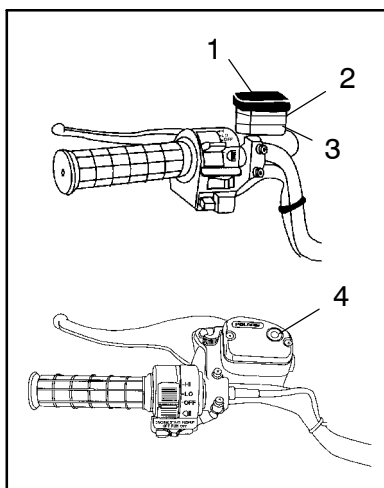
The Electronic Throttle Control (ETC) stops the engine in the event of a throttle system malfunction and is provided for your safety. Do not attempt to modify the ETC system or replace it with any after market throttle mechanisms.

### **CAUTION**

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

### Front and Rear Brakes

The brake fluid in the master cylinder, which is located on the left handlebar, should be checked before each ride. The fluid level can be seen through the plastic reservoir (1), and should be maintained between the indicated max (2) and min (3) marks on the reservoir. On some models, there is an indicator window (4) on the top of the master cylinder. This “eye” will appear dark when the fluid level is full. When fluid needs to be added, the eye will be clear. **NOTE:** When checking the fluid level, the ATV must be on level ground the the handlebars straight. If the fluid level is low add DOT 3 (PN 2870990) only.



## CONTROL AND PARTS FUNCTIONS

The front and rear brakes are applied by squeezing the left side brake lever toward the handlebar. The front and rear brakes are hydraulically activated disc type brakes which are activated by one lever only.

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

### **WARNING**

Never operate the ATV with a spongy feeling brake lever.

Operating the ATV with a spongy brake lever can result in loss of braking. Loss of braking could cause an accident.

# CONTROL AND PARTS FUNCTIONS

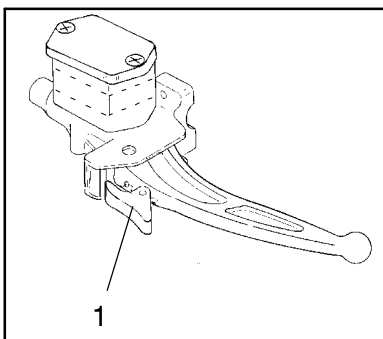
## Parking Brake

### **WARNING**

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

### Setting the Parking Brake - A

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

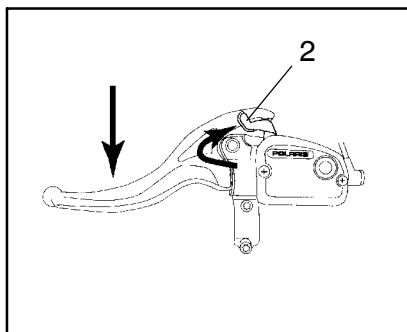




# CONTROL AND PARTS FUNCTIONS

## Setting the Parking Brake - B

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



## Important Safeguards

- The parking brake may relax when left on for a long period of time. This could cause an accident.
- **Do not leave the vehicle on a hill depending on the parking brake for more than five minutes.**
- Always block the downhill side of the wheels if leaving the ATV on a hill or park the ATV in a side hill position.

## Auxiliary Power Outlet

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

On select models, an outlet is located on the front headlight pod.

To determine if your vehicle is equipped with auxiliary power outlet, please check your Owner's Manual Supplement.

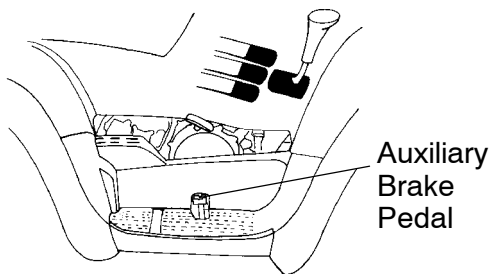
Accessory outlets are available for all models. Contact your Polaris dealer for more information.

# CONTROL AND PARTS FUNCTIONS

## Auxiliary Brake

### **WARNING**

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



Your Polaris ATV has an auxiliary brake provided as a safety feature. It is located on the inside of the right floor board and is operated by the right foot. It is intended as a backup to the main brake system, especially if the main system becomes inoperative.

If the rear wheels slide, reduce brake pedal pressure to brake the rear wheels without skidding. Aggressively applying the rear brake when backing down a hill may cause rear tip over.

## Brake Fluid Level

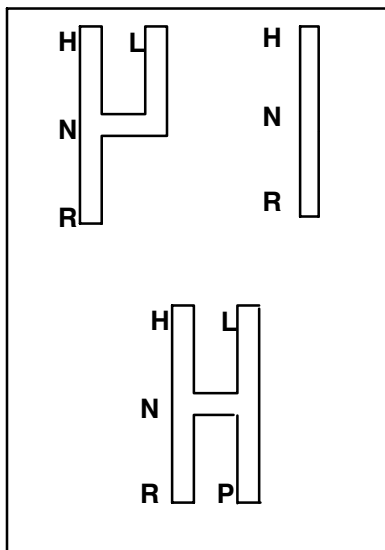
It will be necessary to check the brake fluid level for the auxiliary brake system. The reservoir is located under the seat or near the foot brake. The fluid should be kept between the maximum and minimum marks.

# CONTROL AND PARTS FUNCTIONS

## Automatic Transmission Gear Selector Operation

Shift patterns depend on the type of vehicle you own. Please check your Owner's Manual Supplement to define your machine's shift pattern.

The transmission gear selector is located on the right side of the vehicle directly above and forward of the engine recoil starter. The transmission selector lever has three or four positions: high forward; reverse; neutral; and low forward or forward; reverse; and neutral. Check your Owner's Manual Supplement for specification.



**NOTE: To extend belt life, use low forward gear in heavy pulling situations and in situations where you are operating below 7 miles per hour for extended periods of time.**

## CAUTION

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

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

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

# CONTROL AND PARTS FUNCTIONS

## Manual Shift Operation

The engine can only be started with the transmission in neutral.

Turn the key to "on" and ensure the stop switch is in the run position.

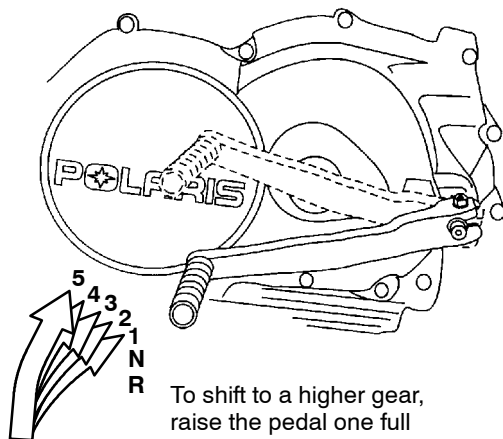
The neutral indicator light should be on. If it is not, shift the foot pedal down (or up and down, if in Reverse) to find neutral. Refer to the gear shift pedal illustrated on this page.

Once the vehicle is in neutral, start the engine by engaging the start button.

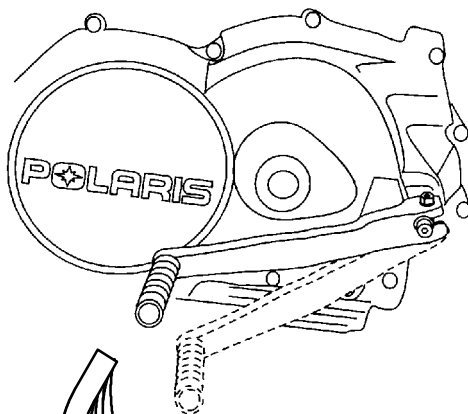
## Brake Start Feature

This model also has a brake start feature that can be used when it is difficult to find neutral. To activate, pull on the LH brake lever and push on the start switch.

### Gear Shift Pedal



To shift to a higher gear, raise the pedal one full stroke.



To downshift, depress the pedal one full stroke.

# CONTROL AND PARTS FUNCTIONS

## Gear Shift Pedal

The gear shift pedal is above the left floorboard. One full stroke of the pedal shifts the transmission to the next higher or lower gear in the shifting sequence. The pedal automatically returns to the horizontal position when released.

The Xpedition has five forward gears (1, 2, 3, 4, and 5). To upshift to a higher gear, put the toe of your boot under the gear shift pedal and raise the pedal one full stroke. To downshift, step on the gear shift pedal and depress the pedal one full stroke.

## Shifting Gears

Start the engine and let it warm up, follow this procedure:

1. With the transmission in neutral, hold the brake lever.
2. With the throttle closed, raise the gear shift pedal one full stroke to shift into first gear.
3. Release the brake lever and increase engine speed by gradually opening the throttle.
4. When speed increases, release the throttle and shift to 2nd gear by raising the gear shift pedal one full stroke.
5. Repeat sequence 4. to progressively upshift to 3rd, 4th and 5th (top) gear.
6. To downshift, reverse sequence 4. Remember to release the throttle each time you shift to the next lower gear.

## WARNING

### POTENTIAL HAZARD

Shifting gears without releasing the throttle.

### WHAT CAN HAPPEN

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

### HOW TO AVOID THE HAZARD

Always release the throttle when shifting gears.

# CONTROL AND PARTS FUNCTIONS

## Shifting to Reverse

With the ATV running and in neutral, hold the brake lever and push the Reverse/Override button on the LH control. Depress the gear shift pedal one stroke. The reverse indicator light will come on. Slowly release the brake lever and press throttle control lightly. See Owner's manual page for reverse operation.

## Shifting From Reverse to Forward

Be sure machine is completely stopped. Hold the brake lever, raise gear shift pedal one full stroke to engage forward gear. **NOTE:** neutral is bypassed when shifting from reverse to 1st gear. To engage neutral, depress gear shift pedal one full stroke from the 1st gear position.

## To Decelerate

When slowing down or stopping, release the throttle and apply the brakes smoothly and evenly. As you slow down, shift to a lower gear. Be certain the engine has sufficiently slowed before engaging a lower gear. Improper use of the brakes or shifting can cause the tires to lose traction, reducing control and increasing the possibility of an accident.

## **WARNING**

### POTENTIAL HAZARD

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

### WHAT CAN HAPPEN

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

### HOW TO AVOID THE HAZARD

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

# CONTROL AND PARTS FUNCTIONS

## Exclusive Demand 4 Drive System (All Wheel Drive)

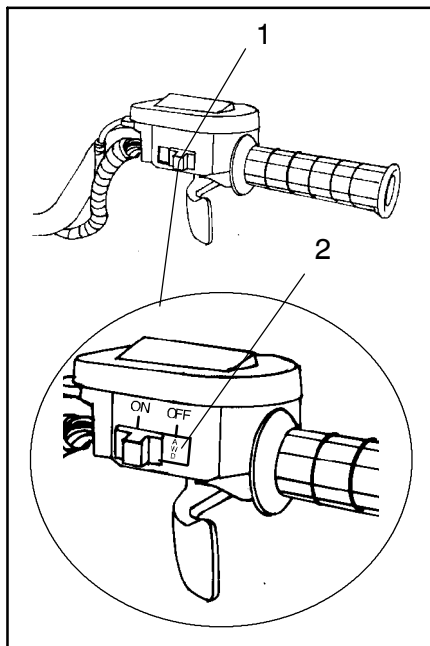
Polaris 4 wheel drive ATVs are equipped with a unique, Polaris exclusive, Demand 4 Drive (AWD) system which is activated by a switch (1) on the right handlebar. When the switch is "off" the ATV is in 2 wheel drive at all times. When the switch is "on" the ATV is in Demand 4 Drive and the AWD indicator(2) will light.

When in AWD, the front wheels will automatically engage anytime the rear wheels lose traction. When the rear wheels regain traction, the front wheels will automatically disengage.

**NOTE:** The override switch also allows activation of Demand 4 Drive (AWD) in reverse, if Demand 4 Drive switch is on.

There is no limit to the length of time the vehicle may remain in Demand 4 Drive.

The Demand 4 Drive switch may be turned on or off while the vehicle is moving. If the switch is turned off when the front hubs are driving they will not release until the rear wheels regain traction.



## CAUTION

Do not switch on Demand 4 Drive if the rear wheels are spinning. This may cause severe drive shaft and hub damage.

## CONTROL AND PARTS FUNCTIONS

Engage the Demand 4 Drive switch before getting into conditions where front wheel drive may be needed. If the rear wheels are spinning, release the throttle before turning the Demand 4 Drive switch on.

### Disengaging Wheel Hubs

When backing up while in Demand 4 Drive and then going forward, one or both hubs may remain engaged. If one or both hubs remain engaged they can be disengaged by stopping, shifting to and moving in reverse. Then proceed in forward again.

You can tell if only one front hub is engaged if the handlebars pull to one side. If both front wheel hubs are engaged, steering effort increases but remains balanced from left to right, and vehicle speed is somewhat restricted.

## **WARNING**

If both hubs were engaged and only one released during operation, loss of control could result. If you experience hub engaging symptoms, use the above disengaging technique before proceeding. Failure to disengage front hubs as directed above could result in severe injury or death.

**NOTE:** If the hubs remain engaged after following these instructions return the ATV to your dealer for service.



# CONTROL AND PARTS FUNCTIONS

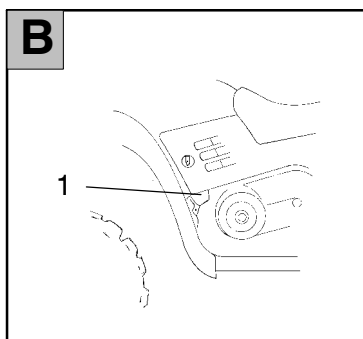
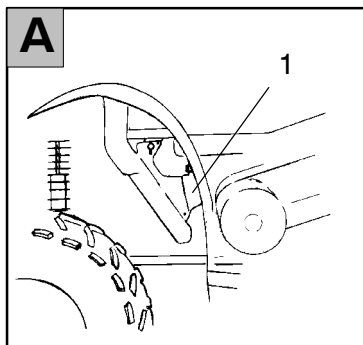
## Engine Cooling System

### Coolant Level

The recovery bottle(1), located on the left side of the machine, must be maintained between the minimum and maximum levels indicated on the recovery bottle.

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

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



**NOTE:** Some coolant level drop on new machines is normal as the system is purging itself of trapped air. Observe coolant levels and maintain as recommended by adding coolant to the recovery bottle. Polaris recommends the use of Polaris Premium 60/40 anti-freeze/coolant or a 50/50 mixture of high quality aluminum compatible anti-freeze/coolant and distilled water. **NOTE:** Polaris Premium 60/40 is already premixed and ready to use. Do not dilute with water. **NOTE:** Always follow the manufacturer's mixing recommendations for the freeze protection required in your area.

To access the recovery bottle on Gen IV machines (B) it is necessary to remove the left side panel as described on page 115.

# CONTROL AND PARTS FUNCTIONS

## Engine Cooling System

### **WARNING**

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

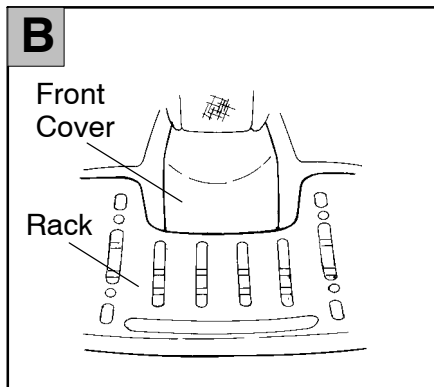
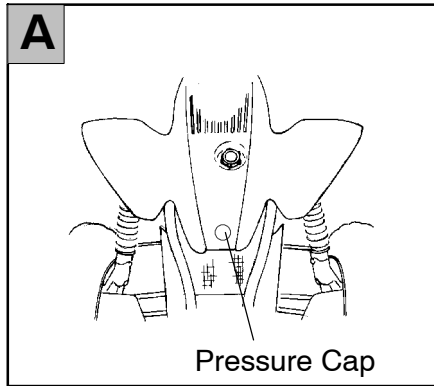
### Radiator Coolant Level Inspection

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

To access the radiator pressure cap:

**Gen III (A)** - To access the pressure cap, clean the area around the oil cap and remove the oil cap (2-cycle models). Remove front cover by placing your fingers under the front of the cover and pulling upward. Reinstall oil cap.

**Gen IV (B)** - Remove the four screws securing front rack. Remove front cover by placing your fingers under the front of the cover and pulling upward.



## CONTROL AND PARTS FUNCTIONS

**NOTE:** Use of a non-standard pressure cap will not allow the recovery system to function properly. If the cap should need replacement contact your dealer for the correct replacement part.

To insure that the coolant maintains its ability to protect the engine, it is recommended that the system be completely drained every two years and a fresh mixture of antifreeze and water be added.

Polaris recommends the use of Polaris Premium 60/40 anti-freeze/coolant or a 50/50 mixture of high quality aluminum compatible anti-freeze/coolant and distilled water. **NOTE:** Polaris Premium 60/40 is already premixed and ready to use. Do not dilute with water. **NOTE:** Always follow the manufacturer's mixing recommendations for the freeze protection required in your area.

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

## CONTROL AND PARTS FUNCTIONS

### **WARNING**

Gasoline is highly flammable and explosive under certain conditions.

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

### **WARNING**

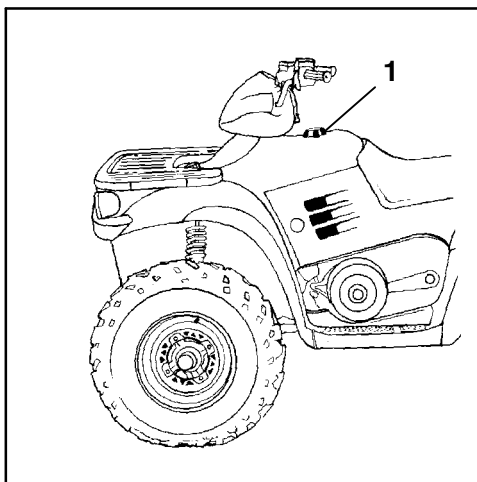
The engine exhaust from this product contains chemicals known to cause cancer, birth defects or other reproductive harm.

# CONTROL AND PARTS FUNCTIONS

## Engine Fuel and Oil System

### Fuel System

The fuel tank filler cap (1) is located directly behind the handlebar. Refer to your owner's Manual Supplement for tank capacity. Use either leaded or unleaded gasoline with a minimum pump octane number of 87 R+ M/2 octane.

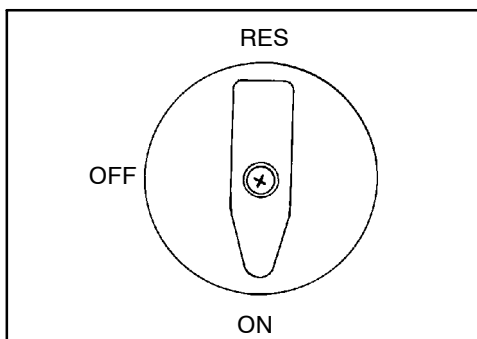


The fuel valve is located on the left side of the front fender and has three positions:

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

**ON:** For normal operation.

**RES:** For reserve supply in the event of main supply exhaustion.



**NOTE:** There is about a 7 to 10 mile (11.2 to 16 km) range on reserve gas. Always refill the gas tank as soon as possible after having used the reserve supply.

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

### Engine Fuel Safety/Fuel/Filter

The Polaris ATV is equipped with a unique in-line fuel filter.

This filter should be replaced by your dealer after every 100 hours of operation or annually. Do not attempt to clean the fuel filter.

# CONTROL AND PARTS FUNCTIONS

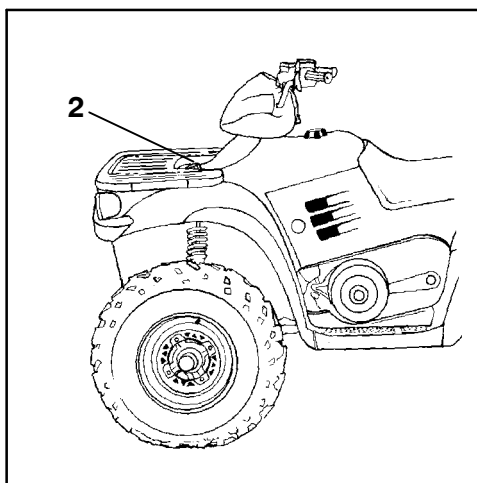
## Oil System

### CAUTION

On models with a two cycle engine, use only Polaris injection oil. Never substitute or mix oil brands. Serious engine damage and voiding of warranty can result.

To avoid serious engine damage always top off the oil level when refueling.

On models with a two cycle engine, the engine oil injection tank filler cap (2) is located on the front of the machine. Refer to your Owner's Manual Supplement to determine the type of engine your vehicle has. The tank capacity is 2 quarts (1.9 l).



## CONTROL AND PARTS FUNCTIONS

# CAUTION

Engine warranty coverage may become void if you use a brand other than Polaris in your machine.

### **Polaris 2-Cycle Lubricants**

Polaris has a family of premium oils available for use in all our products and highly recommends their use. The only oils recommended for Polaris 2-cycle ATVs are Polaris Premium 2-cycle oil or Premium Gold Synthetic 2-cycle oil.

Polaris Premium 2-cycle lubricants are the most advanced formulation of oils specifically designed for today's 2-cycle engines. Months of lab and field tests have resulted in a new generation of 2-cycle lubricants. Polaris Premium 2-cycle lubricants provide additives for 2-cycle engines lacking in today's fuel that keep ring grooves cleaner for less ring sticking and provide improved overall engine cleanliness. With new generation lubricity technology, they excel in meeting the lubrication demands of today's high performance 2-cycle engines. These are optimum oils recommended for liquid cooled and air cooled 2-cycle engines. We believe these oils are the best available in the market today.

### **Premium Gold Synthetic 2-Cycle Oil**

Your vehicle has been primed with Premium Gold Synthetic oil. This lubricant has been specially formulated for low smoke, low odor and high lubricity. We recommend continued use of this oil or Premium 2-cycle oil.

### **Premium 2-Cycle Oil**

Polaris also has a TC-W3 premium oil available for use in all of our 2 cycle products. We highly recommend its use if premium gold synthetic is not used. The only oil recommended for this ATV is Polaris brand oil.

Polaris Premium 2-cycle oils will readily mix with each other, however do not mix Polaris Premium 2-cycle oils with any other oils as they may not be compatible and engine damage may occur.

# CONTROL AND PARTS FUNCTIONS

## 4-Cycle Premium 4 Synthetic Lubricant

### **CAUTION**

Use only Polaris Premium 4 All Season synthetic oil (PN 2871271), or API certified "SH" oil. Never substitute or mix oil brands. Serious engine damage and voiding of warranty can result.

Polaris Premium 4 All Season Synthetic engine oil has been specially formulated for use in Polaris 4-cycle engines. It is a fully synthetic, high performance, multi-viscosity oil designed to provide the ultimate in lubrication performance and protection.

Premium 4 possesses unsurpassed film strength over the widest possible temperature range. It resists viscosity and frictional breakdown in ambient temperatures from -40° F to 120° F. Its exceptional frictional properties result in more efficient operation, more power output, lower fuel consumption, and easier starting in cold temperatures.

Although Polaris Premium 4 is the only oil recommended for use in this engine, use of any API certified "SH" oil is allowable. Oil may need to be changed more frequently if Polaris Premium 4 is not used. You will also need to follow the manufacturers recommendations for ambient temperature operation.



# CONTROL AND PARTS FUNCTIONS

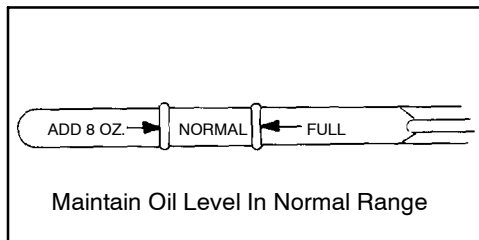
## Oil System

The oil tank is located on the left side of the vehicle or on the engine, depending on the model. To check the oil:

1. Set machine on a level surface.

2. Start the engine and let it idle for 20-30 seconds.

3. Stop the engine, remove dipstick and wipe dry with a clean cloth.

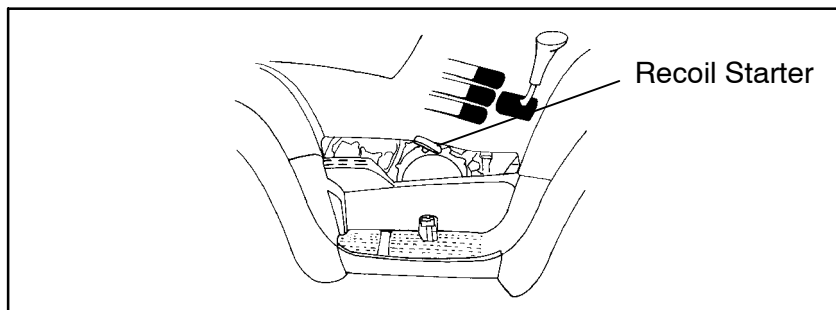


4. Screw in the dipstick completely, remove it and read the oil level. **NOTE:** The dipstick must be screwed in to keep the angle and depth of stick consistent.

5. Remove dipstick and check to see that the oil level is between the full and add marks. Add oil as indicated by the level on the dipstick. Do not overfill.

# CONTROL AND PARTS FUNCTIONS

## Recoil Starter



If the battery is weak and cannot start the engine, use of the recoil starter located on the right side of the machine will allow vehicle operation until repairs can be made.

Polaris 4-cycle engines are equipped with automatic decompressors. 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.

## CAUTION

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

Make sure the manual start handle is fully seated on the recoil housing, especially when travelling in wet areas. If it is not sealed properly, water may enter the recoil housing and damage components.

1. Be certain your vehicle is on a level surface and the parking brake is set. See page 45.
2. Take the machine out of gear.
3. Grasp the recoil starter tightly and pull slightly until the starter mechanism engages.
4. Pull the rope abruptly to start the engine.

## CONTROL AND PARTS FUNCTIONS

Drain the recoil housing after operating the ATV in very wet conditions. This should also be done before storing the ATV. The drain screw is located at the bottom of the recoil housing. Using a wrench, remove the screw. Reinstall screw once housing has been drained.

Water will enter the recoil housing if the starter handle is disengaged from the rope guide when under water.

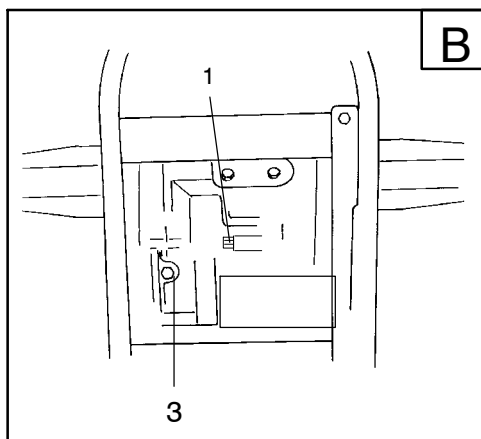
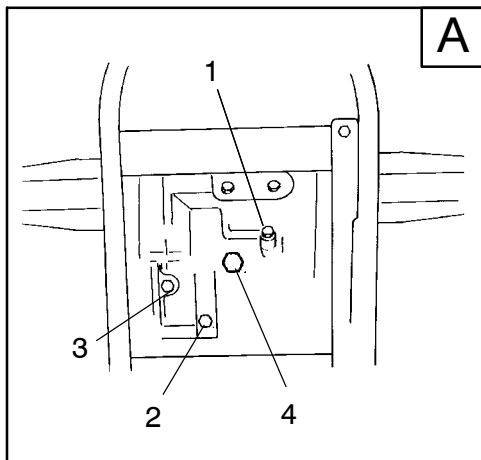
After travelling in wet areas the recoil housing and starter should always be drained completely by removing the recoil.

Do not open the crankcase drain unless the engine has ingested water. On 4-cycle engines, some engine oil will be lost if crankcase drain is opened.

On the Trail Blazer, the recoil handle **must be behind the heat shield** for it to seal properly. If it is not sealed properly, water may enter the recoil housing and damage components.

**A** - 250 and 400 Engines

**B** - 4-Cycle Engines



1. Crankcase Drain
2. Starter Pinion Drain
3. Recoil Drain (above front prop shaft on shaft drive models)
4. Counter Balance Drain (400s)

# STARTING THE ENGINE

## Procedure for Starting a Cold Engine

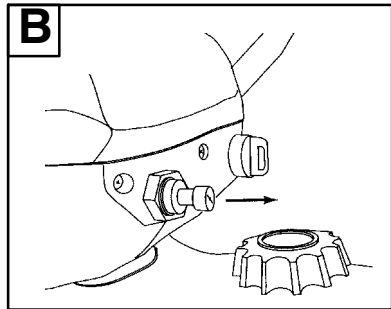
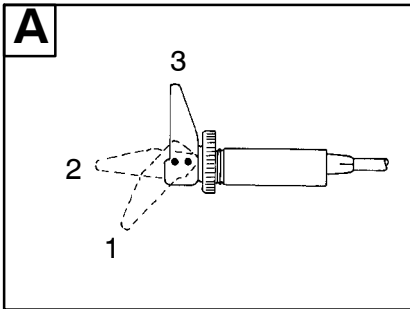
### **WARNING**

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

### **CAUTION**

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

**NOTE:** (A) - top view of the choke lever; (B) - choke button



1. Place the transmission in neutral and reset the parking brake.
2. Turn the fuel tank valve to ON.
3. Sit on the vehicle.
4. Move the choke to the FULL (1) position.
5. Turn the engine stop switch to RUN.
6. Turn the ignition key to ON and press the starter button.
7. On models with a push/pull choke, the choke is on "FULL" when the knob is pulled out all the way. The choke is "OFF" when the knob is pushed in. This is a variable choke and can be adjusted gradually, depending on how much choke is needed for starting.

## STARTING THE ENGINE

8. On models with a key ignition, turn the key to start the vehicle.
9. Do not press the throttle while starting the engine.
10. Activate the starter for a maximum of five seconds, releasing the key or button when the vehicle starts. If engine does not start, release the starter and wait five seconds; then activate the starter for another five seconds. Repeat this procedure until engine starts.

### After the Engine Starts

1. If the engine slows or stops, use of the choke at its HALF (2) position will allow proper engine warm up.
2. Vary the engine RPM slightly with the throttle to aid in warm up until the engine idles smoothly. Then move the choke to OFF (3).

### Cold Weather Operation - 4 Cycle Engines

Polaris offers the following kits for cold weather operation: Oil Tank Cover, Engine Heater and Oil Tank Heater. These kits reduce moisture accumulation in the oil tank when the ATV is operated in freezing temperatures.

If you use your ATV all year round, it is important to check your oil level frequently. A rising oil level could indicate the accumulation of water in the bottom of the oil tank. Water in the bottom of the tank can lead to engine damage and must be drained.

Water accumulation increases as outside temperature decreases.

The cold weather kits not only reduce moisture accumulation, but the heaters provide quicker warm-ups and easier starting.

See your dealer for more information on cold weather operation and what kit will work best for your driving habits.

# VEHICLE BREAK-IN PERIOD

## 2-Cycle Engines

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

### **CAUTION**

Use only Polaris injection oil. Never substitute or mix oil brands. Serious engine damage and voiding of warranty can result.

1. Mix 12.8 ounces of injection oil to four gallons (or 16 ounces to 5 gallons) of gasoline in a suitable gas can. Fill the fuel tank as outlined on page 58.
2. Fill the oil tank with Polaris injection oil.
3. Drive slowly at first. Select an area which is open and will give you room to familiarize yourself with vehicle operation and handling.

### **CAUTION**

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

4. Vary the throttle positions.
5. Perform regular checks on fluid levels, controls and all important areas on the vehicle as outlined earlier on the daily pre-ride inspection checklist found on page 12.

## VEHICLE BREAK-IN PERIOD

After the break in period the oil injection system provides the necessary engine lubrication without the need for pre-mixed fuel.

### **CAUTION**

Fill the oil tank when you refuel your ATV. If you don't serious engine damage could result.

After the first tank of pre-mixed fuel has been used please verify that the oil level in the oil tank has dropped, indicating that the oil pump is functioning properly. If the level has not dropped, see your dealer for oil pump bleeding and repeat the pre-mix procedure.

# VEHICLE BREAK-IN PERIOD

## 4-Cycle Engines

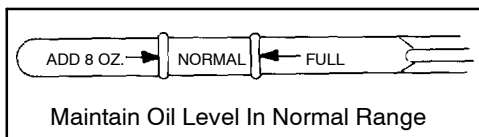
The break in period for your new Polaris ATV is defined as the first ten hours of operation, or the time it takes to use the first two tanks full of gasoline. No single action on your part is as important as a proper break in period. Careful treatment of a new engine will result in more efficient performance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

### CAUTION

Use only Polaris Premium 4 All Season synthetic oil, or API certified "SH" oil. Never substitute or mix oil brands. Serious engine damage and voiding of warranty can result.

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

1. Fill fuel tank with either unleaded or leaded fuel which has a minimum pump octane number of 87= (R+M)/2.



2. Check oil reservoir level indicated on dipstick. Add oil if necessary.
3. Drive slowly at first. Select an area which is open and will give you room to familiarize yourself with vehicle operation and handling.
4. Vary the throttle positions. Do not operate at sustained idle.

#### CAUTION:

5. Perform regular checks on fluid levels, controls and all important areas on the vehicle as outlined earlier on the daily pre-ride inspection checklist found on page 12.
6. Pull only light loads.
7. Break in oil and filter. Change at 20 hours or 500 miles.



## Safe Riding Gear

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

### 1. Helmet

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

Select an approved helmet which meets or exceeds your state's safety standards and bears either the Department of Transportation (DOT) label, the American National Standards Institute label (ANSI z90.1), or the Snell Memorial Foundation label.

### 2. Eye Protection

Do not depend on sunglasses for proper eye protection. A pair of goggles or helmet face shield offer the best protection for your eyes. They should be kept clean and be of shatterproof design (bearing the markings z2.1 or VESC 8).

### 3. Gloves

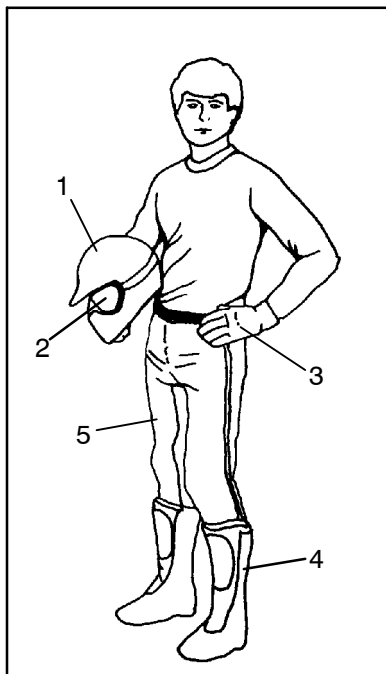
Off-road style gloves with knuckle pads are the best for comfort and protection.

### 4. Boots

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

### 5. Clothing

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



## CARRYING LOADS

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

Maximum trailer weight - 850 lbs.(386 kg); maximum vertical hitch weight - 30 lbs.(14 kg). Select models may tow up to 1225 (556 kg) on level ground only with a maximum vertical hitch weight of 35 lbs. (16 kg). Refer to your Owner's Manual Supplement to determine your machine's capabilities. **Know your machine before your ride.**

Maximum grade while trailer towing - 15°. Do not tow any trailer on a grade steeper than 15°.

If your machine is equipped with a front rack, take care when loading. Improper loading of the front rack can obstruct the headlight beam, reducing night visibility. Do not obstruct the headlight beam with cargo.

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

### **WARNING**

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



### **Important Safeguards**

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

- **REDUCE SPEED AND ALLOW GREATER DISTANCE FOR BRAKING WHEN CARRYING CARGO.**
- **CARGO WEIGHT DISTRIBUTION** should be 1/3 on the front rack and 2/3 on the rear rack. When operating over rough or hilly terrain, reduce speed and cargo to maintain stable driving conditions. Carrying loads on one rack only increases the possibility of vehicle tip over.
- **HEAVY LOADS CAN CAUSE BRAKING AND CONTROL PROBLEMS.** Use extreme caution when applying brakes with a loaded vehicle. Avoid terrain or situations which may require backing downhill.
- **ALL LOADS MUST BE SECURED BEFORE MOVING VEHICLE.** Unsecured loads can create unstable operating conditions, which could result in loss of control of the vehicle.

## **CARRYING LOADS**

- **LOADS MUST BE CARRIED AS LOW ON THE RACKS AS POSSIBLE.** Carrying loads high on the racks raises the center of gravity of the vehicle and creates a less stable operating condition. When cargo loads are carried high on the racks, the weight of the loads must be reduced to maintain stable operating conditions.
- **OPERATE ONLY WITH STABLE AND SAFELY ARRANGED LOADS.** When handling off-centered loads which cannot be centered, securely fasten load and operate with extra caution. Always attach the tow load to the hitch point designated for your ATV.
- **EXTREME CAUTION MUST BE USED** when operating with loads extending over the rack sides. Stability and maneuverability may be adversely affected, causing the machine to overturn.
- **DO NOT BLOCK THE FRONT HEADLIGHT BEAM** when carrying loads on the front rack.
- **DO NOT TRAVEL FASTER THAN THE RECOMMENDED SPEEDS.** Vehicle should never exceed 10 mph (16 kph) while towing a load on a level grass surface. Vehicle speed should never exceed 5 mph (8 kph) when towing loads in rough terrain, while cornering, or while ascending or descending a hill.

# DAILY PRE-RIDE INSPECTION

## **WARNING**

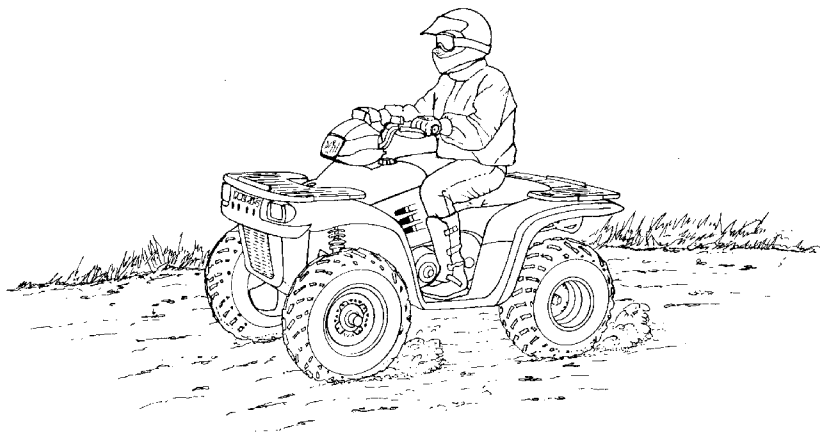
You must inspect your ATV each time before riding to ensure it is in proper working order. If proper inspection is not done, severe injury or death could result.

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

### **Item/Inspection Procedure**

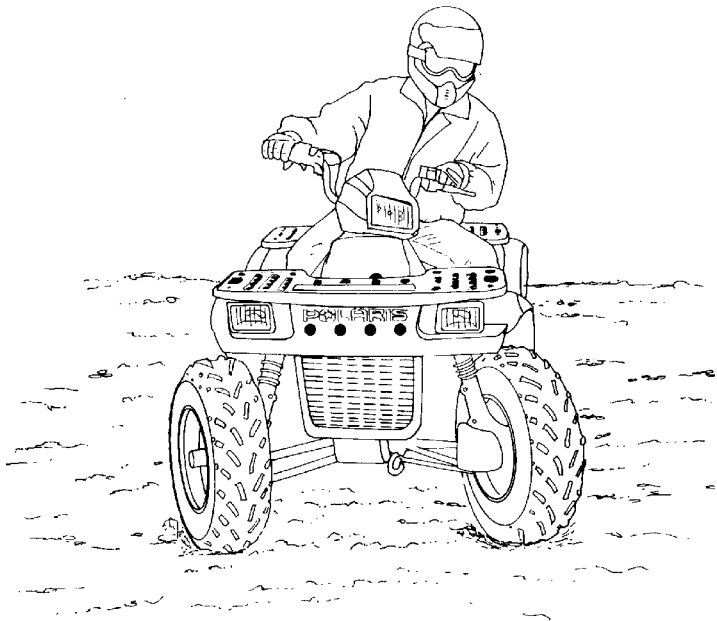
1. Tires - check condition and pressures
2. Fuel and oil tanks - fill both tanks to their proper levels
3. All brakes - check operation, adjustment and fluid level (includes auxiliary brake)
4. Throttle - check for free operation and closing
5. Headlight/Taillight/Brakelight - check operation of all indicator lights and switches
6. Engine stop switch - check for proper function
7. Wheels - check for tightness of wheel nuts and axle nuts; check that axle nuts are secured by cotter pins
8. Drive chain - condition and slack; refer to drive chain adjustment
9. Air cleaner element - check for dirt; clean or replace
10. Steering - check for free operation noting any unusual looseness in any area
11. Loose parts - visually inspect vehicle for any damaged components or loose nuts/bolts or fasteners
12. Operators helmet, goggles and clothing
13. Engine coolant - (Liquid Cooled Models Only) check for proper level at the recovery bottle

# RIDING



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

## Making Turns



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

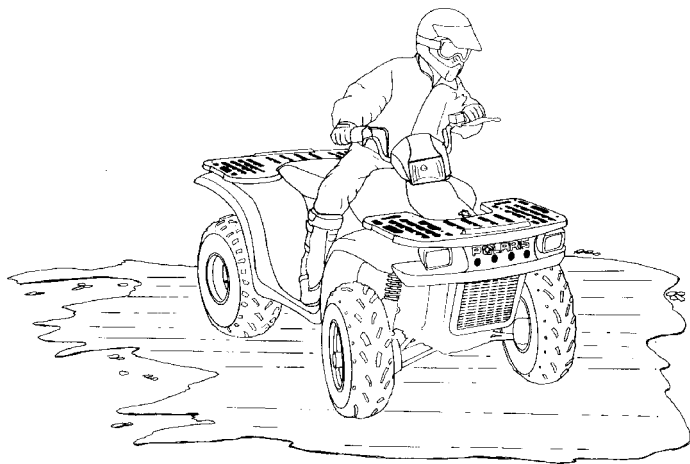
Polaris ATVs are equipped with a solid rear axle which drives both rear wheels equally at all times. This means that the wheel on the outside of the turn must travel a greater distance than the inside wheel when turning and the inside tire must slip traction slightly. To turn, steer in the direction 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 rear wheels allowing the turn to be made smoothly. The same leaning technique should be used for turning in reverse.

## **⚠ WARNING**

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

# RIDING

## Riding On Slippery Surfaces



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

1. Slow down when entering slippery areas.
2. Maintain a high level of alertness, reading the trail and avoiding quick, sharp turns which can cause skids.
3. Correct a skid by turning the handlebars in the direction of the skid and shifting your body weight forward.
4. Driving with Demand 4 Drive (All Wheel Drive) engaged can assist in controlling the vehicle in slippery areas.
5. Never apply brakes during a skid. Complete loss of ATV control can result.
6. Do not operate on excessively slippery surfaces if possible to avoid.
7. Always reduce speed and use additional caution.



## CAUTION

Never engage Demand Drive while wheels are spinning as severe damage to drive train may occur.

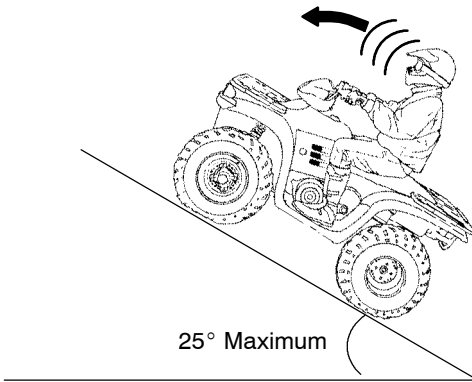
## WARNING

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

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

# RIDING

## Traveling Uphill



### **WARNING**

Exercise extreme caution when traveling in hilly terrain. Braking and handling are greatly affected. Loss of vehicle control or overturning of the ATV could occur causing severe injury or death.

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

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

## Sidehilling



**Sidehilling your ATV is one of the most dangerous types of riding and should be avoided if possible. In the event you do enter into a situation where sidehilling is necessary, always:**

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

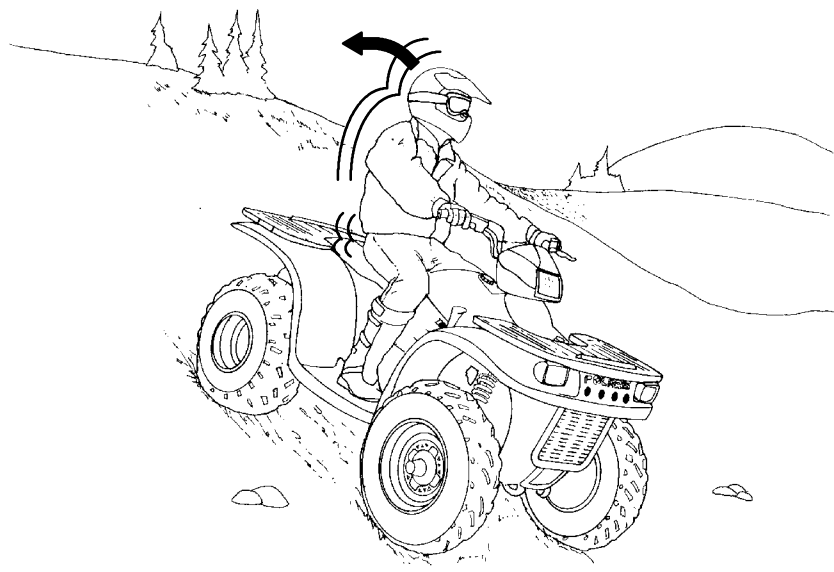
If vehicle begins to tip, quickly turn the front wheel downhill, if possible, or dismount on the uphill side **immediately!**

### **WARNING**

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

# RIDING

## Traveling Downhill



### Whenever descending a hill, always:

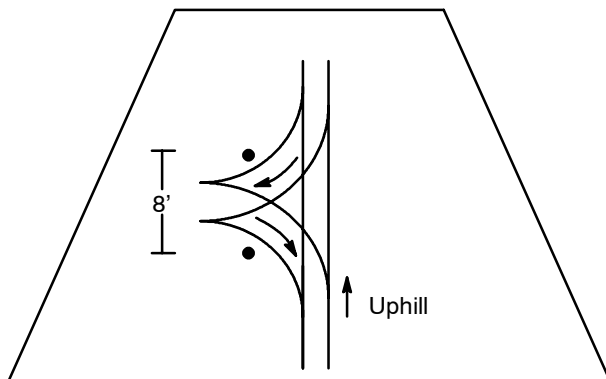
1. Drive directly downhill.
2. Transfer your weight to the rear of the vehicle.
3. Slow down.
4. Apply the brakes slightly to aid in slowing.

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

## **WARNING**

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

## Turning Around On A Hill



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

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

### **WARNING**

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

# RIDING

## Crossing Streams

Your Polaris ATV can operate through water up to maximum recommended depths reaching the footrests. Before fording streams always:

1. Determine water depths and current.
  2. Choose a crossing where both banks have gradual inclines.
  3. Proceed slowly, avoiding rocks and obstacles if possible.
  4. After crossing, dry the brakes by applying light pressure to the lever until braking action is normal.
- Avoid operating the ATV through deep or fast flowing water. If you cannot avoid water which exceeds the recommended maximum depth, go slowly, balance your weight carefully, avoid sudden movements, maintain a slow and steady forward motion. Do not make sudden turns or stops and do not make sudden throttle changes.

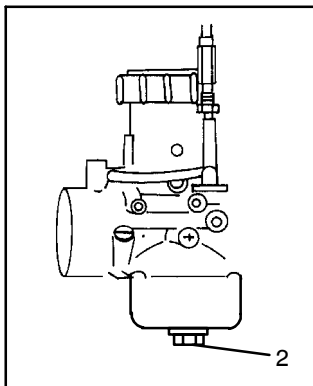
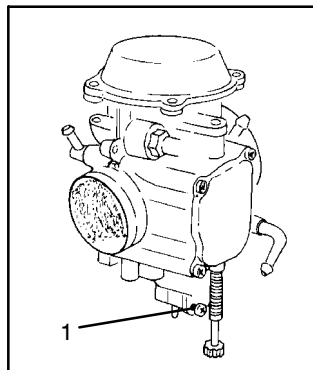
**NOTE:** After running the vehicle in water, it is **critical** your machine is serviced as outlined in the maintenance chart beginning on page 99. The following areas need special attention: engine oil, transmission oil, front and rear gearcases, and all grease fittings.

# CAUTION

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

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

- Move the ATV to dry land or at the very least, to water below the foot rests.
- Turn the fuel valve to “OFF”.
- Remove the spark plug.
- Loosen the carburetor drain screw (1) or remove bowl drain (2).
- For two stroke engines, remove crankcase drain screw as on page 148.
- Turn the engine over several times with electric start.
- Dry the spark plug and reinstall or replace with a new plug.
- Tighten the carburetor drain screw (1) or reinstall carburetor drain (2).
- Reinstall crankcase drain.
- Turn the fuel valve to “ON”.
- Attempt to start the engine. If necessary repeat the “drying” procedure.
- Take the machine to your dealer for service as soon as possible whether you succeed in starting it or not.



If water has been ingested into the PVT follow the procedure on page 90 to dry out the PVT.

# RIDING

## Trail Obstacles



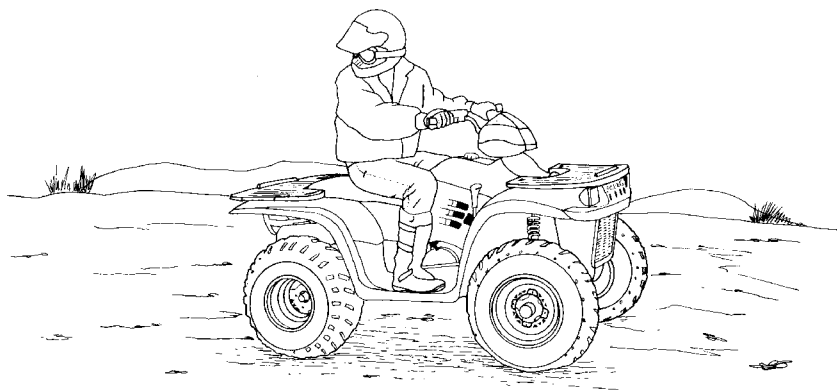
### Keep Alert!

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

## **WARNING**

Not all obstacles are visible. Travel with caution on trails. severe injury or death can result if your machine comes in contact with a hidden obstacle.





## Backing Up

1. Avoid backing up on steep inclines.
2. Always back slowly.
3. When in reverse, apply the brakes lightly for stopping.
4. Avoid turning at sharp angles in reverse.
5. Never open the throttle suddenly while backing.
6. Never activate override button while throttle is open. Loss of control may result.

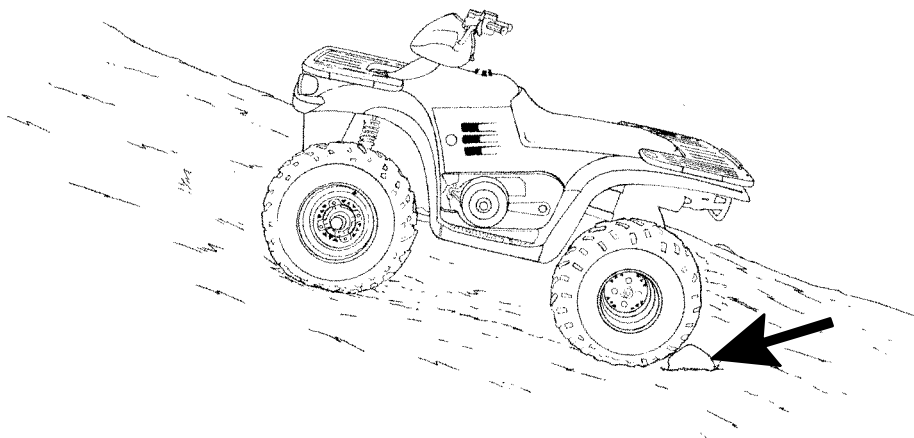
**NOTE:** Most Polaris ATVs are equipped with a reverse speed limiter. The override button should be used with caution as rearward vehicle speed is greatly increased. Do not operate at wide open throttle. Only open the throttle enough to maintain a desired speed. Manual shift models (Xpedition) do not have a reverse speed limiter or an override.

## CAUTION

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

# RIDING

## Parking on an Incline



## **Whenever the Vehicle is Parked**

1. Turn the engine off.
2. Place the transmission in gear or in park.
3. Set the parking brake.
4. Avoid parking on an incline. If it is necessary to park on an incline, always block the rear wheels on the down hill side as shown above.
5. Shut off fuel supply.

# PVT SYSTEM OPERATION

## PVT System

### **WARNING**

The PVT system rotates at high speeds, creating large amounts of force on clutch components. Extensive engineering and testing has been conducted to insure the safety of this product. However, as the owner you have the following responsibilities to make sure this system remains safe:

- Do not modify any component of the PVT system. Doing so may reduce its strength so that a failure may occur at high speeds. This system has been precision balanced. Any modification will cause the system to be out of balance, creating vibration and additional loads on components.
- Routine maintenance is the responsibility of the owner. Always follow recommended maintenance procedures. See your dealer!
- This PVT system is intended for use on Polaris products only.
- The PVT housing must be securely in place during operation.

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

### **Low Range Use May Reduce PVT Operating Temperatures**

The basic operation of the Polaris PVT system is dependent on engine speed and vehicle torque requirements. As engine speed increases, the force exerted on the movable drive sheave by the flyweights also increases. This, in turn, increases the amount of “pinch” applied to the drive belt. Similarly, if the engine speed decreases, the amount of centrifugal force decreases, reducing the amount of belt “pinch.”

## PVT SYSTEM OPERATION

On Polaris ATVs, the approximate gear ratio difference between high and low range is 1:2.25. This difference in gearing affects the operation of the PVT, especially at speeds less than 7 MPH, due to the system's dependence on engine speed.

For example, when operating at a ground speed of 3 MPH in low range, the engine speed would be around 3000 RPM. This is well above the engagement speed of 1200 - 1400 RPM. However, in high range at 3 MPH, the engine would be running at only 1500 RPM. Whenever operating this close to the engagement speed, the engine may be running at a speed which is too low to provide adequate "pinch" needed to prevent belt slip. This belt slip is responsible for creating the excessive heat that destroys belts and causes outer clutch covers to fail.

By switching to low range while operating at low ground speeds, the air temperature in the clutch cover is reduced by almost 160 degrees. Reducing the temperature inside the clutch cover extends the life of the PVT components (belt, cover, etc.).

**NOTE;** Models without a low range should avoid heavy pulling and extended low-speed operation.

### PVT Drying

There may be some instances when water is accidentally ingested into the PVT system. Use the following instructions to dry it out before operating:

Shift the transmission into neutral and apply full throttle for no longer than 10 seconds and repeat as necessary. This will expel the moisture and air-dry the belt and clutches. Allow the engine RPM to settle to idle speed and shift the transmission to the lowest available range and test for belt slippage. If the belt slips, repeat the process.

Take the vehicle to your dealer for service as soon as possible.

# **PVT SYSTEM OPERATION**

## **When To Use Low Range vs. High Range**

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

### **Low Range:**

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

### **High Range:**

- Basic operation at speeds greater than 7 MPH
- High ground speeds

## Battery

### **WARNING**

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

### **WARNING**

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

**External:** Flush with water.

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

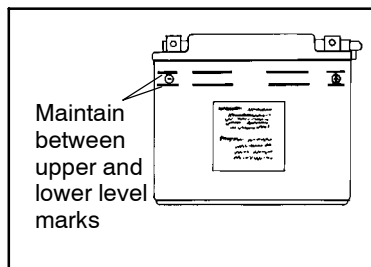
**Eyes:** Flush with water for 15 minutes and get prompt medical attention.

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

## Replenishing the Battery Fluid

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

To refill use only distilled water. Tap water contains minerals which are harmful to a battery.



# BATTERY

## Battery Removal

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

### CAUTION

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

## Battery Installation and Connections

### WARNING

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

Battery terminals and connections should be kept free of corrosion.

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



## BATTERY

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

### **NOTE:**

- When your ATV is placed in storage for three months or more, the battery should be removed, charged to proper level, and stored in a cool dry place.
- Before reusing, take the battery to your dealer for testing and recharging.
- Power plug leads may need to be bent down so that the battery cover may be installed.
- When installing a new battery, make certain it is fully charged prior to its initial use. Using a new battery that has not been fully charged can damage the battery resulting in a shorter life of the battery. It can also hinder vehicle performance.

# NOISE EMISSION CONTROL SYSTEM REGULATION

## TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED!

U.S. Federal law prohibits the following acts or the causing thereof:

(1) The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use or

(2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

1. Removal or alteration or the puncturing of the muffler or any engine component which conducts removal of engine exhaust gases.
2. Removal or alteration or the puncturing of any part of the engine air induction system.
3. Replacement of any vehicle parts with parts not in compliance with federal regulations.
4. Lack of proper maintenance.

**CAUTION:** Remember, exhaust system components are very hot during and after use of ATV.

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

## USFS Approved Spark Arrestor

Most Polaris ATVs have mufflers that were tested and approved in accordance with the USFS Forest Service Standard 5100-1A. For specific information on your model, see the Owner's Manual Specification Supplement that came with your machine.

## Spark Arrestor

### **WARNING**

When cleaning the spark arrestor, you must follow the safeguards listed below to avoid serious injury or death.

- Do not perform this operation immediately after the engine has been run because the exhaust system becomes very hot.
- Because of the increased fire hazard, make sure that there are no combustible materials in the area when purging the spark arrestor.
- Wear eye protection.
- Do not stand behind or in front of the vehicle while purging the carbon from the spark arrestor.
- Never run the engine in an enclosed area. The exhaust contains poisonous carbon monoxide gas.
- Do not go under the machine while it is inclined.
- Keep combustible materials away from exhaust system. Fire may result.

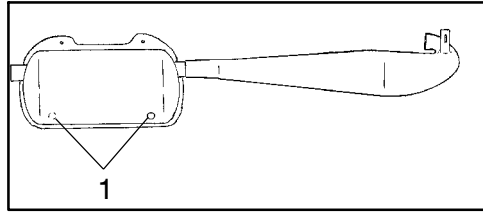
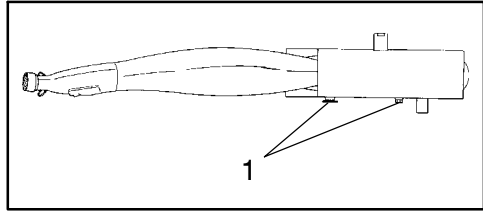
## Spark Arrestor

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

1. Remove the clean out plugs (1) located on the bottom of the muffler as shown above.
2. Place the transmission in neutral and start the engine. Purge accumulated carbon from the system by momentarily revving the engine several times.
3. If some carbon is expelled, cover the exhaust outlet and rap on the pipe around the clean out plugs while revving the engine several more times.

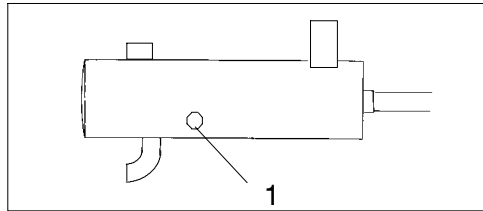
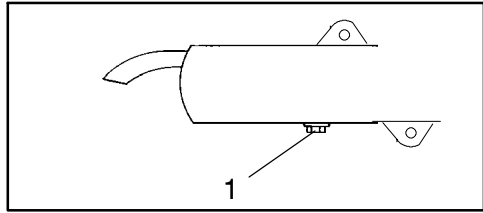
# MAINTENANCE

4. If particles are still suspected to be in the muffler, back the machine onto an incline so the rear of the machine is one foot higher than the front. Set the parking brake and block the wheels. Make sure the machine is in neutral and repeat steps 2 and 3.



## Spark Arrestor (cont.)

5. If particles are still suspected to be in the muffler, drive the machine onto the incline so the front of the machine is one foot higher than the rear. Set the parking brake and block the wheels. Make sure the machine is in neutral and repeat steps 2 and 3.



6. Repeat steps 2 through 5 until no more particles are expelled when the engine is revved.
7. Stop the engine and allow the arrestor to cool.
8. Reinstall the arrestor plugs.

## Tool Kits

To help you perform routine maintenance, a tool kit is provided in the storage compartment under the seat. Items included in the kits are:

### 2-cycle engines

- flat screwdriver
- spark plug wrench with Phillips head screwdriver
- wrench
- tire pressure gauge
- spanner wrench for adjusting rear shock spring preload (selected models)

### 4-cycle engines

- screwdriver
- open end wrench (8-10 mm)
- open end wrench (12-14 mm)
- box end wrench
- tire pressure gauge
- spark plug wrench and handle
- spanner wrench for adjusting rear shock spring preload (selected models)

**NOTE:** Other tools are also necessary to perform maintenance work. They are called out later in this manual.

# MAINTENANCE

## Periodic Maintenance Schedule

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

Maintenance intervals are based upon average riding conditions and an average vehicle speed of approximately 10 miles per hour. Vehicles subjected to severe use, such as operation in wet or dusty areas, should be inspected and serviced more frequently. If you are not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

Inspect, clean, lubricate, adjust or replace parts as necessary. **NOTE:** Inspection may reveal the need for replacement parts. Always use genuine Polaris parts available from your Polaris dealer.

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

### CAUTION

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

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

★ Emission Control System Service (California - 4-Cycle) **NOTE:** Some 4-Cycle models may have an additional California -only emissions warranty. Please refer to your owner's manual supplement to determine if this applies to your vehicle.

# MAINTENANCE

	Item	Hours or Miles	When	Remarks
	Brake System	Pre-ride	Pre-ride	Pre-ride inspection item
	Auxiliary Brake	Pre-ride	Pre-ride	Pre-ride inspection item
	Tires	Pre-ride	Pre-ride	Inspect daily, pre-ride inspection item
	Wheels	Pre-ride	Pre-ride	Pre-ride inspection item
	Frame nuts, bolts, fasteners	Pre-ride	Pre-ride	Pre-ride inspection item
	Injector Oil Level (2-Cycle)	Daily	Daily	Check when refueling
▶ ★	Air Filter - Pre-Cleaner	Daily	Daily	Inspect-Clean
	Coolant/Level Inspection	Daily	Daily	Replace engine coolant every two years
▶	Air Box Sediment Tube	Daily	Daily	Drain deposits whenever visible
	Headlamp Inspection	Daily	Daily	Check operation daily; apply Polaris dielectric grease to connector when replaced
	Tail lamp inspection	Daily	Daily	Check operation daily; apply Polaris dielectric grease to socket when replaced
▶ ★	Air Filter - Main Element	Weekly	Weekly	Inspect-Replace if necessary
▶	Transmission Oil Level	20 hrs	Monthly	Inspect monthly; change annually
	Battery	20 hrs	Monthly	Check Terminals/clean/check fluid level
	Engine Counter-balance (400 Engines)	20 hrs	Monthly	Check oil level; change annually

# MAINTENANCE

## Periodic Maintenance Schedule (Cont.)

### CAUTION

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

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

★ Emission Control System Service (California - 4-Cycle) **NOTE:** Some 4-Cycle models may have an additional California -only emissions warranty. Please refer to your owner's manual supplement to determine if this applies to your vehicle.

	Item	Hours or Miles	When	Remarks
►★	Engine breather filter (4-cycle)	20 hrs	Monthly	Inspect-replace annually and as needed
■	Brake pad wear	10 hrs	Monthly	Inspect periodically
►	Front and Rear Gearcase Oil (shaft drive)	100 hrs	Monthly	Check monthly and change annually
	Engine Cylinder Head and Cylinder Base Fasteners	25 hrs	3 months	Inspect (re-torque required at first service only)
►	General Lubrication	50 hrs	3 months	Lubricate all fittings, pivots, cables, etc.



# MAINTENANCE

	Item	Hours or Miles	When	Remarks
▶ ★	Engine Oil - Level/ Change (4-Cycle)	100 hrs / 1000 miles	6 months	Check Level Daily; Break in Service at 1 month. Change oil more often in cold weather use.
▶ ★	Oil Filter(4-Cycle)	100 hrs / 1000 miles	6 months	Replace with oil change
	Oil Pump Cable (2-Cycle)	50 hrs	6 months	Inspect, adjust, lubri- cate, replace if required
★	Engine breather hose (4-cycle)	100 hrs	6 months	Inspect
	Carburetor Float Bowl	50 hrs	6 months	Drain bowl periodically and prior to storage
■	Throttle Cable/ ETC Switch	50 hrs	6 months	Inspect-adjust, lubri- cate, replace if neces- sary; pre-ride inspection item
★	Choke (Enricher) Cable	50 hrs	6 months	Inspect-adjust, lubri- cate, replace if neces- sary
	Coolant strength/ pressure test sys- tem	100 hrs	6 months	Inspect strength sea- sonally; pressure test system annually
▶	Front hubs/fluid check (AWD)	50 hrs	6 months	Check monthly
	Shift linkage	50 hrs	6 months	Inspect, adjust
■	Drive belt	50 hrs	6 months	Inspect, replace if nec- essary
▶	Steering	50 hrs	6 months	Inspect daily, lubricate
▶	Rear Axle	50 hrs	6 months	Inspect bearings, Lube

# MAINTENANCE

## Periodic Maintenance Schedule (Cont.)

### CAUTION

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

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

★ Emission Control System Service (California - 4-Cycle) **NOTE:** Some 4-Cycle models may have an additional California -only emissions warranty. Please refer to your owner's manual supplement to determine if this applies to your vehicle.

	Item	Hours or Miles	When	Remarks
►	Front Suspension	50 hrs	6 months	Inspect-lubricate, tighten fasteners
►	Rear Suspension	50 hrs	6 months	Inspect, tighten fasteners
►	Drive Chain(s)	50 hrs	6 months	Inspect daily, adjust and lubricate if needed
★	Spark Plug	100 hrs	12 months	Inspect-replace if necessary
■ ★	Ignition Timing	100 hrs	12 months	Inspect and adjust as needed
■ ★	Fuel System	100 hours	12 months	Check for leaks at tank cap, lines, fuel valve, filter, pump and carburetor. Replace lines every two years.
■	Fuel Filter	100 hrs	12 months	Replace annually

## MAINTENANCE

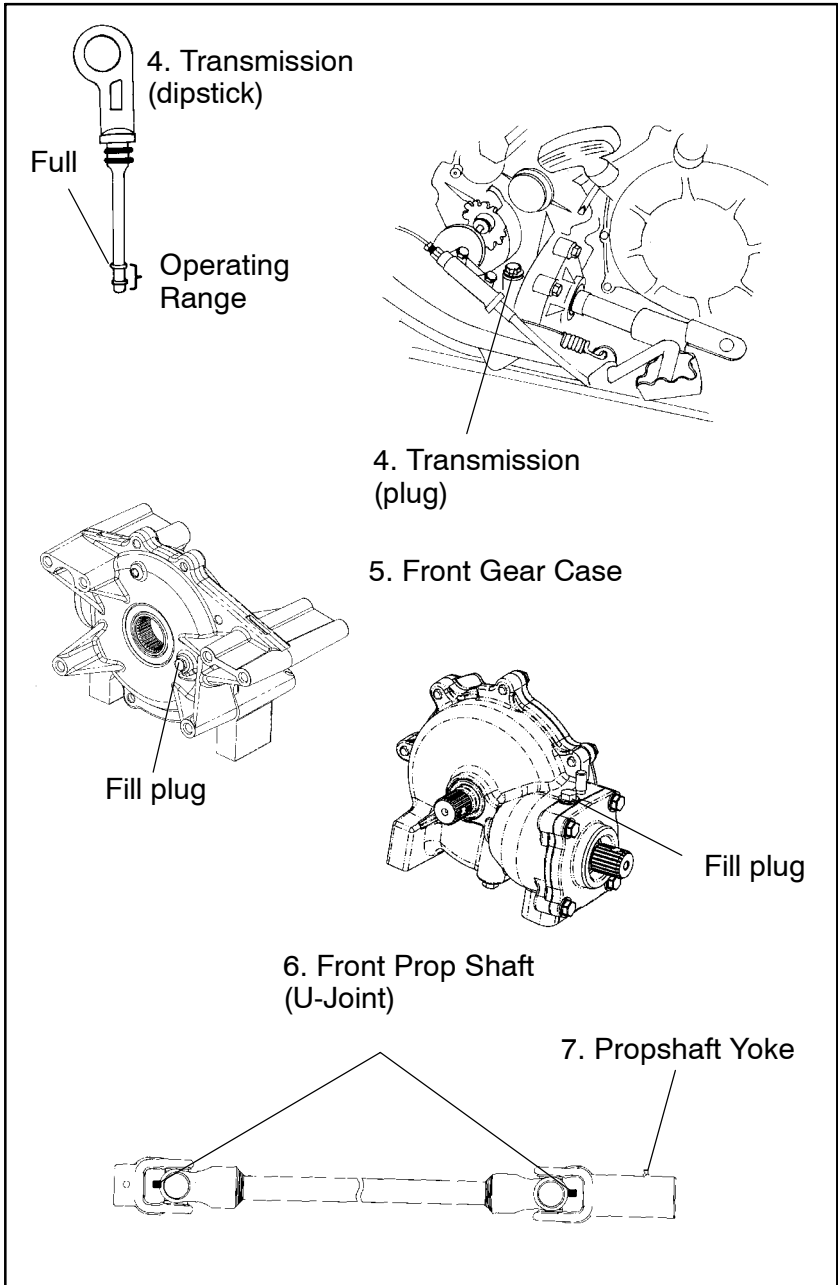
	Item	Hours or Miles	When	Remarks
	Radiator	100 hrs	12 months	Inspect/clean external surface
	Cooling System hoses	100 hrs	12 months	Inspect
	Spark arrestor	100 hrs	12 months	Clean out
▶	Front hubs/fluid change (AWD)	100 hrs	12 months	
■	Clutches (drive and driven)	100 hrs	12 months	Inspect, clean
	Engine Mounts	100 hrs	12 months	Inspect
■ ★	Valve Clearance (4-Cycle)	100 hrs	12 months	Inspect/Adjust
■	Injector Oil Filter (2-Cycle)	100 hrs	12 months	Replace
■	Shift selector box (H/L/R)	200 hrs	24 months	Change lubricant every two years
■	Brake fluid	200 hrs	24 months	Change every two years
■	Front wheel bearings (2wd)	300 hrs	36 months	Inspect, replace if necessary
★	Idle Speed	As Required	As Required	Adjust
	Recoil housing	As required	As required	Drain moisture out after riding in water
■	Toe adjustment	As required	As required	Periodic inspection, adjust when parts are replaced
	Headlight Aim	As required	As required	Adjust if necessary

# MAINTENANCE

## Lubrication Recommendations

Item	Lube Rec	Method	Frequency*
1. Engine Oil (2-Cycle)	Polaris Injection Oil	Fill oil tank. See page 58.	As needed, when refueling
2. Engine Oil (4-Cycle)	Polaris Premium 4 Synthetic 0W40	Add to proper level on dipstick. See page 61.	Check level daily.
3. Brake Fluid	DOT 3 Only	Maintain level between fill lines. See page 43.	As required; change every two years or 200 hours
4. Transmission Oil	Polaris Premium Synthetic gear case lube	See Page 141	Change annually or at 100 hours
5. Front Gearcase Oil	GL5 80-90 Weight Gear Lube	See Page 146	Change annually or at 100 hours
6. Front Prop Shaft U-joints	Grease+	Locate Fittings and Grease	Every 3 months or 50 hours
7. Front Propshaft Yoke	Grease+	Locate fittings and grease - 3 pumps maximum	Every 3 months or 50 hours
8. Drive Chain(s)	O-Ring chain lube or SAE 80/90	Lubricate as often as required. Before each ride in wet conditions	As required
9. Demand 4 Hubs - All Wheel Drive ATVs	Premium Hub Lube	Remove set screw in hubs. Rotate wheels to 4 O'clock position. If lubricant is not visible add more. Reinstall set screw.	Annually or at 100 hrs

## Lubrication Recommendations

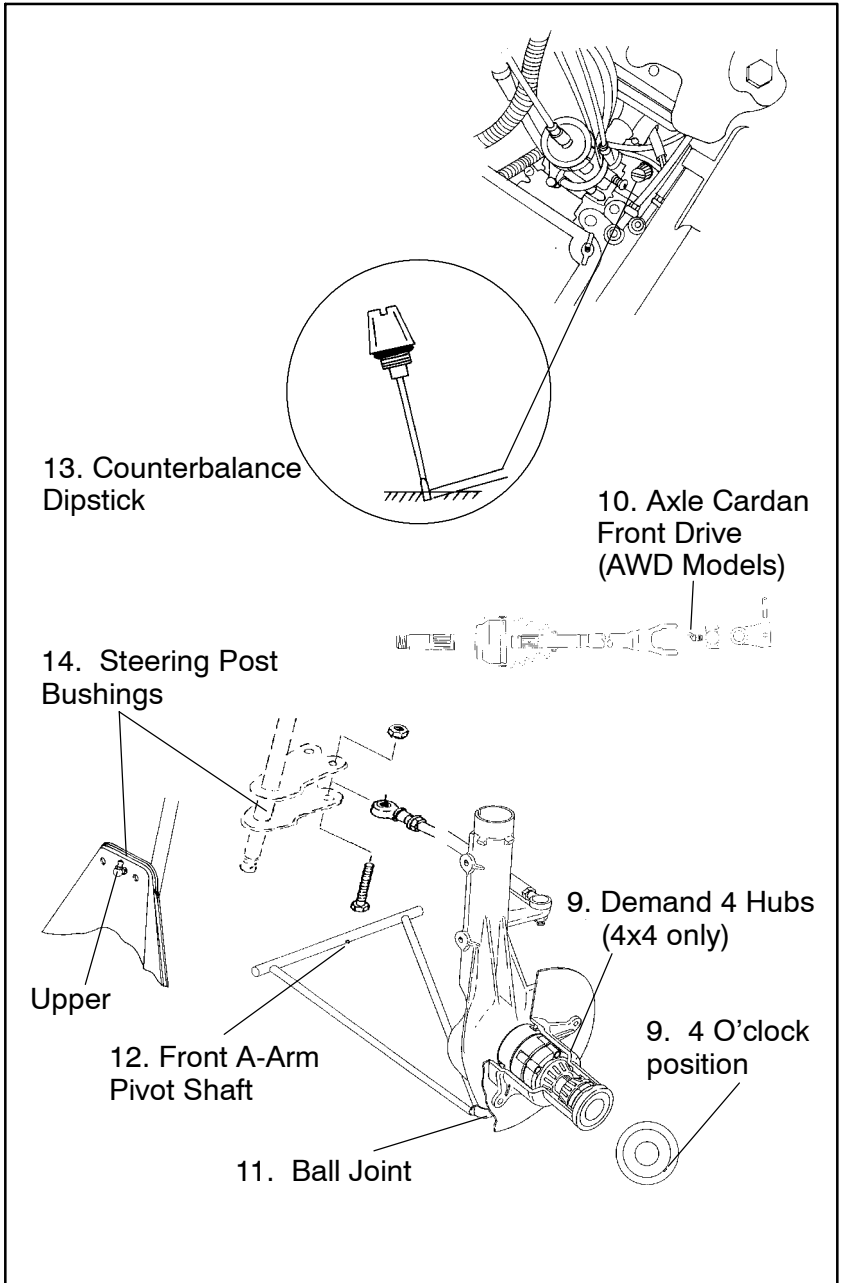


# MAINTENANCE

## Lubrication Recommendations

10. Front Drive Axle (U Joint) (AWD Models)	Grease+	Locate grease fitting and grease with grease gun.	Every 3 months or 50 hours
11. Ball Joint	★ Grease **	Locate fitting on back side of struts and grease with grease gun.	Every 3 months or 50 hours
12. Front A Arm Pivot Shaft	★ Grease **Δ	Locate fitting on pivot shaft and grease with grease gun.	Every 3 months or 50 hours
13. Counter Balance Housing (400)	SAE 10/30	Check level on dipstick and add oil as necessary. Change annually. To change oil see page 149.	Check monthly and change annually
14. Steering Post Bushings	★ Grease **	Locate fittings on steering post and grease with grease gun.	Every 3 months or 50 hours

## Lubrication Recommendations



# MAINTENANCE

## Lubrication Recommendations

15. Rear Axle Bearing	★ Grease **	Locate fittings and grease	Every 3 months or 50 hours
16. Swing Arm Bushings	★ Grease **	Locate fittings on swing arm and grease with grease gun.	Monthly or at 20 hours
17. Upper Control Arms	★ Grease **Δ	Locate fittings and grease	Semi-annually
18. Lower Control Arms	★ Grease **Δ	Locate fittings and grease	Semi-annually
19. Rear Wheel Hub Bearing Carrier	★ Grease **Δ	Locate fitting and grease	Semi-annually
20. Rear Anti-Roll Bar	★ Grease	Locate fitting and grease	Semi-annually

★ More often under severe use, such as wet or dusty conditions.

\*\*Polaris Premium all Season Grease or grease conforming to NLGI No. 2, such as Conoco Superlube M or Mobile-grease Special.

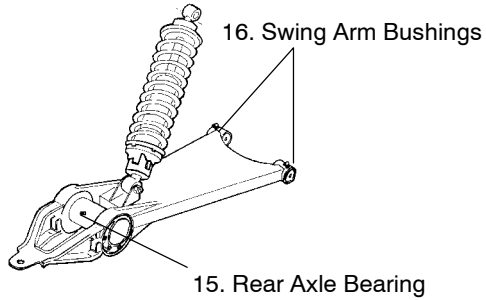
+ Grease every 500 miles, or before long periods of storage or after pressure washing, or after submerging in water. Always use Polaris Premium U-Joint Lube for maximum service of these driveline components (PN 2871515 3 oz.)(PN 2871551 14 oz.).

Δ When suspension action becomes stiff or after washing.

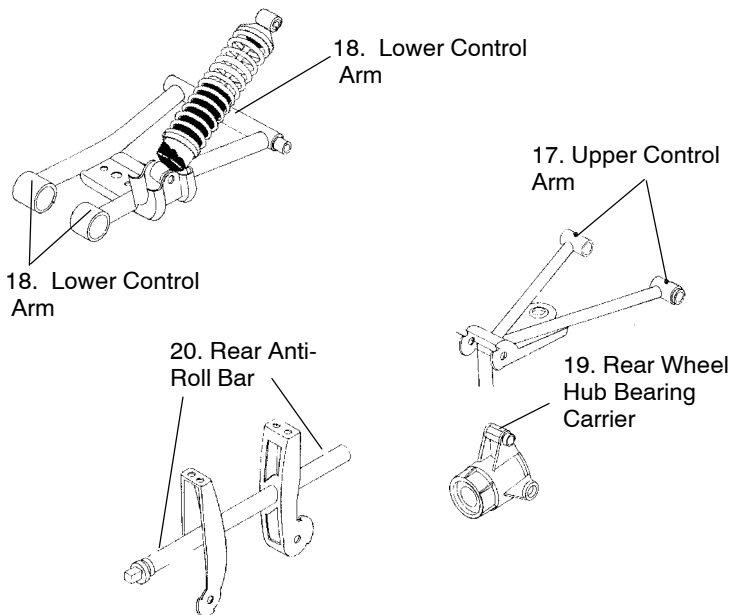
**NOTE:** Hours are based on 10 mph average.



## Lubrication Recommendations



## INDEPENDENT REAR SUSPENSION





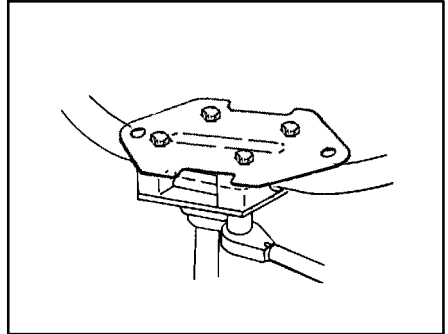
## **WARNING**

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

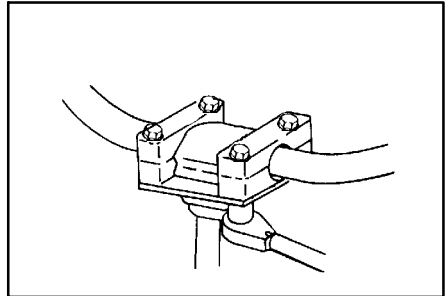
### Handlebar Adjustment

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

1. Locate handlebar bolts. On models with a headlight pod, it will be necessary to remove the upper headlight pod. On other models remove the handlebar cover.



2. Loosen the four bolts.
3. Adjust handlebar to desired height. Be sure handlebars do not hit gas tank or any other part of machine when turned fully to left or right.



4. Torque handlebar adjuster block bolts to 10 to 12 ft. lbs.

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

## MAINTENANCE

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

### Wheel Nut Torque Specifications

Bolt Size	Specification
Front 3/8"	20 Ft. Lbs.
Rear 3/8"	20 Ft. Lbs.
Rear 1/2"	50 Ft. Lbs.

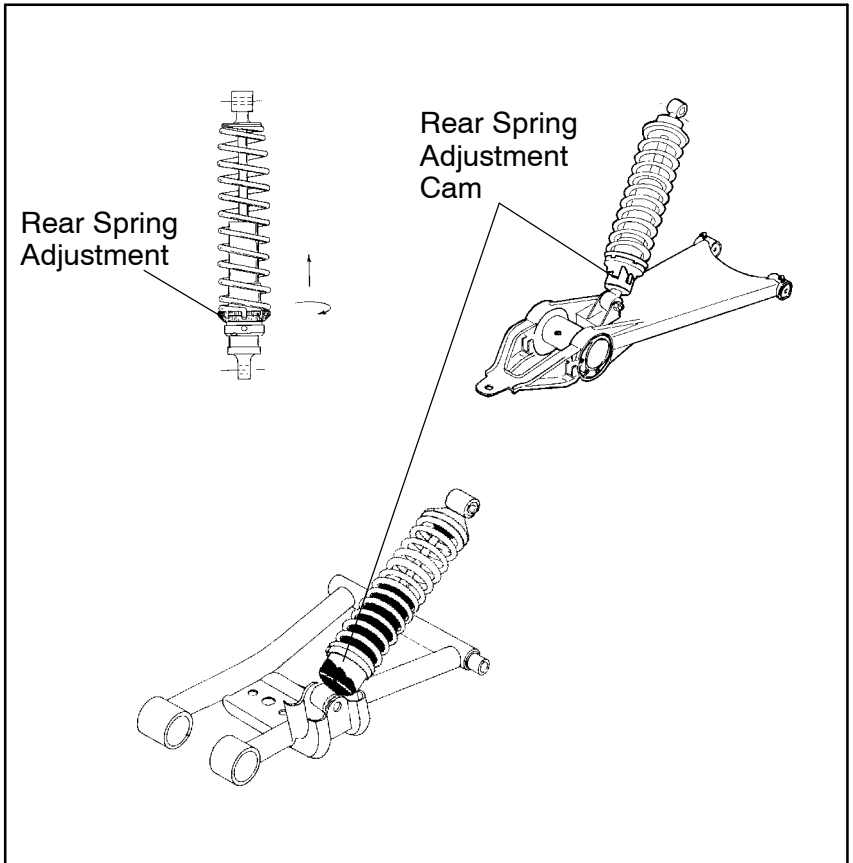
**NOTE: All nuts that have a cotter pin installed must be serviced by an authorized Polaris Dealer.**

### Front Wheel Hub Tightening

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

## Rear Spring Adjustment

The rear shock absorber spring is adjusted by rotating the adjuster in the direction required to increase or decrease spring tension.



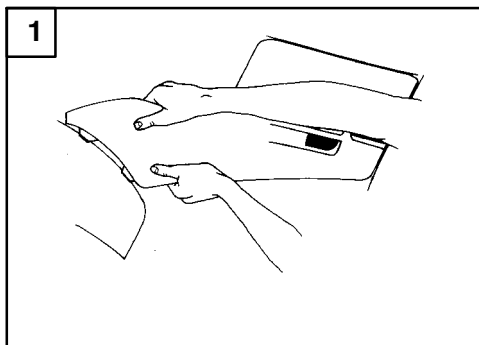
**NOTE:** Accessory springs are available through your Polaris dealer.

# MAINTENANCE

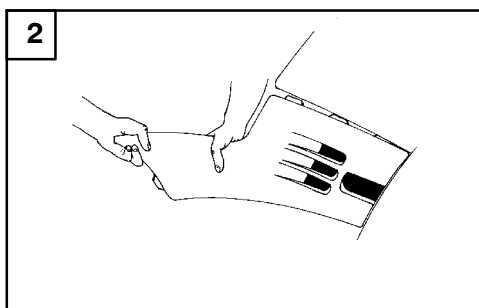
## Side Panel Removal (Gen IV Models)

Side panel removal may be difficult until the locking tabs and receivers have been snapped and unsnapped a few times.

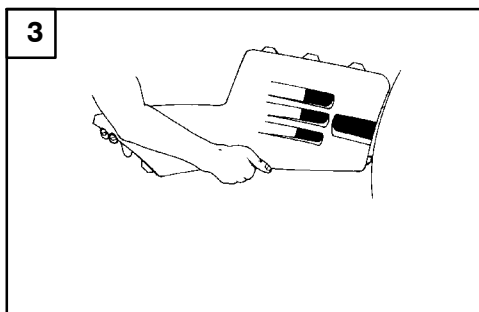
1. Remove seat. Grasp rear of side panel near rear cab. With a quick and firm motion, pull the panel forward and outward to disengage the two rear tabs.



2. Place hand on top of side panel behind the fuel tank. With a quick and firm motion, push down on the side panel to disengage the top rear two tabs. Then pull up on side panel to disengage front upper and lower tab.



3. To reinstall side panel, align panel tabs with slots on front cab. Push panel upward and forward until tabs lock. Bend rear of side panel and insert the two tabs into the rear cab.



## **Air Cleaner - 2 Cycle Engines**

### **Filter Removal and Service Procedure**

1. Remove the ATV seat.
2. Unsnap the four clips holding the cover assembly to the air box.
3. Loosen clamp securing the filter and remove the filter.
4. Remove the foam pre-filter from the main filter.
5. Wash pre-filter in soapy water, rinse and let dry.
6. Re-install pre-filter over main filter. Replace main filter if required.

### **Filter Installation Procedure**

1. Check condition of airbox and replace if necessary.
2. Replace filter over carburetor boot. Make certain filter is fully seated in the air box.
3. Tighten clamp. Do not overtighten or filter damage may occur.
4. Check cover gasket and replace if required. Be certain the cover is seated properly and snap the four clips on to the cover.
5. Reinstall ATV seat.

# MAINTENANCE

## Cleaning the Main Filter

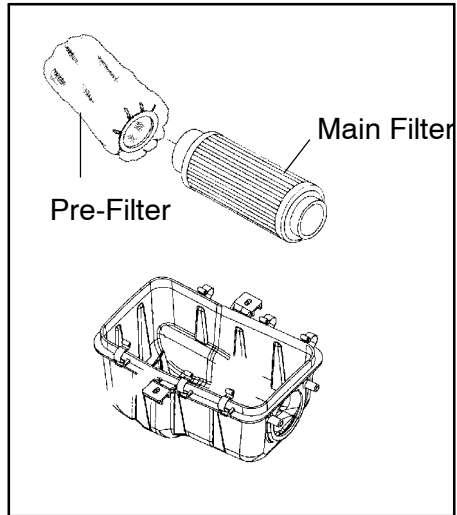
**NOTE:** It is advisable to replace the filter when it is dirty. However, in an emergency it is permissible to clean the main filter if you observe the following practices.

1. **Never** immerse the filter in water since dirt can be transferred to the clean air side of the filter.
2. If compressed air is used **never** exceed a pressure of 40 PSI. Always use a dispersion type nozzle to prevent filter damage and clean from the inside to the outside.

**NOTE:** Replace the air filter every 50 hours, and possibly more often in very dirty conditions.

## Air Filter Service - 4 Cycle

1. Remove seat.
2. Release clips and remove cover.
3. Loosen clamp and remove filter
4. Remove fabric type pre-filter from main filter. Wash pre-filter in soapy water and dry it.
5. Reinstall pre-filter over main filter. Replace main filter as required.



6. Reinstall filter into air box and tighten clamp. Do not over tighten clamp or filter damage may occur.

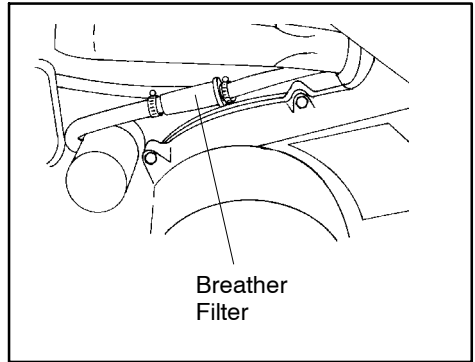


## CAUTION

Operation of your ATV without a breather filter can cause engine damage.

### Breather Filter and Hose - 4-Cycle Engines With Dry Sump\*

1. Remove the clamps and pull the filter out of the hoses. **NOTE:** It will not be necessary to remove the lower hose from the engine.
  2. Inspect filter for debris. Blow through gently in direction of arrow on filter to check for clogging. Replace as needed.
  3. Check hoses for cracks, deterioration, abrasion, or leaks. Replace as needed.
  4. Reinstall filter and clamps with arrow pointing toward engine.
- \* Refer to your owner's manual supplement to determine if your machine has a dry sump.



# MAINTENANCE

## Steering Inspection

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

## Camber and Caster

The camber and caster are non-adjustable.

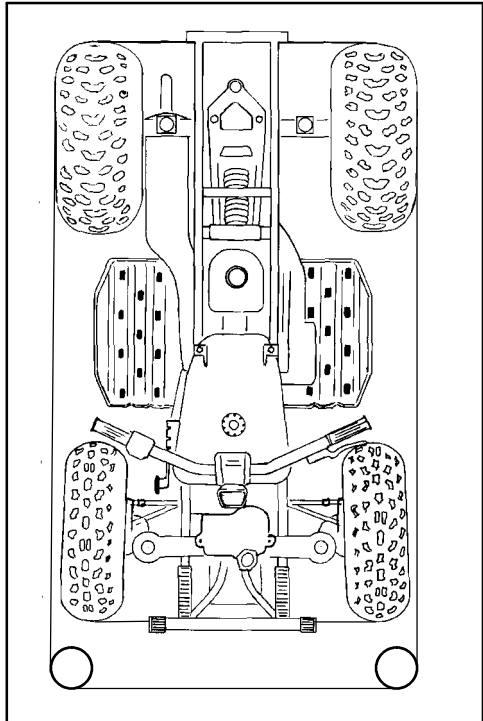
# WARNING

Do not attempt to adjust the tie rod for toe alignment. Severe injury or death can result from improper adjustment. Contact your Polaris dealer. He/she has the training and tools to make these adjustments.

## Toe Alignment

You can check the toe alignment of the vehicle using the following method. The recommended toe alignment is 1/8" to 1/4" (.3 to .6 cm) toe out. If you discover improper adjustment have your dealer correct it.

1. Set the handlebars in a straight ahead position and hold them in this position.



### Toe Alignment (cont.)

2. Place stands in front of the machine, perpendicular to the rear tires.
3. Tie an elastic string around the stands, making sure string just touches side surface of the rear tires on each side of machine and goes around the stands in front of the machine.
4. Measure from string to rim at front and rear of front rim. Rear rim measurement should be  $1/16'' - 1/8''$  (.2 to .3 cm) more than front rim measurement.
5. If this measurement needs to be adjusted, contact your dealer for service.

# MAINTENANCE

## Front Brake

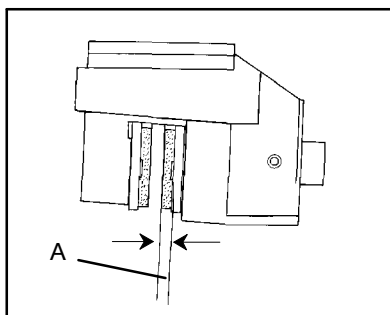
### **WARNING**

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

The front brakes are hydraulic disc brakes which are activated by the brake lever being moved toward the handlebar. These brakes are self-adjusting and require no adjustment.

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

- Keep fluid level in the master cylinder reservoirs as described on page 43. Normal functioning of the diaphragm is to extend into the reservoir as fluid level drops. If the fluid level is low and the diaphragm is not extended, a leak is indicated and the diaphragm should be replaced. Always fill the reservoir as indicated whenever the cover is loosened or removed to insure proper diaphragm operation. Use Polaris DOT 3 brake fluid (PN 2870990).
- Check brake system for fluid leaks.
- Check brake for excessive travel or spongy feel.
- Check friction pads for wear, damage and looseness.
- Check security and surface condition of the disc.
- Pads should be changed when friction material is worn to  $3/64$ " (.1 cm) (A), or about the thickness of a dime.



## Rear and Auxiliary Brake

### Rear Brake

The rear brake is a hydraulic disc type brake which is activated by the same lever which activates the front brake system. The rear brake system is self adjusting and requires no maintenance other than periodic checks of the pads for wear.

- Pads should be changed when the friction material is worn to 3/64" (.1 cm) which is about the thickness of a dime.
- Inspect the brake disc spline and pad wear surface for excessive wear.

### Auxiliary Brake Systems

Your ATV's auxiliary brake system is intended to be used as a backup for the main brake system. Should the main system fail, the rear brake can be activated by depressing the foot pedal on the inside of the right floorboard. All Polaris ATVs have hydraulic brake systems. The hydraulic auxiliary brake system will not require adjustment.

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

# MAINTENANCE

## Oil Pump Adjustment Procedure 400 Engines

1. Before adjusting the oil pump, check engine idle RPM and carburetor adjustments which are found in the owner's manual supplement.

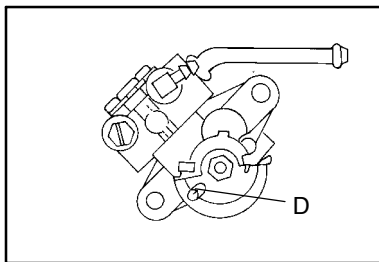
2. Loosen throttle cable jam nut and turn adjuster in or out until there is 1/16" - 1/8" (.16 - .32 cm) of throttle lever travel before throttle slide starts to open. See Owner's Manual Supplement.

3. Place very slight pressure on the throttle lever until all freeplay is removed from throttle cable (to the point where the carb slide is just starting to rise).

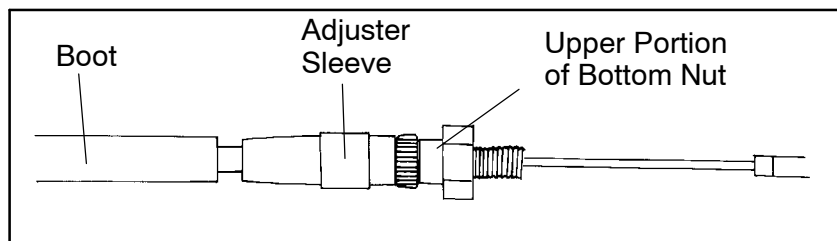
4. Lift boot up off adjuster sleeve. Remove the oil pump cover. Loosen the cable adjuster locknut. Adjust oil pump cable until marks align (D) when the throttle slide just begins to raise.

5. Tighten the locknut.

6. Recheck adjustment. If correct, slide boot all the way down over the upper portion of the bottom nut to ensure good sealing against water entry. Reinstall oil pump cover and gasket.

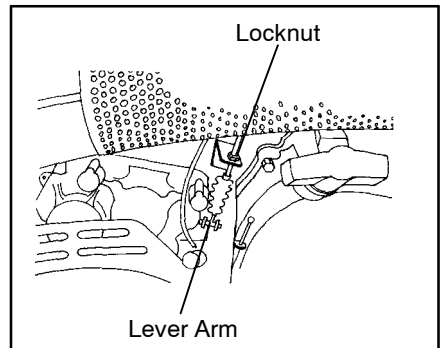
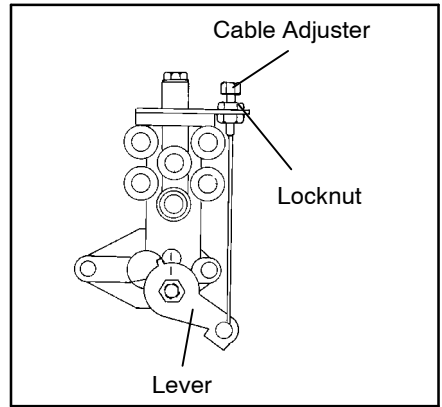


Oil Pump Adjustment 400



## Oil Pump Adjustment Procedure - 250 Engines

1. Before adjusting the oil pump, check engine idle RPM and carburetor adjustments which are found in the owner's manual supplement.
2. Loosen throttle cable jam nut and turn adjuster in or out until there is 1/16" - 1/8" (.16 - .32 cm) of throttle lever travel before throttle slide starts to open. See Owner's Manual Supplement.
3. Place very slight pressure on the throttle lever until all freeplay is removed from throttle cable (to the point where the carb slide is just starting to rise).
4. Loosen locknut. Turn adjuster in or out until all freeplay is removed from oil pump cable (the point where the oil pump arm is just starting to move off of its stop). The pump stop keeps the pump arm from rotating any farther down than the idle position so no visual alignment of marks is necessary. Tighten the locknut



# MAINTENANCE

## Oil Pump Bleeding Procedure

1. Fill the oil reservoir with Polaris injector oil.
2. Loosening the bleeder screw is only necessary when the oil supply line has been disconnected from the pump or the oil reservoir and supply line have been completely run out of oil. In these cases, loosen the pump bleed screw one full turn. Allow oil to flow from the bleed screw for five to ten seconds. Tighten bleed screw. **CAUTION:** Never run the engine with the bleed screw loose. Loss of oil will cause serious engine damage.
3. Start the engine and rotate the oil pump lever to its full open position. With the engine at idle, hold the lever up for thirty seconds to make sure all air is out of the system.

## Throttle Cable Adjustment 250 and 400 Engines

Vehicles with 250 and 400 engines do not utilize a cable sleeve jam nut. You will need to bottom the cable to the carburetor slide-valve cap. Adjust at throttle cable adjuster near the throttle block. See page 130 for adjustment procedure.



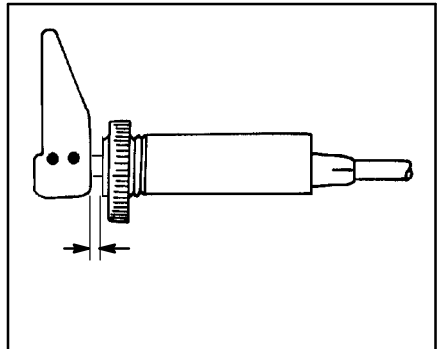
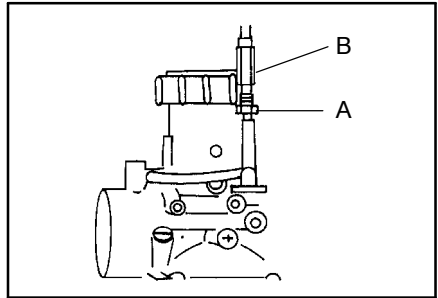
## Engine Choke Adjustment 2-Cycle Engines

When the choke is in the full off position, the choke plunger must be seated on the fuel passageway in the carburetor. If the plunger is not seated on the passageway, the engine will flood or run too rich, causing spark plug fouling and very poor engine performance.

If there is too much choke cable slack resulting in excessive free play, the engine will be hard starting when cold and the half-on choke position used for intermittent applications will not function.

### Choke Adjustment Procedure

1. Flip choke toggle to the full off position.
2. Loosen adjustment locknut (A) on carburetor.
3. Turn cable sleeve adjusting nut (B) clockwise on carburetor until  $1/8''$  (.3 cm) or more choke toggle free play is evident.
4. Turn the cable sleeve adjusting nut counterclockwise on the carburetor until the toggle has zero free play. Then rotate it clockwise until  $1/8''$  to  $1/4''$  (.3 to .6 cm) toggle free play is evident.
5. Tighten adjustment locknut.

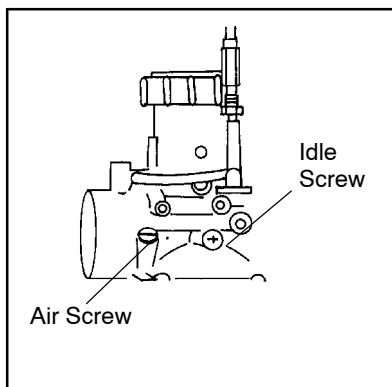


# MAINTENANCE

## Carburetor/Engine Idle RPM Adjustment 2 Cycle Engines

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

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



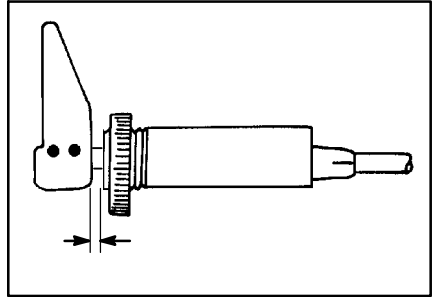
The following variations to air screw adjustment for 2-Cycle engines should be noted:

- For improving cold weather start and reducing audible detonation noise, the air screw can be closed from 1/2 to 1 turn by turning the screw clockwise.
- During hot weather and/or high altitude operation the air screw can be adjusted for smooth operation by approximately 2 turns counterclockwise.

## Choke Adjustment Procedure 4-cycle Engines

### Toggle Switch

1. Push choke knob to the full off position.
2. Slide boot off in-line cable adjuster sleeve. Loosen adjustment locknut on in-line cable adjuster.
3. Turn cable sleeve adjusting nut clockwise on in-line adjuster until  $1/8''$  (.3 cm) or more choke toggle free play is evident.



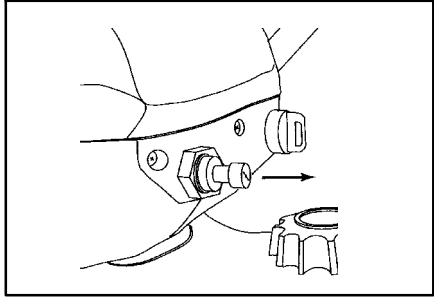
4. Turn the cable sleeve adjusting nut counterclockwise on the in-line cable adjuster until the toggle has zero free play. Then rotate it clockwise until  $1/8''$  to  $1/4''$  (.3 to .6 cm) toggle free play is evident.
5. Tighten adjustment locknut.
6. Slide boots back over cable adjuster sleeve until they touch at the middle point of the sleeve.

# MAINTENANCE

## Choke Adjustment Procedure 4-cycle Engines

### Push/Pull Choke

1. Locate the boot behind the choke knob and pull it back. Loosen the friction nut 1 turn or until choke slides freely. Re-install boot.



2. Push the choke knob in to the full off position.

3. Slide boots off in-line cable adjuster and loosen adjustment locknut.

4. Turn adjuster until the choke knob pushes out over 1/4".

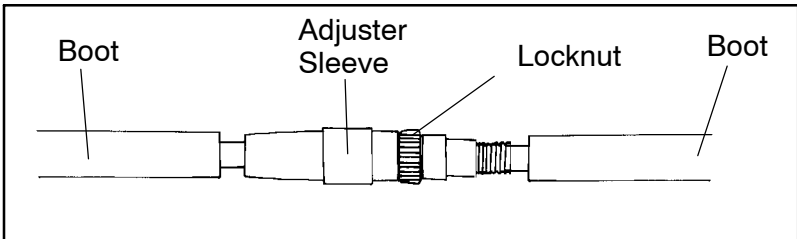
5. Push on the choke knob lightly while turning the adjuster the opposite way.

6. Turn the adjuster until the knob contacts the boot.

7. Tighten adjuster locknut.

8. Slide boots back over the cable adjuster until they touch at the middle of the adjuster.

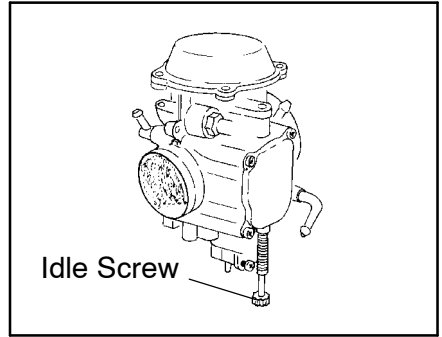
9. Pull back the choke knob boot and tighten the friction nut until the choke will maintain a set position. Re-install boot.



## Carburetor/Engine Idle RPM Adjustment 4-cycle Engines

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

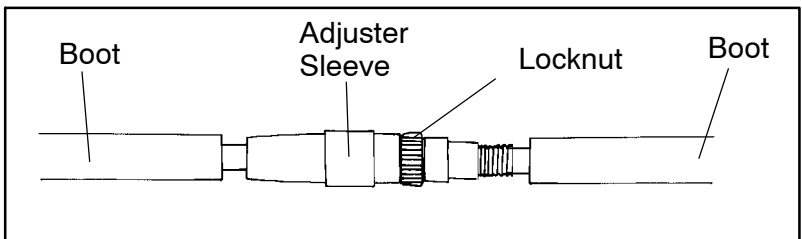
1. Warm up the engine by running the vehicle approximately five minutes.
2. Place the transmission in gear with the parking brake applied.
3. Adjust the carburetor idle screw in or out until the desired idle RPM is reached. Turning the screw in (clockwise) will raise RPM. Turning the screw out (counterclockwise)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



## Throttle Cable Free Play Adjustment

Throttle cable free play is adjusted at the handlebar.

1. Slide the bolts off inline cable adjuster sleeve. Loosen adjuster locknut.
2. Turn adjuster until 1/16" to 1/8" freeplay is achieved at thumb lever. **NOTE:** While adjusting freeplay, it is important you flip the throttle lever back and forth.
3. Tighten locknut and slide boots over cable adjuster until they touch at the mid point of adjuster.



# MAINTENANCE

## Spark Plugs

Check your owner's manual supplement for recommended spark plug and gap.

The spark plug and its condition is indicative of engine operation. The spark plug firing end condition should be read after the engine is warmed up and the vehicle is driven at higher speeds. Immediately check the spark plug for correct color.

### 1. Normal

The insulator tip is gray, tan or light brown. There will be few combustion deposits. The electrodes are not burned or eroded. This indicates the proper type and heat range for the engine and the service.

**NOTE:** The tip should not be white. A white insulator tip indicates overheating, caused by use of an improper spark plug or incorrect carburetion adjustments.

### 2. Wet Fouled

The insulator tip is black. A damp oil film covers the firing end. There may be a carbon layer over the entire nose. Generally, the electrodes are not worn. General causes are excessive oil, use of non-recommended injection oil, improper use of the choke, or incorrect carburetion adjustments.

## Spark Plug Removal and Replacement

### **WARNING**

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

The spark plug is removed by using the special wrench provided in the tool pouch. Remove the spark plug cap and then the spark plug by rotating counterclockwise.

Reverse the procedure for spark plug installation. Torque to 17 ft. lbs.

Never deviate from the recommended spark plug as engine damage can occur.

## Cylinder Head/Cylinder Base Fastener Torque (2-Cycle Models)

Have your dealer check the ATV cylinder head and cylinder base fasteners for proper torque at the first service or after 25 hours.

## Oil and Filter Change

The recommended oil change interval is 100 hours, 1000 miles, or every six months, whichever comes first. Suggested break in oil change is at 20 hours, 200 miles, or one month, whichever comes first. Severe use operation requires more frequent service. Severe use includes continuous duty in dusty or wet conditions, and cold weather riding. **NOTE:** Severe use cold weather riding is all riding below 10° F, and riding between 10° F and 30°F when most trips are slow speed and less than 5 miles. Be sure to change the oil filter whenever changing oil

### **CAUTION**

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

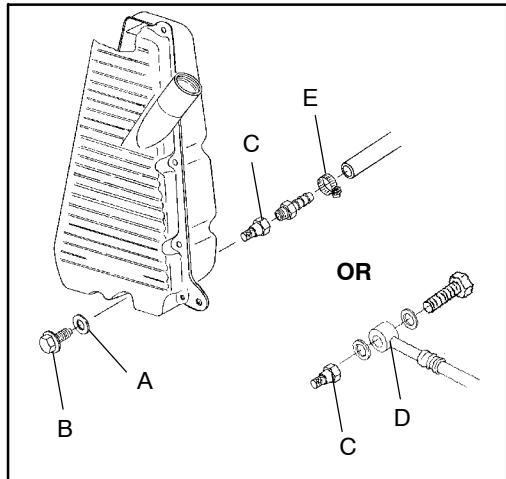
# MAINTENANCE

## Oil Filter and Change

### (4-Stroke models with an external oil tank)

1. Place vehicle on a level surface.
2. Clean area around drain plug which is found at the bottom of the oil tank or on the bottom of the engine.
3. Run engine for two to three minutes until warm. Shut engine off.
4. Place a drain pan beneath the plug and remove it.
5. Allow oil to drain completely.
6. Install a new sealing washer on oil drain plug. **NOTE:** The sealing surfaces on the drain plug and the oil tank should be clean and free of burrs, nicks or scratches.
7. Reinstall drain plug and torque to 14-17 ft. lbs. (1.93-2.35 kg/m)

8. Disconnect the lower oil delivery hose. Remove the fitting (C) from the oil tank. Clean the fitting screen. Reinstall the fitting screen, torquing to 14-17 ft. lbs. Reattach oil line. If banjo fitting (D) is used, torque to 14-17 ft. lbs. If hose clamp (E) is used, tighten to 25 in. lbs.



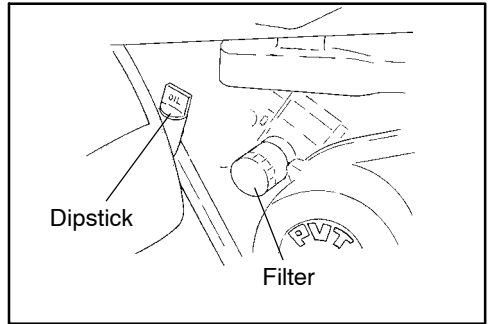
9. Place shop towels beneath oil filter. Using an oil filter wrench, turn filter counterclockwise to remove.
10. Using a clean dry cloth, clean filter sealing surface on crankcase.



## Oil Filter and Change (Cont.)

### (4-Stroke models with an external oil tank)

11. Lubricate O-Ring on new filter with a film of new engine oil. Check to make sure the O-Ring is in good condition. Also make sure the O-ring from the old filter is not still on the engine.
12. Install new filter and tighten by hand 1/2 to 3/4 turn after gasket contact.
13. Approximately 1 cup of engine oil will remain in the crankcase. To drain, remove drain plug found on lower right side of crankcase. **NOTE:** The sealing surfaces on the drain plug and crankcase should be clean and free of burrs, nicks or scratches.
14. Reinstall drain plug.
15. Remove dipstick and add the amount of oil indicated in your Owner's Manual Supplement. Reinstall dipstick. **NOTE:** If sump is not drained, add about 1 3/4 quarts initially.
16. Place gear selector in neutral and set parking brake.
17. Start engine and let it idle for one to two minutes. Stop engine and inspect for leaks.
18. Re-check oil level on the dipstick and add oil as necessary to bring the level to the upper mark on the dipstick.
19. Dispose of used filter and oil properly.



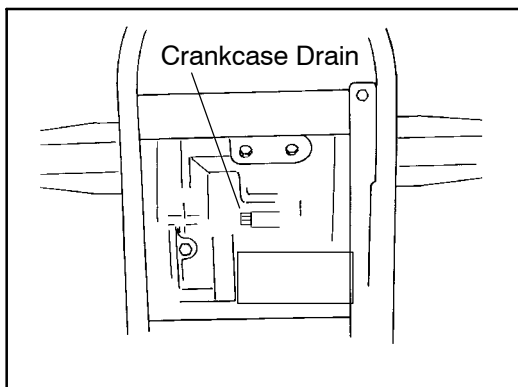
# MAINTENANCE

## Oil Filter and Change

### Magnum 325 2x4, Magnum 325 4x4, Trail Boss

#### Oil and Filter Change

1. Place vehicle on a level surface.
2. Run engine two to three minutes until warm. Stop engine.
3. Clean area around drain plug.



4. Place a drain pan beneath engine crankcase and remove drain plug. **CAUTION:** Oil may be hot. Do not allow hot oil to come into contact with skin as serious burns may result.
5. Allow oil to drain completely.
6. Replace sealing washer on drain plug. **NOTE:** The sealing surfaces on drain plug and crankcase should be clean and free of burrs, nicks or scratches.
7. Reinstall drain plug and torque to 14 ft. lbs. (19 Nm).
8. Place shop towels beneath oil filter. Using an oil filter wrench, turn filter counterclockwise to remove.
9. Using a clean dry cloth, clean filter sealing surface on crankcase.
10. Lubricate O-ring on new filter with a film of engine oil. Check to make sure the O-ring is in good condition.
11. Install new filter and turn by hand until filter gasket contacts the sealing surface, then turn and additional 1/2 turn.

## Oil Filter and Change (Cont.)

### Magnum 325 2x4, Magnum 325 4x4, Trail Boss

12. Remove dipstick and fill sump with 2 quarts (1.9 l) of Polaris Premium 4 synthetic oil.
13. Place gear selector in neutral and set parking brake.
14. Start the engine and let it idle for one to two minutes. Stop the engine and inspect for leaks.
15. Re-check the oil level on the dipstick and add oil as necessary to bring the level to the upper mark on the dipstick.
16. Dispose of used filter and oil properly.

**NOTE:** Drain Plug Torque: 14 ft. lbs. (19 Nm); Oil Filter Torque: Turn by hand until filter gasket contacts the sealing surface, then turn an additional 1/2 turn.

# MAINTENANCE

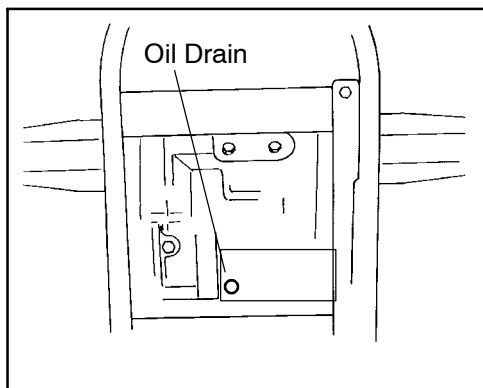
## Oil Filter and Change Xpedition 325

1. Place vehicle on a level surface.

2. Run engine two to three minutes until warm. Stop engine.

3. Clean area around drain plug.

4. Place a drain pan beneath engine



crankcase and remove drain plug. **CAUTION:** Oil may be hot. Do not allow hot oil to come into contact with skin as serious burns may result.

5. Allow oil to drain completely.

6. Replace sealing washer on drain plug. **NOTE:** The sealing surfaces on drain plug and crankcase should be clean and free of burrs, nicks or scratches.

7. Reinstall drain plug and torque to 14 ft. lbs. (1.9 kgm).

8. Place shop towels beneath oil filter. Using an oil filter wrench, turn filter counterclockwise to remove.

9. Using a clean dry cloth, clean filter sealing surface on crankcase.

10. Lubricate O-ring on new filter with a film of engine oil. Check to make sure the O-ring is in good condition.

11. Install new filter and turn by hand until filter gasket contacts the sealing surface, then turn an additional 1/2 turn.

12. Remove dipstick and fill sump with 4.5 quarts (4.25L) of Polaris Premium 4 synthetic oil.

### Oil Filter and Change (Cont.) Xpedition 325

13. Shift machine into neutral and set parking brake.
14. Start the engine and let it idle for one to two minutes. Stop the engine and inspect for leaks.
15. Re-check the oil level on the dipstick and add oil as necessary to bring the level to the upper mark on the dipstick.
16. Dispose of used filter and oil properly.

**NOTE:** Drain Plug Torque: 14 ft. lbs. (19 Nm); Oil Filter Torque: Turn by hand until filter gasket contacts the sealing surface, then turn an additional 1/2 turn.

# MAINTENANCE

## Oil Filter and Change Xpedition 425

1. Place vehicle on a level surface.

2. Run engine two to three minutes until warm. Stop engine.

3. Clean area around drain plug.

4. Place a drain pan beneath engine

crankcase and remove drain plug. **CAUTION:** Oil may be hot. Do not allow hot oil to come into contact with skin as serious burns may result.

5. Allow oil to drain completely.

6. Replace sealing washer on drain plug. **NOTE:** The sealing surfaces on drain plug and crankcase should be clean and free of burrs, nicks or scratches.

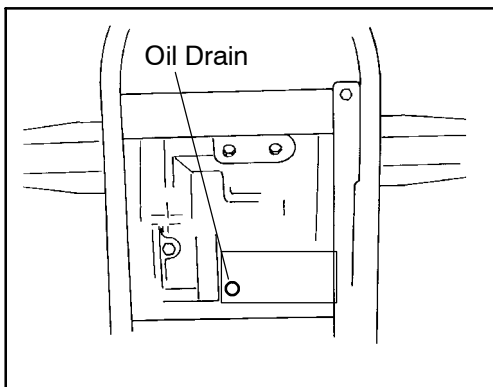
7. Reinstall drain plug and torque to 14 ft. lbs. (1.9 kgm).

8. Place shop towels beneath oil filter. Using an oil filter wrench, turn filter counterclockwise to remove.

9. Using a clean dry cloth, clean filter sealing surface on crankcase.

10. Lubricate O-ring on new filter with a film of engine oil. Check to make sure the O-ring is in good condition.

11. Install new filter and turn by hand until filter gasket contacts the sealing surface, then turn an additional 1/2 turn.



## Oil Filter and Change (Cont.) Xpedition 425

12. Remove dipstick and fill sump with 5.5 quarts (5.2 l) of Polaris Premium 4 synthetic oil.
13. Shift machine into neutral and set parking brake.
14. Start the engine and let it idle for one to two minutes. Stop the engine and inspect for leaks.
15. Re-check the oil level on the dipstick and add oil as necessary to bring the level to the upper mark on the dipstick.
16. Dispose of used filter and oil properly.

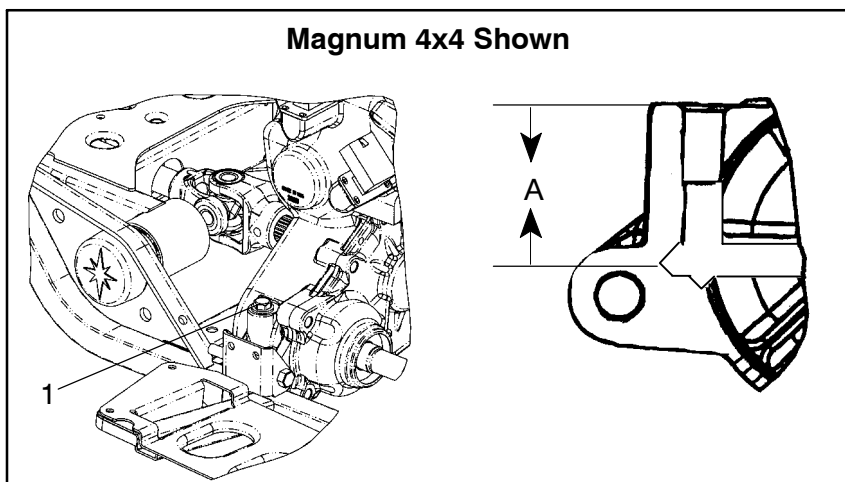
**NOTE:** Drain Plug Torque: 14 ft. lbs. (19 Nm); Oil Filter Torque: Turn by hand until filter gasket contacts the sealing surface, then turn an additional 1/2 turn.

## MAINTENANCE

### Transmission Lubrication - Models with Fill Plug Scrambler 500 4x4, Xplorer 400, Xplorer 4x4, Magnum 500, Magnum 325 4x4, Magnum 325 2x4

The transmission fill plug is located on the right side of the machine behind the pushshaft shield or footwell.

The transmission lubricant level should be checked every six months or 1000 miles (1600 km), whichever comes first. Transmission oil should be changed annually. With the ATV on a level surface, remove fill plug (1) and check the lubricant level. Use the illustration and the chart below to determine the correct fluid level. The correct transmission lubricant to use is Polaris Premium Synthetic Gearcase Lubricant (PN 2871478).



Model	Oil Level "A"	Oil Fill Ounces (ml)
Scrambler 500 4x4	1 5/8"	27 (800)
Xplorer 400	1 5/8"	27 (800)
Xplorer 4x4	1 5/8"	27 (800)
Magnum 500	1 5/8"	13.5 (400)
Magnum 325 4x4	1 5/8"	13.5 (400)
Magnum 325 2x4	3/4"	27 (800)

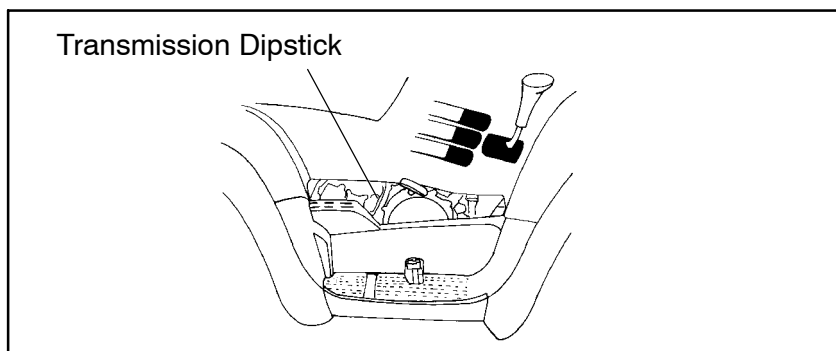


### Transmission Oil Changing Procedure

1. Remove the four screws on the footwell and gently pull outward for access. Remove propshaft shield from the right side of the vehicle (Scrambler 500 4x4, Xplorer 4x4).
2. Remove fill plug.
3. Remove transmission drain plug located on the bottom left hand side and drain the oil (refer to page for the location of the Magnum drain plug). Catch and discard used oil properly.
4. Clean and reinstall the drain plug torque to 14 ft. lbs. (1.93 kg-m).
5. Add the correct amount of Polaris Premium Synthetic Gearcase Lubricant until oil reaches the bottom of the filler hole.
6. Check for leaks.
7. Reinstall propshaft shield or footwell and screws removed in step 1.

# MAINTENANCE

## Transmission Lubrication - Models with Dipstick



For most 2x4 models, a transmission dipstick is located on the right side of the machine. On the Sportsman, the dipstick is located near the rear brake disc.

The transmission lubricant level should be checked monthly or 1000 miles (1600 km), whichever comes first. Transmission oil should be changed annually. With the ATV on a level surface, remove fill plug dipstick and check the lubricant level. Lubricant should be kept at the full mark on the dipstick. The correct transmission lubricant to use is Polaris Premium Synthetic Gearcase Lubricant (PN 2871478).

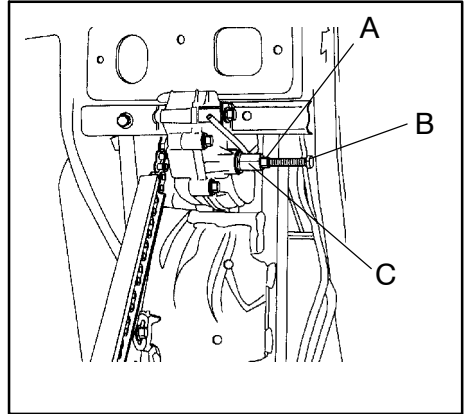
## 2x4 Models

To check the level:

1. Remove fill dipstick and wipe clean.
2. Reinstall dipstick completely, remove and check the level. Add the proper lubricant as required to bring level into operating range as shown.

To change lubricant:

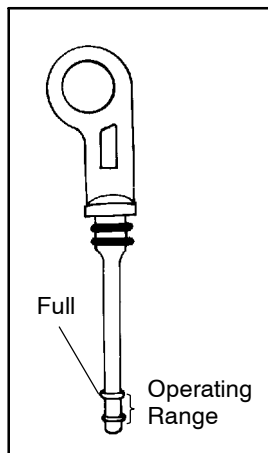
1. Remove skid plate (if necessary).
2. Place a drain pan beneath the transmission oil drain plug area.
3. Loosen jam nut (A).
4. Turn adjuster bolt (B) in to allow the removal of drain plug (C).
5. Remove the drain plug and wipe the magnetic end clean to remove accumulated metallic filings.
6. After the oil has drained completely, install a new sealing washer and install the drain plug. Torque to 14 ft. lbs. (19.3 Nm).
7. Turn adjuster bolt (B) out until it touches the frame, and then an additional 1/2 turn.
8. Tighten the jam nut securely while holding the adjuster bolt.
9. Add the proper lubricant through the dipstick hole until the oil level is between the upper and lower limits. Do not overfill.
10. Check for leaks.
11. Reinstall skid plate if removed in step 1.



# MAINTENANCE

## Sportsman Transmission Oil Changing Procedure

1. Remove fill plug/dipstick.
2. Remove transmission drain plug side and drain the oil. Catch and discard used oil properly.
3. Clean and reinstall the drain plug.
4. Add 32 oz. (948 ml) Polaris Premium Synthetic Gearcase Lubricant (PN 2871478 - 12 oz. bottle) to full mark on the fill plug/dipstick.
5. Check for leaks.



## Front Gearcase Lubrication

The front gearcase fill plug is located as shown.

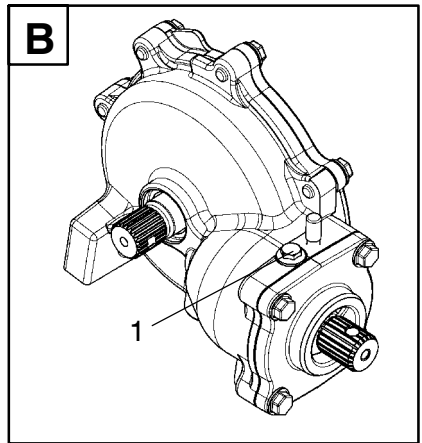
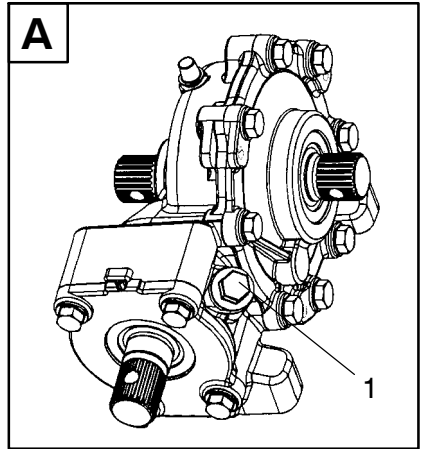
The front gearcase lubricant level should be checked every six months or 1000 miles (1600 km), whichever comes first. Front gearcase oil should be changed annually.

**Type A** - With the ATV on a level surface, remove fill plug and check the lubricant level. Lubricant should be kept at the bottom of fill plug thread. The correct gearcase lubricant to use is GL5 80-90 Weight Gear Lube.

**Type B** - The lubricant level in this type of gearcase cannot be checked. You must periodically drain it and refill it according to the following procedure.

### Gearcase Oil Changing Procedure

1. Remove fill plug (1).
2. Remove gearcase drain plug located on the bottom right hand side and drain the oil.
3. Clean and reinstall the drain plug and tighten securely (14 ft. lbs/1.93 kgm).
4. Add 4 ounces (120 ml) (Type A) or 5 ounces (150 ml) (Type B) of GL5 80-90 Weight Gear Lube.
5. Reinstall filler plug.
6. Check for leaks.

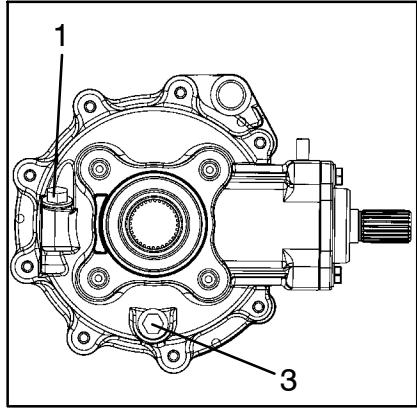


# MAINTENANCE

## Rear Gearcase Lubrication

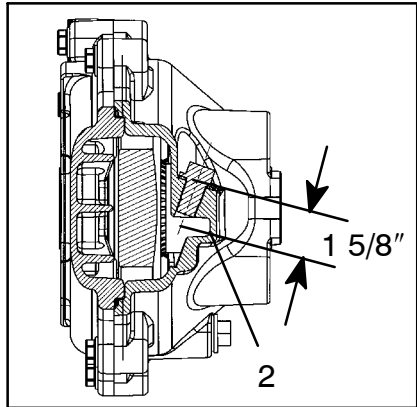
With the ATV on a level surface, remove fill plug and visually inspect the lubricant level through the fill hole (1). Lubricant should be kept even with the center of the drillpoint (2) approximately 1 5/8" below the top of the fill hole.

**NOTE:** Do not add lubricant to the bottom of the fill plug threads. The correct gearcase lubricant to use is GL5 80-90 Weight Gear Lube.



## Oil Changing Procedure

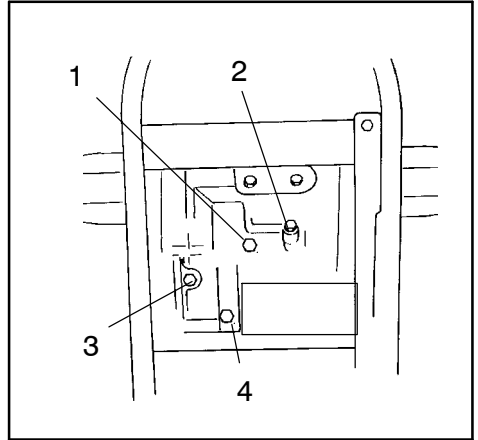
1. Remove drain plug (3). Catch and discard used oil properly.
2. Clean and reinstall the drain plug with a new sealing washer and tighten securely (14 ft. lbs./1.93 kgm).
3. Remove fill plug and add 10 ounces (300 ml) of GL5 80-90 Weight gear Lube and inspect oil level. Oil level should be kept even with the center of the drill point (approximately 1 5/8" below the top of the fill hole).
4. Reinstall the fill plug. Tighten securely (14 ft. lbs./1.93 kgm).
5. Check for leaks



## Counter Balance Lubrication - 400 Engines

1. Counter Balance Drain
2. Crankcase Drain
3. Recoil Drain
4. Starter Pinion Drain

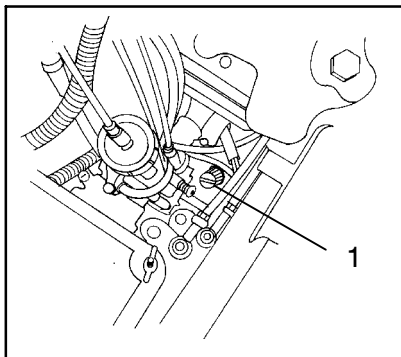
The counter balance oil should be checked semi-annually and oil should be added or changed as necessary. The oil should be changed annually, especially before off season storage. If the machine is used in wet conditions the oil should be checked more frequently. If the oil has a milky appearance it should be changed as soon as possible. Failure to properly maintain this important area can result in premature wear or possible failure of the counter balance components. Always use SAE 10W30 oil.



# MAINTENANCE

## Procedure for Adding Oil

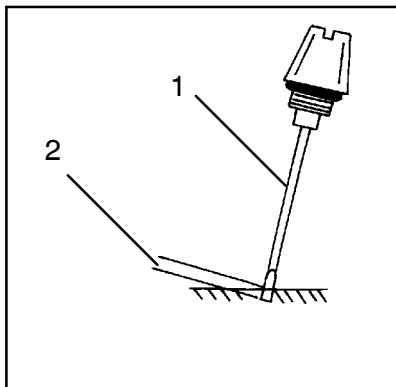
1. Remove seat and locate dipstick (1).
2. Remove dipstick. Oil level is shown on dipstick.
3. Add SAE 10W30 oil with a transmission fluid funnel until oil is at the proper level on the dipstick. If over-filled, excess oil will be expelled through the vent hose.
4. Reinstall dipstick.



**NOTE:** Recommended Oil Level (2).

## Counter Balance Oil Changing Procedure

1. Remove skid plate.
2. Remove counter balance drain plug. Catch used oil and discard of properly.
3. Clean and reinstall drain plug.
4. Add 10W30 oil to full mark on dipstick. Capacity after draining is approximately 70-75 cc (2.3 - 2.5 oz.).
5. Reinstall dipstick and check for leaks.





### **WARNING**

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

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

#### **Important Safeguards**

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

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

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

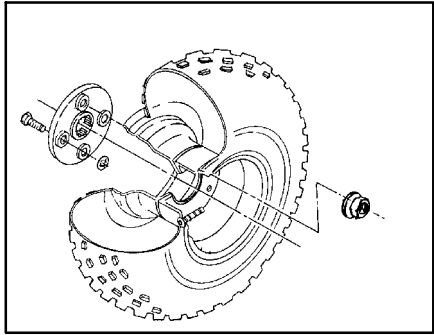
#### **Wheel Removal Procedure**

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

# MAINTENANCE

## Wheel Installation

1. With the transmission in gear and the parking brake locked, place the wheel in the correct position on the wheel hub. Be sure the valve stem is toward the outside and rotation arrows on the tire point toward forward rotation.
2. Attach the wheel nuts and finger tighten them.
3. Lower the vehicle to the ground.
4. Securely tighten the wheel nuts according to the chart found on page 113:

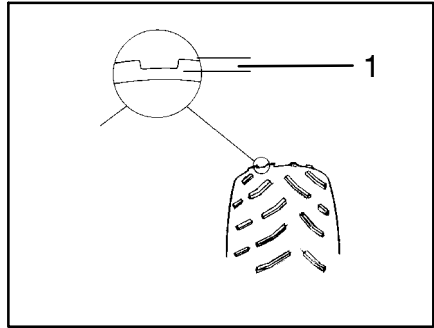


## Tire Inspection

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

## Tire Tread Depth

Always replace tires when tread depth is worn to 1/8" (.3 cm) (1) or less. Please refer to your Owner's Manual Supplement for tire specifications.



### Drive Chain Inspection and Adjustment

Polaris ATV drive chains are equipped with O-ring sealed permanently greased pins and rollers. However, it is still necessary to lubricate the outer surfaces of the roller.

## CAUTION

Never wash the chain with a high pressure washer or gasoline. Damage to the O-rings will result, causing premature wear and drive chain failure.

Always inspect the drive chain prior to operating the vehicle, checking for damaged or missing O-rings, rollers and correct slack adjustment. Maintain the stone guard to rear sprocket clearance at 1/8" (.3 cm).

Regularly lubricate the drive chain with SAE 80-90 lube or an approved O-ring chain spray lube.

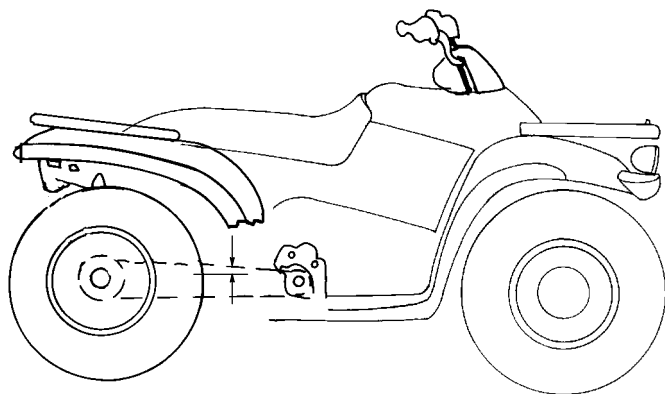
## MAINTENANCE

### Rear Drive Chain Slack Adjustment (Models with Concentric Drive)

# CAUTION

Never adjust or operate the vehicle with the rear drive chain too loose or too tight as severe damage to the transmission and drive components can result.

Check the amount of chain slack by moving the vehicle slightly forward to gain slack at the top side of the rear chain. At this point the chain should have 3/16"-3/8" (.48 cm - .95 cm) deflection (1). If the chain needs adjustment, use the following procedure.

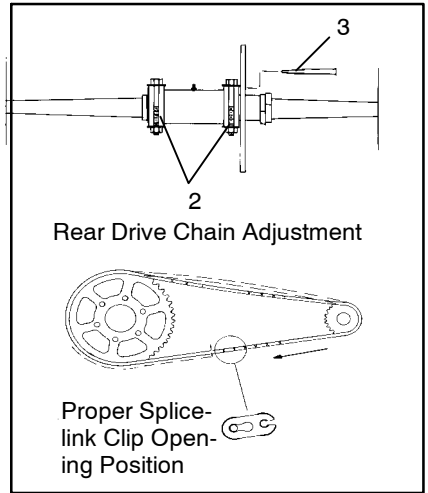


3/16"-3/8" (.48 cm - .95 cm) Deflection

## Adjustment Procedure

1. Loosen chain guide.
2. Loosen two eccentric locking bolts (2).
3. Loosen caliper mounting bracket bolts located under the axle.
4. Insert a pin punch through the sprocket hub and into the eccentric axle housing.
5. Roll the ATV forward or back to adjust chain slack to the proper tension.
6. Tighten caliper mount bolts 10-12 ft. lbs. (1.4 - 1.7 kg/m)
7. Tighten the eccentric locking bolts to 30 ft. lbs. (9 kg/m) for machines without the hitch and 45 ft. lbs. (13.7 kg/m) for machines with a hitch.
8. Remove pin punch.
9. Reinstall chain guard.

**NOTE:** Reposition chain guide to allow 1/8" (.3 cm) clearance between sprocket and guide.



## MAINTENANCE

### Headlight Lamp Replacement

#### **WARNING**

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

#### **CAUTION**

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

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

### Headlight Lamp Replacement - Scrambler

1. Remove wire harness connector from the back of headlight.
2. Grasp bulb housing, turn counterclockwise and remove bulb.
3. Install bulb into headlight housing and rotate clockwise firmly.  
**NOTE:** Bulb is to be positioned so the harness installs into the lamp at the bottom.
4. Reinstall connector.

### High Beam Headlight Adjustment

The headlight beam can be adjusted up and down.

1. Place the vehicle on a level surface with the headlight approximately 25' (7.6 m) from a wall.
2. Measure the distance from the floor to the center of the headlight and make a mark on the wall at the same height.
3. Start the engine and turn the headlight switch to high beam.
4. Observe headlight aim. The most intense part of the headlight beam should be aimed 2" (5.1 cm) below the mark placed on the wall in step 2. **NOTE:** Rider weight must be included on the seat.
5. Loosen pivot bolt and adjust beam to desired position.
6. Tighten nut and bolt. Torque to 60 in. lbs.

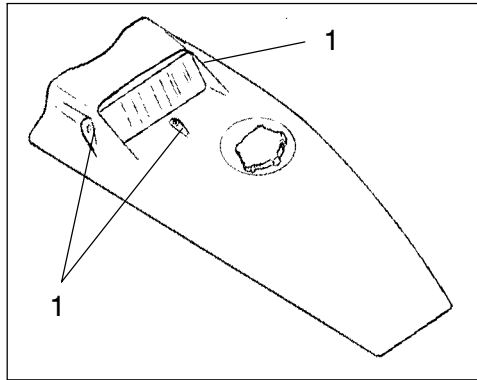
# MAINTENANCE

## Headlight Lamp Replacement (Trail Blazer)

1. Remove front cover and unplug the light harness.
2. Remove rubber cap from back of headlight to reveal retention screw.
3. Remove small phillips head screw, and carefully remove bulb from housing.
4. Insert new bulb into housing and tighten retention screw, install rubber cap.
5. Reconnect light harness.
6. Install cover to machine.
7. Properly adjust headlight aim.

## Headlight Adjustment

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

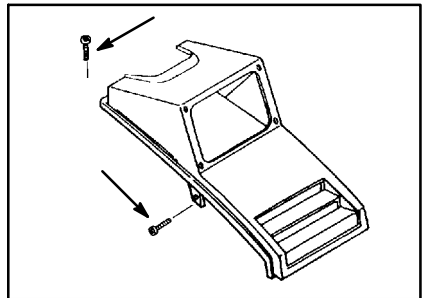
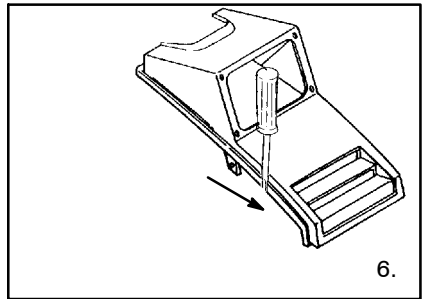
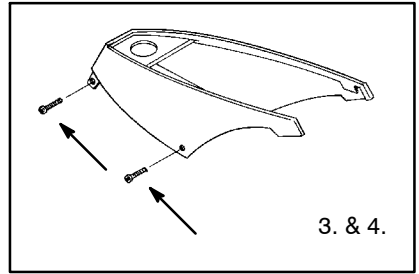


3. Start the engine and turn on headlight.
4. Observe headlight aim. The most intense part of the headlight beam should be aimed 8" (20.3 cm) below the mark placed on the wall in step 2. **NOTE:** Rider weight must be included on the seat.
5. Adjust beam to desired position by turning adjustment screws (1) in headlight cover. Turning right screw clockwise moves the intense spot of light up to the left. Turning the left screw clockwise moves intense spot of light up to the right. Turning the bottom screw clockwise adjusts the light upwards.



## Headlight Lamp Replacement (Gen II)

1. Remove the seat.
2. Remove the plastic panel surrounding the upper portion of the gas tank by first removing the gas tank cap.
3. Remove the Phillips head screws on either side of the panel at the junction of this panel, the lower panels, and the rear of the front fenders.
4. Remove the Phillips head screws on either side of the rear of the upper panel which were revealed by the removal of the seat.
5. Disengage the tabs at the front of the upper panel where they snap into the lower panel surrounding the headlight assembly. Also disengage the tabs on the upper panel which engage with the lower triangular panels on either side of the machine. Lift off the upper panel and set it aside.



6. Reinstall the gas tank cap.
7. Remove the panel surrounding the headlight by removing the Phillips head machine screws from either side of this panel. Also remove the two Torx screws at the rear of this panel.
8. Ease the panel forward and up to allow you to reach the socket connected to the headlight lamp.

## MAINTENANCE

### Headlight Replacement (cont.)

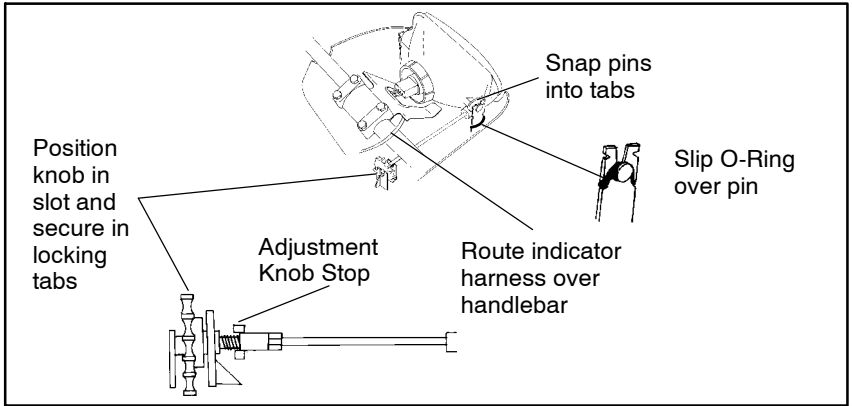
9. Carefully unplug the socket from the lamp. Remove the panel and set it aside.
10. Stand the panel containing the headlight assembly on end to allow access to the back of the headlight assembly.
11. Remove bolt and disengage the wire bail holding the headlight lamp in place and move it out of the way.
12. Grasp the base of the lamp and lift it out.
13. Reverse the previous steps to replace the lamp and reassemble the panels.

### High Beam Headlight Adjustment

The headlight beam can be adjusted to any position desired by turning the four screws at the outer corners of the lamp housing.

1. Place the vehicle on a level surface with the headlight approximately 25' (7.6 m) from a wall.
2. Measure the distance from the floor to the center of the headlight and make a mark on the wall at the same height.
3. Start the engine and turn the headlight switch to high beam.
4. Observe headlight aim. The most intense part of the headlight beam should be aimed 2" (5.1 cm) below the mark placed on the wall in step 2. **NOTE:** Rider weight must be included on the seat.
5. Adjust beam to desired position by turning screws on the housing.

## Headlight Lamp Replacement (Gen IV)



1. Using a small flat blade screwdriver, push in on the lock tab through the two small openings at the front of the headlight pod.
2. Lift the pod lightly while depressing the tabs.
3. Remove the screw in the back of the headlight pod
4. Lift pod cover up. Disconnect speedometer harnesses from speedometer. Unplug indicator light harness and remove pod cover.
5. Unplug headlamp from wiring harness.
6. Remove boot and locking collar from back of lamp housing.
7. Grasp base of lamp and lift it out.
8. Reverse previous steps to replace lamp and reassemble pod. Make sure tab on lamp locates properly in housing.

# MAINTENANCE

## High Beam Headlight Adjustment (Gen IV)

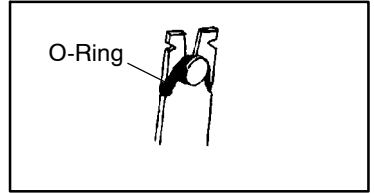
The headlight beam can be adjusted to any position desired by turning the adjusting knob located on the bottom right side of the headlight pod.

1. Place the vehicle on a level surface with the headlight approximately 25' (7.6 m) from a wall.
2. Measure the distance from the floor to the center of the headlight and make a mark on the wall at the same height.
3. Start the engine and turn the headlight switch to high beam.
4. Observe headlight aim. The most intense part of the headlight beam should be aimed 2" (5.1 cm) below the mark placed on the wall in step 2. **NOTE:** Rider weight must be included on the seat.
5. Adjust beam to desired position by turning the adjustment knob.

## Headlight Housing Replacement

1. Using a small flat blade screwdriver, push in on the lock tab through the two small openings at the front of the headlight pod.
2. Lift the pod lightly while depressing the tabs.
3. Remove the screw in the back of the headlight pod

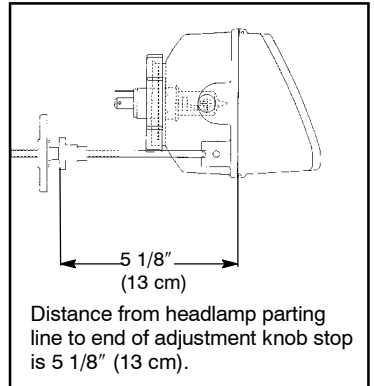
4. Remove three Phillips screws at back of headlight pod.



5. Lift pod cover up. Disconnect speedometer harnesses from speedometer. Unplug indicator light harness and remove pod cover.

6. Unplug headlamp from wiring harness.

7. Remove O-Ring from headlight pivot pins.



8. Pull headlight housing up to release from locking tabs.

9. Lift adjusting knob up to remove from locking tabs.

10. Carefully pull assembly up and out of pod.

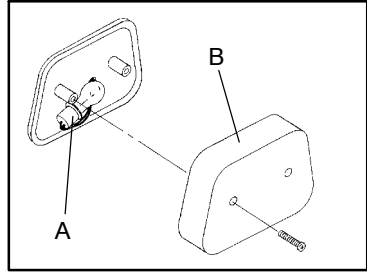
11. Reverse steps to install new housing and reassemble pod.

12. Adjust headlight aim by turning adjusting knob.

# MAINTENANCE

## Taillight/Brakelight Lamp Replacement

If the taillight/brakelight does not work the lamp may need to be replaced.



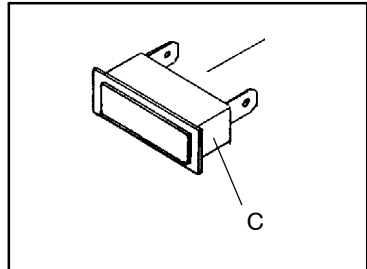
1. From the rear of the taillight remove two screws holding lens cover in place and remove lens cover.
2. Remove lamp (A) and replace it with recommended lamp.
3. Test the taillight/brakelight to see that it's working.
4. Reinstall the lens cover (B) removed in step 1.

## Indicator Lamp Replacement - Style I

1. Remove the upper headlight pod (Gen 4) or the front cover (Gen 2) to access the back of the indicator panel.
2. Using a small, straight blade screwdriver, turn the base of the bad bulb 1/4 turn counter clockwise.
3. Use a needle nose plier or similar tool to pull the lamp out of the indicator panel housing.
4. Insert the new bulb and seat it by turning it 1/4 turn clockwise.
5. Reassembly pod or front cover.

## Indicator Lamp Replacement - Style II

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



## Cleaning Your 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

If a high pressure type car wash system is used, extreme care must be taken to avoid water damage to the wheel bearings, transmission seals, body panels, brakes and warning labels. Many expensive repair bills can result from using high pressure detergent systems.

**NOTE:** If a high pressure car wash is used, grease all zerk fittings immediately after washing. Also run the vehicle to evaporate any water that might have entered the engine or exhaust system.

The best and safest way to clean your ATV is with a garden hose and a pail of mild soap and water. Use a professional type washing mitten, cleaning the upper body first and the lower parts last. Rinse with water frequently and dry with a chamois to prevent water spots. **NOTE:** If warning labels are damaged, contact your a Polaris dealer for free replacement.

### Waxing

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

## CAUTION

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

# MAINTENANCE

## Storage Tips

### CAUTION

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

**Cleaning - Outside**...Make necessary repairs and then clean the ATV thoroughly with a mild soap and warm water solution 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. Drain the recoil housing.

**Stabilize Fuel** - Fill the fuel tank. Add Polaris Carbon Clean Fuel Treatment or Polaris Fuel Stabilizer. Follow instructions on the container for recommended amount. Carbon clean will also reduce the possibility of bacterial growth in the fuel system. It's best to allow 15-20 minutes of operation for the stabilizer to disperse through the fuel in the tank and carburetor. Turn the fuel valve to "OFF" and drain the carburetor bowl completely.

**Oil And Filter Change** - (4-Stroke) Warm the engine and change oil and filter.

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

**Breather Filter(s)** - On 4-Stroke, inspect and clean or replace the breather filter(s).

**Inspect All Fluid Levels** - Inspect the following fluid levels and change if necessary: engine counter balance (2-strokes); front gear case (shaft drive models); transmission; front hubs (AWD models); brake fluid (change every two years or as required if fluid looks dark or contaminated).

**Drain Recoil Housing** - Remove drain plug from recoil housing and drain any moisture present.



## MAINTENANCE

**\* Fog The Engine - 2 Strokes** - Polaris Fogging Oil (PN 2870791) follow directions on the can. **4-Strokes** - Remove the spark plug and add 2-3 tablespoons of Premium 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 out 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.

**Check and Lubricate Cables / Grease** - Inspect all cables and lubricate with Polaris 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 Polaris Premium All Season Grease. Apply Polaris O-ring Chain Lube to the drive chain(s).

**Battery Maintenance** - Remove the battery and add distilled water as required to the proper level. *Do not* use tap water which may contain minerals that reduce battery life. Apply Polaris Di-Electric Grease to the terminal bolts and terminals. Charge the battery at 1.4 amps or less until specific gravity of *each* cell is 1.265 or greater. Store the battery in a cool, dry, place. Charge can be maintained easily by using Polaris Battery Tender™ charger (PN 2871076) or by charging about once a month to make up for normal self-discharge. Battery Tender™ can be left connected during the storage period, and will automatically charge the battery if the voltage drops below a pre-determined point. The only thing you need to do is check the fluid level once a month.

**Engine Anti-Freeze** - Test engine coolant strength and change if necessary. Coolant should be replaced every 2 years.

**Storage Area/Covers** - Set tire pressure and safely support the ATV with the tires 1-2" off the ground. Be sure the storage area is well ventilated. Cover the machine with a genuine Polaris 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.

## **MAINTENANCE**

\* If you choose not to use Polaris 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 spark plug(s). Rotate piston to BDC and pour approximately two ounces of Polaris 2 Cycle Injector oil into the cylinder.
3. Turn the engine over several times to ensure coverage of piston rings, cylinder walls and crankshaft bearings.
4. Treat the fuel system with Polaris Carbon Clean.
5. If Polaris 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.

## **Transporting**

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

1. Turn off the engine and remove the key. It may be lost if not removed.
2. Turn the fuel valve to off.
3. Be certain the fuel cap, oil cap, and seat are installed correctly.
4. Always tie the frame of the ATV to the transporting unit securely using suitable straps or rope.
5. Always place the transmission in gear and lock the parking brake.

## Carburetor Adjustments

If the vehicle is to be operated at various altitudes and temperatures, certain adjustments can be made to improve its operation and driveability. Above 6000 feet (1800 m) the engine air/fuel mixture becomes overly rich. An engine loses approximately 3% of its power for each 1000 foot (304.8 m) increase in elevation. Although this power cannot be regained, changes to the carburetor and drive system can be made to allow efficient operation. These changes include:

1. Carburetor re-jetting to compensate for altitude and/or temperature changes.
2. Transmission convertor modification to adjust for engine horsepower loss during high altitude operation. Contact your dealer.
3. On 2 cycle models, air screw adjustments can be made to compensate for temperature changes and/or changes in altitude.
4. On 4-cycle models, pilot screw adjustments can be made to compensate for temperature changes and/or changes in altitude.

**NOTE:** Contact your dealer for altitude adjustments. They have the training and special tools required to perform all necessary modifications for you.

## Accessories

There are a wide range of Polaris Accessories available for ATVs. Contact your Polaris dealer to find out about the accessories available for your machine.

## TROUBLESHOOTING

<b>Clutch Drive Belt &amp; Cover Related Issues: Diagnosis</b>	
<b>Possible Causes</b>	<b>Solutions/What to do</b>
Loading the ATV into a pickup or tall trailer when in high range.	Shift transmission to low range during loading of the ATV to prevent belt burning.
Starting out going up a steep incline.	When starting out on an incline, use low range, or dismount the ATV after first applying the park brake and perform the “K” turn as described on page 82 of this manual.
Driving at low RPM or low ground speed (at approximately 3–7 MPH).	Drive at higher speed or use Low Range. The use of Low Range is highly recommended for cooler PVT operating temperatures and longer component life.
Insufficient warm-up of ATVs exposed to low ambient temperatures.	Warm engine at least 5 min., then with transmission in neutral, advance throttle to approx. 1/8 throttle in short bursts, 5 to 7 times. The belt will become more flexible and prevent belt burning.
Slow and easy clutch engagement.	Fast, effective use of the throttle for efficient engagement.
Towing/Pushing at low RPM/low ground speed.	Use Low Range only.
Plowing snow, dirt, etc./utility use.	Use Low Range only.
Stuck in mud or snow.	Shift the transmission to Low Range, carefully use fast, aggressive throttle application to engage clutch. <b>WARNING:</b> Excessive throttle may cause loss of control and vehicle overturn.

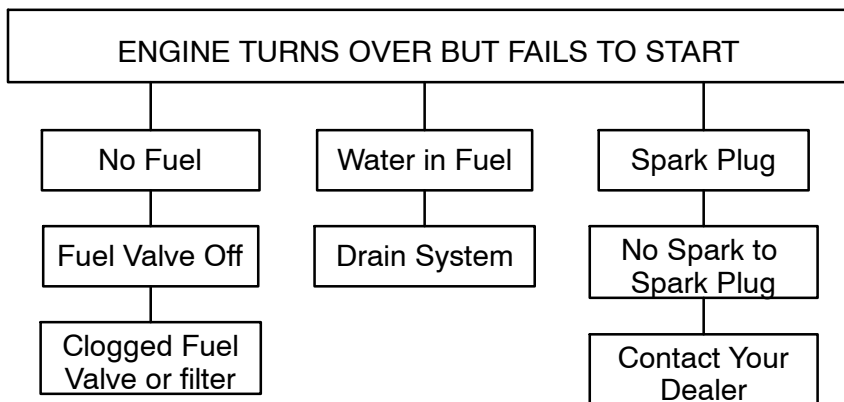
## TROUBLESHOOTING

<b>Possible Causes</b>	<b>Solutions/What to do</b>
Climbing over large objects from a stopped position.	Shift the transmission to Low Range, 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 PVT system.	Shift the transmission to neutral. 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 10 seconds. Clutch seals should be inspected for damage if repeated leaking occurs.
Clutch malfunction.	For inspection of clutch components, please contact your Polaris dealer.
Poor engine performance.	Fouled plugs, foreign material in gas tank, fuel lines, or carburetor. Contact you dealer for further service information.
<b>GENERAL RANGE OPERATION GUIDELINES:</b>	
Low Range	Heavy pulling, basic operational speeds less than 7 MPH, riding through rough terrain (swamps, mountains, etc.), low ground speeds.
High Range	High ground speeds, speeds above 7 MPH.

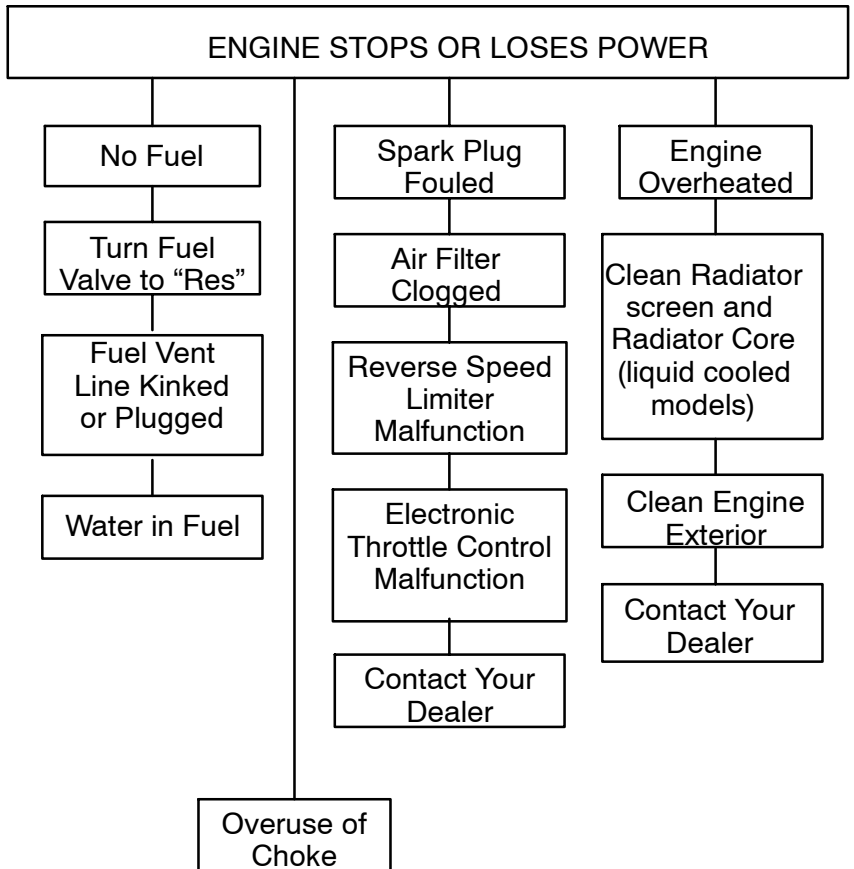
# TROUBLESHOOTING

## Procedures

The following information is provided to help you identify probable causes for questions you may have about the operation of your ATV. See your Polaris dealer with any additional questions you may have.



# TROUBLESHOOTING



# WARRANTY

## LIMITED WARRANTY

Polaris Industries Inc., 2100 Highway 55, Medina, MN 55340, gives a SIX MONTH LIMITED WARRANTY on all components of the Polaris All Terrain Vehicle (ATV) against defects in material or workmanship. Polaris also gives a one year limited warranty on the final drive chain for failure due to defects. This warranty covers the parts and labor charges for repair or replacement of defective parts which are covered by this warranty. This warranty begins on the date of purchase. This warranty is transferrable to another consumer during the warranty period through a Polaris dealer. There is a charge of \$35.00 payable to Polaris Industries Inc.

## REGISTRATION

At the time of sale, the Warranty Registration Form must be completed by your dealer and submitted to Polaris within ten days. Upon receipt of this registration, Polaris will record the registration for warranty. **THE PURCHASER MUST COMPLETE AN ATV SAFETY TRAINING COURSE PROVIDED BY THE DEALER IN ORDER TO HAVE VALID WARRANTY ON THE ATV.** No verification of registration will be sent to the purchaser as the copy of the Warranty Registration Form will be the warranty entitlement. If you have not signed the original registration and received the “customer copy”, please contact your dealer immediately. **NO WARRANTY COVERAGE WILL BE ALLOWED UNLESS YOUR ATV IS REGISTERED WITH POLARIS.**

Initial dealer preparation and set-up of your ATV is very important in ensuring trouble-free operation. Purchasing a machine in the crate or without proper dealer set-up will void your warranty coverage.



# WARRANTY

## WARRANTY COVERAGE AND EXCLUSIONS:

### LIMITATIONS OF WARRANTIES AND REMEDIES

The Polaris limited warranty excludes any failures that are not caused by a defect in material or workmanship. This warranty does not cover accidental damage, normal wear and tear, abuse or improper handling. This warranty also does not cover any ATV that has been altered structurally, modified, neglected, improperly maintained, used for racing, or used for purposes other than for which it was manufactured, or for any damages which occur during trailer transit or as a result of unauthorized service or the use of unauthorized parts. In addition, this warranty does not cover physical damage to paint or finish, stress cracks, tearing or puncturing of upholstery material, corrosion, or defects in parts, components or the ATV due to fire, explosions or any other cause beyond Polaris' control.

This warranty does not cover the use of unauthorized lubricants, chemicals, or fuels that are not compatible with the ATV. The exclusive remedy for breach of this warranty shall be, at Polaris' exclusive option, repair or replacement of any defective materials, or components or products. THE REMEDIES SET FORTH IN THIS WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. POLARIS SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED

WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE, OR OTHER TORT OR OTHERWISE. Some states do not permit the exclusion or limitation of incidental or consequential damages or implied warranties, so the above limitations or exclusions may not apply to you if inconsistent with controlling state law.

# WARRANTY

ALL IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO THE ABOVE SIX MONTH WARRANTY PERIOD. POLARIS FURTHER DISCLAIMS ALL EXPRESS WARRANTIES NOT STATED IN THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you if inconsistent with controlling state law.

## HOW TO OBTAIN WARRANTY SERVICE

If your ATV requires warranty service, you must take it to a Polaris dealer authorized to repair Polaris ATVs. When requesting warranty service you must present your copy of the Warranty Registration form to the dealer. (THE COST OF TRANSPORTATION TO AND FROM THE DEALER IS YOUR RESPONSIBILITY). Polaris suggests that you use your original selling dealer; however, you may use any Polaris Servicing Dealer to perform warranty service.

Please work with your dealer to resolve any warranty issues. Should your dealer require any additional assistance they will contact the appropriate person at Polaris.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

If any of the above terms are void because of state or federal law, all other warranty terms will remain in effect.

### Engine Oil

1. Always use Polaris engine oil.
2. Never substitute or mix oil brands as serious engine damage and voiding of warranty can result.

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# **WARNING**

**Read and understand all warning labels and Owner's Manual before operation. Severe injury or death can result from ignoring warnings or improper use. Never permit a guest to operate this vehicle unless the guest has read and understands all warning labels and the Owner's Manual.**

**THIS MANUAL SHOULD REMAIN WITH THE  
VEHICLE AT THE TIME OF RESALE.**



**POLARIS®**  
**SALES INC.**



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