

**POLARIS®**  
**The Way Out.**



# **Hawkeye 2X4**

## **Owner's Manual for Maintenance and Safety**

**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

Improper vehicle 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.

**READ OWNER'S MANUAL.**

**FOLLOW ALL INSTRUCTIONS AND WARNINGS.**



**POLARIS**  
The Way Out.

For your nearest Polaris dealer,  
visit [www.polarisindustries.com](http://www.polarisindustries.com)

Polaris Sales Inc.,  
2100 Hwy. 55, Medina, MN 55340  
U.S.A.

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# WELCOME

Thank you for purchasing a Polaris vehicle, and welcome to our world-wide family of Polaris owners. We proudly produce an exciting line of utility and recreational products.

- Snowmobiles
- All-terrain vehicles (ATVs)
- Quadricycles
- *RANGER* utility vehicles
- Victory motorcycles

Always follow the instructions and recommendations in this manual. The manual contains instructions for minor maintenance, but information about major repairs is outlined in the Polaris Service Manual and should be performed only by a Factory Certified Master Service Dealer (MSD) Technician. Please see your dealer for all of your service needs during (and after) the warranty period.

For more information about Polaris, visit us online at [www.polarisindustries.com](http://www.polarisindustries.com).



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Copyright 2007 Polaris Sales Inc. All information contained within this publication is based on the latest product information at the time of publication. Due to constant improvements in the design and quality of production components, some minor discrepancies may result between the actual vehicle and the information presented in this publication. Depictions and/or procedures in this publication are intended for reference use only. No liability can be accepted for omissions or inaccuracies. Any reprinting or reuse of the depictions and/or procedures contained within, whether whole or in part, is expressly prohibited.

Printed in U.S.A.

2008 Hawkeye 2X4 Owner's Manual

P/N 9921770

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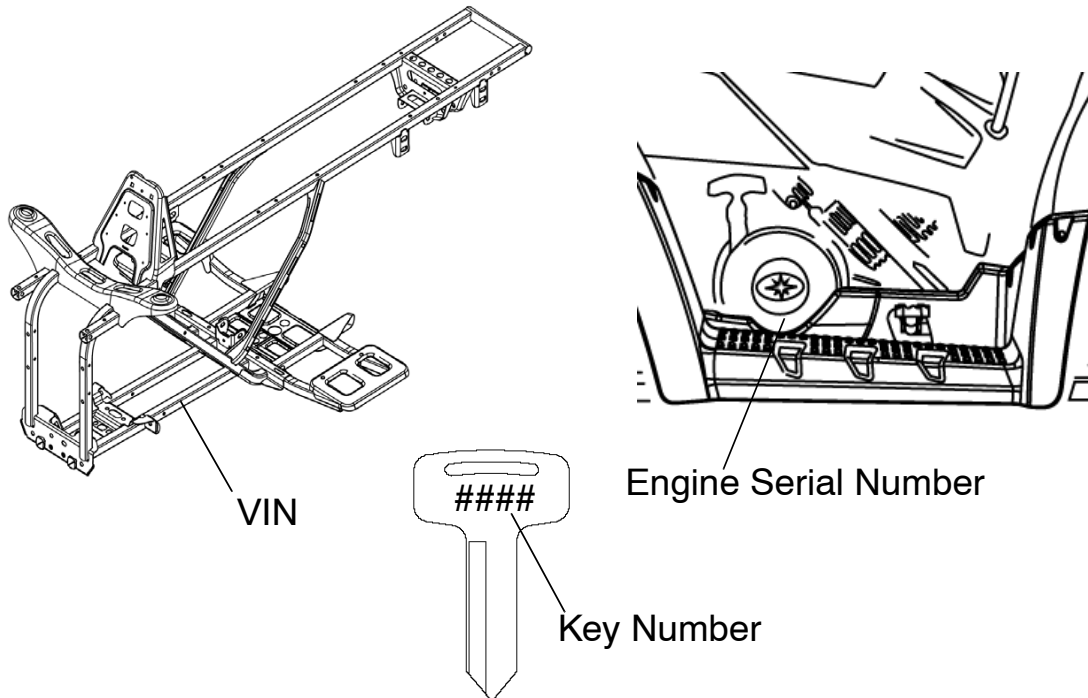
# KNOW YOUR VEHICLE

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

*Ride responsibly.* Know all laws and regulations concerning the operation of this vehicle in your area.

## Vehicle Identification Numbers

Record your vehicle's identification numbers and key number in the spaces provided. Remove the spare key and store it in a safe place. An ignition key can be duplicated only by ordering a Polaris key blank (using your key number) and mating it with one of your existing keys. The ignition switch must be replaced if all keys are lost.



Vehicle Model Number: \_\_\_\_\_

Frame VIN: \_\_\_\_\_

Engine Serial Number: \_\_\_\_\_

Key Number: \_\_\_\_\_

# SAFETY

## Operator Safety

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



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

### WARNING

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

### CAUTION

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

## CAUTION

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

## NOTE

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

## Operator Safety

### **WARNING**

Failure to follow the warnings in this manual can result in serious injury or death. This vehicle is not a toy and can be hazardous to operate. A collision or rollover can occur quickly, even during routine maneuvers, if you fail to take proper precautions.

Read and understand your owner's manual and all warnings before operating this vehicle.

### **Safety Training**

When you purchased your new Polaris vehicle, your dealer offered a hands-on safety training course. You were also provided with printed materials that explain safe operating procedures. Review this information on a regular basis.

If you purchased your vehicle from a party other than a Polaris dealer, please request free safety training from any authorized Polaris dealer.

### **Age Restrictions**

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

### **Equipment Modifications**

The warranty on your Polaris vehicle may be terminated if any equipment has been added, or if any modifications have been made, that increase speed or power.

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

# SAFETY

## Operator Safety

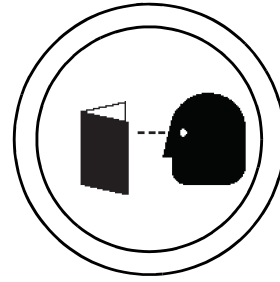
### WARNING

Serious injury or death can result if you do not follow the instructions and procedures listed here and throughout this manual.



Read and understand all warnings, cautions and operating procedures in this manual and on the safety labels before operating this vehicle.

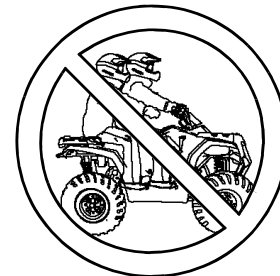
Never operate this vehicle without proper instruction. *Take a training course.* Beginners should receive training from a certified instructor. Contact an authorized Polaris dealer or visit the Polaris web site at [www.polarisindustries.com](http://www.polarisindustries.com).



Never permit others to operate this vehicle unless they have read and understand this manual and all product labels, and have completed a certified safety training course.



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



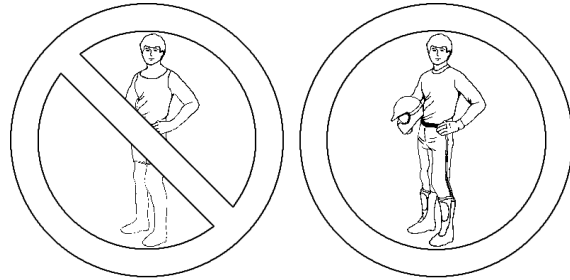
Never allow anyone under 16 years of age to operate this vehicle.



## Operator Safety

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Always wear an approved helmet that fits properly. Wear eye protection (goggles or face shield), gloves, boots, long sleeves and long pants.



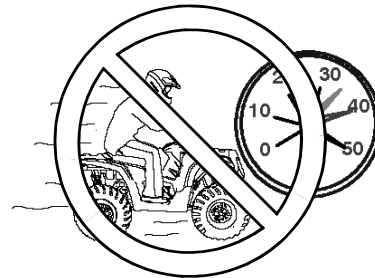
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Never consume alcohol or drugs before or while operating this vehicle.



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Never operate at excessive speeds. Travel and turn at speeds appropriate for the terrain, visibility, operating conditions and your experience.



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Never attempt jumps or other stunts.

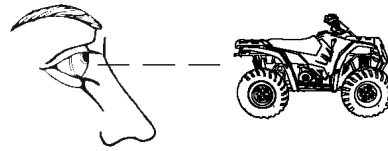


# SAFETY

## Operator Safety



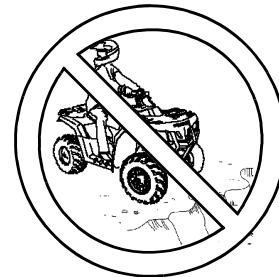
Always inspect your vehicle before each use to verify that it's in safe operating condition. Follow the inspection and maintenance procedures outlined in this manual. See page 35.



Keep both hands on the handlebars.  
Keep both feet on the footrests.



Always travel slowly when operating on unfamiliar terrain. Use extra caution.



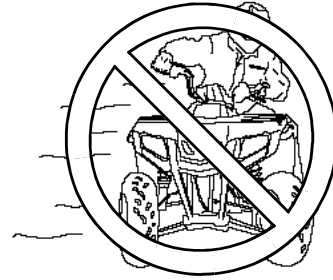
Use caution when operating on rough, slippery or loose terrain.



## Operator Safety



Always follow the procedures outlined in this manual for turning. Never turn sharply at excessive speeds, which can lead to vehicle overturn. See page 41.



If this vehicle has been involved in an accident, always have an authorized Polaris dealer inspect the entire vehicle for possible damage, including (but not limited to) brake, throttle and steering systems.



Always follow the procedures outlined in this manual for driving on hills. See page 43. Never operate on hills too steep for this vehicle or for your abilities. Practice on smaller hills before attempting larger hills. Avoid climbing hills steeper than 15°.

Always follow the procedures outlined in this manual for driving downhill and for braking on hills. See page 45.



Always follow the procedures outlined in this manual for crossing the side of a hill. See page 44. Never attempt to turn this vehicle around on any hill until you've mastered (on level ground) the turning technique outlined in this manual.



# SAFETY

## Operator Safety



Always follow the procedures outlined in this manual for braking if you stall or roll backwards while climbing a hill. Never back down a hill. See page 46.



Always follow the procedures outlined in this manual for operating over obstacles. See page 50.



Always follow the procedures outlined in this manual for operating on slippery or loose surfaces. Use extra caution. Always avoid skidding or sliding. See page 42.



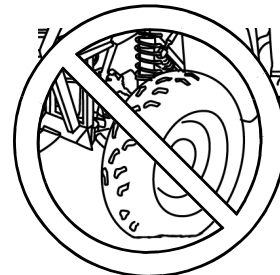
Always follow the procedures outlined in this manual for driving through water. Never drive through deep or fast-flowing water. See page 48.



Always follow the procedures outlined in this manual for driving in reverse. See page 51.



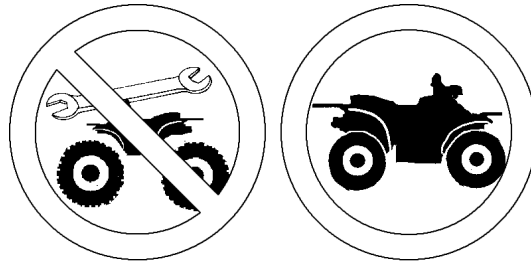
Always use the size and type of tires specified for your vehicle. Maintain the proper tire pressure.



## Operator Safety

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Never modify this vehicle through improper installation or use of accessories.



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Never exceed the stated load capacity for your vehicle. Cargo must be properly distributed and securely attached. Reduce speed and follow the instructions in this manual for carrying cargo or towing. Allow a greater distance for braking.



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Never operate this vehicle on a frozen body of water.



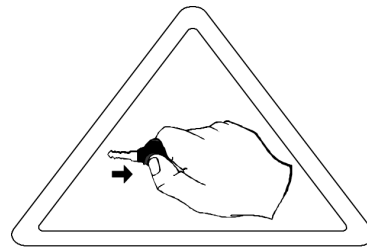
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Always avoid operating this vehicle on paved surfaces, including sidewalks, driveways, parking lots and streets. Never operate this vehicle on a public street, road or highway, including a dirt or gravel road.



---

Always remove the ignition key when the vehicle is not in use to prevent unauthorized use or accidental starting.



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Hot components can cause serious burns and fire. Do not touch hot exhaust system components. Always keep combustible materials away from the exhaust system.



**For more information about safety, contact an authorized Polaris dealer or visit the Polaris web site at [www.polarisindustries.com](http://www.polarisindustries.com).**

# SAFETY

## Safety Decals and Locations

Warning decals have been placed on the vehicle for your protection. Read and follow the instructions of the decals on the vehicle carefully. If any of the decals depicted in this manual differ from the decals on your vehicle, always read and follow the instructions of the decals on the vehicle.

If any decal becomes illegible or comes off, contact your Polaris dealer to purchase a replacement. Replacement *safety* decals are provided by Polaris at no charge. The part number is printed on the decal.

### General Warning

#### 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

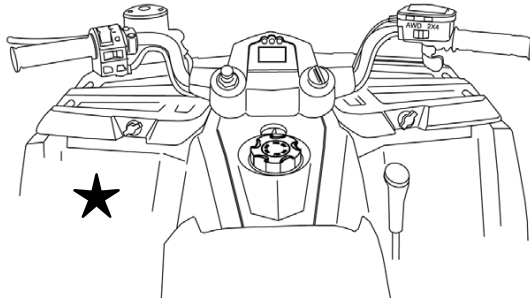
ALWAYS:

- 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 A POLARIS DEALER FOR A REPLACEMENT.



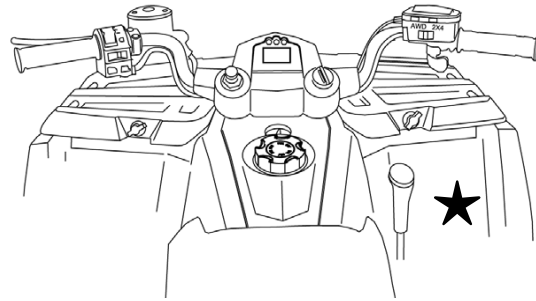
7172560

## Safety Decals and Locations

### Discretionary Warning

#### WARNING

- Never operate this ATV on HILLS steeper than 25 degrees  $\angle 25^\circ$ . To prevent flip-over 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.



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## Tire Pressure/Load Warning

#### WARNING

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

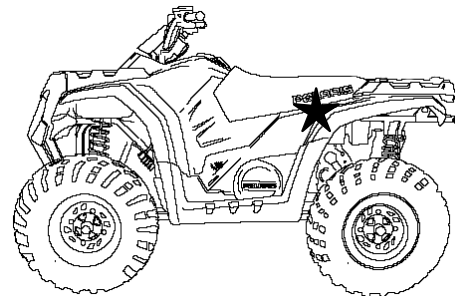
**TIRE PRESSURE IN PSI (KPa):**  
FRONT 5 (34.5) REAR 5 (34.5)

**MAXIMUM WEIGHT CAPACITY**  
365 lbs. (166 kg)

INCLUDES WEIGHT OF OPERATOR, CARGO AND ACCESSORIES.

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.

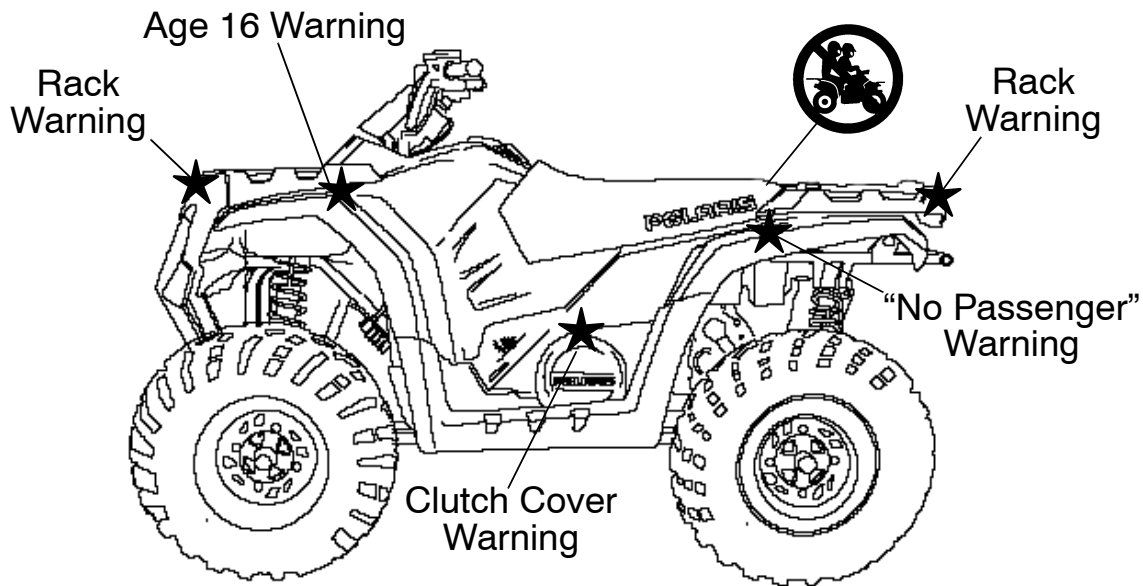
Read Owner's Manual for more detailed loading information.



7174823

# SAFETY

## Safety Decals and Locations



### **“No Passenger” Warning**

#### **WARNING**

NEVER ride as a passenger.

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

7172566

### **Age 16 Warning**

#### **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.

7172559

## Safety Decals and Locations

### Clutch Cover Warning

WARNING

NO STEP

- 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.

### Rack Warning, Front and Rear

WARNING

- 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.
- Max Rack Loads: Front 70 lbs. (32 kg) Rear 100 lbs. (46 kg)

### Reverse Override Warning (4X4 Models)

WARNING

Pushing reverse override button may cause sudden increases in power and traction if too much throttle is applied. Loss of control or forward flipover may result, especially in AWD. See Owner's Manual.

### Override Switch (2X4 Models)

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

### All Wheel Drive Switch (4X4 Models)

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.

### Hitch Capacity Label

TRAILER MAX WEIGHT:

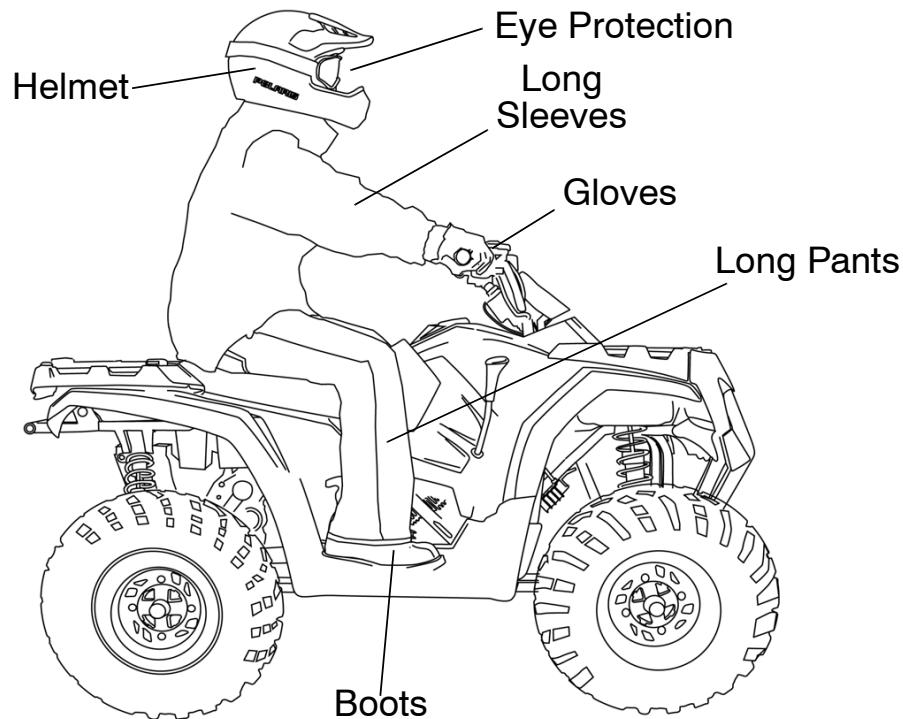
750 LBS. (340 KG) ON LEVEL GROUND

HITCH MAX. VERTICAL WEIGHT: 75 LBS. (34 KG)

# SAFETY

## Safe Riding Gear

Always wear protective clothing to reduce the chance of injury.

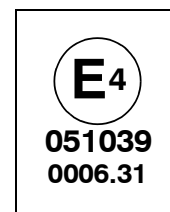


### Helmet

Always wear a helmet that meets or exceeds established safety standards.

Approved helmets in the USA and Canada bear a U.S. Department of Transportation (DOT) label.

Approved helmets in Europe, Asia and Oceania bear the ECE 22.05 label. The ECE mark consists of a circle surrounding the letter E, followed by the distinguishing number of the country which has granted approval. The approval number and serial number will also be displayed on the label.



## Safe Riding Gear

### Eye Protection

Do not depend on eyeglasses or sunglasses for eye protection. Whenever riding a Polaris vehicle, always wear shatterproof goggles or use a shatterproof helmet face shield. Polaris recommends wearing approved Personal Protective Equipment (PPE) bearing markings such as VESC 8, V-8, Z87.1, or CE. Make sure protective eye wear is kept clean.

### Gloves

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

### Boots

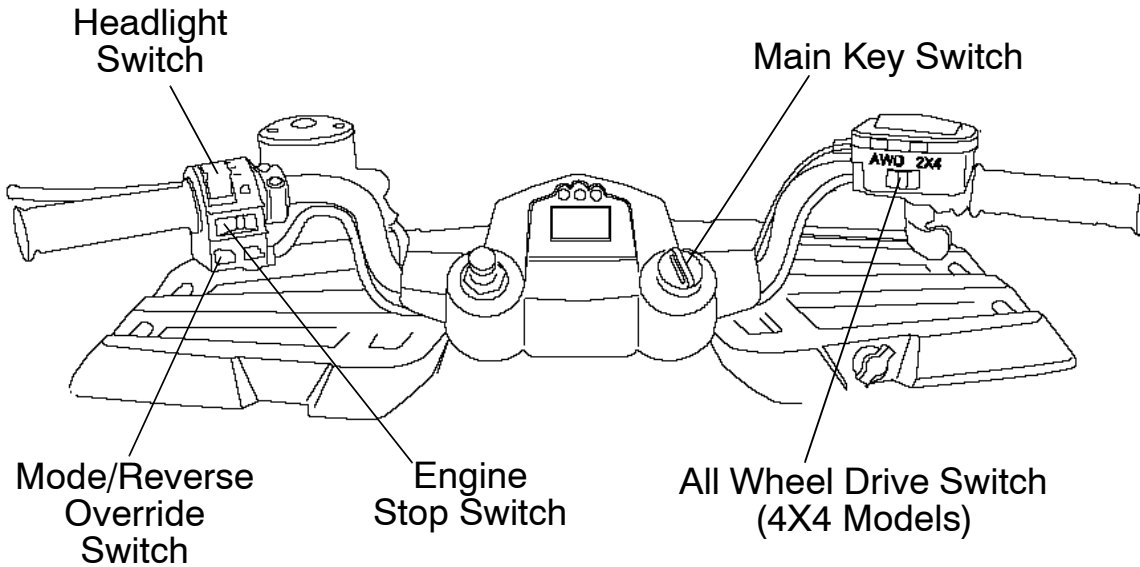
The best footwear is a pair of sturdy over-the-calf boots with low heels.

### Clothing

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

# FEATURES AND CONTROLS

## Switches



### **⚠ WARNING**

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

### **Mode/Reverse Override Switch**

This vehicle is equipped with a reverse speed limiter system. To gain additional power while backing, depress the override switch.

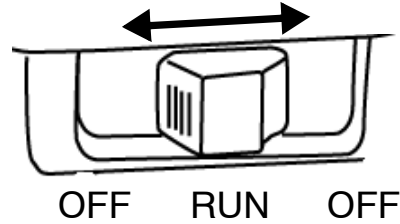
**NOTE:** The override switch also allows activation of All Wheel Drive in reverse, if the AWD switch is on. This switch is also used to toggle through the modes of the rider information center. See page 30.

# FEATURES AND CONTROLS

## Switches

### Engine Stop Switch

Move the stop switch either left or right to the OFF position to stop the engine quickly. The engine will not start or run when the switch is off.



**NOTE:** Both the main switch and the engine stop switch will shut off all electrical power to the vehicle, including lights.

### Main Key Switch

Use the main key switch to start the engine. See page 36 for starting procedures.

### Headlight Switch

Use the headlight switch to turn the lights on and off and to change the lights from high beam to low beam.

**NOTE:** The lights won't work unless the key is in the ON position and the engine stop switch is in the RUN position.

## **⚠ WARNING**

Operating this vehicle on streets or roads, especially in darkness, could result in an accident and serious injury or death.

Your vehicle is not equipped with highway-approved lights. It's designed for and must be used for off-road use only. Use caution and drive at reduced speeds in conditions of reduced visibility such as fog, rain and darkness.

### All Wheel Drive Switch (4x4 Models)

See page 29 for all wheel drive information.

# FEATURES AND CONTROLS

## Throttle Lever

### **⚠ WARNING**

Operating this vehicle with sticking or improperly operating throttle controls could cause an accident and lead to severe injury or death.

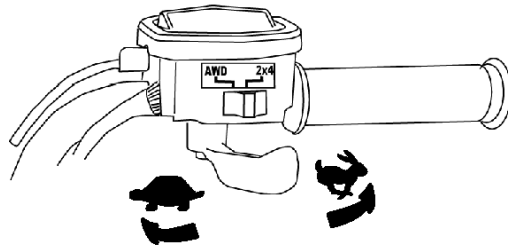
Never start or operate this vehicle with a sticking or improperly operating throttle. Always contact your dealer for service if throttle problems arise.

Failure to check or maintain proper operation of the throttle system can result in an accident if the throttle lever sticks during operation. Always check the lever for free movement and return before starting the engine. Also check occasionally during operation.

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

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

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



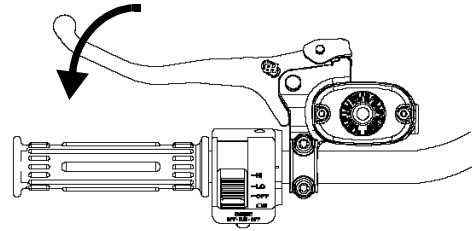
### **⚠ WARNING**

Modifications to the ETC could result in failure to perform as designed, which could result in severe injury or death. Do not attempt to modify the ETC system or replace it with any after market throttle mechanisms. Always ensure that the throttle cable is properly installed to the ETC.

# FEATURES AND CONTROLS

## Brake Lever

Squeeze the brake lever toward the handlebar to apply the front and rear brakes. These brakes are hydraulically activated disc type brakes that are activated by only one lever.



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

### **⚠ WARNING**

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

# FEATURES AND CONTROLS

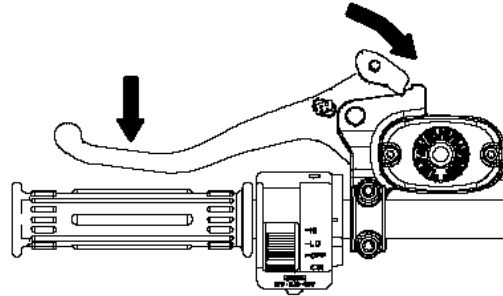
## Parking Brake

### **⚠ WARNING**

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

### **Locking the Parking Brake**

1. Place the transmission in gear.
2. Squeeze and release the brake lever two or three times, then squeeze and hold.
3. Push the parking brake lock forward to engage the lock.
4. Release the brake lever.
5. To release the parking brake lock, squeeze and release the brake lever. It will return to its unlocked position.



### **Important Safeguards**

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

# FEATURES AND CONTROLS

## Auxiliary Foot Brake

The auxiliary brake system is intended to be used as a backup for the main brake system. Should the main system fail, use the auxiliary foot brake.

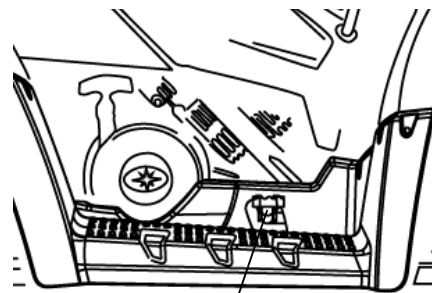
### ⚠ WARNING

Aggressively applying the auxiliary brake when backing down a hill may cause rear tipover, which could result in serious injury or death.

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

The auxiliary foot brake is located on the inside of the right footrest. Operate this brake with your right foot.

**NOTE:** If the rear wheels slide while using the auxiliary brake, *reduce* brake pedal pressure to brake the rear wheels without skidding.



Auxiliary Foot Brake

Check the brake fluid level frequently for the auxiliary brake system. See page 71.

# FEATURES AND CONTROLS

## Choke

The choke assists in starting a cold engine. Refer to the engine starting procedure on page 36 for correct choke and throttle settings during starting.

## Fuel Tank Cap

Remove the fuel tank cap to add fuel to the fuel tank. Use either leaded or unleaded gasoline with a minimum pump octane number of  $87 = (R + M/2)$  octane. *Do not use E-85 fuel.*

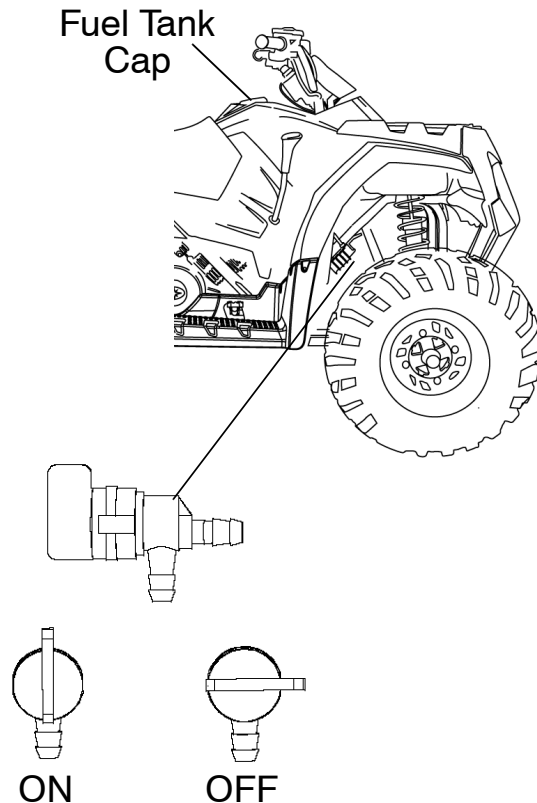
## Fuel Valve

The fuel valve is located on the bottom of the fuel tank. Access the fuel valve through the right front wheel well or from the front of the vehicle.

ON: For normal operation.

OFF: For vehicle storage and when transporting.

Refuel when the instrument gauge indicates a low fuel level.



## Fuel Filter

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

# FEATURES AND CONTROLS

## Automatic Transmission Gear Selector

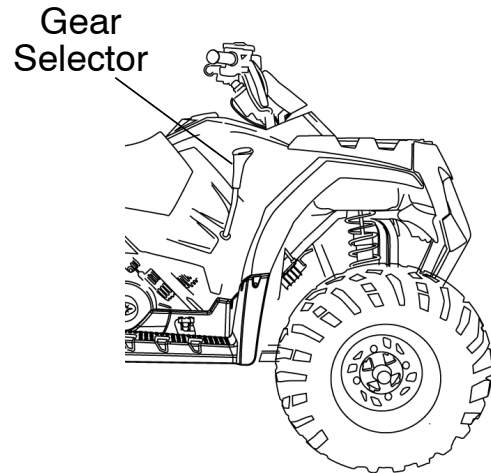
The transmission gear selector is located on the right side of the vehicle.

H: High Gear

N: Neutral

R: Reverse

Whenever this vehicle is left unattended, always place the transmission in gear and lock the parking brake.



### CAUTION

Shifting gears with the engine speed above idle or while the vehicle is moving could cause transmission damage.

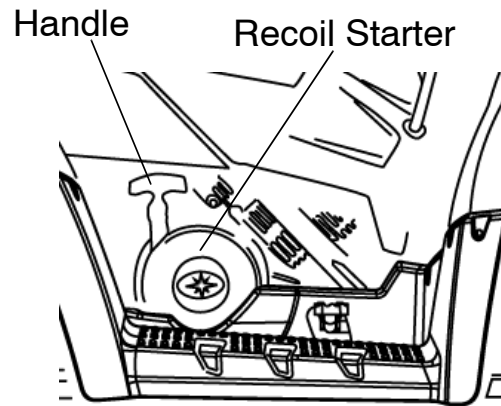
To change gears, stop the vehicle, and with the engine idling, move the lever to the desired gear.

# FEATURES AND CONTROLS

## Recoil Starter

If the battery is too weak to start the engine, use the recoil starter. Follow the starting procedures on page 36, cranking the engine with the recoil starter instead of the main key switch.

1. Grasp the recoil starter rope handle tightly.
2. Pull slowly so you can feel the engine strokes.



**NOTE:** The rope will be harder to pull when the engine is on a compression stroke. When a compression stroke is found, continue pulling the rope just until the engine rolls past the stroke, then stop pulling immediately.

3. Allow the recoil rope to rewind into the recoil assembly, then pull the rope abruptly and forcefully to start the engine.
4. Repeat all steps until the engine starts.
5. Make sure the handle is fully seated on the housing.

### CAUTION

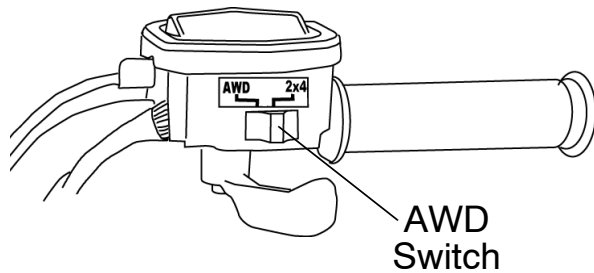
Extending the recoil starter rope until it stops can cause damage to the recoil assembly. Do not extend the starter rope so far that it stops.

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

# FEATURES AND CONTROLS

## All Wheel Drive (AWD) System (4X4 Models)

The All Wheel Drive system is controlled by the AWD switch. When the switch is on 2X4, the vehicle is in two-wheel drive at all times. When the switch is on AWD, the vehicle is in all wheel drive and the AWD indicator light in the instrument cluster will be on.



When in AWD, the demand drive unit will automatically engage any time the rear wheels lose traction. When the rear wheels regain traction, the demand drive unit will automatically disengage.

**NOTE:** The override switch allows activation of AWD in reverse if the AWD switch is on. See page 20.

There is no limit to the length of time the vehicle may remain in AWD.

### Engaging AWD

The AWD switch may be turned on or off while the vehicle is moving. Initially, the vehicle's electronic system will not enable the AWD until the engine RPM is below 3100. Once enabled, the AWD remains enabled until the AWD switch is turned off. If the switch is turned off while the demand drive unit is moving, it will not disengage until the rear wheels regain traction.

Engage the AWD switch before getting into conditions where front wheel drive may be needed. If the rear wheels are spinning, release the throttle before switching to AWD.

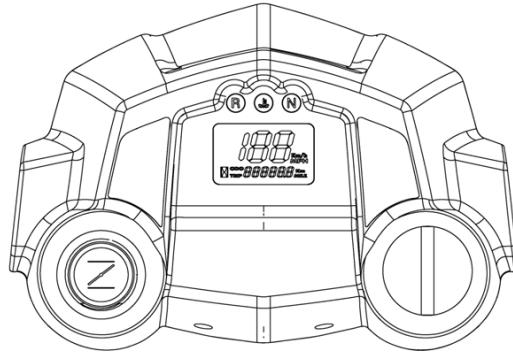
### CAUTION

Switching to AWD while the rear wheels are spinning may cause severe drive shaft and gearcase damage. Always switch to AWD while the rear wheels have traction or are at rest.

# FEATURES AND CONTROLS

## Instrument Cluster

Your vehicle is equipped with an instrument cluster that senses vehicle speed from the right front wheel. The instrument cluster measures distance in miles as well as hours of operation. It also includes a reverse speed limiter function that limits this vehicle's speed to approximately 7-9 mph. Refer to page 20 for additional information.



### CAUTION

High water pressure may damage vehicle components. Wash this vehicle by hand or with a garden hose using mild soap.

Certain products, including insect repellents and chemicals, will damage the speedometer lens and other plastic surfaces. Do not use alcohol to clean the instrument cluster. Do not allow insect sprays to contact the lens. Immediately clean off any gasoline that splashes on the instrument cluster.

## Miles/Kilometers Toggle

The display in the tripmeter, odometer and speedometer can be changed to display either kilometers or miles.

1. To change modes, press and release the mode button (see page 31) as often as needed to reach the odometer mode.
2. In the odometer mode, press and hold the mode button until the letters flash, then release the button.
3. Press and release the button one more time. When the display stops flashing, the mode has been set.

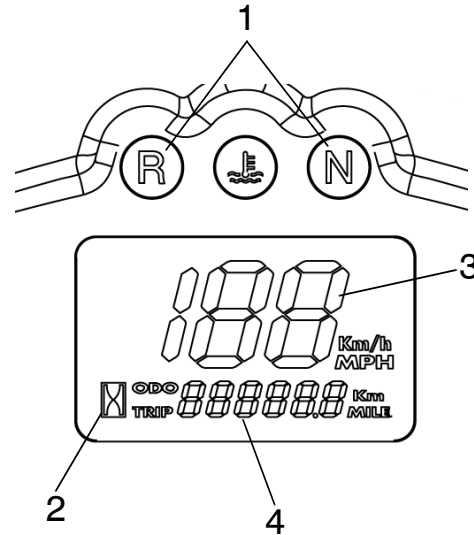
# FEATURES AND CONTROLS

## Instrument Cluster

### Rider Information Center

The rider information center is located in the instrument cluster. All segments will light up for 3 seconds at start-up.

1. **Gear Indicator** - This indicator displays gear shifter position.  
N = Neutral (Green)  
R = Reverse (Amber)
2. **Engine Hour Display Indicator**
3. **Speedometer**
4. **Odometer/Tripmeter/ Hour Meter**



### Modes

Use the reverse override/mode button to toggle through the 3 standard modes.

**NOTE:** If using the mode button to program the rider information center, or to toggle through the options, the transmission cannot be in reverse.

### Odometer

The odometer records the distance traveled by the vehicle.

### Trip Meter

The trip meter records the distance traveled by the vehicle on each trip if it's reset before each trip. To reset the trip meter, toggle to the trip meter mode. Press and hold the mode button until the display changes to 0.

In the Rider Information Center, the trip meter display contains a decimal point, but the odometer displays without a decimal point.

### Hour Meter

This mode logs the total hours the engine has been in operation.

# OPERATION

## Fuel Safety

### **WARNING**

Gasoline is highly flammable and explosive under certain conditions.

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

### **WARNING**

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

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

## Break-In Period

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

Install the accessory oil cooler when the following conditions exist:

- The vehicle will be used for towing heavy loads.
- The vehicle will be used for dragging ground surfaces or performing similar activities.
- The vehicle is normally operated when the air temperature is above 100° F. (38° C).

### CAUTION

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

# **OPERATION**

## **Break-In Period**

### **Engine and Drivetrain Break-in**

1. Fill the fuel tank with gasoline. See page 26.
2. Check the oil level on the dipstick. See page 61. Add oil if necessary to maintain the level between the safe and add marks.
3. Drive slowly at first. Select an open area that allows room to familiarize yourself with vehicle operation and handling.
4. Vary the throttle positions. Do not operate at sustained idle.
5. Perform regular checks on fluid levels, controls and areas outlined on the daily pre-ride inspection checklist. See page 35.
6. Pull only light loads.
7. During the break-in period, change both the oil and the filter at 20 hours.

### **PVT Break-in (Clutches/Belt)**

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

## Pre-Ride Checklist

| <b>⚠ WARNING</b>                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| If a proper inspection is not done before each use, severe injury or death could result. Always inspect the vehicle before each use to ensure it's in proper operating condition. |

| <b>Item</b>                   | <b>Remarks</b>                                                         | <b>Page</b> |
|-------------------------------|------------------------------------------------------------------------|-------------|
| Brake system/lever travel     | Ensure proper operation                                                | 23<br>72    |
| Brake fluid                   | Ensure proper level                                                    | 70          |
| Auxiliary brake               | Ensure proper operation                                                | 25          |
| Front suspension              | Inspect, lubricate if necessary                                        | 59          |
| Rear suspension               | Inspect, lubricate if necessary                                        | 59          |
| Steering                      | Ensure free operation                                                  | -           |
| Tires                         | Inspect condition and pressure                                         | 75          |
| Wheels/fasteners              | Inspect, ensure fastener tightness                                     | 75<br>77    |
| Frame nuts, bolts, fasteners  | Inspect, ensure tightness                                              | -           |
| Fuel and oil                  | Ensure proper levels                                                   | 26<br>61    |
| Coolant level (if applicable) | Ensure proper level                                                    | -           |
| Coolant hoses (if applicable) | Inspect for leaks                                                      | -           |
| Throttle                      | Ensure proper operation                                                | 22<br>104   |
| Indicator lights/switches     | Ensure operation                                                       | 20          |
| Engine stop switch            | Ensure proper operation                                                | 21          |
| Air filter, pre-filter        | Inspect, clean                                                         | 78          |
| Air box sediment tube         | Drain deposits whenever visible                                        | -           |
| Headlamp                      | Check operation, apply Polaris dielectric grease when lamp is replaced | 21<br>80    |
| Brake light/tail lamp         | Check operation, apply Polaris dielectric grease when lamp is replaced | 80          |
| Riding gear                   | Wear approved helmet, goggles, and protective clothing                 | 18          |

# OPERATION

## Starting the Engine

### WARNING

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

1. Position the vehicle on a level surface.
2. Place the transmission in neutral.
3. Lock the parking brake.

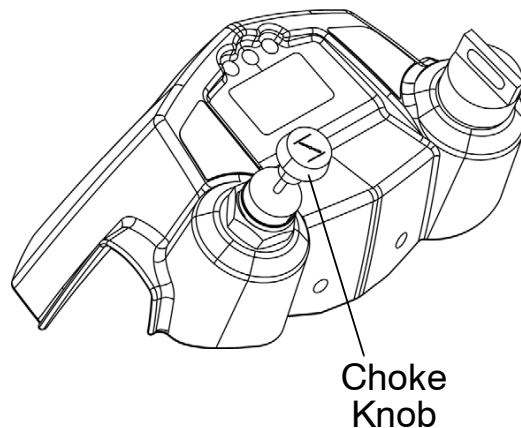
**NOTE:** The starter interlock will prevent the engine from starting if the transmission is in gear and the brake is not engaged.

4. Turn the fuel valve on.
5. Sit on the vehicle.

**NOTE:** Do not use the choke if starting a warm engine. Excessive use of the choke can cause the spark plug to become wet fouled.

6. If the engine is cold, pull the choke knob out until it stops.

**NOTE:** The variable choke is fully on when the knob is pulled completely out. The choke is off when the knob is pushed completely in. The choke can be adjusted gradually, depending on how much choke is needed for starting. Be sure the choke is off during operation, as excess fuel washing into the engine oil will increase wear on engine components.



7. Move the engine stop switch to RUN.

**NOTE:** Do not press the throttle while starting the engine.

## Starting the Engine

8. Turn the ignition key past the ON position to engage the starter. Activate the starter for a maximum of five seconds, releasing the key when the engine starts.
9. If the engine does not start, return the key to the OFF position and wait five seconds before attempting to start again. Activate the starter for another five seconds if necessary. Repeat this procedure until the engine starts.

**NOTE:** If a warm engine has cooled to a point where it does not readily start, intermittent use of the choke button (pulled half way out) may be necessary. If the engine is over-choked when warm, depress the throttle lever fully while cranking to aid in starting. Release the throttle lever *immediately* after the engine starts. If the engine does not start and all conditions are favorable, change the spark plug and try again.

10. If the engine slows or stops, position the choke knob half way in to allow proper engine warm up. Vary the engine RPM slightly with the throttle to aid in warm-up. When the engine idles smoothly, push the choke completely in.

|                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CAUTION</b>                                                                                                                                            |
| Operating the vehicle immediately after starting could cause engine damage. Allow the engine to warm up for several minutes before operating the vehicle. |

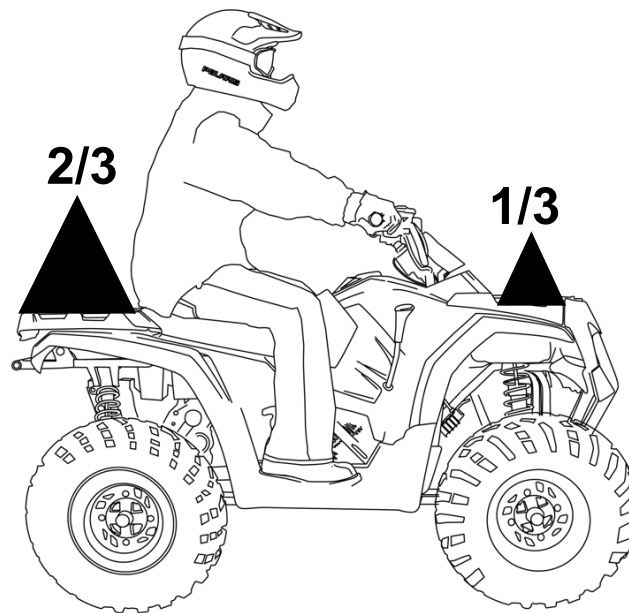
## Cold Weather Operation

If this vehicle is used year-round, check the oil level frequently. A rising oil level could indicate the accumulation of contaminants such as water or excess fuel in the bottom of the crankcase. Water in the bottom of the crankcase can lead to engine damage and must be drained. Water accumulation increases as outside temperature decreases.

See your Polaris dealer for engine heater kits, which provide quicker warm-ups and easier starting in colder weather.

# OPERATION

## Hauling Cargo



Your vehicle has been designed to carry or tow a certain amount of load. Always read and understand the load distribution warning labels on the vehicle, and never exceed the weight capacities outlined in the specifications section of the owner's manual and on the safety decals.

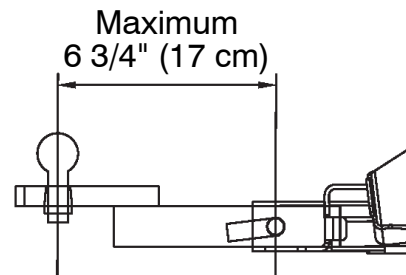
Cargo weight should be evenly distributed ( $\frac{1}{3}$  on the front rack and  $\frac{2}{3}$  on the rear rack) and mounted as low as possible. When operating over rough or hilly terrain, reduce speed and cargo weight to maintain stable driving conditions. Do not obstruct the headlight beam with cargo.

### Towing Loads

Always attach a towed load to the hitch point. If towing a load, reduce rear rack cargo weight by the amount of tongue weight. The combination of rear rack cargo weight and tongue weight must not exceed the rear rack capacity.

### CAUTION

Using an improper hitch or exceeding the maximum tongue weight capacity can result in serious damage to the vehicle and will void your warranty. Never install a hitch longer than  $6\frac{3}{4}$ " (17 cm). Never install automotive accessories on your Polaris vehicle. Always install Polaris-approved (or equivalent) accessories designed for use on your vehicle.



## Hauling Cargo

### **WARNING**

Hauling cargo improperly can alter vehicle handling and may cause loss of control or brake instability and result in serious injury or death. Always follow these precautions when hauling cargo:

**REDUCE SPEED AND ALLOW GREATER DISTANCES FOR BRAKING WHEN HAULING 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 only one rack increases the possibility of vehicle overturn.

**CARRY LOADS 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.

**SECURE ALL LOADS BEFORE OPERATING.** Unsecured loads can create unstable operating conditions, which could result in loss of control of the vehicle.

**OPERATE ONLY WITH STABLE AND SAFELY ARRANGED LOADS.** When handling off-centered loads that cannot be centered, securely fasten the load and operate with extra caution. Always attach the tow load to the hitch point designated for your vehicle.

**HEAVY LOADS CAN CAUSE BRAKING AND CONTROL PROBLEMS.** Use extreme caution when applying brakes with a loaded vehicle. Avoid terrain or situations that may require backing downhill.

**USE EXTREME CAUTION** when operating with loads that extend over the rack sides. Stability and maneuverability may be adversely affected, causing the vehicle 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 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.

# OPERATION

## Driving Safely

### Driving Procedures



1. Wear protective riding gear. See page 18.
2. Sit upright with both feet on the footrests and both hands on the handlebars.
3. Start the engine and allow it to warm up.
4. Shift the transmission into gear.
5. Check your surroundings and determine your path of travel.
6. Release the parking brake.
7. Slowly depress the throttle with your right thumb and begin driving.
8. Drive slowly. Practice maneuvering and using the throttle and brakes on level surfaces.

## Driving Safely Turning the Vehicle

Your vehicle is 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.



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

### **⚠ WARNING**

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

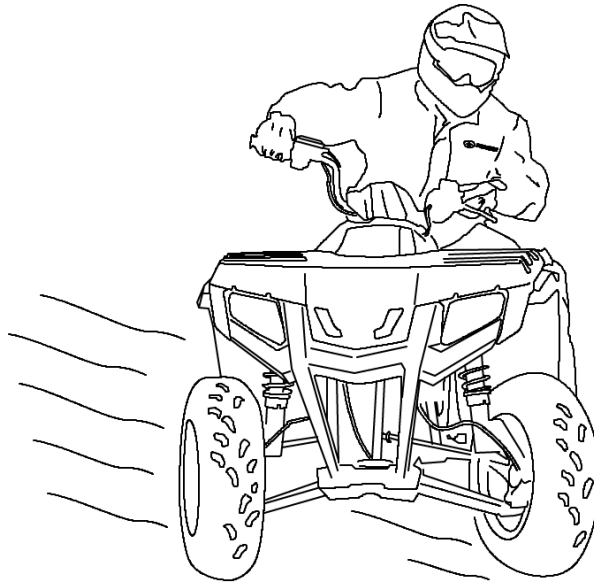
# OPERATION

## Driving Safely

### Driving on Slippery Surfaces

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

1. Slow down when entering slippery areas.
2. Engage AWD before wheels begin to lose traction.
3. Maintain a high level of alertness, reading the trail and avoiding quick, sharp turns, which can cause skids.
4. Correct a skid by turning the handlebars in the direction of the skid and shifting your body weight forward.



## CAUTION

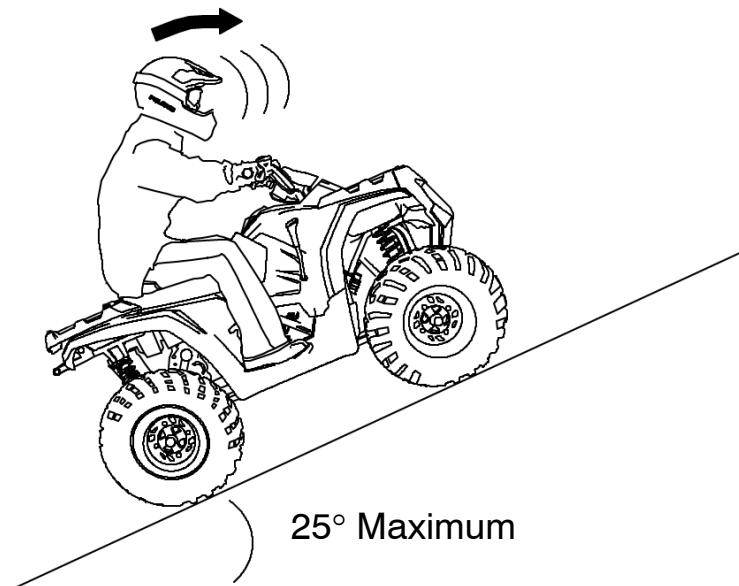
Severe damage to drive train may occur if the AWD is engaged while the wheels are spinning. Always allow the rear wheels to stop spinning before engaging AWD, or engage AWD before wheels begin to lose traction.

## ⚠ WARNING

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

Never apply the brakes during a skid. Do not operate on excessively slippery surfaces. Always reduce speed and use additional caution.

## Driving Safely Driving Uphill



Whenever traveling uphill, follow these precautions:

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

### **⚠ WARNING**

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

Avoid climbing steep hills (25° maximum).

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

# OPERATION

## Driving Safely

### Driving on a Sidehill (Sidehilling)



#### **⚠ WARNING**

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

Sidehilling can be dangerous and should be avoided if at all possible. If you encounter a situation where sidehilling is necessary, follow these precautions:

1. Slow down.
2. Shift your weight uphill.
3. Keep your feet on the footrests.
4. Steer slightly into the hill to maintain vehicle direction.

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

## Driving Safely Driving Downhill



### **⚠ WARNING**

Excessive speed when traveling downhill can cause loss of control and serious injury or death. Slow down.

Applying the brakes too firmly may cause the rear wheels to lock, which could result in loss of control and serious injury or death. Apply the brakes gradually.

When driving downhill, follow these precautions:

1. Shift your weight uphill.
2. Drive straight downhill.
3. Slow down.
4. Squeeze the brake lever gradually.

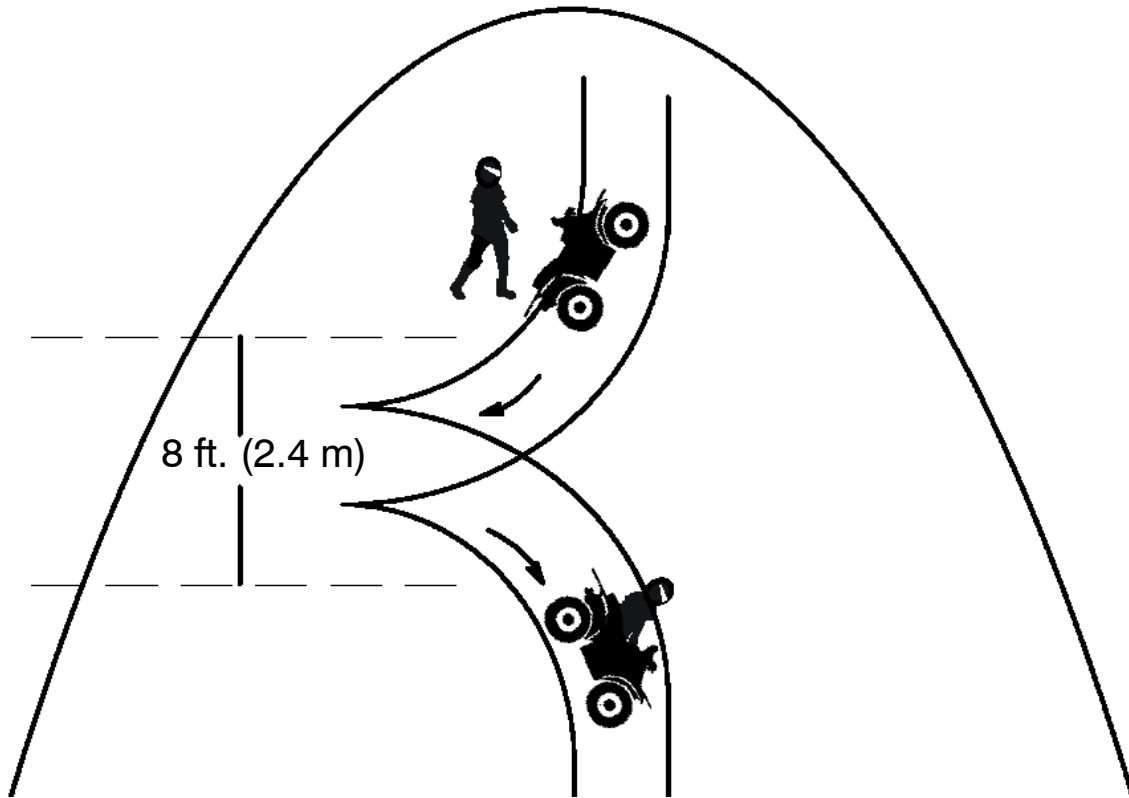
**NOTE:** Before operating your vehicle, learn how to use the auxiliary brake for emergency situations (if single-lever brakes become inoperable).

# OPERATION

## Driving Safely

### Turning Around on a Hill (K-Turn)

If the vehicle stalls while climbing a hill, never back it down the hill!  
Use the K-turn to turn around.



## Driving Safely

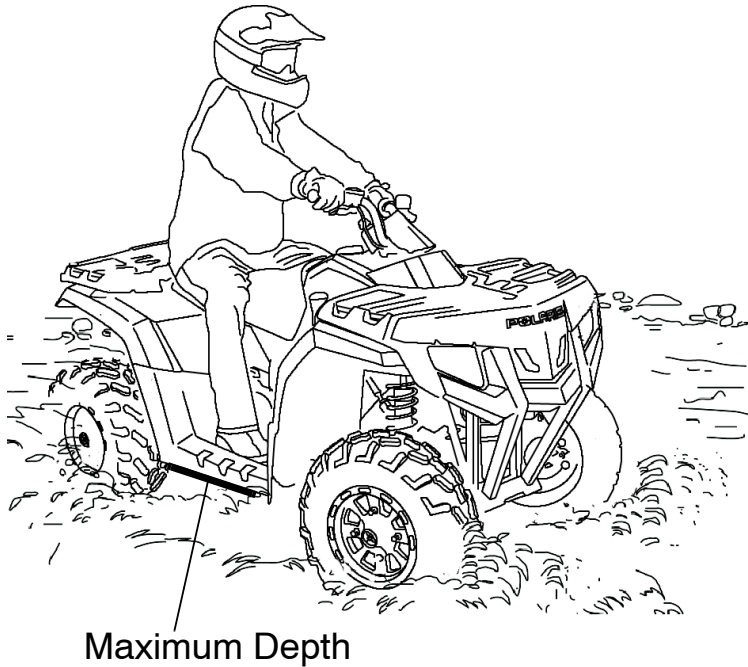
### Turning Around on a Hill (K-Turn)

1. Stop and lock the parking brake while keeping body weight uphill.
2. Leave the transmission in forward and shut off the engine.
3. Dismount on the uphill side of the vehicle, or on the left if the vehicle is pointing straight uphill.
4. Staying uphill of the vehicle, turn the handlebars full left.
5. While holding the brake lever, release the parking brake lock and slowly allow the vehicle to roll around to your right until it's pointing across the hill or slightly downward.
6. Lock the parking brake. Remount the vehicle from the uphill side, keeping body weight uphill.
7. Start the engine with the transmission still in forward.
8. Release the parking brake and proceed *slowly*, controlling speed with the brake lever, until the vehicle is on more level ground.

# OPERATION

## Driving Safely

### Driving Through Water



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

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

## Driving Safely

### Driving Through Water

After running the vehicle in water, it's critical to have it serviced as outlined in the maintenance chart. See page 54. The following areas need special attention: engine oil, transmission oil, front and rear gearcases, and all grease fittings.

#### CAUTION

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

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

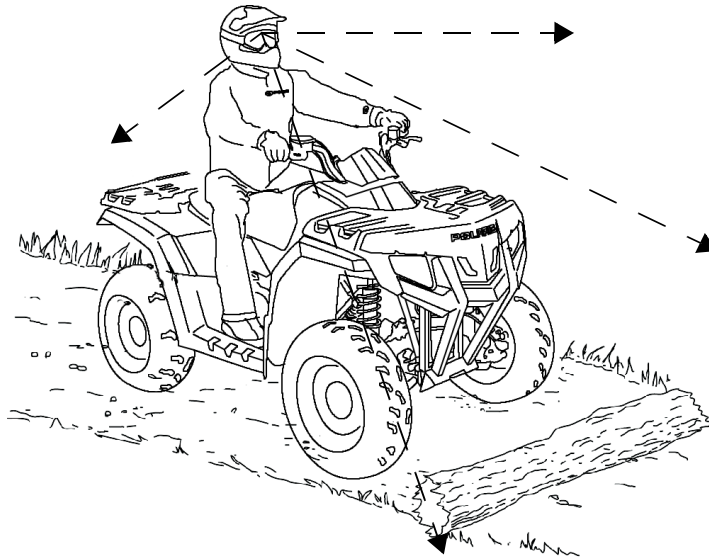
**NOTE:** Avoid operating the vehicle through deep or fast-flowing water. If you cannot avoid water that exceeds the recommended maximum depth, go slowly, balance your weight carefully, avoid sudden movements, and maintain a slow and steady forward motion. Do not make sudden turns or stops, and do not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

If your vehicle becomes immersed, and it's impossible to take it to a dealer before starting it, follow the steps described on page 84. Have the vehicle serviced by your dealer at the first opportunity.

# OPERATION

## Driving Safely

### Driving Over Obstacles



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

#### **⚠ WARNING**

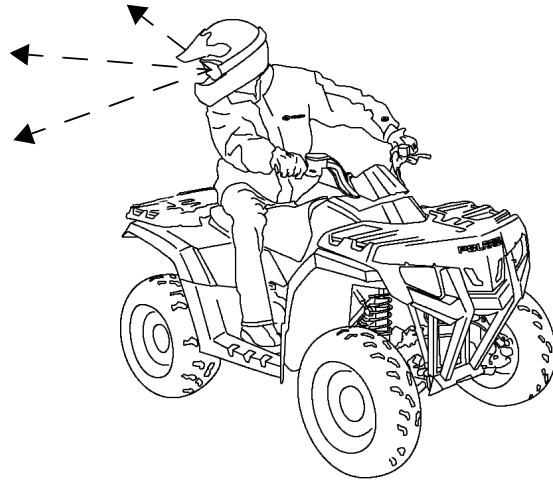
Severe injury or death can result if your vehicle comes in contact with a hidden obstacle. Not all obstacles are immediately visible. Travel with caution in unfamiliar terrain.

## Driving Safely

### Driving in Reverse

Follow these precautions when operating in reverse:

1. Always check for obstacles or people behind the vehicle.
2. Always avoid backing downhill.
3. Back slowly.
4. Apply the brakes *lightly* for stopping.
5. Avoid turning at sharp angles.
6. Never open the throttle suddenly.



### **⚠ WARNING**

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

Do not use the override switch unless additional power is required for vehicle movement. Use with caution.

Avoid backing on inclines, and avoid turning at sharp angles.

**NOTE:** Your Polaris vehicle is equipped with a reverse speed limiter. Use the override button with caution as rearward vehicle speed is greatly increased. Do not operate at wide open throttle.

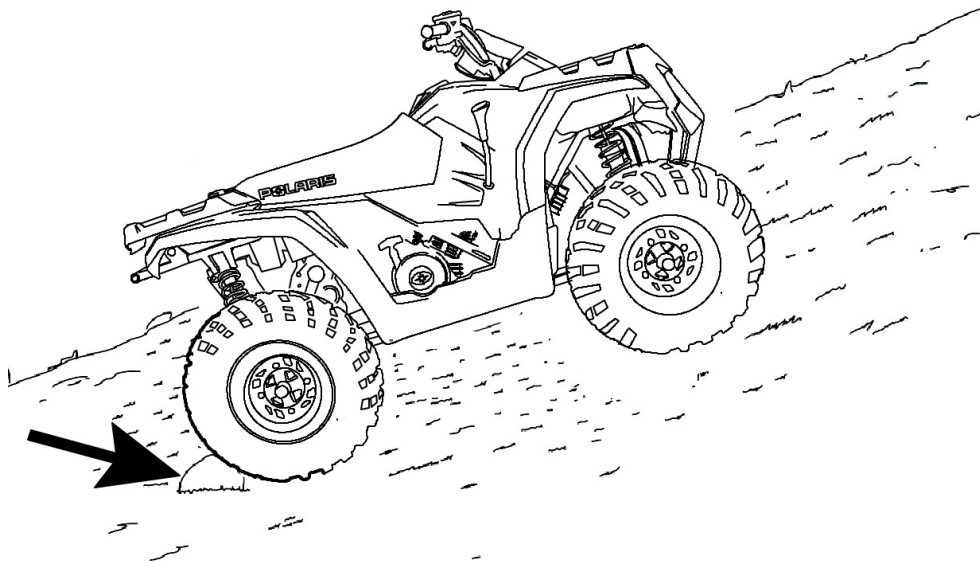
### **CAUTION**

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

# OPERATION

## Driving Safely

### Parking on an Incline



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

1. Stop the engine.
2. Place the transmission in gear.
3. Lock the parking brake.
4. Always block the rear wheels on the downhill side.
5. Turn the fuel valve off.

# **EMISSION CONTROL SYSTEMS**

## **Noise Emission Control System**

Do not modify the engine, intake or exhaust components, as doing so may affect compliance with governmental noise level requirements.

## **Exhaust Emission Control System**

The emissions from the exhaust of this vehicle are controlled by engine design, including factory-set fuel delivery and ignition. The engine and related components must be maintained at Polaris specifications to achieve optimal performance.

Engine idle speed is the only adjustment Polaris recommends that the operator perform. Any other adjustments should be performed by an authorized Polaris dealer.

## **Electromagnetic Interference**

This spark ignition system complies with USA requirements, Canadian ICES-002 and European directives 89/336/EEC and 97/24/EC.

# MAINTENANCE

## Periodic Maintenance Chart

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

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

Record maintenance and service in the Maintenance Log beginning on page 117.

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

Maintenance intervals in the following chart are based upon average riding conditions and an average vehicle speed of approximately 10 miles per hour (16 km/h). Vehicles subjected to severe use must be inspected and serviced more frequently.

### Severe Use Definition

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

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

## Periodic Maintenance Chart

### Maintenance Chart Key

► Perform these operations more often for vehicles subjected to severe use.

**E** Emission-related service (Failure to conduct this maintenance will not void the emissions warranty but may affect emissions.)

■ Have an authorized Polaris dealer perform these services.

### WARNING

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

# MAINTENANCE

## Periodic Maintenance Chart

Perform all services at whichever maintenance interval is reached first.

| Item   |                                      | Maintenance Interval<br>(whichever comes first) |          |               | Remarks                                                           |
|--------|--------------------------------------|-------------------------------------------------|----------|---------------|-------------------------------------------------------------------|
|        |                                      | Hours                                           | Calendar | Miles<br>(Km) |                                                                   |
| ■      | Steering                             | -                                               | Pre-Ride | -             | Make adjustments as needed. See Pre-Ride Checklist on page 35.    |
| ▶      | Front suspension                     | -                                               | Pre-Ride | -             |                                                                   |
| ▶      | Rear suspension                      | -                                               | Pre-Ride | -             |                                                                   |
|        | Tires                                | -                                               | Pre-Ride | -             |                                                                   |
| ▶      | Brake fluid level                    | -                                               | Pre-Ride | -             |                                                                   |
| ▶      | Brake lever travel                   | -                                               | Pre-Ride | -             |                                                                   |
|        | Brake system                         | -                                               | Pre-Ride | -             |                                                                   |
|        | Wheels/fasteners                     | -                                               | Pre-Ride | -             |                                                                   |
|        | Frame fasteners                      | -                                               | Pre-Ride | -             |                                                                   |
| ▶      | Engine oil level                     | -                                               | Pre-Ride | -             |                                                                   |
| ▶<br>E | Air filter, pre-filter               | -                                               | Daily    | -             | Inspect; clean often; replace as needed                           |
| ▶      | Air box sediment tube                | -                                               | Daily    | -             | Drain deposits when visible                                       |
|        | Headlamp/tail lamp                   | -                                               | Daily    | -             | Check operation; apply dielectric grease if replacing             |
| ▶<br>E | Air filter, main element             | -                                               | Weekly   | -             | Inspect; replace as needed                                        |
|        | Recoil housing (if applicable)       | -                                               | Weekly   | -             | Drain water as needed, check often if operating in wet conditions |
| ▶<br>■ | Brake pad wear                       | 10 H                                            | Monthly  | 100 (160)     | Inspect periodically                                              |
|        | Battery                              | 20 H                                            | Monthly  | 200 (320)     | Check terminals; clean; test                                      |
| ▶      | Front gearcase oil (if equipped)     | 25 H                                            | Monthly  | 250 (400)     | Inspect level; change yearly                                      |
| ▶      | Transmission oil                     | 25 H                                            | Monthly  | 250 (400)     | Inspect level; change yearly                                      |
| ▶<br>E | Engine breather filter (if equipped) | 25 H                                            | Monthly  | 250 (400)     | Inspect; clean if needed                                          |

▶ Perform these procedures more often for vehicles subjected to severe use.

E Emission-Related Service

■ Have an authorized Polaris dealer perform these services.

# MAINTENANCE

## Periodic Maintenance Chart

| Item   |                                    | Maintenance Interval<br>(whichever comes first) |          |               | Remarks                                                                                                  |
|--------|------------------------------------|-------------------------------------------------|----------|---------------|----------------------------------------------------------------------------------------------------------|
|        |                                    | Hours                                           | Calendar | Miles<br>(Km) |                                                                                                          |
| ▶      | General lubrication                | 50 H                                            | 3 M      | 500 (800)     | Lubricate all fittings, pivots, cables, etc.                                                             |
|        | Carburetor float bowl              | 50 H                                            | 6 M      | 500 (800)     | Drain bowl periodically and prior to storage                                                             |
| ■<br>E | Throttle Cable/<br>ETC Switch      | 50 H                                            | 6 M      | 500 (800)     | Inspect; adjust; lubricate; replace if necessary                                                         |
| ■<br>E | Choke cable                        | 50 H                                            | 6 M      | 500 (800)     | Inspect; adjust; lubricate; replace if necessary                                                         |
| E      | Carburetor air intake ducts/flange | 50 H                                            | 6 M      | 500 (800)     | Inspect duct for proper sealing/air leaks                                                                |
|        | Drive belt                         | 50 H                                            | 6 M      | 500 (800)     | Inspect; adjust; replace as needed                                                                       |
| ▶      | Engine oil change                  | 100 H                                           | 6 M      | 1000 (1600)   | Perform a break-in oil change at 20 hours                                                                |
| ▶      | Oil filter change                  | 100 H                                           | 6 M      | 1000 (1600)   | Replace with oil change                                                                                  |
| ▶      | Oil tank vent hose (if equipped)   | 100 H                                           | 6 M      | 1000 (1600)   | Inspect routing, condition                                                                               |
| ■<br>E | Valve clearance                    | 100 H                                           | 12 M     | 1000 (1600)   | Inspect; adjust                                                                                          |
| ■<br>E | Fuel system/filter                 | 100 H                                           | 12 M     | 1000 (1600)   | Check for leaks at tank cap, lines, fuel valve, filter, pump, carburetor; replace lines every two years  |
| ▶      | Engine mounts                      | 100 H                                           | 12 M     | 1000 (1600)   | Inspect                                                                                                  |
|        | Exhaust muffler/pipe               | 100 H                                           | 12 M     | 1000 (1600)   | Inspect                                                                                                  |
| ■<br>E | Spark plug                         | 100 H                                           | 12 M     | 1000 (1600)   | Inspect; replace as needed                                                                               |
| ■<br>E | Ignition Timing                    | 100 H                                           | 12 M     | 1000 (1600)   | Inspect                                                                                                  |
| ▶      | Wiring                             | 100 H                                           | 12 M     | 1000 (1600)   | Inspect for wear, routing, security; apply dielectric grease to connectors subjected to water, mud, etc. |

# MAINTENANCE

## Periodic Maintenance Chart

| Item |                             | Maintenance Interval<br>(whichever comes first) |          |               | Remarks                                              |
|------|-----------------------------|-------------------------------------------------|----------|---------------|------------------------------------------------------|
|      |                             | Hours                                           | Calendar | Miles<br>(Km) |                                                      |
| ■    | Clutches (drive and driven) | 100 H                                           | 12 M     | 1000 (1600)   | Inspect; clean; replace worn parts                   |
| ■    | Front wheel bearings        | 100 H                                           | 12 M     | 1000 (1600)   | Inspect; replace as needed                           |
| ■    | Brake fluid                 | 200 H                                           | 24 M     | 2000 (3200)   | Change every two years                               |
|      | Spark arrestor              | 300 H                                           | 36 M     | 3000 (4800)   | Clean out                                            |
|      | Idle speed                  | -                                               |          |               | Adjust as needed                                     |
| ■    | Toe adjustment              | -                                               |          |               | Inspect periodically; adjust when parts are replaced |
|      | Headlight aim               | -                                               |          |               | Adjust as needed                                     |

► Perform these procedures more often for vehicles subjected to severe use.

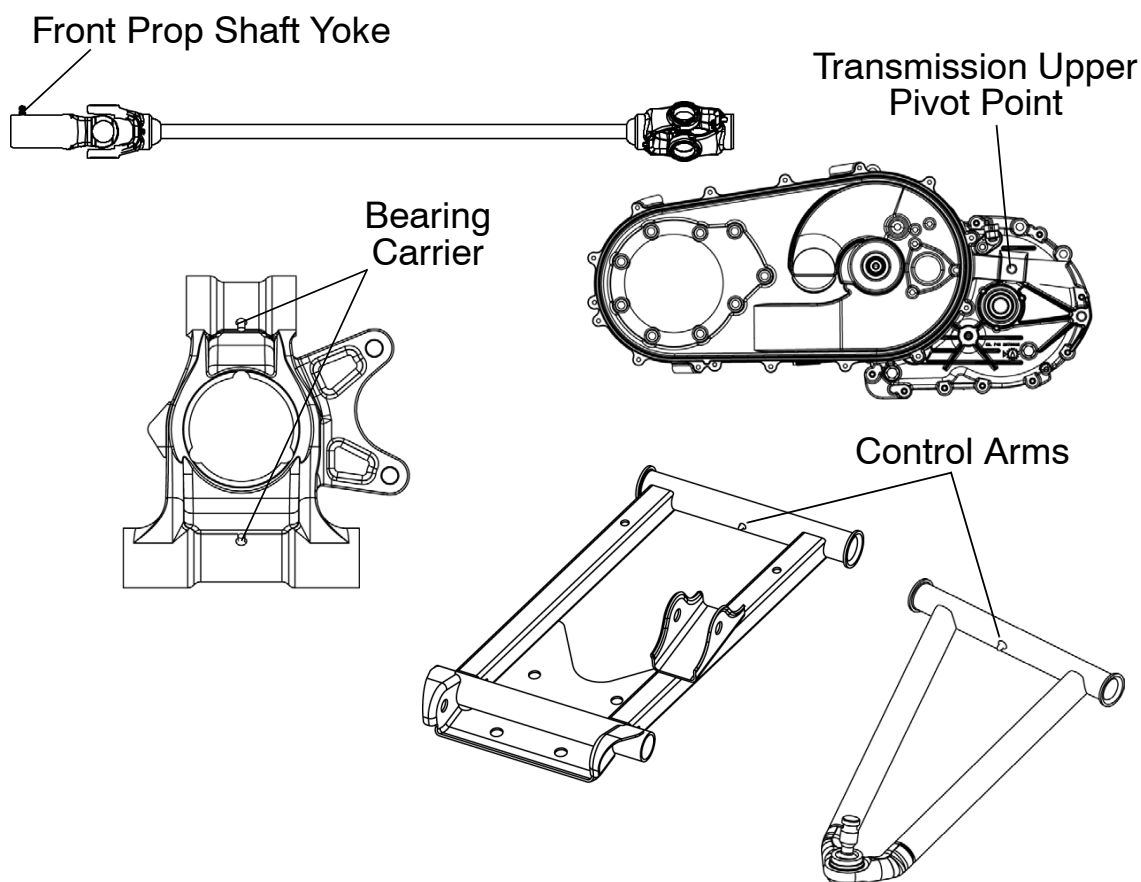
E Emission-Related Service

■ Have an authorized Polaris dealer perform these services.

## Lubrication Guide

Check and lubricate all components at the intervals outlined in the Periodic Maintenance Chart beginning on page 54. Items not listed in the chart should be lubricated at the General Lubrication interval.

| Item                                     | Lube                                  | Method                                                                                                                               |
|------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Engine Oil                               | PS-4 PLUS Performance Synthetic 2W-50 | See page 60.                                                                                                                         |
| Brake Fluid                              | DOT 4 Only                            | See page 70.                                                                                                                         |
| Transmission Oil                         | Polaris AGL Synthetic Gearcase Lube   | See page 64.                                                                                                                         |
| Front Demand Drive Unit (Front Gearcase) | Premium Demand Drive Hub Fluid        | See page 67.                                                                                                                         |
| Front Prop Shaft Yoke                    | Polaris Premium U-Joint Lube          | Grease fittings (3 pumps maximum) every 500 miles (800 km), before long periods of storage, or after pressure washing or submerging. |
| Control Arm (front and rear)             |                                       |                                                                                                                                      |
| Bearing Carrier                          |                                       |                                                                                                                                      |
| Transmission (upper pivot point)         |                                       |                                                                                                                                      |



# MAINTENANCE

## Engine Oil

### Oil Recommendations

Always change the oil filter whenever changing oil.

Polaris recommends the use of Polaris PS-4 *PLUS Performance* Synthetic 2W-50 4-cycle oil or a similar oil for this engine. Oil may need to be changed more frequently if Polaris oil is not used. Always use 2W-50 oil. Follow the manufacturer's recommendations for ambient temperature operation.

### CAUTION

Mixing brands or using a non-recommended oil may cause serious engine damage. Always use the recommended oil. Never substitute or mix oil brands.

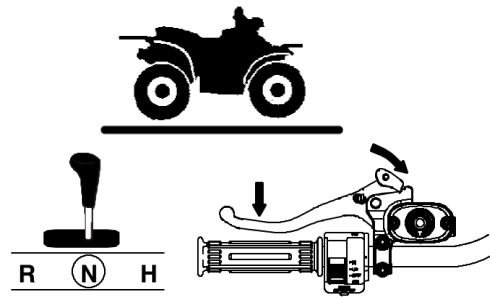
### Oil Specifications

| Lubricant                                | Capacity       | Drain Plug Torque   |
|------------------------------------------|----------------|---------------------|
| PS-4 PLUS Performance<br>Synthetic 2W-50 | 2 qts. (1.9 l) | 14 ft. lbs. (19 Nm) |

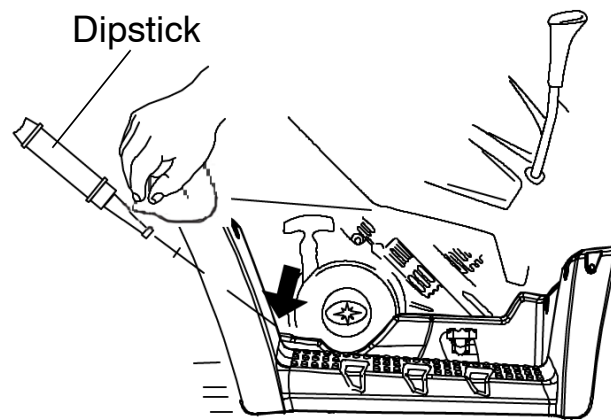
## Engine Oil Oil Level

The oil dipstick is located behind the recoil on the right side of the vehicle.

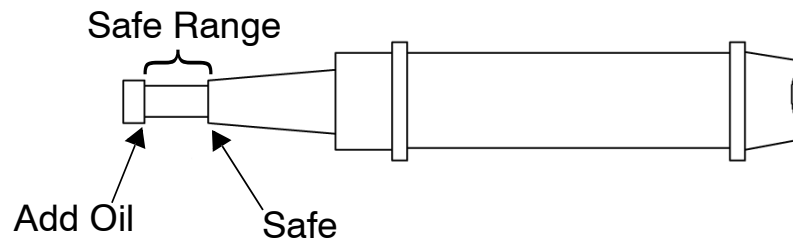
1. Position the vehicle on a level surface.
2. Place the transmission in neutral.
3. Lock the parking brake.



- 
4. Start the engine. Allow it to idle for 30 seconds. Stop the engine.
  5. Remove the dipstick. Wipe it dry with a clean cloth.
  6. Reinstall the dipstick completely.



- 
7. Remove the dipstick and check the oil level. Add oil as needed. Maintain the oil level in the safe range. Do not overfill.



8. Reinstall the dipstick.
-

# MAINTENANCE

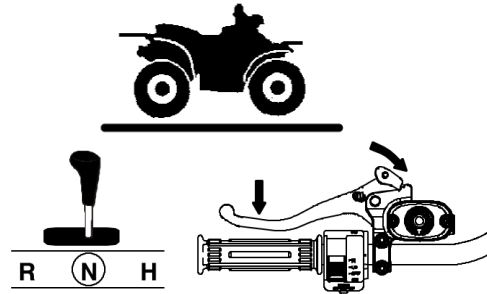
## Oil and Filter Change

### ⚠ CAUTION

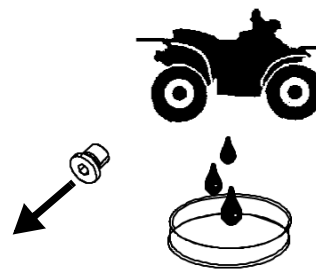
Hot oil can cause serious burns to skin. Do not allow hot oil to contact skin.

Always change the oil and filter at the intervals outlined in the Periodic Maintenance Chart beginning on page 54. Always change the oil filter whenever changing oil.

1. Position the vehicle on a level surface.
2. Place the transmission in neutral.
3. Lock the parking brake.

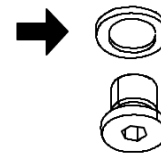


4. Start the engine. Allow it to idle for two to three minutes. Stop the engine.
5. Clean the area around the drain plug.
6. Place a drain pan under the vehicle.
7. Remove the drain plug. Use a 6 mm Allen wrench.
8. Drain the oil.



9. Reinstall the drain plug with a new sealing washer.

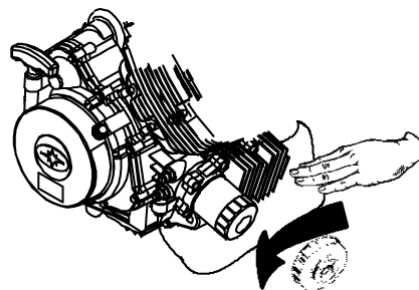
**NOTE:** The sealing surfaces on the drain plug and crankcase should be clean and free of burrs, nicks or scratches.



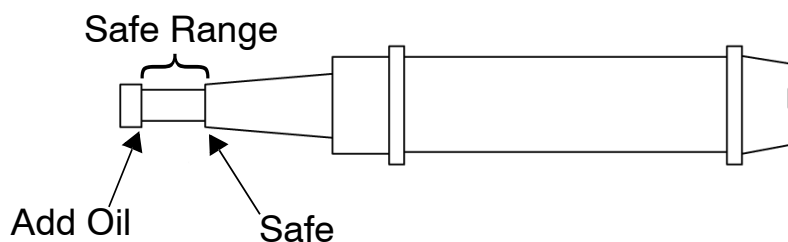
10. Torque to specification. See page 60.

## Oil and Filter Change

11. Place towels under the oil filter.  
Using an oil filter wrench, turn the filter counterclockwise to remove it.
12. Clean the filter sealing area on the engine.
13. Lubricate the filter o-ring. Check to make sure the o-ring is in good condition.
14. Install the new oil filter. After the filter contacts the engine surface, turn it 1/2 turn by hand.



- 
15. Remove the dipstick.
  16. Add the recommended oil. See page 60.
  17. Reinstall the dipstick.
  18. Start the engine. Allow it to idle for two minutes.
  19. Stop the engine.
  20. Check for oil leaks.
  21. Remove the dipstick and check the oil level. Add oil as needed. Maintain the oil level in the safe range. Do not overfill.



22. Reinstall the dipstick.

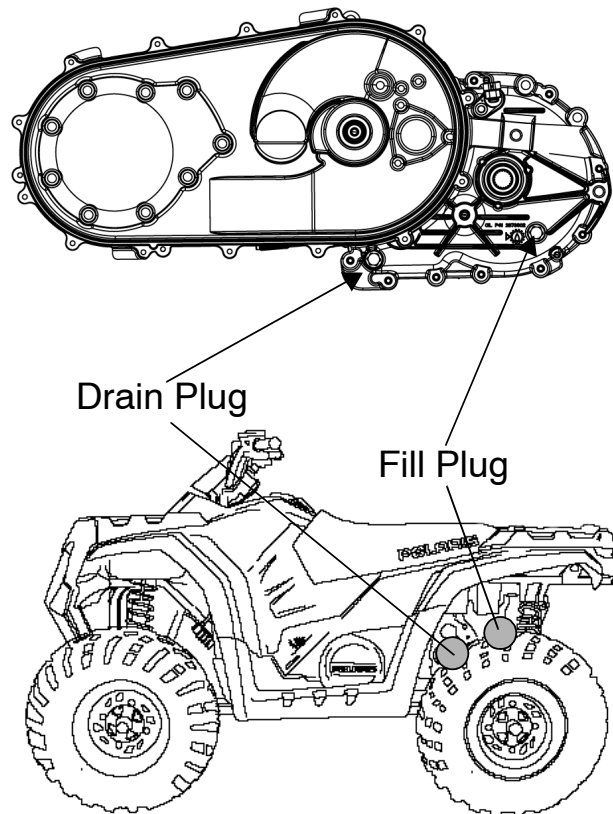
- 
23. Discard used oil and filter properly.

# MAINTENANCE

## Transmission Oil

Always check and change the transmission oil at the intervals outlined in the Periodic Maintenance Chart beginning on page 54. Maintain the oil level at the bottom of the fill plug hole. See page 105 for the part numbers of Polaris products.

The fill plug is located on the left side of the vehicle, under the rear fender, behind the wheel. The drain plug is located behind the wheel well.

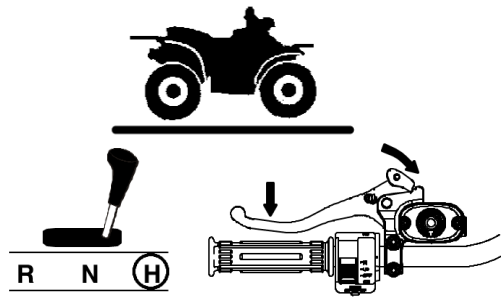


## Transmission Oil Recommendations

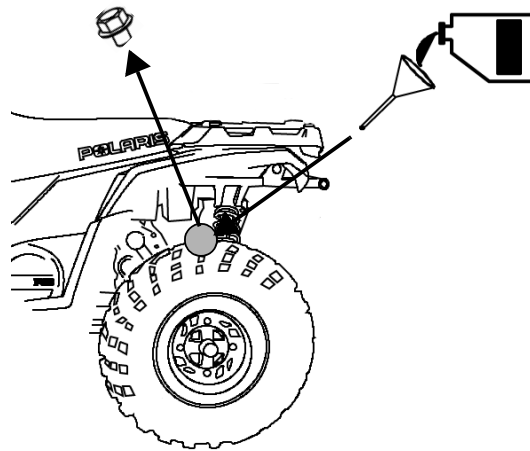
| Gearcase         | Lubricant                                | Capacity          | Fill Plug Torque    | Drain Plug Torque   |
|------------------|------------------------------------------|-------------------|---------------------|---------------------|
| Transmission 2x4 | Premium AGL Synthetic Gearcase Lubricant | 15.2 oz. (450 ml) | 15 ft. lbs. (20 Nm) | 15 ft. lbs. (20 Nm) |
| Transmission 4x4 | Premium AGL Synthetic Gearcase Lubricant | 20.3 oz. (600 ml) | 15 ft. lbs. (20 Nm) | 15 ft. lbs. (20 Nm) |

## Transmission Oil Oil Check

1. Position the vehicle on a level surface.
2. Place the transmission in gear.
3. Lock the parking brake.



- 
4. Remove the fill plug.  
Use a 15 mm wrench.
  5. Check the oil level.
  6. Add oil as needed. Do not overfill.
  7. Reinstall the fill plug.  
Torque to specification.  
See page 64 for recommendations.

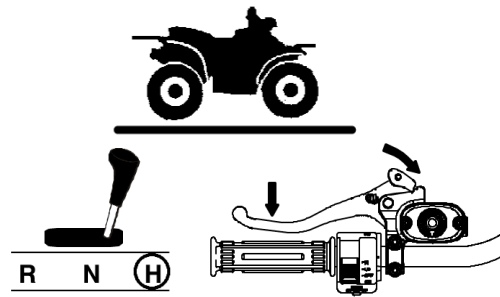


# MAINTENANCE

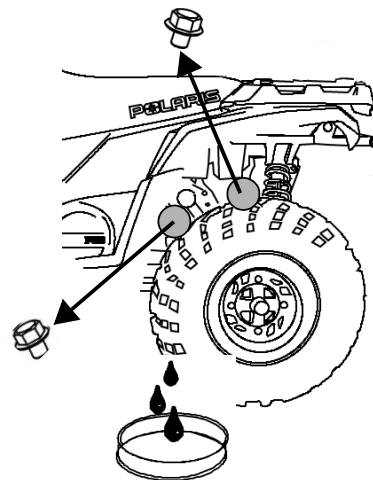
## Transmission Oil

### Oil Change

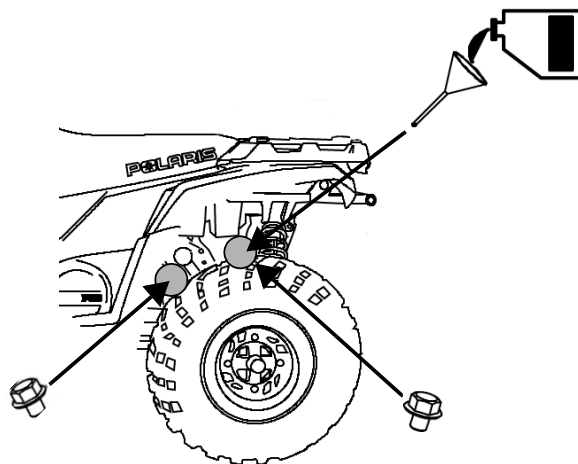
1. Position the vehicle on a level surface.
2. Place the transmission in gear.
3. Lock the parking brake.



- 
4. Remove the fill plug.  
Use a 15 mm wrench.
  5. Place a drain pan under the gearcase.
  6. Remove the drain plug.  
Use a 15 mm wrench.
  7. Allow the oil to drain completely.



- 
8. Clean and reinstall the drain plug. Torque to specification. See page 64 for recommendations.
  9. Add the recommended oil.
  10. Reinstall the fill plug. Torque to specification. See page 64 for recommendations.
  11. Check for leaks.
  12. Dispose of used oil properly.

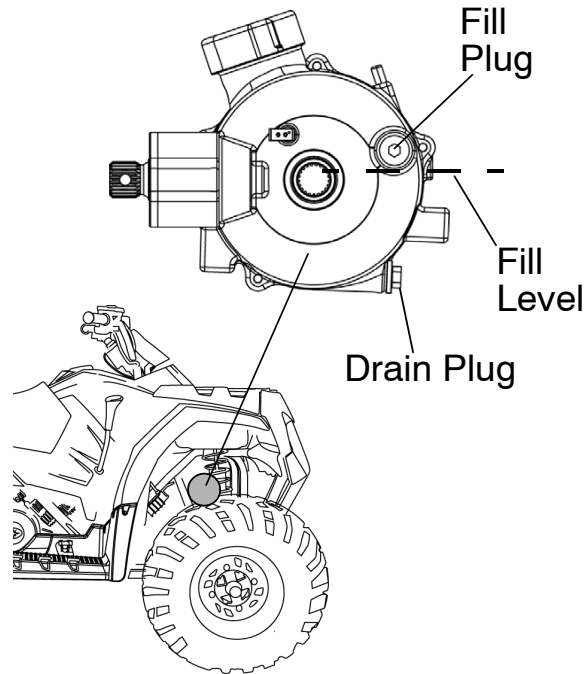


# MAINTENANCE

## Front Gearcase (Demand Drive) Fluid

Always check and change the demand drive fluid at the intervals outlined in the Periodic Maintenance Chart beginning on page 54. We recommend the use of Polaris Premium Demand Drive Hub Fluid. Use of other oils may result in improper operation of components. See page 105 for the part numbers of Polaris products.

Maintain the fluid level at the bottom of the fill hole threads. The fill plug is located on the right side of the gearcase. The drain plug is located on the bottom right side of the gearcase.



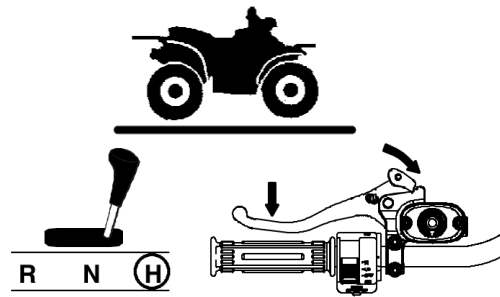
## Demand Drive Fluid Recommendations

| Gearcase          | Lubricant                      | Capacity          | Fill Plug Torque            | Drain Plug Torque           |
|-------------------|--------------------------------|-------------------|-----------------------------|-----------------------------|
| Demand Drive Unit | Premium Demand Drive Hub Fluid | 5 oz.<br>(148 ml) | 8-10 ft. lbs.<br>(11-13 Nm) | 8-10 ft. lbs.<br>(11-13 Nm) |

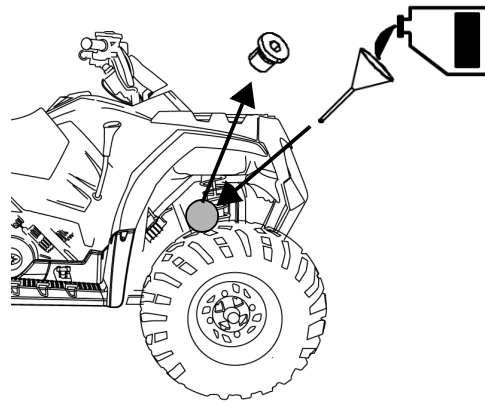
# MAINTENANCE

## Front Gearcase (Demand Drive) Fluid Fluid Check

1. Position the vehicle on a level surface.
2. Place the transmission in gear.
3. Lock the parking brake.



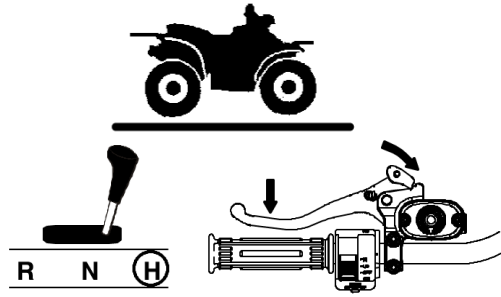
- 
4. Remove the fill plug. Use an 8 mm Allen wrench.
  5. Check the oil level.
  6. Add the recommended oil as needed to bring the level to the bottom of the fill hole threads.
  7. Reinstall the fill plug. Torque to specification. See page 67.
- 



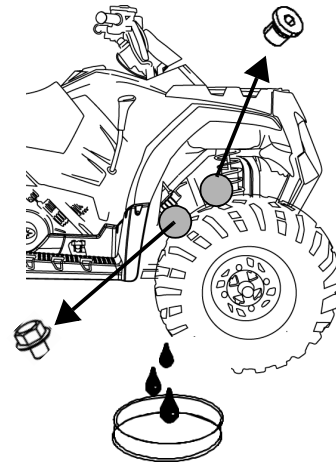
# MAINTENANCE

## Front Gearcase (Demand Drive) Fluid Fluid Change

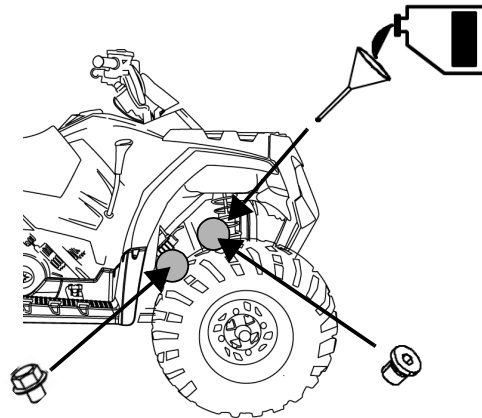
1. Position the vehicle on a level surface.
2. Place the transmission in gear.
3. Lock the parking brake.



4. Remove the fill plug. Use an 8 mm Allen wrench.
5. Place a drain pan under the gearcase.
6. Remove the drain plug. Use an 11 mm wrench.
7. Allow the oil to drain completely.



8. Clean and reinstall the drain plug. Torque to specification. See page 67.
9. Add the recommended fluid.
10. Reinstall the fill plug. Torque to specification.
11. Check for leaks.
12. Dispose of used oil properly.



# MAINTENANCE

## Brake Fluid

Check brake fluid levels for both brake systems before each ride.  
Always maintain brake fluid at the recommended level. Do not overfill.

### **WARNING**

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

If the fluid level is low add DOT 4 brake fluid only. See page 105 for the part numbers of Polaris products.

### **WARNING**

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

Under normal operation, the diaphragm extends into the reservoir as fluid level drops. If the fluid level is low and the diaphragm is not extended, a leak is likely and the diaphragm should be replaced. To ensure proper diaphragm operation, always fill the reservoir as needed whenever the cover is loosened or removed. Do not overfill.

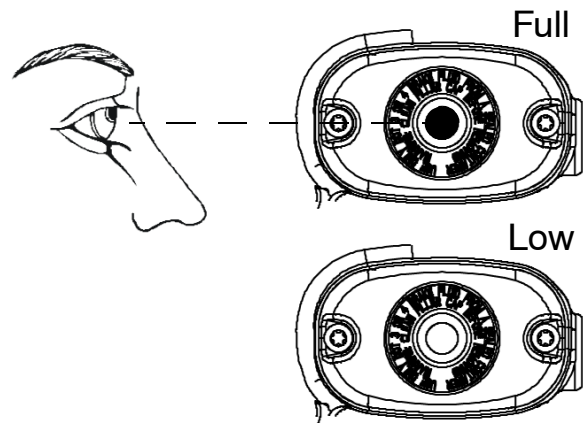
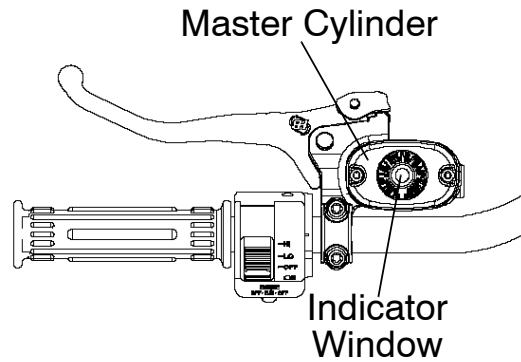
## Brake Fluid Hand Brake

The master cylinder is located on the left handlebar. Maintain the fluid level 1/4" (6.3 mm) below the top edge of the master cylinder. Do not overfill.

1. Position the vehicle on a level surface. Make sure the handlebars are straight.
2. View the fluid level through the indicator window (eye) on the top of the master cylinder.

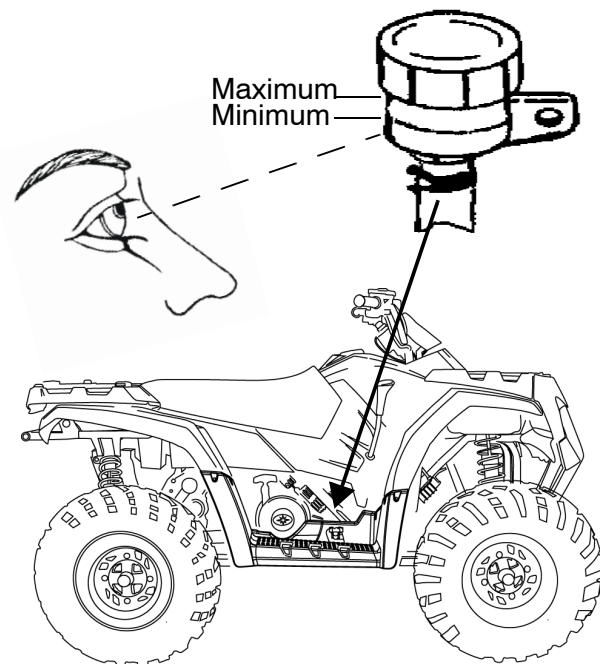
**NOTE:** The eye will appear dark when the fluid level is full. When fluid is low, the eye will be clear.

3. Add the recommended fluid as needed. Do not overfill.



## Foot Brake

The brake fluid reservoir is located on the right side of the vehicle. Maintain the fluid level between the minimum and maximum marks. Do not overfill.



# MAINTENANCE

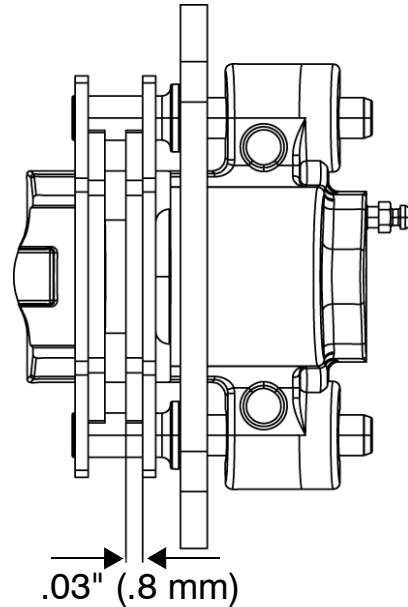
## Brakes

The front and rear brakes are hydraulic disc brakes, activated by moving the single brake lever toward the handlebar. The auxiliary foot brake is also hydraulic. Both brake systems are self-adjusting.

### Brake Inspections

The following checks are recommended to keep the brake system in good operating condition. Check more often if brakes are used heavily under normal operation.

1. Always keep brake fluid at an adequate level. See page 70.
2. Check the brake system for fluid leaks.
3. Check the brakes for excessive travel or spongy feel.
4. Check the friction pads for wear, damage and looseness. Replace the pads when the friction material is worn to .03" (.8 mm).
5. Check the security and surface condition of the disc.



## Toe Alignment

### ⚠ WARNING

Do not attempt to adjust alignment. All steering adjustments should be performed by an authorized Polaris dealer.

Use the following procedure to check the toe alignment of the vehicle. The recommended toe alignment is 3-6 mm toe out.

1. Position the vehicle on a level surface.
2. Place the handlebars in a straight-ahead position.
3. Tie a length of string between two stands as shown in the illustration. Position the stands so that the string is flush with the side of the rear tire.

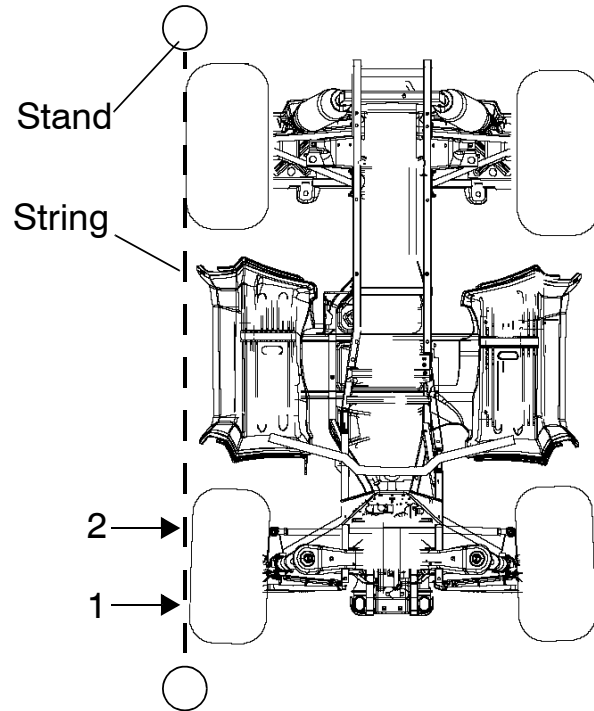
**NOTE:** If available, you may use a long straight-edge instead of string.

4. Measure the distance from the string to the rim at the front (1) and rear (2) of the front rim.

The rear measurement should be 2-3 mm more than the front measurement on each side of the vehicle to obtain the recommended 3-6 mm toe out alignment.

5. Repeat the measurement procedure on the other side of the vehicle.

**NOTE:** If you discover improper alignment, see your Polaris dealer for service.



# MAINTENANCE

## Steering Assembly

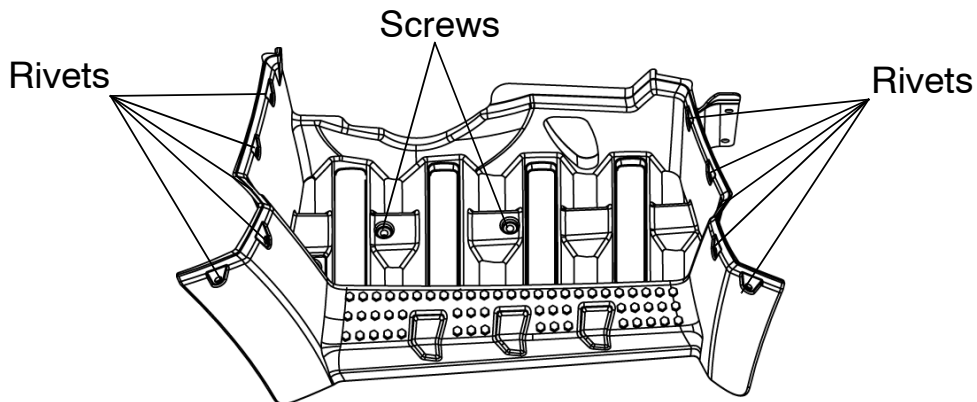
The steering assembly of this vehicle should be checked periodically for loose nuts and bolts. If loose nuts and bolts are found, see your Polaris dealer for service before operating the vehicle.

## Side Panel Removal

1. Remove the seat.
2. Grasp the top of the side panel and pull it outward to remove it.

## Footwell Removal

1. Remove the two screws on the bottom of the footwell.
2. Use a flat screwdriver or sidecutters to remove the plastic rivets securing the footwell to the fenders.
3. Remove the footwell.



## Tires

Refer to the specifications section beginning on page 110 for recommended tire type, size and pressure.

### **⚠ WARNING**

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

Maintain proper tire pressure as described on the decal on your vehicle and in the owner's manual.

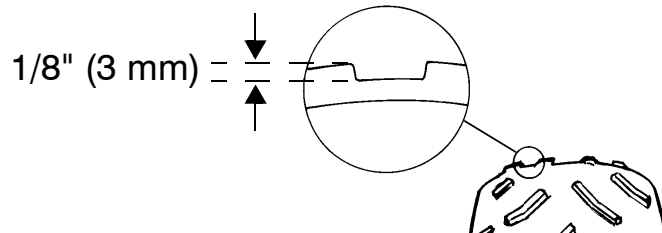
Always use original equipment size and type when replacing tires.

Make sure the wheels are installed properly.

Always replace tires when the tread depth measures 1/8" (3 mm) or less.

### **Tire Tread Depth**

Always replace tires when tread depth is worn to 1/8" (3 mm) or less.



### **Front Wheel Hub Tightening**

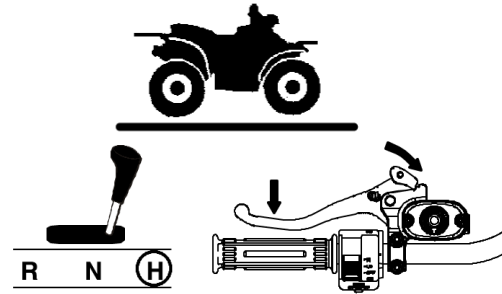
Front wheel bearing tightness and spindle nut retention are critical component operations. All service must be performed by your authorized Polaris dealer.

# MAINTENANCE

## Tires

### Wheel Removal

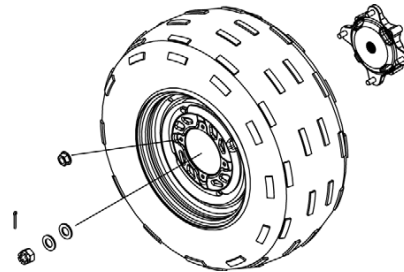
1. Position the vehicle on a level surface.
2. Place the transmission in gear.
3. Lock the parking brake.



- 
4. Loosen the wheel nuts slightly.
  5. Place a suitable stand under the footrest frame to raise the wheel slightly off the ground.



- 
6. Remove the wheel nuts.
  7. Remove the wheel.



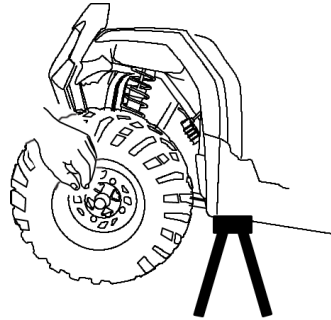
## Tires

### Wheel Installation

#### **⚠ WARNING**

Improperly installed wheels can adversely affect tire wear and vehicle handling, which can result in serious injury or death. Always ensure that all nuts are torqued to specification. Do not service axle nuts that have a cotter pin installed. See your Polaris dealer.

1. Place the wheel on the wheel hub with the valve stem toward the outside and the rotation arrows on the tire pointing toward forward rotation.
2. Install the wheel nuts finger tight.



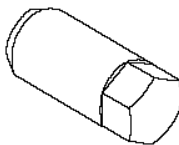
3. Lower the vehicle to the ground.
4. Torque the wheel nuts to specification.



### Wheel Nut Torque Specifications



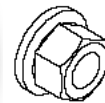
**CAST ALUMINUM**



90 ft. lbs.  
(122 Nm)



**STEEL**



27 ft. lbs.  
(37 Nm)

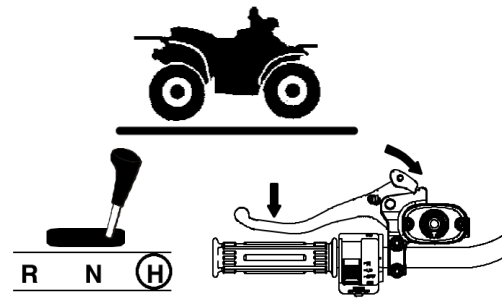
Check the wheel nut torques occasionally and when they've been loosened for service.

| Nut Type           | Nut Torque           |
|--------------------|----------------------|
| Lug Nut            | 90 ft. lbs. (122 Nm) |
| 2-Piece Flange Nut | 27 ft. lbs. (37 Nm)  |

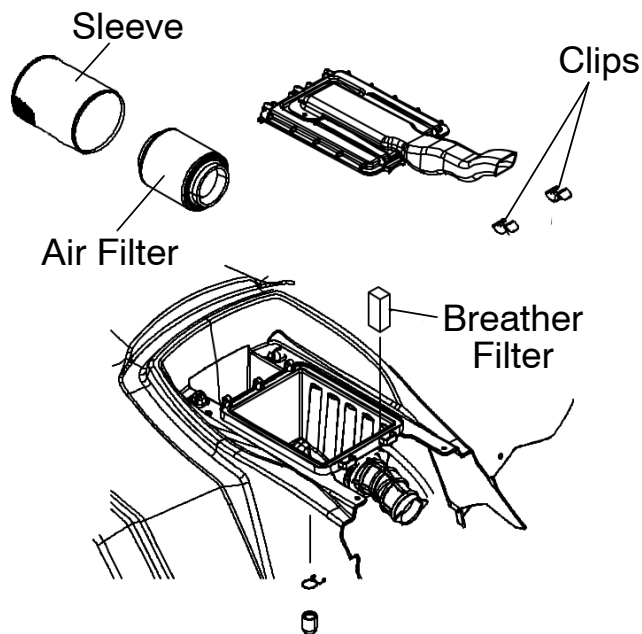
# MAINTENANCE

## Air Filter/Breather Filter

1. Position the vehicle on a level surface.
2. Place the transmission in gear.
3. Lock the parking brake.
4. Remove the seat.



5. Release the air box cover clips, and remove the air box cover.
6. Remove the air filter.
7. Remove the sleeve from the filter.
8. Wash the sleeve in soapy water, then rinse and let dry.
9. Remove the breather filter.
10. Wash the breather filter in soapy water, then rinse and let dry.



11. Reinstall the breather filter.

### CAUTION

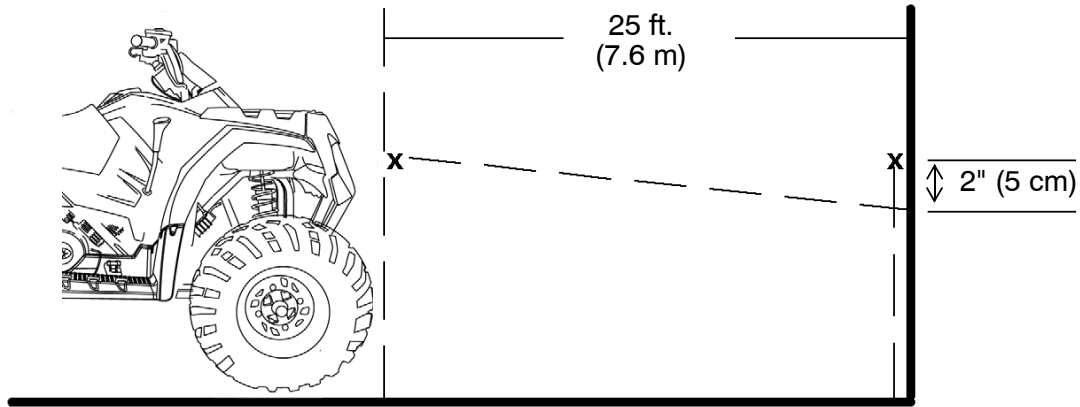
Operation of your vehicle without a breather filter can cause engine damage. Always reinstall the breather filter after removing it for service.

12. Reinstall the sleeve over the air filter. Replace the filter if needed.
13. Reinstall the air filter into the air box.
14. Reinstall the air box cover and the seat.

## Lights

### Headlight Beam Adjustment

The headlight beam can be adjusted slightly upward or downward. Use the following procedure to make the adjustment.



1. Position the vehicle on a level surface with the headlight approximately 25 ft. (7.6 m) from a wall.
2. Place the transmission in neutral.
3. Lock the parking brake.
4. Measure the distance from the floor to the center of the headlight and make a mark on the wall at the same height.

**NOTE:** Include rider weight on the seat when measuring.

5. Start the engine. Turn the headlight switch to high beam.
6. Observe the headlight aim on the wall. The most intense part of the headlight beam should be two inches (5 cm) below the mark on the wall.
7. Loosen the phillips screw at the rear of the headlamp.
8. Adjust the beam.
9. Tighten the screw.

# MAINTENANCE

## Lights

When servicing a halogen lamp, don't touch the lamp with bare fingers. Oil from your skin leaves a residue, causing a hot spot that will shorten the life of the lamp.

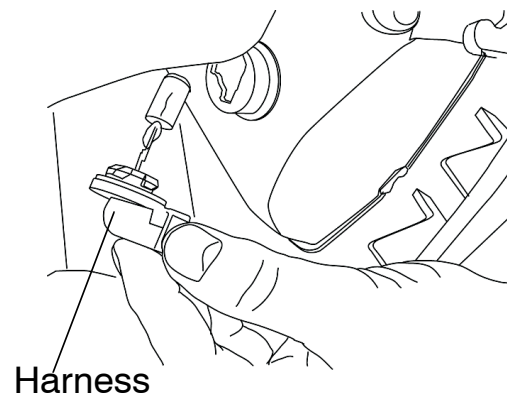
### **⚠ WARNING**

Poor lighting while driving can result in severe injury or death. Headlight and taillight lenses become dirty during normal operation. Wash the headlights frequently to maintain lighting quality.

Hot components can cause serious burns to skin. Allow lamps to cool before servicing.

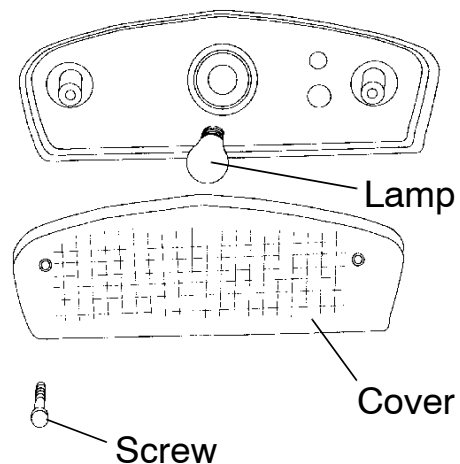
## Headlamp Replacement

1. Turn the back of the headlight harness counterclockwise and pull the harness assembly away from the headlight assembly.
2. Remove the headlamp and install the new headlamp.
3. Reinstall the harness assembly into the headlight assembly.
4. Turn the headlight harness clockwise to secure the headlamp.



## Taillight/Brakelight Lamp Replacement

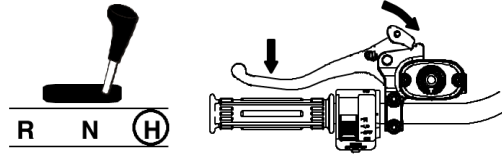
1. From the rear of the brakelight, remove the two screws holding the lens cover in place. Remove the lens cover.
2. Remove the lamp and replace it with a new lamp.
3. Test the light for proper operation.
4. Reinstall the lens cover.



## Recoil Housing

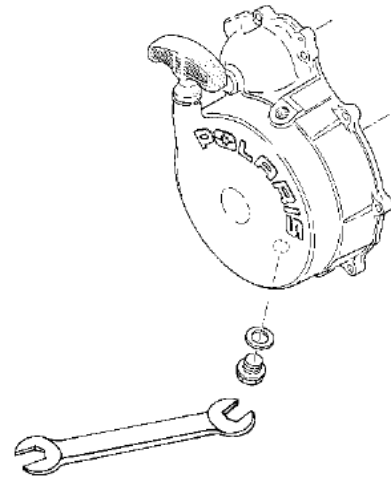
Always drain the recoil housing after operating the vehicle in wet conditions. Drain the housing before storing the vehicle. Make sure the housing is completely dry before reinstalling the drain plug.

1. Place the transmission in gear.
2. Lock the parking brake.
3. Stop the engine.



- 
4. Remove the drain screw on the bottom of the recoil housing.
  5. Reinstall the drain screw.

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



# MAINTENANCE

## Spark Plugs

### Spark Plug Recommendations

#### CAUTION

Using non-recommended spark plugs can result in serious engine damage. Always use Polaris-recommended spark plugs.

Refer to the specifications section beginning on page 110 for the recommended spark plug type and gap for your vehicle. Torque spark plugs to specification.

| Plug Condition                  | Torque Specification      |
|---------------------------------|---------------------------|
| New Spark Plug                  | 9-11 ft. lbs. (12-15 Nm)  |
| Previously Installed Spark Plug | 17-20 ft. lbs. (23-27 Nm) |

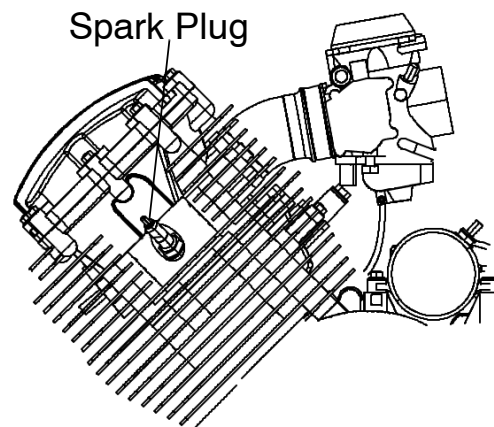
### Spark Plug Inspection

Spark plug condition is indicative of engine operation. Check the spark plug firing end condition after the engine has been warmed up and the vehicle has been driven at higher speeds. Immediately check the spark plug for correct color. See page 83.

#### ⚠ WARNING

A hot exhaust system and engine can cause serious burns. Wear protective gloves when removing a spark plug for inspection.

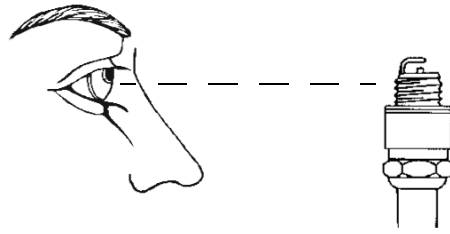
1. Remove the left side panel.
2. Rotate the spark plug cap 1/4 turn and pull it off the spark plug.
3. Using the special wrench provided in the tool pouch, rotate the spark plug counterclockwise to remove it.



## Spark Plugs

### Spark Plug Inspection

4. Inspect the electrodes for wear and carbon buildup. Replace worn or fouled plugs. Verify that the gap is at specification before installation.
5. Reverse the procedure for spark plug installation. Torque to specification.



---

### Spark Plug Condition

#### Normal Spark Plug

The normal 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 flaky and white. A white insulator tip indicates overheating, caused by use of an improper spark plug or incorrect carburetion adjustments.

#### Wet Fouled Spark Plug

The wet fouled 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 of fouling are excessive oil, use of non-recommended oil, improper use of the choke, or incorrect throttle body/carburetor adjustments.

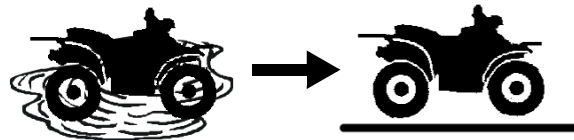
# MAINTENANCE

## Vehicle Immersion

### CAUTION

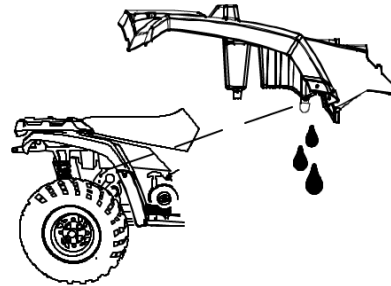
If your vehicle becomes immersed, major engine damage can result if the machine is not thoroughly inspected. Take the vehicle to your dealer before starting the engine.

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

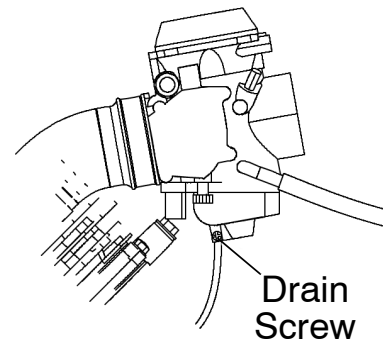


1. Move the vehicle out of the water.

- 
2. Turn the fuel valve off.
  3. Check the air box. If water is present, dry the air box and replace the filter with a new filter.
  4. Remove the spark plug.



- 
5. Loosen the carburetor drain screw and drain the carburetor.
  6. Turn the engine over several times using the electric start.
  7. Dry the spark plug. Reinstall the plug or install a new plug.
  8. Tighten the carburetor drain screw.



- 
9. Turn the fuel valve on.
  10. Attempt to start the engine. If necessary, repeat the drying procedure.
  11. Take the vehicle to your dealer for service as soon as possible, whether you succeed in starting it or not.
  12. If water has been ingested into the PVT, follow the procedure on page 87 for drying out the PVT.
-

## Spark Arrestor

### **⚠ WARNING**

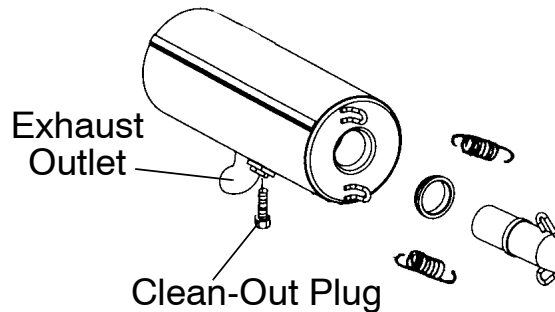
Failure to heed the following warnings while servicing the spark arrestor could result in serious injury or death.

The exhaust system can get extremely hot. Do not perform service on the spark arrestor while the system is hot. Allow components to cool sufficiently before proceeding.

Remove any combustible materials from the area. Wear eye protection and leather work gloves. Do not stand behind or in front of the vehicle while purging. Never run the engine in an enclosed area. Exhaust contains poisonous carbon monoxide gas. Never go under the vehicle while it's inclined.

Use the following procedure to periodically purge accumulated carbon from the exhaust pipe/muffler.

1. Position the vehicle on a level surface.
2. Place the transmission in neutral.
3. Lock the parking brake.
4. Remove the arrestor clean-out plug from the bottom of the muffler.
5. Start the engine.
6. Quickly squeeze and release the throttle lever several times to purge carbon from the system.
7. If carbon comes out of the exhaust, cover or plug the exhaust outlet. Wear protective gloves.
8. Lightly tap on the exhaust pipe with a rubber mallet while repeating step 6.
9. If particles are still suspected to be in the muffler, elevate the rear of the vehicle one foot (30 cm) higher than the front. Block the wheels.
10. Place the transmission in neutral. Lock the parking brake. Repeat steps 6 to 8 until no more particles are expelled.
11. Stop the engine. Allow the arrestor to cool.
12. Reinstall the arrestor plug and remove the exhaust outlet cover or plug.



# MAINTENANCE

## PVT System

### **WARNING**

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

Do not modify any component of the PVT system. Doing so may reduce its strength so that a failure may occur at a high speed. The PVT system has been precision balanced. Any modification will cause the system to be out of balance, creating vibration and additional loads on components.

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

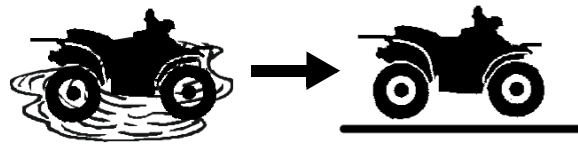
- Always follow all recommended maintenance procedures. See your dealer as outlined in the owner's manual.
- This PVT system is intended for use on Polaris products only. Do not install it in any other product.
- Always make sure the PVT housing is securely in place during operation.

## PVT System

### 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.

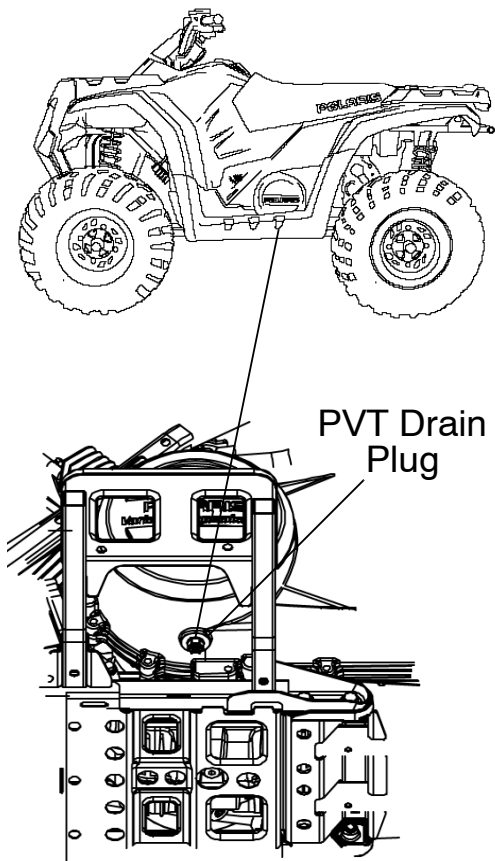
1. Move the vehicle out of the water.



- 
2. Remove the PVT drain plug. Use a 17 mm wrench, a flat screwdriver, or the spark plug wrench.
  3. Allow the water to drain completely. Reinstall the drain plug.
  4. Start the engine. Place the transmission in neutral.
  5. Apply varying throttle for 10-15 seconds to expel the moisture and air-dry the belt and clutches.

**NOTE:** Do not hold the throttle wide open for more than 10 seconds.

6. Allow the engine RPM to settle to idle speed, then shift the transmission into forward gear.
7. Test for belt slippage. If the belt slips, repeat the process.
8. Take the vehicle to your dealer for service as soon as possible.



# MAINTENANCE

## Battery

Your vehicle may have either a sealed battery, which requires little maintenance, or a conventional battery. A sealed battery can be identified by its flat covers on the top of the battery. A conventional battery has six filler caps on the top of the battery.

### Conventional Battery

Always keep battery terminals and connections free of corrosion. If cleaning is necessary, remove 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 shop towels. Coat the terminals with dielectric grease or petroleum jelly. Be careful not to allow cleaning solution or tap water into a conventional battery.

#### **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.**

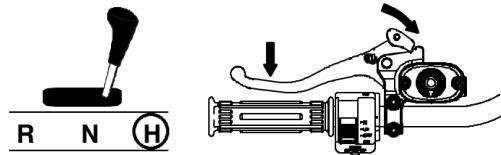
## Battery

### ⚠ WARNING

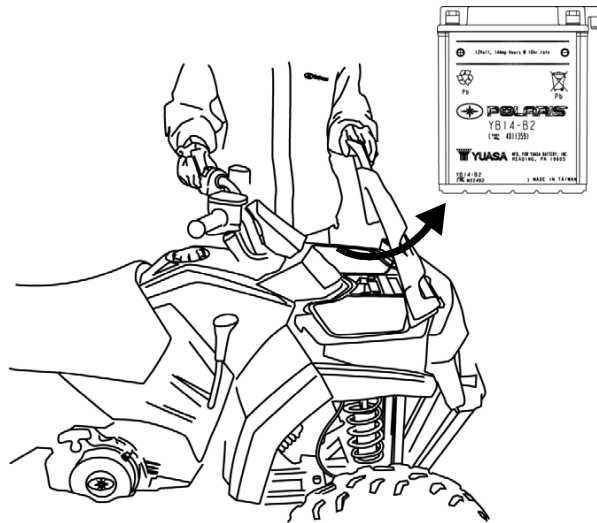
Improperly connecting or disconnecting battery cables can result in an explosion and cause serious injury or death. When removing the battery, always disconnect the negative (black) cable first. When reinstalling the battery, always connect the negative (black) cable last.

### Battery Removal

1. Place the transmission in gear.
2. Lock the parking brake.



3. Open the front cover.
4. Disconnect the battery hold-down strap.
5. On conventional batteries, remove the battery vent tube.
6. Disconnect the black (negative) battery cable first.
7. Disconnect the red (positive) battery cable last.
8. Lift the battery out of the vehicle. Be careful not to tip a conventional battery sideways, which could spill electrolyte.



### CAUTION

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

# MAINTENANCE

## Battery

### Battery Installation

Using a new battery that has not been fully charged can damage the battery and result in a shorter life. It can also hinder vehicle performance. Follow the battery charging instructions on page 92 before installing the battery.

1. Ensure that the battery is fully charged.
2. Place the battery in the battery holder.
3. With conventional batteries, install the battery vent tube (sealed batteries do not have a vent tube).

**NOTE:** The vent tube must be free of obstructions and securely installed. Route the tube away from the frame and vehicle body to prevent contact with electrolyte.

#### **WARNING**

Battery gases could accumulate in an improperly installed vent tube and cause an explosion, resulting in serious injury or death. Always ensure that the vent tube is free of obstructions and is securely installed as recommended.

4. On conventional batteries, coat the terminals with dielectric grease or petroleum jelly.
5. Connect and tighten the red (positive) cable first.
6. Connect and tighten the black (negative) cable last.
7. Secure the battery hold-down strap.
8. Verify that cables are properly routed.

**NOTE:** Cables should be safely tucked away at the front and rear of the battery.

# MAINTENANCE

## Battery

### Battery Storage

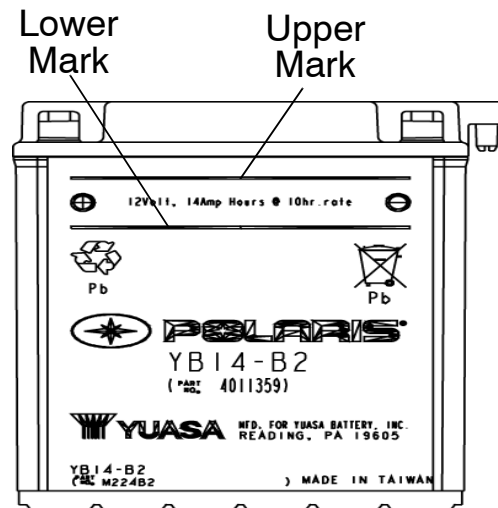
Whenever the vehicle is not used for a period of three months or more, remove the battery from the vehicle, ensure that it's fully charged, and store it out of the sun in a cool, dry place. Check battery voltage each month during storage and recharge as needed to maintain a full charge.

**NOTE:** Battery charge can be maintained by using a Polaris Battery Tender charger 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. See page 105 for the part numbers of Polaris products.

### Battery Fluid (Conventional Battery)

A poorly maintained battery will deteriorate rapidly. Check the battery fluid level often. Maintain the fluid level between the upper and lower level marks.

Add only distilled water. Tap water contains minerals that are harmful to a battery.



# MAINTENANCE

## Battery

### Battery Charging (Conventional Battery)

1. Remove the battery from the vehicle to prevent damage from leaking or spilled electrolyte during charging. See page 89.
2. Charge the battery with a charging output no larger than 1/10 of the battery's amp/hr rating. Charge as needed to raise the specific gravity to 1.270 or greater.
3. Reinstall the battery. See page 90. Make sure the positive terminal is toward the front of the vehicle.

### Battery Charging (Sealed Battery)

The following battery charging instructions apply only to the installation of a sealed battery. Read all instructions before proceeding with the installation of this battery.

The sealed battery is already filled with electrolyte and has been sealed and *fully charged* at the factory. *Never* pry the sealing strip off or add any other fluid to this battery.

The single most important thing about maintaining a sealed battery is to keep it fully charged. Since the battery is sealed and the sealing strip cannot be removed, you must use a voltmeter or multimeter to measure DC voltage.

#### **WARNING**

An overheated battery may explode, causing severe injury or death. Always watch charging times carefully. Stop charging if the battery becomes very warm to the touch. Allow it to cool before resuming charging.

For a refresh charge, follow all instructions carefully.

1. Check the battery voltage with a voltmeter or multimeter. A fully charged battery will register 12.8 V or higher.
2. If the voltage is less than 12.8 volts, recharge the battery at 1.2 amps or less until battery voltage is 12.8 or greater.

**NOTE:** When using an automatic charger, refer to the charger manufacturer's instructions for recharging. When using a constant current charger, use the following guidelines for recharging.

# MAINTENANCE

## Battery

### Battery Charging (Sealed Battery)

**NOTE:** Always verify battery condition before and 1-2 hours after the end of charging.

| <b>State of Charge</b> | <b>Voltage</b>     | <b>Action</b>                                                 | <b>Charge Time</b><br>(Using constant current charger @ standard amps specified on top of battery) |
|------------------------|--------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 100%                   | 12.8-13.0 volts    | None, check at 3 mos. from date of manufacture                | None required                                                                                      |
| 75%-100%               | 12.5-12.8 volts    | May need slight charge, if no charge given, check in 3 months | 3-6 hours                                                                                          |
| 50%-75%                | 12.0-12.5 volts    | Needs charge                                                  | 5-11 hours                                                                                         |
| 25%-50%                | 11.5-12.0 volts    | Needs charge                                                  | At least 13 hours, verify state of charge                                                          |
| 0%-25%                 | 11.5 volts or less | Needs charge with desulfating charger                         | At least 20 hours                                                                                  |

# MAINTENANCE

## Cleaning and Storage

### Washing the Vehicle

Keeping your Polaris vehicle clean will not only improve its appearance but it can also extend the life of various components.

| CAUTION                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High water pressure may damage components. Polaris recommends washing the vehicle by hand or with a garden hose, using mild soap.<br>Certain products, including insect repellents and chemicals, will damage plastic surfaces. Do not allow these types of products to contact the vehicle. |

The best and safest way to clean your Polaris vehicle is with a garden hose and a pail of mild soap and water.

1. Use a professional-type washing cloth, cleaning the upper body first and the lower parts last.
2. Rinse with clean water frequently.
3. Dry surfaces with a chamois to prevent water spots.

### Washing Tips

- Avoid the use of harsh cleaners, which can scratch the finish.
- Do not use a power washer to clean the vehicle.
- Do not use medium to heavy duty compounds on the finish.
- Always use clean cloths and pads for cleaning and polishing. Old or reused cloths and pads may contain dirt particles that will scratch the finish.

## Cleaning and Storage

### Washing the Vehicle

If a high pressure water system is used for cleaning (not recommended), exercise extreme caution. The water may damage components and could remove paint and decals. Avoid directing the water stream at the following items:

- Wheel bearings
- Transmission seals
- Brakes
- Cab and body panels
- Labels and decals

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

Grease all zerk fittings immediately after washing. Allow the engine to run for a while to evaporate any water that may have entered the engine or exhaust system.

### Polishing the Vehicle

Polaris recommends the use of common household aerosol furniture polish for polishing the finish on your Polaris vehicle. Follow the instructions on the container.

### Polishing Tips

- Avoid the use of automotive products, some of which can scratch the finish of your vehicle.
- Always use clean cloths and pads for cleaning and polishing. Old or reused cloths and pads may contain dirt particles that will scratch the finish.

# MAINTENANCE

## Cleaning and Storage

### Chrome Wheel Care (if equipped)

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

**NOTE:** Chrome wheels exposed to road salt (or salt in the air in coastal areas) are more susceptible to corrosion if not properly cleaned. Clean chrome wheels more often if they're exposed to salt or other corrosive elements.

1. Wash chrome wheels frequently. Use a mild detergent. Never use abrasive cleaners on plated or painted surfaces.
2. Rinse well with clear water. Soap, detergents, salt, dirt, mud and other elements can cause corrosion.
3. Polish the clean chrome wheels periodically. Use an automotive grade chrome polish.
4. Routinely and liberally apply a weather resistant wax to each polished chrome wheel. Choose a product suitable for chrome finishes. Read and follow the product labels and instructions.

### Removing Corrosion

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

## Cleaning and Storage

### Storage Tips

#### CAUTION

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

### Clean the Exterior

Make any necessary repairs and clean the vehicle as recommended. See page 94.

### Stabilize the Fuel

1. Fill the fuel tank.
2. Add Polaris Carbon Clean Fuel Treatment or Polaris Fuel Stabilizer. Follow the instructions on the container for the recommended amount.

**NOTE:** Carbon Clean removes water from fuel systems, stabilizes fuel and removes carbon deposits from pistons, rings, valves and exhaust systems.

3. Allow the engine to run for 15-20 minutes to allow the stabilizer to disperse through the fuel in the tank and carburetor.
4. Turn the fuel valve off.
5. Drain the carburetor bowl.

### Oil and Filter

Change the oil and filter. See page 62.

### Air Filter / Air Box

1. Inspect and clean (or replace) the pre-cleaner and air filter.
2. Clean the air box.
3. Clean or replace the breather filter.
4. Drain the sediment tube.

### Recoil Housing

1. Drain the recoil housing. See page 81.

# **MAINTENANCE**

## **Cleaning and Storage**

### **Storage Tips**

#### **Fluid Levels**

Inspect the fluid levels. Change fluids as recommended in the Periodic Maintenance Chart beginning on page 54.

- Demand drive unit (front gearcase)
- Transmission
- Brake fluid (change every two years and any time the fluid looks dark or contaminated)

#### **Fog the Engine**

1. Treat the fuel system with Polaris Carbon Clean. See page 97.
2. Support the front end of the machine so the engine is level or tilted slightly rearward.
3. Remove the spark plug. Rotate the piston to BDC and pour two ounces (59 ml) of engine oil into the cylinder.
4. Reinstall the spark plug. Torque to specification.
5. Apply dielectric grease to the inside of the spark plug cap. Reinstall the cap.
6. Turn the engine over several times using 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.
7. If Polaris fuel system additive is not used, the fuel tank, fuel lines, and carburetor should be completely drained of gasoline.

## Cleaning and Storage

### Storage Tips

#### Inspect and Lubricate

Inspect all cables and lubricate all areas of the vehicle as recommended in the Periodic Maintenance Chart beginning on page 54.

#### Battery Storage

See pages 91-92 for storage and charging procedures.

#### Storage Area/Covers

Set the tire pressure and safely support the vehicle with the tires slightly off the ground. Be sure the storage area is well ventilated. Cover the vehicle with a genuine Polaris cover.

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

## Accessories

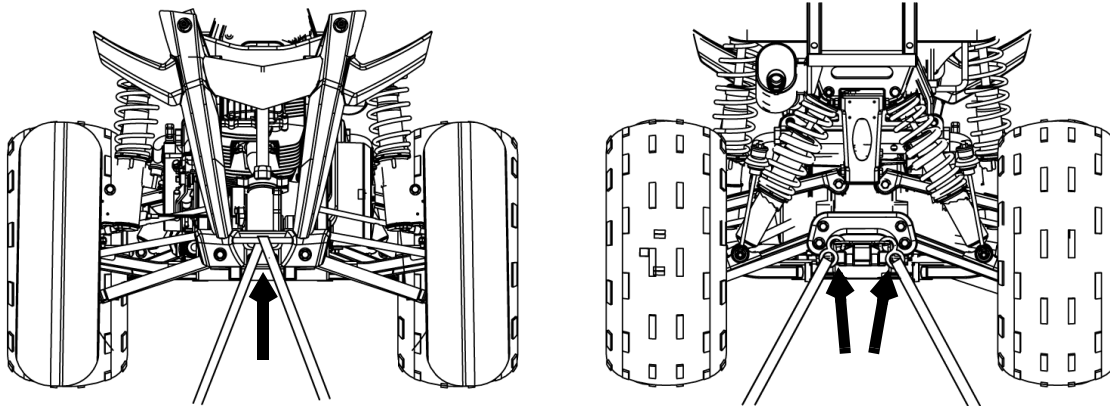
Auxiliary power outlets provide 12-volt power for operating accessories. Accessory outlets are available for all models. Polaris also has a wide range of additional accessories available for your vehicle. Always install accessories that are approved for use with this vehicle. Please see your Polaris dealer.

# MAINTENANCE

## Transporting the Vehicle

Follow these procedures when transporting the vehicle.

1. Stop the engine.
2. Place the transmission in gear.
3. Lock the parking brake.
4. Turn the fuel valve off.
5. Secure the fuel cap, oil cap and seat.
6. Remove the key to prevent loss during transporting.
7. Always tie the frame of the vehicle to the transporting unit securely with suitable straps or rope. Do not attach tie straps to the front A-arm bolt pockets.



# ADJUSTMENTS

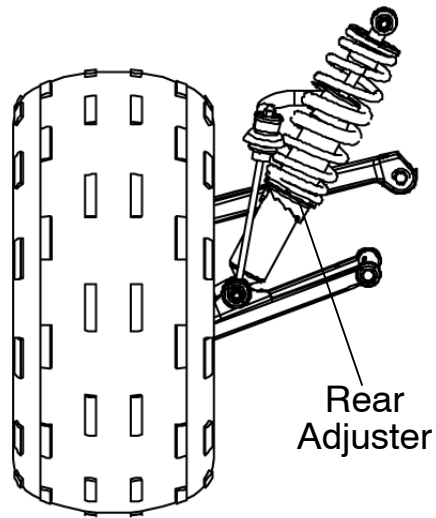
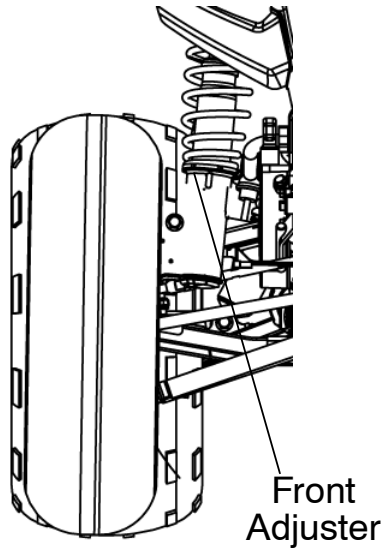
## Camber and Caster

The camber and caster are non-adjustable.

## Spring Adjustments

The front and rear shock absorber springs are adjustable. Rotate the adjuster either clockwise or counterclockwise to increase or decrease spring tension. Always adjust both sides equally.

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



# ADJUSTMENTS

## Handlebars

The handlebars can be adjusted for rider preference.

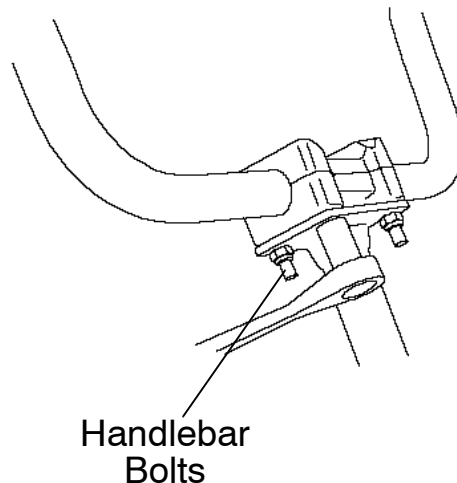
### **⚠ WARNING**

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. Follow the adjustment procedures exactly, or see your Polaris dealer for service.

1. Loosen the four handlebar bolts.
2. Adjust the handlebar to the desired height.

**NOTE:** Be sure the handlebars do not contact the gas tank or any other part of the machine when turned fully to the left or right.

3. Torque the front two bolts to 10-12 ft. lbs. (14-17 Nm), then torque the rear two bolts. A gap of up to 1/8" (3 mm) will remain at the rear bolts.



# ADJUSTMENTS

## Carburetor

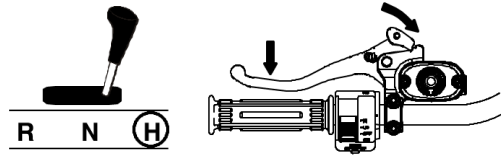
This vehicle is calibrated at the factory for optimal performance at altitudes ranging from zero to 6,000 feet (1800 m) and temperatures of +40 degrees F. (4 degrees C.) or higher. Above 6000 feet (1800 m) the engine air/fuel mixture becomes overly rich and the engine loses approximately 3% of its power for each 1000-foot (304.8 m) increase in elevation. Although this power cannot be regained, adjustments to the carburetor and drive system can be made to allow more efficient operation. Optional jets, available from your Polaris dealer, are required for operation above 6,000 feet and temperatures below +40 degrees F. (4 degrees C.)

**NOTE:** Continuous operation of the engine without proper jetting when required can cause poor performance, overheating or PVT or engine damage. See your Polaris dealer for more information about jetting for conditions in your area.

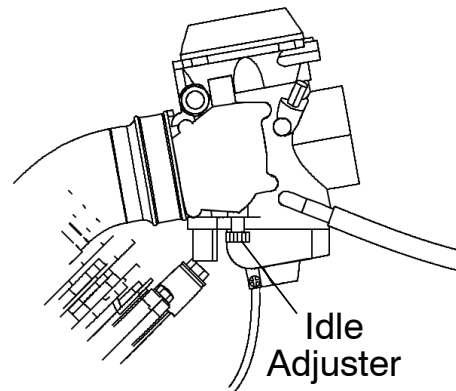
## Carburetor/Engine Idle RPM Adjustment

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

1. Place the transmission in gear.
2. Lock the parking brake.



3. Start the engine and allow it to warm up for approximately five minutes.
4. Turn the screw in (clockwise) to raise RPM. Turn the screw out (counterclockwise) to lower RPM.



# ADJUSTMENTS

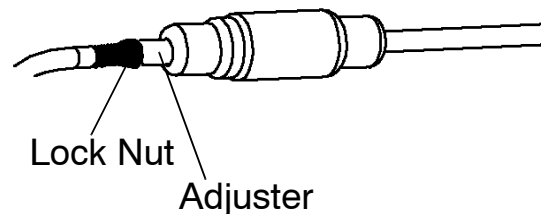
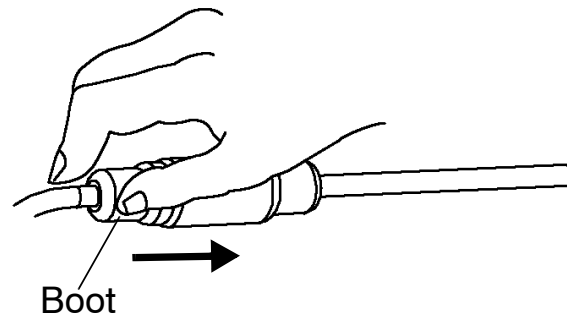
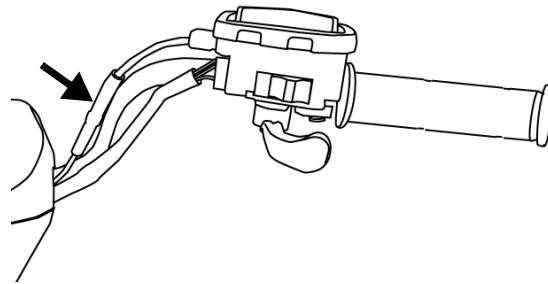
## Throttle Cable Freeplay

Adjust throttle cable freeplay at the handlebar.

1. Locate the throttle cable adjuster at the handlebar.
2. Squeeze the end of the rubber boot and slide it far enough to expose the end of the inline cable adjuster.
3. Loosen the adjuster lock nut.
4. Rotate the boot to turn the adjuster until  $1/16"$  to  $1/8"$  (1.5-3 mm) of freeplay is achieved at the thumb lever.

**NOTE:** While adjusting freeplay, be sure to flip the throttle lever back and forth.

5. Tighten the lock nut.
6. Squeeze the end of the rubber boot and slide it over the cable adjuster to its original position.



# POLARIS PRODUCTS

| Part Number                               | Description                                              |
|-------------------------------------------|----------------------------------------------------------|
| <b>Engine Lubricant</b>                   |                                                          |
| 2870791                                   | Fogging Oil (12 oz. Aerosol)                             |
| 2876244                                   | PS-4 PLUS Performance Synthetic 2W-50 4-Cycle Oil (qt.)  |
| 2876245                                   | PS-4 PLUS Performance Synthetic 2W-50 4-Cycle Oil (gal.) |
| <b>Gearcase / Transmission Lubricants</b> |                                                          |
| 2873602                                   | Premium AGL Synthetic Gearcase Lubricant (qt.)           |
| 2873603                                   | Premium AGL Synthetic Gearcase Lube (gal.)               |
| 2870465                                   | Pump for Gallon Jug                                      |
| 2871654                                   | Premium Demand Drive Hub Fluid (8 oz.)                   |
| 2872277                                   | Premium Demand Drive Hub Fluid (2.5 gal.)                |
| <b>Grease / Specialized Lubricants</b>    |                                                          |
| 2871312                                   | Grease Gun Kit, Premium All Season (3 oz.)               |
| 2871322                                   | Premium All Season Grease (3 oz. cartridge)              |
| 2871423                                   | Premium All Season Grease (14 oz. cartridge)             |
| 2871460                                   | Starter Drive Grease (2 oz.)                             |
| 2871515                                   | Premium U-Joint Lube (3 oz.)                             |
| 2871551                                   | Premium U-Joint Lube (14 oz.)                            |
| 2871329                                   | Dielectric Grease (Nyogel™)                              |
| 2872073                                   | Chain Lube, Aerosol (6.25 oz.)                           |
| 2872348                                   | Chain Lube, Aerosol (16 oz.)                             |
| <b>Additives / Miscellaneous</b>          |                                                          |
| 2871326                                   | Carbon Clean Plus (12 oz.)                               |
| 2870652                                   | Fuel Stabilizer (16 oz.)                                 |
| 2872189                                   | DOT4 Brake Fluid (12 oz.)                                |
| 2871956                                   | Loctite™ 565 Thread Sealant                              |
| 2859044                                   | Polaris Battery Tender™ Charger                          |

# TROUBLESHOOTING

## Drive Belt Wear/Burn

| Possible Cause                                                 | Solution                                                                                                                                                                                                     |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Driving onto a pickup or tall trailer in high range            | Use low range (if equipped).                                                                                                                                                                                 |
| Starting out going up a steep incline                          | Use low range (if equipped) or turn around using the K-turn (see page 46).                                                                                                                                   |
| Driving at low RPM or ground speed (3-7 MPH)                   | Drive at a higher speed or use low range (if equipped) more frequently.                                                                                                                                      |
| Insufficient warm-up at low ambient temperatures               | Warm the engine at least 5 minutes. With the transmission in neutral, advance the throttle to about 1/8 throttle in short bursts, 5 to 7 times. The belt will become more flexible and prevent belt burning. |
| Slow/easy clutch engagement                                    | Use the throttle quickly and effectively.                                                                                                                                                                    |
| Towing/pushing at low RPM/low ground speed                     | Use low range only (if equipped).                                                                                                                                                                            |
| Utility use/plowing                                            | Use low range only (if equipped).                                                                                                                                                                            |
| Stuck in mud or snow                                           | Shift the transmission to low range (if equipped). Carefully use fast, aggressive throttle application to engage clutch. <b>WARNING:</b> Excessive throttle may cause loss of control and vehicle overturn.  |
| Climbing over large objects from a stopped position            |                                                                                                                                                                                                              |
| Belt slippage from water or snow ingestion into the PVT system | Dry out the PVT. See page 87. Inspect clutch seals for damage if repeated leaking occurs.                                                                                                                    |
| Clutch malfunction                                             | See your Polaris dealer.                                                                                                                                                                                     |
| Poor engine performance                                        | Check for fouled plugs or foreign material in gas tank or fuel lines. See your dealer.                                                                                                                       |
| Slippage from failure to warm up belt                          | Always warm up the belt by operating below 30 mph (48 km/h) for one mile (1.6 km). Operate 5 miles (8 km) or more when temperature is below freezing.                                                        |
| Wrong or missing belt                                          | Install the recommended belt.                                                                                                                                                                                |
| Improper break-in                                              | Always break in a new belt and/or clutch. See page 34.                                                                                                                                                       |

# TROUBLESHOOTING

## Engine Doesn't Turn Over

| Possible Cause             | Solution                          |
|----------------------------|-----------------------------------|
| Blown fuse                 | Replace fuse                      |
| Low battery voltage        | Recharge the battery to 12.8 VDC  |
| Loose battery connections  | Check all connections and tighten |
| Loose solenoid connections | Check all connections and tighten |

## Engine Turns Over, Fails to Start

| Possible Cause                    | Solution                                                                    |
|-----------------------------------|-----------------------------------------------------------------------------|
| Out of fuel                       | Refuel, cycle key to ON position three times for 5 seconds each, then start |
| Clogged fuel valve or filter      | Inspect and clean or replace                                                |
| Water is present in fuel          | Drain the fuel system and refuel                                            |
| Fuel valve is turned off          | Turn the fuel valve on                                                      |
| Old or non-recommended fuel       | Replace with fresh recommended fuel                                         |
| Fouled or defective spark plug(s) | Inspect plugs and replace if necessary                                      |
| No spark to spark plug            | Inspect plugs, verify stop switch is on                                     |
| Overuse of choke                  | Inspect, clean and/or replace spark plugs                                   |
| Water or fuel in crankcase        | Immediately see your Polaris dealer                                         |
| Low battery voltage               | Recharge the battery to 12.8 VDC                                            |
| Mechanical failure                | See your dealer                                                             |

## Engine Backfires

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

# TROUBLESHOOTING

## Engine Pings or Knocks

| Possible Cause                         | Solution                          |
|----------------------------------------|-----------------------------------|
| Poor quality or low octane fuel        | Replace with recommended fuel     |
| Incorrect ignition timing              | See your dealer                   |
| Incorrect spark plug gap or heat range | Set gap to specs or replace plugs |
| Idle set too low                       | Adjust idle speed                 |

## Engine Runs Irregularly, Stalls or Misfires

| Possible Cause                          | Solution                                    |
|-----------------------------------------|---------------------------------------------|
| Fouled or defective spark plug(s)       | Inspect, clean and/or replace spark plug(s) |
| Worn or defective spark plug wires      | See your dealer                             |
| Incorrect spark plug gap or heat range  | Set gap to specs or replace plugs           |
| Loose ignition connections              | Check all connections and tighten           |
| Water present in fuel                   | Replace with new fuel                       |
| Low battery voltage                     | Recharge battery to 12.8 VDC                |
| Kinked or plugged fuel tank vent line   | Inspect and replace                         |
| Incorrect fuel                          | Replace with recommended fuel               |
| Clogged air filter                      | Inspect and clean or replace                |
| Reverse speed limiter malfunction       | See your dealer                             |
| Electronic throttle control malfunction | See your dealer                             |
| Other mechanical failure                | See your dealer                             |
| Possible Lean Fuel Cause                | Solution                                    |
| Low or contaminated fuel                | Add or change fuel, clean the fuel system   |
| Low octane fuel                         | Replace with recommended fuel               |
| Clogged fuel filter                     | Replace filter                              |
| Incorrect jetting                       | See your dealer                             |
| Possible Rich Fuel Cause                | Solution                                    |
| Overuse of choke                        | Inspect, clean and/or replace spark plugs   |
| Fuel is very high octane                | Replace with lower octane fuel              |
| Incorrect jetting                       | See your dealer                             |

# TROUBLESHOOTING

## Engine Stops or Loses Power

| Possible Cause                          | Solution                                                                    |
|-----------------------------------------|-----------------------------------------------------------------------------|
| Out of fuel                             | Refuel, cycle key to ON position three times for 5 seconds each, then start |
| Kinked or plugged fuel vent line        | Inspect and replace                                                         |
| Water is present in fuel                | Replace with new fuel                                                       |
| Overuse of choke                        | Inspect, clean and/or replace spark plugs                                   |
| Fouled or defective spark plug(s)       | Inspect, clean and/or replace spark plug(s)                                 |
| Worn or defective spark plug wires      | See your dealer                                                             |
| Incorrect spark plug gap or heat range  | Set gap to specs or replace plug                                            |
| Loose ignition connections              | Check all connections and tighten                                           |
| Low battery voltage                     | Recharge the battery to 12.8 VDC                                            |
| Incorrect fuel                          | Replace with fresh recommended fuel                                         |
| Clogged air filter                      | Inspect and clean or replace                                                |
| Reverse speed limiter malfunction       | See your dealer                                                             |
| Electronic throttle control malfunction | See your dealer                                                             |
| Other mechanical failure                | See your dealer                                                             |

## Engine Overheating

| Possible Cause              | Solution                                                                                                                                         |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Towing/dragging heavy loads | Install the accessory oil cooler if this vehicle will be used for towing heavy loads, dragging ground surfaces or performing similar activities. |
| Operating in excessive heat | Install the accessory oil cooler if this vehicle is normally operated when air temperature is above 100° F. (38° C).                             |

# SPECIFICATIONS

| Hawkeye 2X4                       |                                                                                     |
|-----------------------------------|-------------------------------------------------------------------------------------|
| Gross Vehicle Weight              | 930 lbs. (422 kg)                                                                   |
| Dry Weight                        | 525 lbs. (238 kg)                                                                   |
| Fuel Capacity                     | 4.5 gal. (17 l)                                                                     |
| Engine Oil Capacity               | 2 qts. (1.9 l)                                                                      |
| Transmission Oil                  | 15.2 oz. (450 ml)                                                                   |
| Demand Drive Fluid                | 5 oz. (148 ml)                                                                      |
| Front Rack Capacity               | 70 lbs. (32 kg)                                                                     |
| Rear Rack Capacity                | 100 lbs. (45 kg)                                                                    |
| Hitch Tongue Weight Capacity      | 75 lbs. (34 kg) (Rear rack capacity and tongue weight not to exceed 100 lbs./45 kg) |
| Hitch Towing Rating               | 750 lbs. (340.2 kg)                                                                 |
| Unbraked Trailer Towing Capacity* | 1213 lbs. (550 kg)                                                                  |
| Overall Length                    | 74 in. (188 cm)                                                                     |
| Overall Width                     | 42 in. (107 cm)                                                                     |
| Overall Height                    | 45.5 in. (116 cm)                                                                   |
| Wheelbase                         | 46 in. (117 cm)                                                                     |
| Ground Clearance                  | 8 in. (20 cm)                                                                       |
| Minimum Turning Radius            | 62.5 in. (159 cm) unloaded                                                          |
| Engine Model Number/Type          | ES300PFE010/4-Cycle, Single Cylinder                                                |
| Lubrication                       | Wet sump                                                                            |
| Engine Cooling                    | Air                                                                                 |
| Displacement                      | 299 cc                                                                              |
| Bore x Stroke                     | 78.5 x 68                                                                           |
| Alternator Output                 | 250 w                                                                               |
| Compression Ratio                 | 9.2:1                                                                               |
| Carburetor                        | Mikuni BST 34                                                                       |
| Pilot Jet                         | 45                                                                                  |
| Main Jet                          | 140                                                                                 |
| Needle Jet                        | 0-5M                                                                                |
| Jet Needle                        | 4HC57-3                                                                             |
| Pilot Air Jet                     | 140                                                                                 |
| Ignition System                   | DC CDI                                                                              |
| Ignition Timing                   | 10° +/- 2° @ 1500 RPM/30° +/- 2° @ 5000 RPM                                         |
| Spark Plug / Gap                  | NGK CR8EB / .031 in. (0.8 mm)                                                       |
| Driving System Type               | Automatic PVT (Polaris Variable Transmission)                                       |
| Shift Type                        | Side Lever (H/N/R)                                                                  |
| Drive Ratio, Final                | 15.18:1                                                                             |

\* Based on EU Directive 76/432/EC

# SPECIFICATIONS

| Hawkeye 2X4                                  |                                           |
|----------------------------------------------|-------------------------------------------|
| Tires/Pressure, Front                        | 22x7-12 / 5 psi (34.5 KPa)                |
| Tires/Pressure, Rear                         | 22x10-12 / 5 psi (34.5 KPa)               |
| Front Suspension                             | MacPherson strut with 7" (18 cm) travel   |
| Rear Suspension                              | Progressive rate with 8" (20 cm) travel   |
| Shock Adjustment                             | CAM                                       |
| Brakes, Front                                | Single-Control Hydraulic Disc             |
| Brakes, Rear                                 | Single-Control Hydraulic Disc             |
| Brake, Auxiliary                             | Foot-Activated Hydraulic Disc, Rear Wheel |
| Brake, Parking                               | Hydraulic lock, all wheel                 |
| Headlight                                    | 2 Single Beam on Bumper (37.5 watt)       |
| Taillights                                   | 12V 8.26W                                 |
| Brake Light                                  | 12V 26.9W                                 |
| Battery                                      | 12V 14AH                                  |
| DC Plug-In (rear)                            | Accessory                                 |
| Windshield                                   | Accessory                                 |
| Speedometer/Odometer/<br>Tripmeter/Hourmeter | Standard                                  |
| Fuel Gauge                                   | Standard                                  |
| Tool Kit                                     | Standard                                  |

## Jetting Chart

| ALTITUDE<br>Meters (Feet) | AMBIENT TEMPERATURE                                                                  |                                   |
|---------------------------|--------------------------------------------------------------------------------------|-----------------------------------|
|                           | Below 40° F<br>(Below 5° C)                                                          | 40°F and above<br>(5°C and above) |
| 0-900 (0-3000)            | 145                                                                                  | 140                               |
| 900-1800 (3000-6000)      | Same main jet / Remove 2 air box plugs                                               |                                   |
| 1800-2700 (6000-9000)     | Same main jet / Remove 4 air box plugs                                               |                                   |
| Above 2700 (Above 9000)   | Same main jet / Remove 6 air box plugs                                               |                                   |
| Above 3000 (Above 10000)  | Same main jet / Remove 6 air box plugs<br><i>Move jet needle clip to position #2</i> |                                   |

## Clutching Chart

| Altitude<br>Meters (Feet) | Roller<br>Weight | Number of Rollers                                                   | Driven Clutch<br>Spring |
|---------------------------|------------------|---------------------------------------------------------------------|-------------------------|
| 0-1500 (0-5000)           | 13 g / 5412988   | 8                                                                   | 7043228                 |
| 1500-3000 (5000-10000)    | 10 g / 5412986   | 8                                                                   | 7043228                 |
| 3000+ (10000+)            | 10 g / 5412986   | 6<br>(Remove two opposite<br>rollers to maintain<br>clutch balance) | 7043228                 |

# SPECIFICATIONS

| Hawkeye 4X4                       |                                                                                     |
|-----------------------------------|-------------------------------------------------------------------------------------|
| Gross Vehicle Weight              | 930 lbs. (422 kg)                                                                   |
| Dry Weight                        | 550 lbs. (250 kg)                                                                   |
| Fuel Capacity                     | 4.5 gal. (17 l)                                                                     |
| Engine Oil Capacity               | 2 qts. (1.9 l)                                                                      |
| Transmission Oil                  | 20.3 oz. (600 ml)                                                                   |
| Demand Drive Fluid                | 5 oz. (148 ml)                                                                      |
| Front Rack Capacity               | 70 lbs. (32 kg)                                                                     |
| Rear Rack Capacity                | 100 lbs. (45 kg)                                                                    |
| Hitch Tongue Weight Capacity      | 75 lbs. (34 kg) (Rear rack capacity and tongue weight not to exceed 100 lbs./45 kg) |
| Hitch Towing Rating               | 750 lbs. (340.2 kg)                                                                 |
| Unbraked Trailer Towing Capacity* | 1213 lbs. (550 kg)                                                                  |
| Overall Length                    | 74 in. (188 cm)                                                                     |
| Overall Width                     | 42 in. (107 cm)                                                                     |
| Overall Height                    | 45.5 in. (116 cm)                                                                   |
| Wheelbase                         | 46 in. (117 cm)                                                                     |
| Ground Clearance                  | 8 in. (20 cm)                                                                       |
| Minimum Turning Radius            | 62.5 in. (159 cm) unloaded                                                          |
| Engine Model Number/Type          | ES300PFE010/4-Cycle, Single Cylinder                                                |
| Lubrication                       | Wet sump                                                                            |
| Engine Cooling                    | Air                                                                                 |
| Displacement                      | 299 cc                                                                              |
| Bore x Stroke                     | 78.5 x 68                                                                           |
| Alternator Output                 | 250 w                                                                               |
| Compression Ratio                 | 9.2:1                                                                               |
| Carburetor                        | Mikuni BST 34                                                                       |
| Pilot Jet                         | 45                                                                                  |
| Main Jet                          | 140                                                                                 |
| Needle Jet                        | 0-5M                                                                                |
| Jet Needle                        | 4HC57-3                                                                             |
| Pilot Air Jet                     | 140                                                                                 |
| Ignition System                   | DC CDI                                                                              |
| Ignition Timing                   | 10° +/- 2° @ 1500 RPM/30° +/- 2° @ 5000 RPM                                         |
| Spark Plug / Gap                  | NGK CR8E / .031 in. (0.8 mm)                                                        |
| Driving System Type               | Automatic PVT (Polaris Variable Transmission)                                       |
| Shift Type                        | Side Lever (H/N/R)                                                                  |

\* Based on EU Directive 76/432/EC

# SPECIFICATIONS

| Hawkeye 4X4                                  |                                                                      |
|----------------------------------------------|----------------------------------------------------------------------|
| Drive Ratio, Front                           | 3.6:1                                                                |
| Drive Ratio, Final                           | 15.18:1                                                              |
| Tires/Pressure, Standard models              | Front 22x7-12 / 5 psi (34.5 KPa)<br>Rear 22x10-12 / 5 psi (34.5 KPa) |
| Tires/Pressure, LE models                    | Front 23x7-12 / 5 psi (34.5 KPa)<br>Rear 23x10-12 / 5 psi (34.5 KPa) |
| Front Suspension                             | MacPherson strut with 7" (18 cm) travel                              |
| Rear Suspension                              | Progressive rate with 8" (20 cm) travel                              |
| Shock Adjustment                             | CAM                                                                  |
| Brakes, Front and Rear                       | Single-Control Hydraulic Disc                                        |
| Brake, Auxiliary                             | Foot-Activated Hydraulic Disc, Rear Wheel                            |
| Brake, Parking                               | Hydraulic lock, all wheel                                            |
| Headlight                                    | 2 Single Beam on Bumper (37.5 watt)                                  |
| Taillights                                   | 12V 8.26W                                                            |
| Brake Light                                  | 12V 26.9W                                                            |
| Battery                                      | 12V 14AH                                                             |
| DC Plug-In (rear)                            | Accessory                                                            |
| Windshield                                   | Accessory                                                            |
| Speedometer/Odometer/<br>Tripmeter/Hourmeter | Standard                                                             |
| Fuel Gauge                                   | Standard                                                             |
| Tool Kit                                     | Standard                                                             |

## Jetting Chart

| ALTITUDE<br>Meters (Feet) | AMBIENT TEMPERATURE                                                                  |                                   |
|---------------------------|--------------------------------------------------------------------------------------|-----------------------------------|
|                           | Below 40° F<br>(Below 5° C)                                                          | 40°F and above<br>(5°C and above) |
| 0-900 (0-3000)            | 145                                                                                  | 140                               |
| 900-1800 (3000-6000)      | Same main jet / Remove 2 air box plugs                                               |                                   |
| 1800-2700 (6000-9000)     | Same main jet / Remove 4 air box plugs                                               |                                   |
| Above 2700 (Above 9000)   | Same main jet / Remove 6 air box plugs                                               |                                   |
| Above 3000 (Above 10000)  | Same main jet / Remove 6 air box plugs<br><i>Move jet needle clip to position #2</i> |                                   |

## Clutching Chart

| Altitude<br>Meters (Feet) | Roller<br>Weight | Number of Rollers                                                   | Driven Clutch<br>Spring |
|---------------------------|------------------|---------------------------------------------------------------------|-------------------------|
| 0-1500 (0-5000)           | 13 g / 5412988   | 8                                                                   | 7043228                 |
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| 3000+ (10000+)            | 10 g / 5412986   | 6<br>(Remove two opposite<br>rollers to maintain<br>clutch balance) | 7043228                 |

# **WARRANTY**

## **LIMITED WARRANTY**

Polaris Industries Inc., 2100 Highway 55, Medina, MN 55340, gives a TWO YEAR LIMITED WARRANTY on all components of the Polaris Quadricycle against defects in material or workmanship. 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 transferable to another consumer during the warranty period through a Polaris dealer.

## **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 A QUADRICYCLE SAFETY TRAINING COURSE PROVIDED BY THE DEALER IN ORDER TO HAVE VALID WARRANTY ON THE QUADRICYCLE.** 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 QUADRICYCLE IS REGISTERED WITH POLARIS.**

Initial dealer preparation and set-up of your vehicle 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 Quadricycle 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 vehicle 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 Quadricycle. 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.

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 TWO YEAR 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.

# **WARRANTY**

## **HOW TO OBTAIN WARRANTY SERVICE**

If your Quadricycle requires warranty service, you must take it to a Polaris dealer authorized to repair Polaris Quadricycles. 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 personnel 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.

# MAINTENANCE LOG

Present this section of your manual to your dealer each time your vehicle is serviced. This will provide you and future owners with an accurate log of maintenance and services performed.

| DATE | MILES (KM)<br>OR HOURS | TECHNICIAN | SERVICE PERFORMED / COMMENTS |
|------|------------------------|------------|------------------------------|
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# MAINTENANCE LOG

| DATE | MILES (KM)<br>OR HOURS | TECHNICIAN | SERVICE PERFORMED / COMMENTS |
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# MAINTENANCE LOG

| DATE | MILES (KM)<br>OR HOURS | TECHNICIAN | SERVICE PERFORMED / COMMENTS |
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