



**POLARIS**<sup>®</sup>  
The Way Out.

**2006**

***RANGER 500 4X4***

***RANGER 500 2X4***

***RANGER TM 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.**

## **NEVER:**

- **Operate on public roads. A collision can occur with another vehicle.**
- **Carry more than two passengers, or passengers under age five.**
- **Use ALCOHOL or DRUGS before or while operating this vehicle.**
- **Operate at speeds too fast for your skills or the conditions.**
- **Operate this vehicle on HILLS steeper than 15 degrees  $\leq 15^\circ$ .**  
To prevent flipover in hilly terrain, use throttle and brakes gradually.

## **ALWAYS:**

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

**REVERSE operation can be dangerous, even at low speeds. Steering becomes difficult. To prevent flipover, avoid sharp turns.**

**The park brake will supply increased braking, but should be used as a parking brake only.**

**READ OWNER'S MANUAL.  
FOLLOW ALL INSTRUCTIONS AND WARNINGS.  
THIS GENERAL PURPOSE OFF-ROAD UTILITY VEHICLE  
DOES NOT MEET  
FEDERAL MOTOR VEHICLE SAFETY STANDARDS  
FOR ON-ROAD VEHICLES.**



For your nearest Polaris dealer,  
call 1-800-POLARIS  
or visit [www.polarisindustries.com](http://www.polarisindustries.com)  
Polaris Sales Inc.,  
2100 Hwy. 55, Medina, MN 55340  
Phone (763) 417-8650 Fax (763) 542-0599  
Part No. 9920210 Rev 01  
Printed in USA

 **WARNING**

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

# 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)
- *RANGER* utility vehicles
- Victory motorcycles

We believe Polaris sets a standard of excellence for all utility and recreational vehicles manufactured in the world today. Many years of experience have gone into the engineering, design, and development of your Polaris vehicle, making it the finest machine we've ever produced.

For safe and enjoyable operation of your vehicle, be sure to follow the instructions and recommendations in this owner's manual. Your 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.

Your Polaris dealer knows your vehicle best and is interested in your total satisfaction. Be sure to return to your dealership for all of your service needs during, and after, the warranty period.

We also take great pride in our complete line of apparel, parts and accessories, available through our online store at [www.purepolaris.com](http://www.purepolaris.com). Have your accessories and clothing delivered right to your door!



**POLARIS**<sup>®</sup>  
**The Way Out.**

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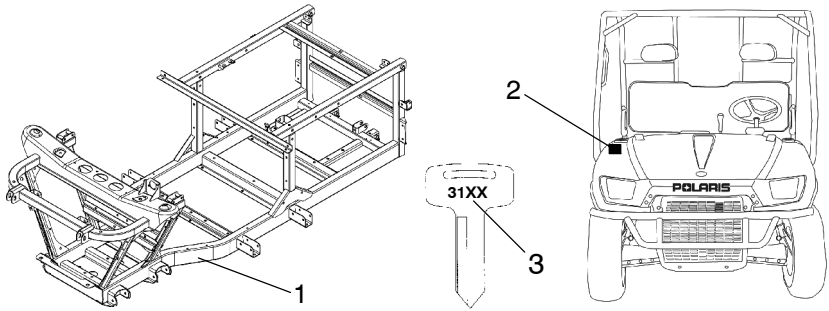
2006 *RANGER 2X4/4X4*/TM Owner's Manual P/N 9920210

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# 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. Your key can be duplicated only by mating a Polaris key blank with one of your existing keys, so if both keys are lost, the ignition switch must be replaced.



Vehicle Model Number: \_\_\_\_\_  
(behind left front wheel)

Frame VIN (1): \_\_\_\_\_  
(under hood)

Engine Serial Number (2): \_\_\_\_\_  
(right front side of engine crankcase)

Key Number (3): \_\_\_\_\_

## Operator Safety

### **WARNING**

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

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

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

### **Age Restrictions**

This vehicle is an **ADULT VEHICLE ONLY**. Operation is prohibited for anyone under 16 years of age. No person under the age of 5 may ride as a passenger in this vehicle.

### **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.

The *RANGER* is an off-road vehicle. Familiarize yourself with all laws and regulations concerning the operation of this vehicle in your area.

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



# SAFETY

## Operator Safety

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



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



### **WARNING**

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



### **CAUTION**

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

### **CAUTION**

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

#### **NOTE:**

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

## Operator Safety

### **WARNING**

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

- Read this manual and all labels carefully. Follow the operating procedures described.
- Never allow anyone without a valid driver's license to operate this vehicle.
- Minimum age recommendation for passengers is five years old. Passengers under five years of age require special restraints which are not available with this vehicle. Driver and passenger should wear their seat belts at all times.
- Never permit a guest to operate this vehicle unless the guest has read this manual and all product labels.
- To reduce tipover risk, be especially careful when encountering obstacles and slopes and when braking on hills or during turns.
- This vehicle is for off road use only. Never operate on public roads. Always avoid paved surfaces.
- Helmets are recommended whenever driving this vehicle in an aggressive manner. Eye protection is recommended at all times.
- Never consume alcohol or drugs before or while operating this vehicle.
- Never operate at excessive speeds. Always travel at a speed proper for the terrain, visibility and operating conditions, and your experience.
- Never attempt wheelies, jumps or other stunts.
- Always inspect your vehicle each time you use it to make sure it's in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in this manual.
- Always keep both hands on the steering wheel and both feet on the floorboards of the vehicle during operation.
- Always travel slowly and use extra caution when operating on unfamiliar terrain. Be alert to changing terrain.
- Never operate on excessively rough, slippery or loose terrain.

# SAFETY

## Operator Safety

- Always follow proper procedures for turning as described in this manual. Practice turning at slow speeds before attempting to turn at faster speeds. Never turn at excessive speeds.
- Always have this vehicle checked by an authorized Polaris dealer if it has been involved in an accident.
- Never operate this vehicle on hills too steep for the vehicle or for your abilities. Practice on smaller hills before attempting larger hills.
- Always follow proper procedures for climbing hills as described in this manual. Check the terrain carefully before attempting to climb a hill. Never climb hills with excessively slippery or loose surfaces. Never open the throttle suddenly or make sudden gear changes. Never go over the top of a hill at high speed.
- Always follow the proper procedures outlined in this manual for traveling downhill and for braking on hills. Check the terrain carefully before descending a hill. Never travel downhill at high speed. Avoid going downhill at an angle, which would cause the vehicle to lean sharply to one side. Travel straight down the hill where possible.
- Always check for obstacles before operating in a new area. Never attempt to operate over large obstacles such as rocks or fallen trees. Always follow the proper procedures outlined in this manual when operating over obstacles.
- Always be careful of skidding or sliding. On slippery surfaces such as ice, travel slowly and exercise caution to reduce the chance of skidding or sliding out of control.
- Never operate your vehicle in fast-flowing water or in water deeper than that specified in this manual. Wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them lightly several times to let friction dry out the pads.
- Always be sure there are no obstacles or people behind your vehicle when operating in reverse. When it's safe to proceed in reverse, move slowly. Avoid turning at sharp angles in reverse.
- Always use the proper size and type of tires specified in this manual. Always maintain proper tire pressure as specified on page 103.

## Operator Safety

- Never modify this vehicle through improper installation or use of accessories.
- Never exceed the stated load capacity for this vehicle. Cargo should be properly distributed and securely attached. Reduce speed and follow the instructions in this manual for hauling cargo or pulling a trailer. Allow a greater distance for braking.
- Always wear the seat belts when operating this vehicle. Seat belts reduce the severity of injury in case of a sudden stop or collision.
- Always keep arms and legs inside the cab frame while the vehicle is in motion.
- Always apply the parking brake before getting out of the vehicle. See page 31.
- Always activate the foot pedal brake before releasing the park brake.
- Always turn off the engine before refueling. Make sure the refueling area is well ventilated and free of any source of flame or sparks. Gasoline is extremely flammable. See page 22 for refueling instructions.
- Always remove the ignition key when the vehicle is not in use to prevent unauthorized use or accidental starting.

**FOR MORE INFORMATION ABOUT SAFETY, call Polaris at 1-800-342-3764.**

# SAFETY

## Operator Safety

### WARNING

Make sure your *RANGER* is in excellent operating condition at all times. We strongly recommend that the operator check all safety components before each ride.

Polaris *RANGERS* are designed to provide safe operation when used as directed. Failure of critical machine components may result from operation with any modifications, especially those that increase speed or power. The *RANGER* may become aerodynamically unstable at speeds higher than those for which it is designed. Loss of control may occur at higher speeds.

Modifications may also create a safety hazard and lead to bodily injury.

Do not make any modifications to your *RANGER*.

### Equipment Modifications

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

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

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

## Operator Safety

### **⚠ WARNING**

#### POTENTIAL HAZARD

Stalling, rolling backwards while climbing a hill

#### WHAT CAN HAPPEN

Vehicle overturn

#### HOW TO AVOID THE HAZARD

Maintain a steady speed when climbing a hill.

#### If you lose all forward speed:

Apply the brakes.

Lock the parking brake after fully stopped.

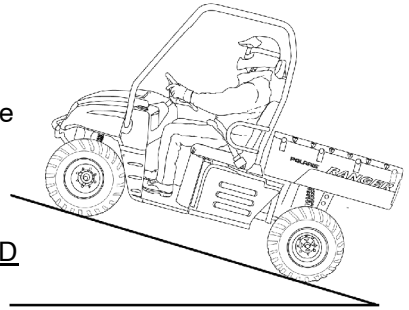
#### If you begin rolling backwards:

Never apply engine power.

Apply the brake gradually.

When fully stopped, lock parking brake.

In the event of an accident, have a qualified service dealer check the complete vehicle for possible damage, including (but not limited to) brakes, throttle and steering.



# SAFETY

## Operator Safety

### **WARNING**

#### POTENTIAL HAZARD

Operating this vehicle on paved surfaces

#### WHAT CAN HAPPEN

Loss of control

#### HOW TO AVOID THE HAZARD

This vehicle's tires are designed for off-road use only, not for use on pavement. Paved surfaces may seriously affect handling and control of the vehicle, and may cause the vehicle to go out of control.

Avoid operating the vehicle on pavement. If you must operate on a paved surface, travel slowly and do not make sudden turns or stops.

### **WARNING**

#### POTENTIAL HAZARD

Operating this vehicle without proper instruction

#### WHAT CAN HAPPEN

Loss of control, accident

#### HOW TO AVOID THE HAZARD

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

All operators must read and understand the Owner's Manual and all warning and instruction labels before operating the vehicle.

## Operator Safety

### **WARNING**

#### POTENTIAL HAZARD

Operating this vehicle on public streets, roads or highways

#### WHAT CAN HAPPEN

Collision with another vehicle

#### HOW TO AVOID THE HAZARD

Never operate this vehicle on any public street, road or highway, including dirt or gravel.

In many states it's illegal to operate vehicles of this type on public streets, roads and highways.

### **WARNING**

#### POTENTIAL HAZARD

Operating this vehicle after consuming alcohol or drugs

#### WHAT CAN HAPPEN

Could seriously affect your judgment.

Could cause you to react more slowly.

Could affect your balance and perception.

Could result in an accident.

#### HOW TO AVOID THE HAZARD

Driving a *RANGER* requires your full attention. **DO NOT** drink alcohol or use drugs or medications before or while driving. They will reduce your alertness and slow your reaction time. In most states and provinces, it's prohibited by law to drive while intoxicated or under the influence of drugs.



# SAFETY

## Operator Safety

### **WARNING**

#### POTENTIAL HAZARD

Operating this vehicle at excessive speeds

#### WHAT CAN HAPPEN

Loss of control, accident

#### HOW TO AVOID THE HAZARD

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

### **WARNING**

#### POTENTIAL HAZARD

Attempting jumps and other stunts

#### WHAT CAN HAPPEN

Loss of control, accident and/or vehicle overturn

#### HOW TO AVOID THE HAZARD

Never attempt jumps and other stunts. Avoid exhibition driving.

### **WARNING**

#### POTENTIAL HAZARD

Operating on frozen bodies of water.

#### WHAT CAN HAPPEN

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

#### HOW TO AVOID THE HAZARD

Never operate the *RANGER* on a frozen body of water.

## Operator Safety

### **WARNING**

#### POTENTIAL HAZARD

Failure to inspect the vehicle before operating

Failure to properly maintain the vehicle

#### WHAT CAN HAPPEN

Accident, equipment damage

#### HOW TO AVOID THE HAZARD

Always inspect your *RANGER* before each use to make sure it's in safe operating condition.

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

### **WARNING**

#### POTENTIAL HAZARD

Failure to use extra caution when operating this vehicle on unfamiliar terrain

#### WHAT CAN HAPPEN

Loss of control, vehicle overturn

#### HOW TO AVOID THE HAZARD

Travel slowly and use extra caution when operating on unfamiliar terrain.

Always be alert to changing terrain conditions when operating the vehicle. You may come upon hidden rocks, bumps, or holes suddenly, without enough time to react.

# SAFETY

## Operator Safety

### **WARNING**

#### POTENTIAL HAZARD

Failure to follow the minimum age recommendations for this vehicle

#### WHAT CAN HAPPEN

Serious injury or death (the child or others)

#### HOW TO AVOID THE HAZARD

Only persons with a valid driver's license should operate a Polaris *RANGER*.

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

### **WARNING**

#### POTENTIAL HAZARD

Operating this vehicle with improper tires or with improper or uneven tire pressure

#### WHAT CAN HAPPEN

Loss of control, accident and/or overturn

#### HOW TO AVOID THE HAZARD

Always use the size and type of tires specified in the Owner's Manual for this vehicle. See page 103.

Always maintain proper tire pressure as described on the decal and in the Owner's Manual. See page 103.

## Operator Safety

### **WARNING**

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

### **WARNING**

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

### **CAUTION**

Always keep combustible materials away from the exhaust system. Exposure to the hot components could result in a fire.

# SAFETY

## Safety Decals and Locations

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

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.

<b>⚠ WARNING</b>
<ul style="list-style-type: none"><li>• VEHICLE ROLLOVER could cause severe injury or death. The cab frame is not designed or intended to provide rollover protection.</li><li>• ALWAYS WEAR YOUR SEAT BELT for maximum protection.</li></ul>
7172676

### Location 1

<b>⚠ WARNING</b>
<ul style="list-style-type: none"><li>• Moving parts hazard under belt-clutch guard. To prevent serious injury, do not operate vehicle with guard removed.</li><li>• 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.</li></ul>

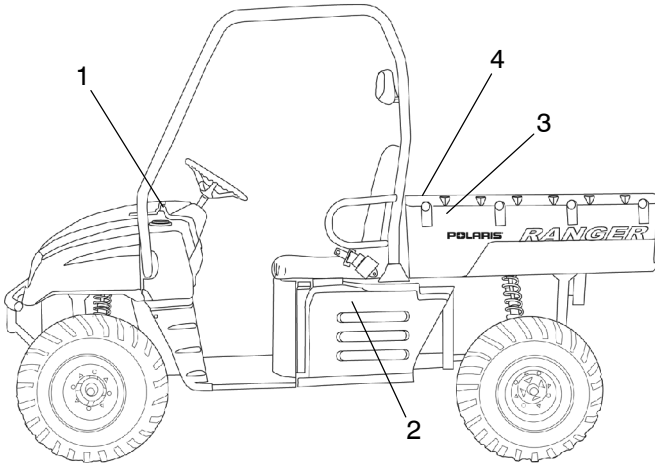
<b>NO STEP</b>	7172563
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### Location 2

<b>⚠ WARNING</b>
IMPROPER TIRE PRESSURE OR OVERLOADING can cause loss of control resulting in SEVERE INJURY OR DEATH.
<b>TIRE PRESSURE (PSI):</b> FRONT ___ REAR ___
<b>MAXIMUM WEIGHT CAPACITY</b> (Gross Vehicle Weight) INCLUDING MACHINE, DRIVER AND CARGO IS _____ LBS.
Reduce speed and allow greater distance for braking when carrying cargo. Overloading or carrying tall, off-center, or unsecured loads will increase your risk of losing control. Loads should be centered and carried as low as possible in box. For stability on rough or hilly terrain, reduce speed and cargo. Be careful if load extends over the side of the box.
Read Owner's Manual for more detailed loading information.

### Location 3

## Safety Decals and Locations



<p style="text-align: center;"><b>▲ WARNING</b></p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <p style="text-align: center;">Remove flammable containers from box before refueling.</p>		<p style="text-align: center;"><b>▲ WARNING</b></p> <p>Passengers can be thrown off. This can cause serious injury or death.</p> <p>Never carry passengers in cargo box.</p> <hr/> <p style="text-align: center;"><b>▲ WARNING</b></p> <p>Maximum Box Load is ___ lbs.</p>
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### Location 4 (inside front of box)

### Fuel / Passenger Warning Decal Text

Remove flammable containers from box before refueling.



- Passengers can be thrown off. This can cause serious injury or death.
- Never carry passengers in cargo box.

Maximum 2X4 (TM) Box Load 750 lbs. (340 kg)

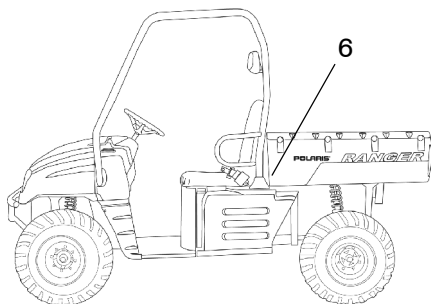
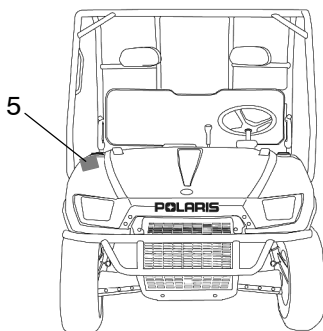
Maximum 4X4 Box Load 1000 lbs. (454 kg)

# SAFETY

## Safety Decals and Locations

	MANUFACTURED BY: POLARIS IND INC.
	DATE:  VIN:
THIS VEHICLE IS A GENERAL PURPOSE OFF-ROAD UTILITY VEHICLE AND IS NOT INTENDED FOR USE ON PUBLIC ROADS.	
CE VÉHICULE USAGE GENERAL VEHICULE UTILIT- AIRE POUR SERVICE HORS ROUTE QUI NEST PAS DES- TINE A ETRE UTILISE SUR LES CHEMINS PUBLICS.	
	
7078472	

### Location 5 (under hood)




### ATTENTION

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Operation of this vehicle without the filter element will severely damage the engine.</li> <li>• Clean air filter often, more frequent cleaning required in dusty conditions</li> <li>• Operation of this vehicle without engine breather filter(s) can cause engine damage. Consult owner's manual for details.</li> </ul> | <ul style="list-style-type: none"> <li>• Specific carburetor jetting and adjustments are required depending on temperature and altitude. See your Owner's Manual.<br/><br/>                     Factory setting:<br/>                     40° to 80° F. at 0-3000 feet<br/>                     (5° to 27° C. at 0-900 meters).</li> </ul> |
|--|--|

7079902

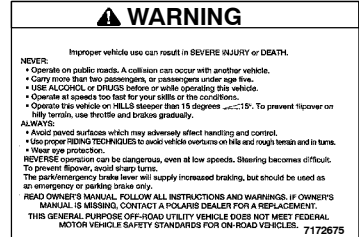
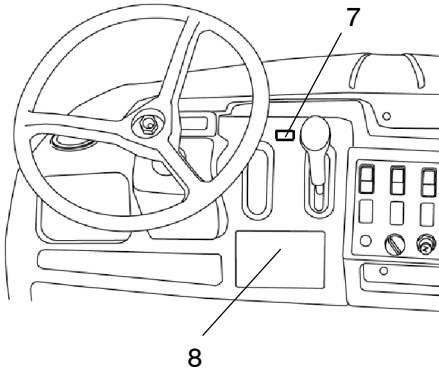
### Location 6

 <b>CAUTION</b>
To avoid transmission damage, shift only when vehicle is stationary and at idle.
7172674

### Location 7

## Safety Decals and Locations

### Discretionary Warning Decal



### Location 8

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

#### **NEVER:**

- Operate on public roads. A collision can occur with another vehicle.
- Carry more than two passengers, or passengers under age five.
- Use **ALCOHOL** or **DRUGS** before or while operating this vehicle.
- Operate at speeds too fast for your skills or the conditions.
- Operate this vehicle on **HILLS** steeper than 15 degrees. To prevent flipover on hilly terrain, use throttle and brakes gradually.

#### **ALWAYS:**

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

**REVERSE** operation can be dangerous, even at low speeds. Steering becomes difficult. To prevent flipover, avoid sharp turns.

The park/emergency brake lever will supply increased braking, but should be used as an emergency or parking brake only.

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

**THIS GENERAL PURPOSE OFF-ROAD UTILITY VEHICLE DOES NOT MEET FEDERAL MOTOR VEHICLE SAFETY STANDARDS FOR ON-ROAD VEHICLES.**



# SAFETY

## Fuel Safety

### **WARNING**

Gasoline is highly flammable and is explosive under certain conditions. Always exercise extreme caution whenever handling gasoline.

Always stop the engine when refueling.

Always refuel outdoors or in a well ventilated area.

Do not smoke or allow open flames or sparks in or near the refueling area or where gasoline is stored.

Do not over fill the tank. Do not fill the tank neck.

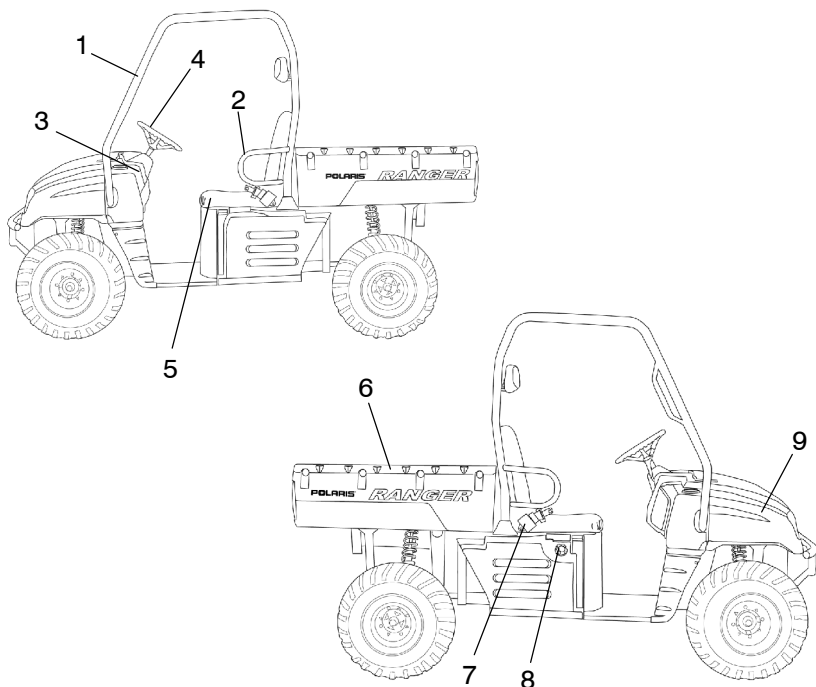
If gasoline spills on your skin or clothing, immediately wash it off with soap and water and change clothing.

Never start the engine or let it run in an enclosed area. Gasoline powered engine exhaust fumes are poisonous and can cause loss of consciousness and death in a short time.

# FEATURES AND CONTROLS

Some Polaris vehicles are equipped with special features such as the cab frame. *Not all models come with all features.* Refer to the specifications section beginning on page 102.

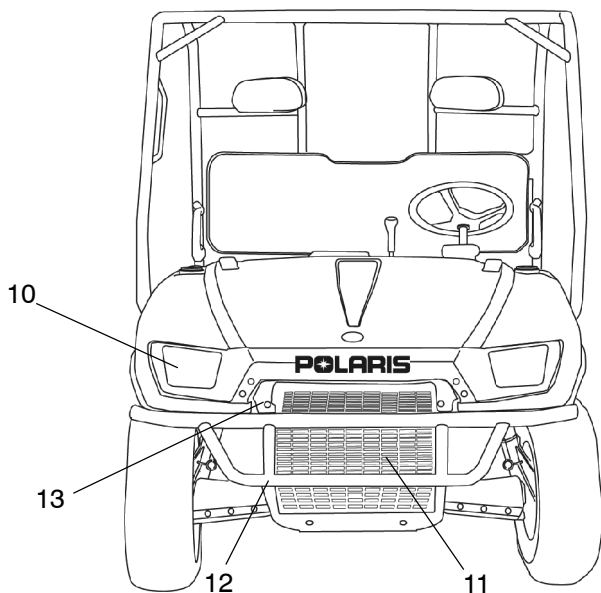
## Component Locations



1. Cab Frame (if equipped)
2. Hip Bar
3. Console
4. Steering Wheel
5. Seat
6. Cargo Box
7. Seat Belts
8. Fuel Tank Cap / Fuel Gauge
9. Battery

# FEATURES AND CONTROLS

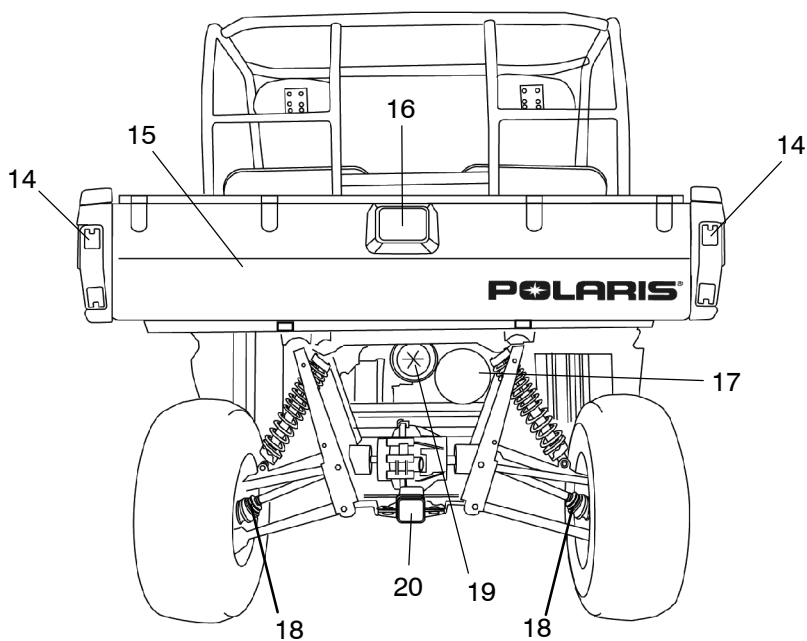
## Component Locations



- 10. Headlights
- 11. Radiator (if equipped)
- 12. Front Bumper/Brush Guard
- 13. Hood Hold Down Strap

# FEATURES AND CONTROLS

## Component Locations



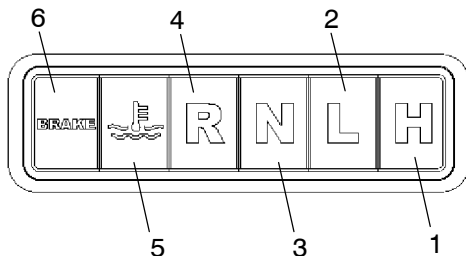
- 14. Taillights
- 15. Tailgate
- 16. Tailgate Latch Release
- 17. Muffler (Spark Arrester)
- 18. CV Boot/Rear Caliper
- 19. Air Box
- 20. Receiver Hitch

# FEATURES AND CONTROLS

## Indicator Lights

The indicator lights on the console display:

1. High Gear
2. Low Gear (if equipped)
3. Neutral Gear
4. Reverse Gear
5. High Temperature
6. Brakes



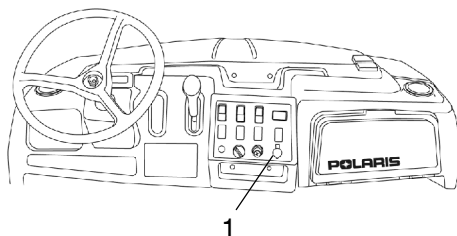
## Trailer Hitch Bracket

This vehicle is equipped with a receiver hitch bracket for a trailer hitch. Trailer towing equipment is not supplied with this vehicle.

To avoid injury and property damage, always heed the warnings and towing capacities outlined on page 47.

## Auxiliary Outlet (1)

The 12-volt receptacle has spade connections on the back that may be used to power an auxiliary light or other optional accessories or lights. The connections are behind the console, under the hood.

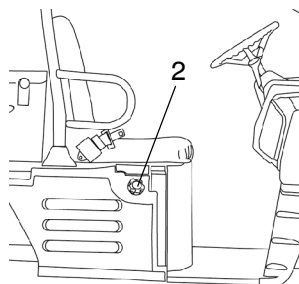


## Fuel Cap/Fuel Gauge (2)

The fuel tank filler cap is located on the right-hand side of the vehicle near the passenger seat. It has a built-in fuel gauge that indicates the amount of fuel remaining in the tank.

When the indicator needle nears the E (empty) mark, refuel at the earliest opportunity.

When refueling, always use either leaded or unleaded gasoline with a minimum pump octane number of 87 R+ M/2 octane.

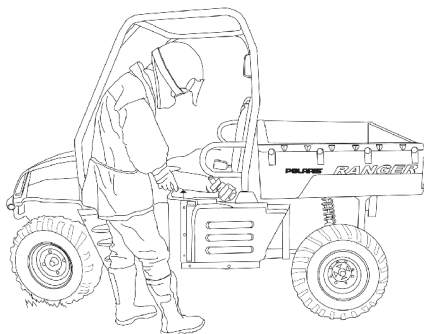


# FEATURES AND CONTROLS

## Seat Removal

Pull up on the front of the seat and slide it toward the front of the vehicle.

Install the seat by sliding the tabs into the rear of the seat base. Push down firmly on the front of the seat until the pins are fully seated into the grommets.



## Seat Belts

The *RANGER* is equipped with lap-style seat belts for the operator and passenger.

## **⚠** WARNING

Falling from a moving vehicle could result in serious injury or death. Always fasten your seat belt securely before operating or riding in the *RANGER*.

Passengers under five years of age require special restraints, which are not available with this vehicle. No person under the age of five years may ride in the *RANGER*.

To wear the seat belt properly, follow this procedure:

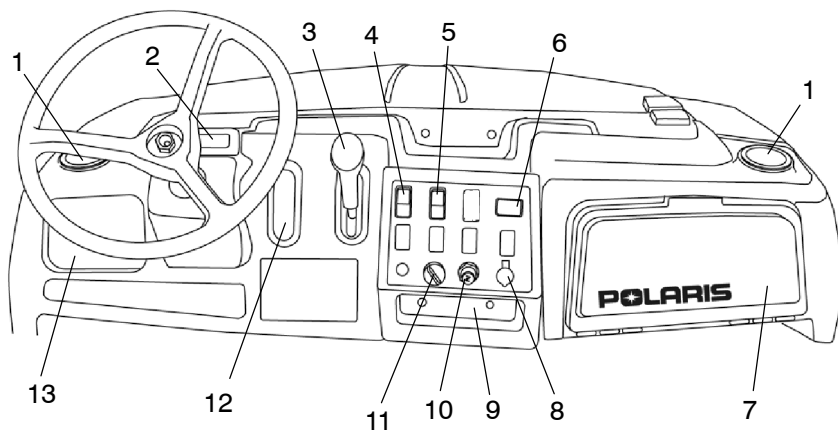
1. Place the belt across your lap as low on your hips as possible, taking care that the belt is not twisted.
2. Push the latch plate into the buckle until it clicks.
3. Release the strap, it will self tighten.

**NOTE:** The center belt must be tightened manually by pulling on the strap.

To unfasten, press the square red button in the buckle's center.

# FEATURES AND CONTROLS

## Console



1. Cup Holder
2. Indicator Lights
3. Shift Lever
4. Light Switch
5. AWD/Differential Switch (if equipped)
6. Hour Meter
7. Glove Box with Lid
8. 12V Accessory Plug
9. Storage Tray
10. Choke Knob
11. Ignition Switch
12. Differential Lock Lever (if equipped)
13. Storage Box

# FEATURES AND CONTROLS

## Gear Selector (1)

### **RANGER 2X4, 4X4**

H: High Gear

L: Low Gear

N: Neutral

R: Reverse

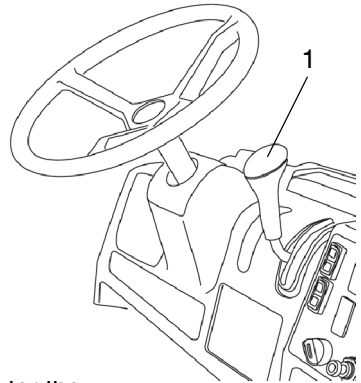
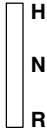


### **RANGER TM**

H: High Gear

N: Neutral

R: Reverse



**NOTE:** Low is the primary driving range for the *RANGER 2X4* and *4X4*. High is intended for use on hard-packed surfaces with light loads.

To change gears, stop the vehicle and with the engine idling, move the lever to the desired gear. Do not attempt to shift gears with engine speed above idle or while the vehicle is moving.

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

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

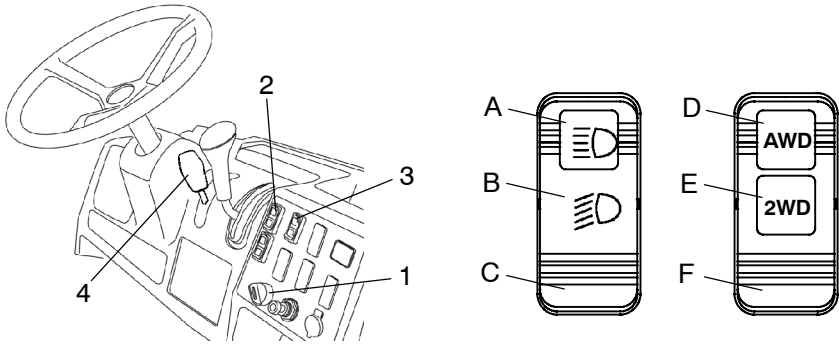
## CAUTION

Do not attempt to shift the transmission while the vehicle is moving or damage to the transmission could result. Always shift when the vehicle is stationary and the engine is at idle.

Always place the transmission in gear with the parking brake applied and turn the vehicle off whenever the vehicle is left unattended.



# FEATURES AND CONTROLS



## Ignition Switch (1)

The ignition switch is a three-position, key-operated switch. The key can be removed from the switch when it is in the OFF position.

OFF	The engine is off. Electrical circuits are off, except Acc. 12V.
ON	Electrical circuits are on. Electrical equipment can be used.
START	Turn the key to the START position to engage the electric starter. The key returns to the ON position when released.

## **⚠** WARNING

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

## Light Switch (2)

The ignition switch key must be in the ON position to operate the headlights. The switch has three positions:

A: High Beam    B: Low Beam    C: Off

## AWD/Differential Lock Switch (3) (2X4, 4X4)

The AWD/Differential Switch has three positions:

D: AWD (4X4 only)    E: 2WD/Differential Lock    F: Off

See page 50 for AWD operating instructions. See page 49 for differential operating instructions.

## Differential Lock Lever (4) (TM)

To lock the differential on the TM, push the lock lever up. See page 49 for differential operating instructions.

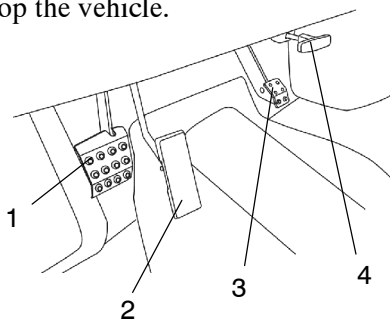
# FEATURES AND CONTROLS

## Brake Pedal (1)

Depress the brake pedal to slow or stop the vehicle.

## Throttle Pedal (2)

Push the pedal down to increase engine speed. Spring pressure returns the pedal to the rest position when released. Always check that the throttle pedal returns normally before starting the engine. Make sure there's adequate throttle pedal freeplay. See page 85 for throttle pedal adjustment procedures.



## Parking Brake Lever (3)

Engage the parking brake when parking the vehicle to help prevent the vehicle from rolling. To apply the parking brake, push down on the pedal with your foot.

## Parking Brake Release (4)

To release the parking brake, pull the release handle. Spring pressure helps return the lever to the released position. Make sure the parking brake lever is functioning properly before each operation.

# OPERATION

## Vehicle Break-In Period

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

### CAUTION

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

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

1. Fill the fuel tank with gasoline. Heed the gasoline warnings on page 22.
2. Check the oil level on the dipstick. See page 61. Add Polaris Premium 4 Synthetic Oil if necessary to maintain the oil level in the normal (safe) operating range.
3. Drive slowly at first. Select an open area that allows room to familiarize yourself with vehicle operation and handling.
4. Vary throttle positions. Do not operate at sustained idle.
5. Perform regular checks on fluid levels, controls and areas outlined on the daily pre-ride inspection checklist. See page 33.
6. Pull only light loads.
7. During the break-in period, change both the oil and the filter at 25 hours.

## Pre-Ride Inspection

### WARNING

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

Pre-Ride Checklist		
Item	Remarks	See Page
Brake system / lever travel	Ensure proper operation	86
Brake fluid	Ensure proper level	86
Front suspension	Inspect, lubricate if necessary	58
Rear suspension	Inspect, lubricate if necessary	58
Steering	Ensure free operation	-
Tires	Inspect condition and pressure	90, 107
Wheels / fasteners	Inspect, ensure fastener tightness	90
Frame nuts, bolts, fasteners	Inspect, ensure tightness	-
Fuel and oil	Ensure proper levels	61, 65
Coolant level (4X4)	Ensure proper level	73
Coolant hoses (4X4)	Inspect for leaks	-
Throttle	Ensure proper operation	31, 85
Indicator lights / switches	Ensure operation	26, 30
Air filter, pre-filter	Inspect, clean	78, 80
Air box sediment tube	Drain deposits whenever visible	-
Headlamp	Check operation, apply Polaris dielectric grease when lamp is replaced	92
Brake light / tail lamp	Check operation, apply Polaris dielectric grease when lamp is replaced	93

# OPERATION

## Starting the Engine

### **⚠ WARNING**

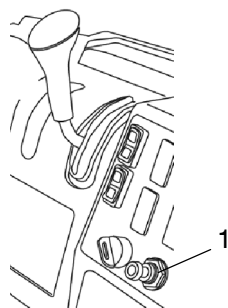
Engine exhaust contains poisonous carbon monoxide and can cause loss of consciousness resulting in severe injury or death. Never run an engine in an enclosed area.

### **CAUTION**

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

### **Starting a Cold Engine**

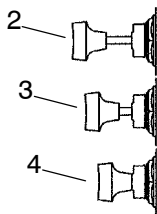
1. Place the transmission in neutral.
2. Lock the parking brake.
3. Sit in the driver's seat and fasten the seat belt.



**NOTE:** Do not use the choke before attempting to start the TM model. If the engine does not start on the first attempt without choking, proceed to step 4.

4. Pull the choke knob (1) all the way out (2).

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



### **CAUTION**

Do not operate the starter continuously for more than five seconds or the starter will overheat and the battery power will drop temporarily. Wait at least five seconds between each operation of the starter to allow it to cool and to allow battery power recovery.

Do not turn the ignition switch key to the START position while the engine is running. Damage to the starter can result.

5. Turn the ignition key to START.
6. If the engine does not start within five seconds, release the ignition switch and wait five seconds. Repeat steps 5 and 6 until the engine starts.
7. After the engine starts, push the choke knob in half way (3).
8. Vary the engine RPM slightly with the throttle to aid in warm up until the engine idles smoothly.
9. Push the choke completely in (4).

## Starting the Engine

### Starting a Warm Engine

Warm engines do not normally require the use of the choke. Overuse of the choke can cause the spark plug to become wet fouled.

1. Place the transmission in neutral and move the vehicle to a level surface.
2. Lock the parking brake.
3. Sit in the driver's seat and fasten the seat belt.
4. Turn the ignition key to START.
5. If the engine has cooled and does not readily start, intermittent use of the choke knob (pulled half way out) may be necessary.
6. If the engine is over-choked when warm, depress the throttle lever fully while cranking to aid in starting.
7. Release the throttle lever immediately after the engine starts.

**NOTE:** If the engine does not start and all conditions are favorable, change the spark plug.

## Stopping the Engine

1. Release the throttle pedal completely and brake to a complete stop.
2. Put the gear shift lever into neutral.
3. Apply the parking brake.

## WARNING

A rolling vehicle can cause property damage and serious injury. Always apply the parking brake after stopping the engine.

# OPERATION

## Braking

1. Release the throttle pedal completely.
2. Press on the brake pedal evenly and firmly.

**NOTE:** Practice starting and stopping (using the brakes) until you're familiar with the controls.

**NOTE:** When the throttle pedal is released completely and the engine speed drops near an idle, the vehicle has no engine braking.

## WARNING

Failure to allow for increased braking distance when hauling cargo or towing a trailer may result in accident and injury. Always slow down and allow additional braking distance when towing or hauling cargo.

## Driving Safely Driving Procedures



1. Sit in the driver's seat and fasten the seat belt.
2. After starting the engine and allowing it to warm up, shift the transmission into gear.
3. Check your surroundings and determine your path of travel.
4. Release the parking brake.
5. Keeping both hands on the steering wheel, slowly depress the throttle with your right foot and begin driving. Vehicle speed is controlled by the amount of throttle opening and Polaris Variable Transmission (PVT) shifting is automatic.
6. Drive slowly. Practice maneuvering and using the throttle and brakes on level surfaces.

**NOTE:** Low is the primary gear for operating the *RANGER* 4X4. High gear is intended for use on hard-packed surfaces with light loads.



# OPERATION

## Driving Safely

### Driving On Slippery Surfaces

When driving on slippery surfaces such as wet trails, loose gravel, or ice, be alert for the possibility of skidding and sliding. Under these conditions, follow these precautions:

1. Slow down when entering slippery areas.
2. Maintain a high level of alertness, reading the trail and avoiding quick, sharp turns, which can cause skids.
3. Correct a skid by turning the steering wheel in the direction of the skid.
4. Drive with AWD engaged (if equipped) to assist in controlling the vehicle.

## CAUTION

Severe damage to the drive train may occur if the AWD is engaged while the wheels are spinning. Always allow the wheels to stop spinning before engaging AWD.

## 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.

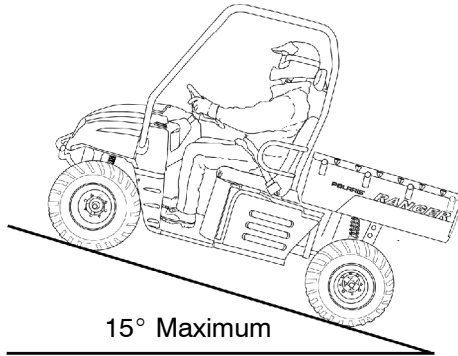
Never apply the brakes during a skid.

Do not operate on excessively slippery surfaces.

Always reduce speed and use additional caution when operating on slippery surfaces.

## Driving Safely

### Driving Uphill



Whenever traveling uphill, follow these precautions:

1. Always travel straight uphill.
2. Avoid steep hills ( $15^{\circ}$  maximum).
3. Keep both feet on the floor.
4. Proceed at a steady rate of speed and throttle opening.

## **⚠** WARNING

Climbing hills improperly can cause loss of control or vehicle overturn. Always check the terrain carefully before climbing a hill.

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 ( $15^{\circ}$  maximum).

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

Never climb hills with excessively slippery or loose surfaces.

Never open the throttle suddenly.

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

# OPERATION

## Driving Safely

### Sidehilling

#### **WARNING**

Crossing hillsides 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. When unavoidable, exercise extreme caution. Avoid operating on steep hills (15° maximum).

### Driving Downhill

Whenever descending a hill, follow these precautions:

1. Proceed directly downhill.
2. Slow down.
3. Apply the brakes *slightly* to aid in slowing.

#### **WARNING**

Traveling downhill improperly could cause loss of control or vehicle overturn. Always check the terrain carefully before descending a hill.

Never descend a hill at high speed. Excessive speed may result in loss of vehicle control and lead to serious injury or death. Always operate slowly when traveling downhill.

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

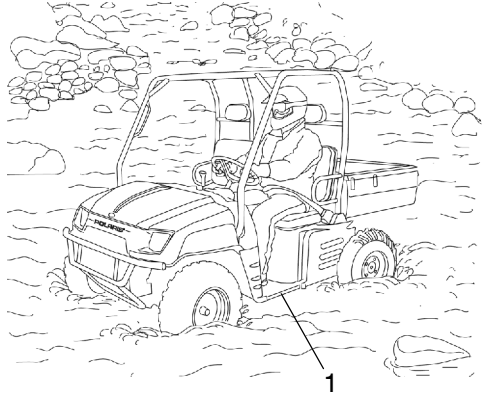
## Driving Safely

### Driving Through Water

#### **⚠ WARNING**

The large tires on your *RANGER* may cause the vehicle to float in deep or fast-flowing water, which could result in loss of control and lead to serious injury or death. Never cross deep or fast-flowing water with your *RANGER*.

Your Polaris *RANGER* can operate through water up to a maximum recommended depth equal to the floorboards (1). Follow these procedures when operating through water:



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

**NOTE:** After running your vehicle in water, it's *critical* that you perform the services outlined in the Periodic Maintenance Chart beginning on page 53. Give special attention to engine oil, transmission oil, front and rear gearcases, and all grease fittings.

#### **CAUTION**

Immersion can result in major damage if the vehicle isn't serviced correctly and promptly. After immersion, always take the vehicle to your dealer service. *Do not start the engine!*

If it's impossible to bring the vehicle to your dealer before starting the engine, perform the service outlined on page 77, and take the vehicle to your dealer at the first opportunity.

# OPERATION

## Driving Safely

### Driving Over Obstacles



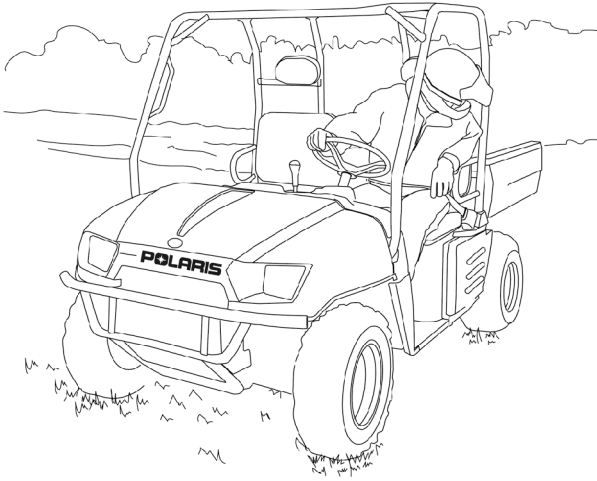
Be alert! Look ahead and learn to read the terrain you're traveling on. Watch for hazards such as logs, rocks and low hanging branches.

### **⚠** WARNING

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

## Driving Safely

### Driving in Reverse



Follow these guidelines when operating in reverse:

1. Back slowly.
2. Apply the brakes lightly for stopping.
3. Avoid turning at sharp angles.
4. Always avoid backing downhill.
5. Never open the throttle suddenly while backing.
6. Always inspect left and right fields of vision before backing.

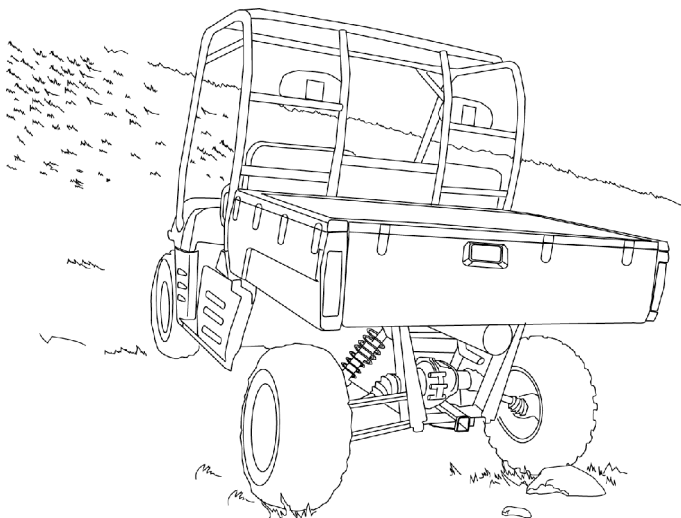
### **WARNING**

Failure to use caution when operating in reverse can result in serious injury or death. Before shifting into reverse, always check for obstacles or people behind the vehicle and follow the reverse operation procedures outlined in this manual. Always back slowly.

# OPERATION

## Driving Safely

### Parking on an Incline



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

1. Place the transmission in gear.
2. Set the parking brake.
3. Block the rear wheels on the downhill side.

## **⚠** WARNING

A rolling vehicle can cause property damage and serious injury. Always apply the parking brake after stopping the engine. Always block the downhill side of the wheels if leaving the vehicle on a hill, or park the vehicle in a sidehill position instead.

Operating the vehicle while the parking brake is engaged could cause loss of control and result in serious injury or death. Always disengage the parking brake before operating the vehicle.

## Hauling Cargo

### **⚠ WARNING**

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

Always load the cargo box with the load as far forward as possible.

Always operate the vehicle with extreme care when hauling or towing loads.

Slow down and *drive in the lowest gear available*.

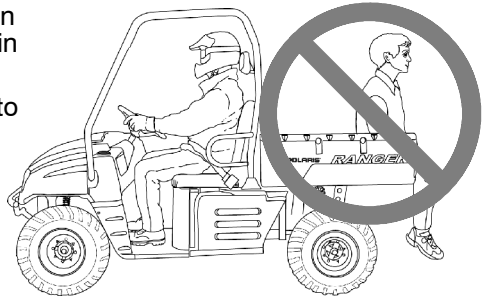
The *RANGER* has been designed to carry or tow specific capacities. Always read and understand the load distribution warnings listed on the warning labels. Never exceed the following capacities.

	<b>Maximum Capacities (Level Ground)</b>	<b>Cargo Box</b>
<i>RANGER</i> 4X4	1500 lbs. (681 kg)	1000 lbs. (454 kg)
<i>RANGER</i> 2X4	1250 lbs. (567 kg)	750 lbs. (340 kg)
<i>RANGER</i> TM	1250 lbs. (567 kg)	750 lbs. (340 kg)

### **⚠ WARNING**

Driving with passengers in the cargo box can result in severe injury or death.

Never allow passengers to ride in the cargo box. Passengers must always ride in the cab with seat belts fastened securely.





# OPERATION

## Hauling Cargo

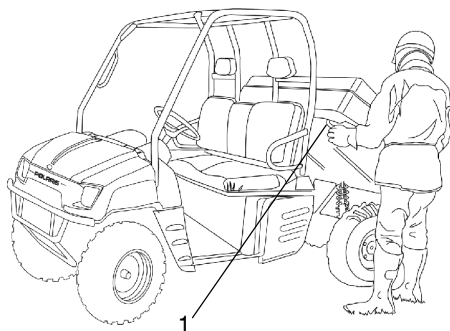
### Dumping the Cargo Box

#### **WARNING**

Operating the vehicle while the cargo box is raised could result in severe injury. The box could close unexpectedly and cause injury to the driver or passenger. The rear tires will also catch the rear of a raised box, damaging the vehicle and creating hazardous driving conditions.

Never operate this vehicle with the cargo box in the raised position.

1. Select a level site to dump the cargo box. Do not attempt to dump or unload the vehicle while parked on an incline.
2. Set the parking brake.
3. Dismount the vehicle.
4. Ensure that the cargo is positioned evenly or toward the front of the cargo box.
5. Release the tailgate by pulling up on the tailgate latch.
6. Stand clear and pull up on the cargo box release lever (1).
7. Lift the front of the cargo box to dump the cargo.
8. Lower the cargo box and push down securely to latch.



#### **WARNING**

If the weight distribution on the box is located toward the rear of the box when the release lever is pulled forward, the box may dump unexpectedly and cause serious injury to the operator or bystanders.

Never operate the dump lever without ensuring that the load is positioned evenly or at the front of the box.

## Hauling Cargo

### Towing Loads

#### **WARNING**

Towing improperly can alter vehicle handling and may cause loss of control or brake instability, which can result in serious injury or death. Always follow these precautions when towing:

Never load more than 150 lbs. (68.1 kg) tongue weight on the towing bracket.

Do not operate the vehicle faster than 10 mph (16 km/h) when towing. Towing a trailer increases braking distance.

Do not tow more than the recommended weight for the vehicle. See the towing capacity chart below and the specifications charts beginning on page 102.

Attach a trailer to the trailer hitch bracket only. Do not attach a trailer to any other location or you may lose control of the vehicle.

Never tow a trailer on a grade steeper than 15°.

### Maximum Towing Capacities (Level Ground)

	<b>Total Towed Load Weight (level ground)</b>	<b>Total Towed Load Weight (15° grade)</b>	<b>Total Hitch Vertical Weight</b>	<b>Maximum Towing Speed</b>
<i>RANGER</i> TM	1000 lbs. (454 kg)	600 lbs. (272 kg)	100 lbs. 45.4 kg)	10 mph (16 kph)
<i>RANGER</i> 2X4	1000 lbs. (454 kg)	600 lbs. (272 kg)	100 lbs. 45.4 kg)	10 mph (16 kph)
<i>RANGER</i> 4X4	1500 lbs. (681 kg)	850 lbs. (386 kg)	150 lbs. (68.1 kg)	10 mph (16 kph)

### Belt Life

To extend belt life, use the lowest gear possible when hauling or towing heavy cargo.

# OPERATION

## Driving Safely

### Parking the *RANGER*

#### **WARNING**

A rolling vehicle can cause property damage and serious injury. Always apply the parking brake after stopping the engine.

1. Stop the vehicle on a level surface.
2. When the engine has stopped, apply the parking brake.
3. Remove the ignition switch key to prevent unauthorized use.

#### **WARNING**

Gasoline is extremely flammable and can be explosive under certain conditions. When parking inside a garage or other structure, be sure that the structure is well ventilated and that the vehicle is not close to any source of flame or sparks, including any appliance with pilot lights.

## Differential Operation Modes

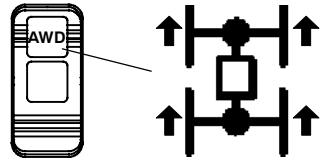
The rear axle is equipped with a lockable differential. On AWD models, engaging AWD locks the front differential and the rear differential.

### CAUTION

Damage to the differential can occur if it is engaged while the vehicle is traveling at high speeds or while the rear wheels are spinning. Slow the vehicle to nearly stopped before engaging the differential.

#### AWD (4X4)

When in AWD, the rear wheels rotate at the same speed. The front wheels also rotate at the same speed. See page 50 for AWD operating instructions.

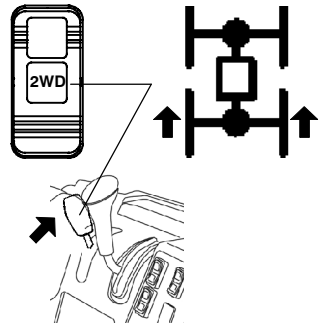


#### 2WD/Rear Differential Locked

When the rear differential is locked, both rear wheels rotate at the same speed. It's beneficial to lock the differential in low traction situations.

To lock the differential on the TM, push the lock lever up.

To lock the differential on the 2X4 and 4X4, move the AWD/Differential Switch to the center (2WD) position.

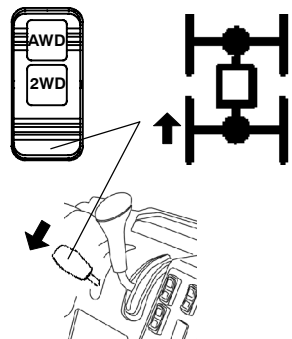


#### OFF/Differential Unlocked

When the rear differential is unlocked, the rear wheels can rotate at different speeds. Unlock the differential to make maneuvering easier and minimize damage to turf.

To unlock the differential on the TM, push the lock lever down.

To unlock the differential on the 2X4 and 4X4, move the AWD/Differential Switch to the lowest (OFF) position.



## **OPERATION**

### **All Wheel Drive (AWD)**

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

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

### **Engaging Front Gearcase**

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 front gearcase is moving, it will not disengage until the rear wheels regain traction.

See page 49 for AWD switch operation.

Engage the AWD 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.

# EMISSION CONTROL SYSTEMS

## Crankcase Emission Control System

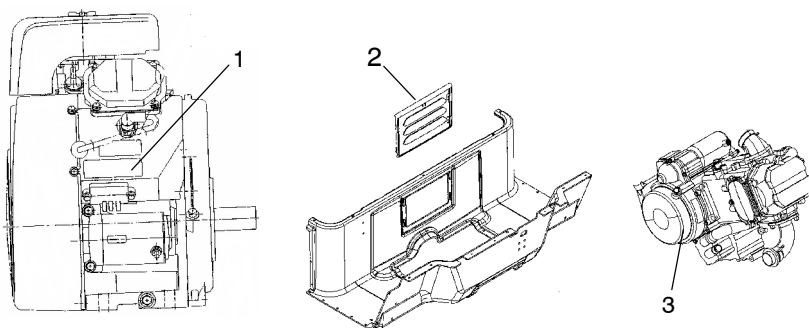
This engine is equipped with a closed crankcase system. Blow-by gases are forced back to the combustion chamber by the intake system. All exhaust gases exit through the exhaust system.

## 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.

The *RANGER*™ emissions label (1) is located on the front of the engine. Remove the service panel (2) to view the label. The label on the *RANGER* 2X4 and 4X4 (3) is located on the recoil cover. Remove the seat and look through the gap in the aluminum exhaust shield to view the label.



**NOTE:** The installation of devices that effectively increase exhaust emissions beyond their legal limits will void all manufacturer warranties and may violate laws governing the registration and operation of this vehicle.

# **EMISSION CONTROL SYSTEMS**

## **Noise Emission Control System**

Do not modify the engine, intake or exhaust components, as doing so may affect compliance with U.S.A. EPA noise control requirements (40 CFR 205) and local noise level requirements.

## **Operation on Public Lands in the U.S.A.**

Your Polaris vehicle has a spark arrestor that was tested and qualified to be in accordance with the USDA Forest Service Standard 5100-1C. Federal law requires that this spark arrestor be installed and functional when the vehicle is operated on public lands.

Operation of off-road vehicles on public lands in the U.S.A. is regulated by 43 CFR 8343. Violations are subject to monetary penalties. Federal regulations can be viewed online at [www.gpoaccess.gov/ecfr/](http://www.gpoaccess.gov/ecfr/).

## **Electromagnetic Interference**

This spark ignition system complies with Canadian ICES-002.

This vehicle complies with European directives 97/24/EC and 89/336/EEC.

# MAINTENANCE AND LUBRICATION

## 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 120.

**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. 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.



# MAINTENANCE AND LUBRICATION

## Periodic Maintenance Chart

### Maintenance Chart Key

- ▶ Perform these procedures more frequently 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 AND LUBRICATION

## Periodic Maintenance Chart

Perform all services at whichever maintenance interval is reached first.

Item		Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Miles (Km)	
■	Steering	-	Pre-Ride	-	Make adjustments as needed. See Pre-Ride Checklist on page 33.
▶	Front suspension	-	Pre-Ride	-	
▶	Rear suspension	-	Pre-Ride	-	
	Tires	-	Pre-Ride	-	
▶	Brake fluid level	-	Pre-Ride	-	
▶	Brake lever travel	-	Pre-Ride	-	
	Brake systems	-	Pre-Ride	-	
	Wheels/fasteners	-	Pre-Ride	-	
	Frame fasteners	-	Pre-Ride	-	
▶	Engine oil level	-	Pre-Ride	-	
▶ E	Air filter, pre-filter	-	Daily	-	
▶	Air box sediment tube	-	Daily	-	Drain deposits when visible
	Coolant (if applicable)	-	Daily	-	Check level daily, change coolant every 2 years
	Headlamp/tail lamp	-	Daily	-	Check operation; apply dielectric grease if replacing
▶ E	Air filter, main element	-	Weekly	-	Inspect; replace as needed
	Recoil housing	-	Weekly	-	Drain water as needed, check often if operating in wet conditions
▶ ■	Brake pad wear	10 H	Monthly	-	Inspect periodically
	Battery	20 H	Monthly	-	Check terminals; clean; test
▶	Front gearcase oil (if equipped)	25 H	Monthly	-	Inspect level; change yearly
▶	Rear gearcase oil (if equipped)	25 H	Monthly	-	Inspect level; change yearly
▶	Transmission oil	25 H	Monthly	-	Inspect level; change yearly

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

E Emission-Related Service

■ Have an authorized Polaris dealer perform these services.

# MAINTENANCE AND LUBRICATION

## Periodic Maintenance Chart

Item		Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Miles (Km)	
▶ E	Engine breather filter (if equipped)	25 H	Monthly	-	Inspect; replace if necessary
▶	Engine oil change (break-in)	25 H	1 M	-	Perform a break-in oil change at one month
▶	General lubrication	50 H	3 M	-	Lubricate all fittings, pivots, cables, etc.
	Shift Linkage	50 H	6 M	-	Inspect, lubricate, adjust
■	Steering	50 H	6 M	-	Lubricate
▶	Front suspension	50 H	6 M	-	Lubricate
▶	Rear suspension	50 H	6 M	-	Lubricate
	Carburetor float bowl	50 H	6 M	-	Drain bowl periodically and prior to storage
■ E	Throttle Cable/ETC Switch	50 H	6 M	-	Inspect; adjust; lubricate; replace if necessary
■ E	Choke cable	50 H	6 M	-	Inspect; adjust; lubricate; replace if necessary
E	Carburetor air intake ducts/flange	50 H	6 M	-	Inspect ducts for proper sealing/air leaks
	Drive belt	50 H	6 M	-	Inspect; adjust; replace as needed
	Cooling system (if applicable)	50 H	6 M	-	Inspect coolant strength seasonally; pressure test system yearly
▶	Engine oil change	100 H	6 M	-	Perform a break-in oil change at 25 hours/one month
▶	Oil filter change	100 H	6 M	-	Replace with oil change
▶	Oil tank vent hose	100 H	12 M	-	Inspect routing, condition
■ E	Valve clearance	100 H	12 M	-	Inspect; adjust

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

E Emission-Related Service

■ Have an authorized Polaris dealer perform these services.

# MAINTENANCE AND LUBRICATION

## Periodic Maintenance Chart

Item		Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Miles (Km)	
■ E	Fuel system	100 H	12 M	-	Check for leaks at tank cap, lines, fuel valve, filter, pump, carburetor; replace lines every two years
■ E	Fuel filter	100 H	12 M	-	Replace yearly
▶	Radiator (if applicable)	100 H	12 M	-	Inspect; clean external surfaces
▶	Cooling hoses (if applicable)	100 H	12 M	-	Inspect for leaks
▶	Engine mounts	100 H	12 M	-	Inspect
	Exhaust muffler/ pipe	100 H	12 M	-	Inspect
■ E	Spark plug	100 H	12 M	-	Inspect; replace as needed
■ E	Ignition Timing	100 H	12 M	-	Inspect
▶	Wiring	100 H	12 M	-	Inspect for wear, routing, security; apply dielectric grease to connectors subjected to water, mud, etc.
■	Clutches (drive and driven)	100 H	12 M	-	Inspect; clean; replace worn parts
■	Front wheel bearings	100 H	12 M	-	Inspect; replace as needed
■	Brake fluid	200 H	24 M	-	Change every two years
	Spark arrestor	300 H	36 M	-	Clean out
	Idle speed	-			Adjust as needed
■	Toe adjustment	-			Inspect periodically; adjust when parts are replaced
▶ ■	Auxiliary brake (if equipped)	-			Inspect daily; adjust as needed
	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.

# MAINTENANCE AND LUBRICATION

## Lubrication Recommendations

Check and lubricate all components at the intervals outlined in the Periodic Maintenance Chart beginning on page 53. Items not listed in the chart should be lubricated at the General Lubrication interval.

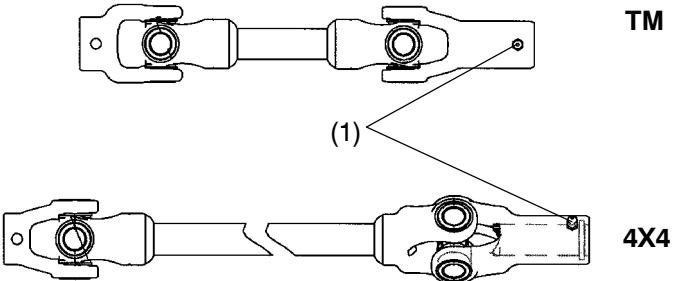
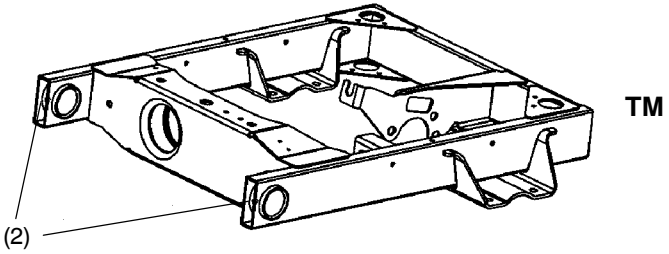
### Lubrication Chart Key

- ▶ More often under severe use, such as wet or dusty conditions
- ★ Polaris Premium all Season Grease or grease conforming to NLGI No. 2, such as Conoco Superlube M or Mobilegrease Special
- Use Polaris Premium U-Joint Lube every 500 miles, before long periods of storage, or after pressure washing or submerging.

Item	Lube	Method
Engine Oil	Polaris Premium 4 Synthetic 0W40	Add to proper level on dipstick.
Brake Fluid	DOT 3 or DOT 4	Maintain level between fill lines. See page 86.
Main Gearcase Oil (Transmission)	Premium AGL Synthetic Gearcase Lube	Maintain as recommended on page 69.
Front Gearcase Oil	Premium Demand Drive Hub Fluid	Maintain as recommended on page 70.
Rear Gearcase Oil	Premium ATV Angle Drive Fluid	Maintain as recommended on page 71.
(1) Prop Shaft U-joints	●Grease	Locate fittings and grease
Front Prop Shaft Yoke (4X4)	●Grease	Locate fittings and grease (3 pumps maximum)
Ball Joint	▶★Grease	Locate fitting (back side of struts), grease with grease gun.
(2) Swing Arm Bushings	★Grease	Locate fittings on swing arm and grease with grease gun.

# MAINTENANCE AND LUBRICATION

## Lubrication Recommendations



# MAINTENANCE AND LUBRICATION

## Engine Oil

Always check and change the engine oil at the intervals outlined in the Periodic Maintenance Chart beginning on page 53. Always change the oil filter whenever changing oil.

### Premium 4 Synthetic Oil

Polaris Premium 4 All Season Synthetic engine oil has been specially formulated for use in Polaris 4-cycle engines. It's a fully synthetic, high performance, multi-viscosity oil designed to provide the ultimate in lubrication performance and protection. See page 101 for the part numbers of Polaris products.

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

Although Polaris Premium 4 is the only oil recommended for use in this engine, use of any API certified "SH" oil is allowable as long as it's 0W-40. Oil may need to be changed more frequently if Polaris Premium 4 is not used. Follow the manufacturer's recommendations for ambient temperature operation.

## CAUTION

Mixing brands or using a non-recommended oil may cause serious engine damage. We recommend the use of Polaris Premium 4 All Season synthetic oil or API certified "SH" oil, 0W-40. Never substitute or mix oil brands. Use only 0W-40.



## WARNING

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

# MAINTENANCE AND LUBRICATION

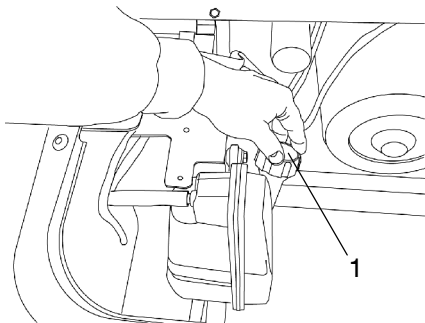
## Engine Oil

Always check and change the oil at the intervals outlined in the Periodic Maintenance Chart beginning on page 53. We recommend the use of Polaris Premium 4 All Season Synthetic engine oil.

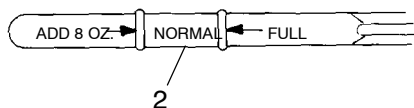
### Oil Check (2x4, 4X4)

The oil tank is located under the seat.

1. Position the vehicle on a level surface.
2. Start the engine and let it idle for 20-30 seconds.
3. Stop the engine and remove the seat (see page 27).
4. Remove the dipstick (1) and wipe it dry with a clean cloth.
5. Reinstall the dipstick and screw it in completely.



**NOTE:** The dipstick must be screwed in completely to keep the angle and depth of the stick consistent.



6. Remove the dipstick and check to see that the oil level is between the full and add marks (2). Add oil if necessary. Do not overfill.

**NOTE:** A rising oil level between checks in cool weather driving can indicate moisture collecting in the oil reservoir. If the oil level is above the full mark, change the oil.



# MAINTENANCE AND LUBRICATION

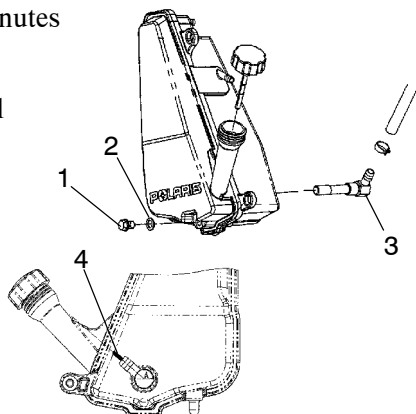
## Engine Oil

### Oil and Filter Change (2x4, 4X4)

#### CAUTION

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

1. Run the engine two to three minutes until warm. Stop the engine.
2. Clean the area around the drain plug (1) at the bottom of the oil tank.
3. Place a drain pan beneath the oil tank and remove the drain plug. Allow the oil to drain completely.
4. Install a new sealing washer (2) on the oil drain plug.



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

5. Reinstall the drain plug and torque to 14 ft. lbs. (19 Nm).
6. Disconnect the lower oil delivery hose and remove the screen fitting (3) from the oil tank. Clean the fitting.

**NOTE:** The fitting threads must be sealed with LOCTITE PST 505 or PTFE seal tape.

7. Reinstall the screen fitting and rotate the fitting clockwise a minimum of 2 1/2 turns into the tank threads. Continue to rotate the fitting until the nipple of the fitting aligns with the mark (4) on the tank.

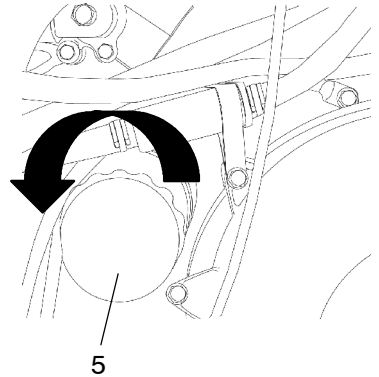
**NOTE:** Do not over-tighten. Maximum torque for the screen fitting is 25 ft. lbs. (34 Nm).

# MAINTENANCE AND LUBRICATION

## Engine Oil

### Oil and Filter Change (2x4, 4X4)

8. Reattach the oil line.
9. Place shop towels beneath the oil filter (5). Using an oil filter wrench, turn the filter counterclockwise to remove.
10. Using a clean dry cloth, clean the filter sealing surface on the crankcase.
11. Lubricate the gasket on the new filter with a film of new engine oil. Check to make sure the gasket is in good condition. Also make sure the gasket from the old filter is not still on the engine.
12. Install the new filter and turn by hand until the filter gasket contacts the sealing surface, then turn and additional 1/2 turn.
13. Approximately one cup of engine oil will remain in the crankcase. To drain, remove the drain plug on the lower right side of the crankcase.



- NOTE:** The sealing surfaces on the drain plug and crankcase should be clean and free of burrs, nicks or scratches.
14. Reinstall the drain plug and torque to 14 ft. lbs. (19 Nm).
  15. Remove the dipstick and fill the tank with two quarts (1.9 l) of Polaris Premium 4 Synthetic Oil.
  16. Place the gear selector in neutral and set the parking brake.
  17. **Prime the oil pump using the procedure on page 64.** Then stop the engine and inspect for leaks.
  18. Re-check the oil level on the dipstick and add oil as necessary to bring the level to the upper mark on the dipstick.
  19. Dispose of used filter and oil properly.

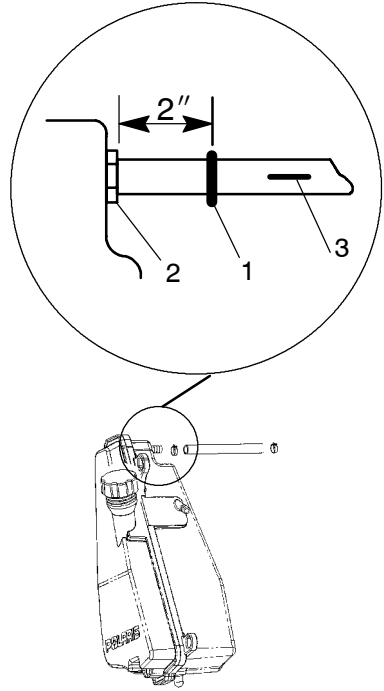
# MAINTENANCE AND LUBRICATION

## Engine Oil

### Oil Pump Priming (2x4, 4X4)

This priming procedure must be performed whenever the oil hose connection between the oil tank and pump inlet has been disconnected.

1. Clamp or pinch off the vent line (1) approximately 2" from the oil tank (2), between the end of the oil tank vent fitting and the vent line's pressure relief slit (3).
2. Run the engine for 15-20 seconds.
3. Remove the vent line clamp. The oil pump will now be properly primed and ready for operation.



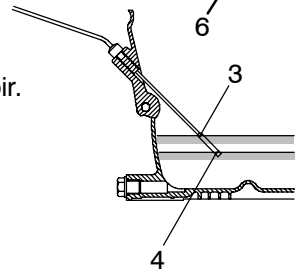
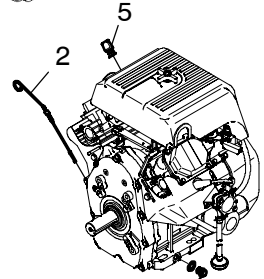
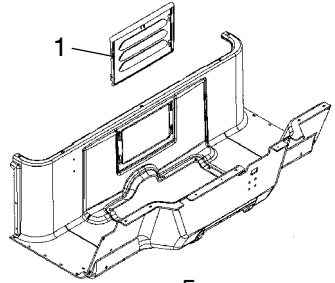
# MAINTENANCE AND LUBRICATION

## Engine Oil

### Oil Check (TM)

1. Position the vehicle on a level surface.
2. Start the engine and let it idle for 20-30 seconds.
3. Stop the engine and remove the seat as described on page 27. Remove the service panel (1) by pulling upward.
4. Remove the dipstick (2) and wipe it dry with a clean cloth.
5. Replace the dipstick and seat it completely.
6. Remove the dipstick and check to see that the oil level is between the FULL (3) and ADD (4) marks. Add oil through the oil filler hole (5) as needed. Do not overfill.

**NOTE:** A rising oil level between checks in cool weather driving can indicate moisture collecting in the oil reservoir. If the oil level is over the full mark, change the oil.



# MAINTENANCE AND LUBRICATION

## Engine Oil

### Oil and Filter Change (TM)

1. Position the vehicle on a level surface.
2. Run the engine two to three minutes until warm, then stop the engine.
3. Clean the area around the drain plug (6) at the bottom of the engine. The plug is accessible through the access hole in the bottom of the skid plate.

### CAUTION

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

4. Place a drain pan beneath the engine and remove the drain plug. Allow the oil to drain completely.
5. Replace the sealing washer on the drain plug.

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

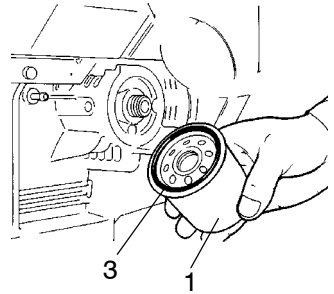
6. Reinstall the drain plug and torque to 14 ft. lbs. (19 Nm).

# MAINTENANCE AND LUBRICATION

## Engine Oil

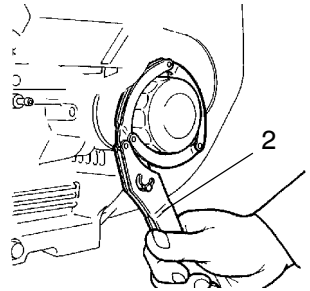
### Oil and Filter Change (TM)

7. Place shop towels beneath the oil filter (1). Using an oil filter wrench (2), turn the filter counterclockwise to remove.
8. Using a clean dry cloth, clean the filter sealing surface on the crankcase.
9. Check to make sure the o-ring (3) is in good condition. Lubricate the o-ring on the new filter with a film of engine oil.
10. Install the new filter and turn by hand until the filter gasket contacts the sealing surface, then turn an additional 3/4 turn.



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

11. Add 1.64 quarts (1550 ml) of the recommended oil.
12. Start the engine and allow it to run for two to three minutes.
13. Place the gear selector in neutral and set the parking brake.
14. Stop the engine and check the oil level on the dipstick. Add oil to the FULL mark if necessary.
15. Dispose of used filter and oil properly.



# MAINTENANCE AND LUBRICATION

## Gearcases

### Gearcase Specification Chart

Gearcase	Lubricant	Capacity	Fill Plug Torque	Drain Plug Torque
Main Gearcase (Transmission) (4X4)	Premium AGL Synthetic Gearcase Lube	15.2 oz. (450 ml)	14 ft. lbs. (19.4 Nm)	14 ft. lbs. (19.4 Nm)
Main Gearcase (Transmission) (2X4, TM)	Premium AGL Synthetic Gearcase Lube	18.2 oz. (540 ml)	14 ft. lbs. (19.4 Nm)	14 ft. lbs. (19.4 Nm)
Front Gearcase (4X4)	Premium Demand Drive Hub Fluid	5 oz. (150 ml)	8-10 ft. lbs. (11-13.6 Nm)	11 ft. lbs. (15 Nm)
Rear Gearcase (2X4, 4X4)	Premium ATV Angle Drive Fluid	18 oz. (532 ml)	40-50 ft. lbs. (54-68 Nm)	30-45 in. lbs. (3-5 Nm)
Rear Gearcase (TM)	Premium ATV Angle Drive Fluid	10 oz. (300 ml)	14 ft. lbs. (19.4 Nm)	14 ft. lbs. (19.4 Nm)

# MAINTENANCE AND LUBRICATION

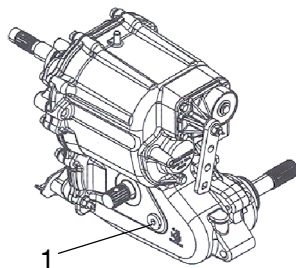
## Gearcases

### Transmission (Main Gearcase)

Always check and change the transmission oil at the intervals outlined in the Periodic Maintenance Chart beginning on page 53. Maintain the oil level even with the bottom of the fill plug hole. We recommend the use of Premium AGL Synthetic Gearcase Lubricant. See page 101 for the part numbers of Polaris products.

#### Oil Check

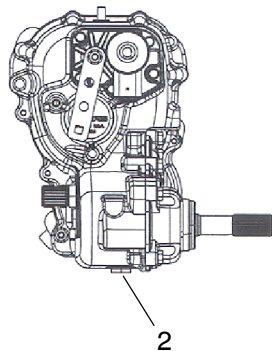
1. Position the vehicle on a level surface.
2. Remove the fill plug (1), which is located on the rear of the vehicle.
3. Check the oil level and add as needed.
4. Reinstall the fill plug. Torque to specification. See page 68.



#### Oil Change

The drain plug (2) is located on the bottom of the transmission. Access the drain plug through the drain hole in the skid plate.

1. Remove the fill plug.
2. Remove the drain plug and drain the oil into a drain pan. Dispose of used oil properly.
3. Wipe the magnetic end of the drain plug clean to remove accumulated metallic filings.
4. After the oil has drained completely, install a new sealing washer and reinstall the drain plug. Torque to specification. See page 68.



**NOTE:** Refer to the Gearcase Specifications Chart on page 68.

5. Add the recommended oil as needed. Do not overfill.
6. Reinstall the fill plug. Torque to specification.
7. Check for leaks.



# MAINTENANCE AND LUBRICATION

## Gearcases

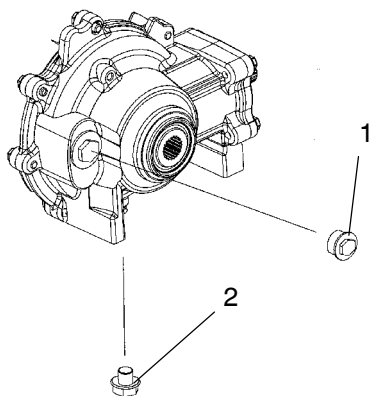
### Front Gearcase (4X4)

Always check and change the front gearcase oil at the intervals outlined in the Periodic Maintenance Chart beginning on page 53. Maintain the oil level even with the bottom thread of the fill plug hole. We recommend the use of Polaris Premium Demand Drive Hub Fluid. See page 101 for the part numbers of Polaris products.

The front gearcase fill plug (1) is located on the right side of the front gearcase.

#### Oil Check

1. Position the vehicle on a level surface.
2. Remove the fill plug and check the oil level.
3. Add the recommended hub fluid as needed.
4. Reinstall the fill plug. Torque to specification. See page 68.



#### Oil Change

1. Support the vehicle securely with a jackstand.
2. Remove the front tire on the driver's side.
3. Remove the fill plug.
4. Remove the gearcase drain plug (2) located on the bottom right-hand side and drain the oil into a drain pan. Discard used oil properly.
5. Clean and reinstall the drain plug. Torque to specification. See page 68.
6. Add 5 oz. (150 ml) of the recommended hub fluid. Refer to the Gearcase Specifications Chart on page 68.
7. Reinstall the fill plug. Torque to specification. See page 68.
8. Check for leaks.

# MAINTENANCE AND LUBRICATION

## Gearcases

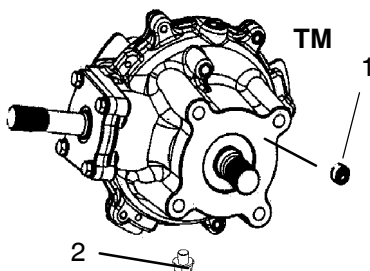
### Rear Gearcase

Always check and change the rear gearcase oil at the intervals outlined in the Periodic Maintenance Chart beginning on page 53. Maintain the oil level even with the bottom thread of the fill plug hole. We recommend the use of Polaris ATV Angle Drive Fluid. See page 101 for the part numbers of Polaris products.

The rear gearcase fill plug (1) is on the driver's side of the rear gearcase.

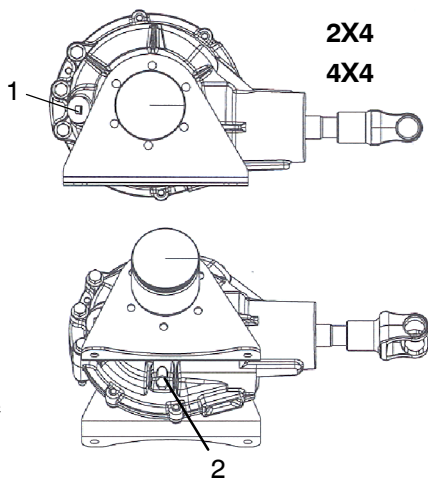
### Oil Check

1. Position the vehicle on a level surface.
2. Remove the fill plug and check the oil level.
3. Add the recommended fluid as needed.
4. Reinstall the fill plug. Torque to specification. See page 68.



### Oil Change

1. Remove the fill plug.
2. Remove the drain plug (2) from the bottom of the gearcase and drain the oil into a drain pan. Discard used oil properly.
3. Clean and reinstall the drain plug. Torque to specification. See page 68.
4. Add the recommended fluid. Refer to the Gearcase Specifications Chart on page 68.
5. Reinstall the fill plug. Torque to specification. See page 68.
6. Check for leaks.



# MAINTENANCE AND LUBRICATION

## Cooling System (2X4, 4X4)

### Operation

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

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

**NOTE:** Some coolant level drop on new vehicles is normal as the system is purging itself of trapped air. Observe coolant levels and maintain as recommended by adding coolant to the overflow bottle.

### Adding or Changing Coolant

To ensure that the coolant maintains its ability to protect the engine, we recommend that the system be completely drained every two years and a fresh mixture of antifreeze and water added. Polaris recommends the use of Polaris Premium 60/40 anti-freeze/coolant or a 50/50 mixture of high quality aluminum compatible anti-freeze/coolant and distilled water. Polaris Premium 60/40 is already premixed and ready to use. Do not dilute with water. See page 101 for the part numbers of Polaris products.

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

Any time the cooling system has been drained for maintenance or repair, replace the coolant. If the recovery bottle has run dry, the level in the radiator should be inspected. Add coolant as needed.

# MAINTENANCE AND LUBRICATION

## Cooling System (2X4, 4X4)

### Radiator and Cooling Fan

Always check and clean the screen and radiator fins at the intervals outlined in the Periodic Maintenance Chart beginning on page 53. Do not obstruct or deflect air flow through the radiator by installing unauthorized accessories in front of the radiator or behind the cooling fan. Interference with the radiator air flow can lead to overheating and consequent engine damage.

### CAUTION

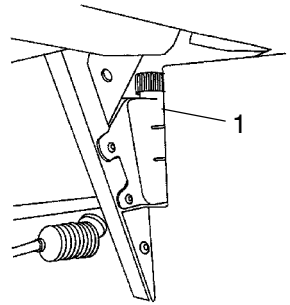
Washing the vehicle with a high-pressure hose could damage the radiator fins and impair the radiator's effectiveness. Exercise caution if a high-pressure system is used for washing the vehicle.

### Coolant Level

Always check and change the coolant at the intervals outlined in the Periodic Maintenance Chart beginning on page 53. Maintain the coolant level between the minimum and maximum marks on the bottle (when the fluid is cool). The overflow bottle (1) is located in front of the right front wheel.

1. Position the vehicle on level ground.
2. View the coolant level in the overflow bottle.
3. If the coolant level is below the safe operating range, lift the hood and locate the overflow bottle lid. Remove the lid and use a funnel to add coolant through the filler opening. Reinstall the cap.

**NOTE:** If coolant must be added often, or if the overflow bottle runs completely dry, there may be a leak in the system. Have the cooling system inspected by your Polaris dealer.



# MAINTENANCE AND LUBRICATION

## Cooling System (2X4, 4X4)

### Radiator Coolant Level

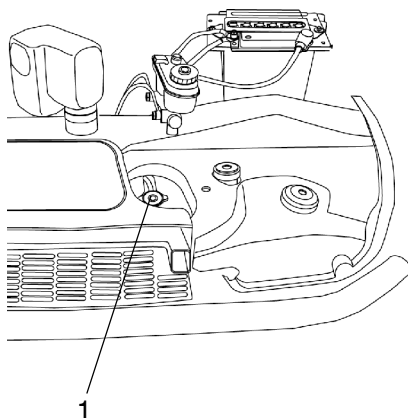
Always check and change the coolant at the intervals outlined in the Periodic Maintenance Chart beginning on page 53.

### WARNING

Escaping steam can cause severe burns. Never remove the pressure cap while the engine is warm or hot. Always allow the engine to cool before removing the pressure cap.

1. Lift the hood and slowly remove the radiator cap (1).
2. View the coolant level through the opening.
3. Use a funnel and slowly add coolant as needed.

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



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

# MAINTENANCE AND LUBRICATION

## Spark Plugs

### 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 102.

### Spark Plug Gap/Torque

Model	Electrode Gap	New Plug Torque	Used Plug Torque
RANGER 2X4, 4X4	.025" (.06 cm)	9-11 ft. lbs. (12-15 Nm)	9-11 ft. lbs. (12-15 Nm)
RANGER TM	.025" (.06 cm)	8.7-10.8 ft. lbs. (11.8-14.6 Nm)	16.6-19.5 ft. lbs. (22.5-26.4 Nm)

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

### WARNING

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

#### 1. Normal

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

#### 2. Wet Fouled

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 injection oil, improper use of the choke, or incorrect carburetion adjustments.

### Spark Plug Removal and Replacement

1. Remove the seat to access the engine compartment.
2. Remove the spark plug cap. Using the spark plug wrench provided in the tool kit, remove the plug by rotating it counterclockwise.
3. Reverse the procedure for spark plug installation. Torque to specification.

# MAINTENANCE AND LUBRICATION

## Polaris Variable Transmission (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 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. Shift the transmission into neutral and apply full throttle for no longer than 10 seconds and repeat as necessary. This will expel the moisture and air dry the belt and clutches.
2. Allow the engine RPM to settle to idle speed, then shift the transmission to the lowest available range.
3. Test for belt slippage. If the belt slips, repeat the process.
4. Take the vehicle to your dealer for service as soon as possible.

# MAINTENANCE AND LUBRICATION

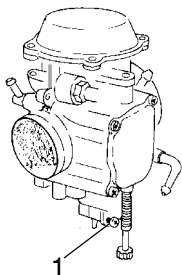
## Vehicle Immersion

### CAUTION

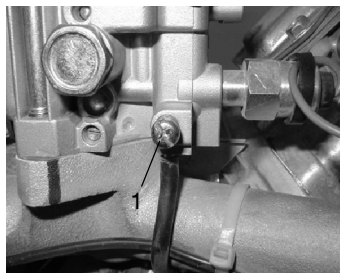
If your vehicle becomes immersed, major engine damage can result if the vehicle is not thoroughly inspected. Take the vehicle to your dealer before starting the engine.

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

1. Move the vehicle to dry land, or at the very least, to a water level below the floor.
2. Disconnect the fuel pump wires.
3. Remove the spark plug.
4. Place a clean container under the engine and loosen the carburetor drain screw (1) two turns.



**RANGER 2X4, 4X4**



**RANGER TM**

5. Turn the engine over several times with electric start. Inspect the drained fuel for water or sediment.
6. Dry the spark plug and reinstall, or install a new plug.
7. Tighten the carburetor drain screw.
8. Reconnect the fuel pump wires.
9. Attempt to start the engine. If necessary, repeat the drying procedure.
10. Take the vehicle to your dealer for service as soon as possible whether you succeed in starting it or not.

**NOTE:** If water has been ingested into the PVT follow the procedure on page 76 for drying.



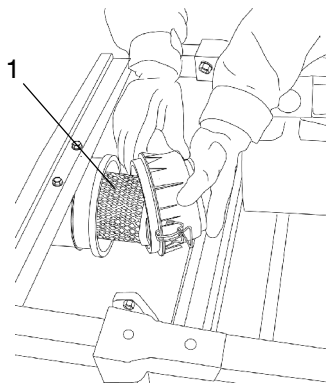
# MAINTENANCE AND LUBRICATION

## Filter Systems (2X4, 4X4)

### Air Filter

Always change the air filter at the intervals outlined in the Periodic Maintenance Chart beginning on page 53.

1. Lift the cargo box to access the air box.
2. Remove the air box cover and inspect the gasket. It should adhere tightly to the cover and seal all the way around.
3. Remove the air filter (1).
4. Do not attempt to clean the main element. Install a new air filter.



**NOTE:** Apply a small amount of general purpose grease to the sealing edges of the filter before installing.

5. Inspect the air box for oil or water deposits. If present, drain them into a suitable container.

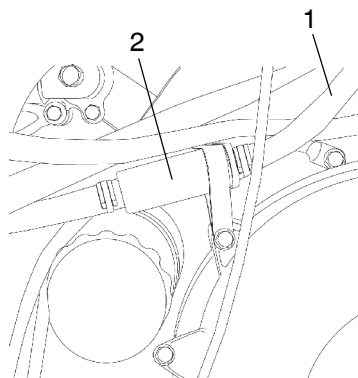
**NOTE:** Service the air filter more frequently if the vehicle is operated in wet conditions or at high throttle openings for extended periods.

# MAINTENANCE AND LUBRICATION

## Filter Systems (2X4, 4X4)

### Breather Filter and Hoses

1. Lift the cargo box and locate the air box.
2. Follow the right-hand breather line (1) out the side of the air box and locate the filter (2).
3. Remove and inspect the filter for debris. Blow gently through the filter in the direction of the arrow to check for clogging. Replace as needed.
4. Check hoses for cracks, deterioration, abrasion, or leaks. Replace as needed.
5. Reinstall the filter with the arrow pointing toward the engine and secure the clamps.



### CAUTION

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

### Fuel Filter

Your Polaris vehicle is equipped with an in-line fuel filter. Have your dealer replace it after every 100 hours of operation. Do not attempt to clean the fuel filter.

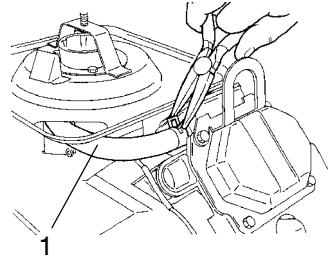
# MAINTENANCE AND LUBRICATION

## Filter Systems (TM)

### Air Filter

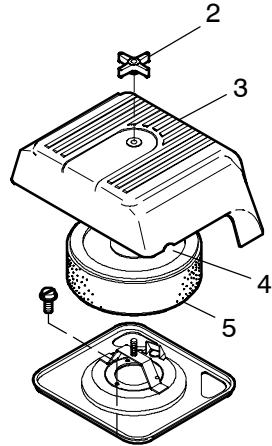
Always check and change the air filter at the intervals outlined in the Periodic Maintenance Chart beginning on page 53.

1. Remove the seat to access the air cleaner.
2. Remove the breather hose (1) from the cylinder.
3. Remove the wing nut (2) and remove the air cleaner cover (3).
4. Remove the primary filter (4) and the secondary filter (5).



**NOTE:** Do not attempt to clean the primary filter. Install new.

5. Wash the secondary (foam) filter with hot soapy water. Rinse and dry thoroughly.
6. Inspect the filter for tears or damage. Replace with a new filter if needed.
7. Apply foam filter oil or clean engine oil and squeeze the filter until excess oil is removed.
8. Reassemble all components.



# MAINTENANCE AND LUBRICATION

## Carburetor/Engine Idle RPM Adjustment

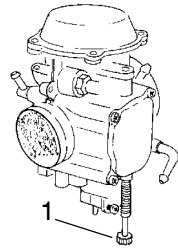
The idle speed adjustment should be performed as outlined in the Periodic Maintenance Chart, or whenever the idle speed is changed. Recommended engine idle RPM for the *RANGER* 2X4 and 4X4 is 1200 +/- 200. Recommended engine idle RPM for the *RANGER* TM is 1000 +/- 100.

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

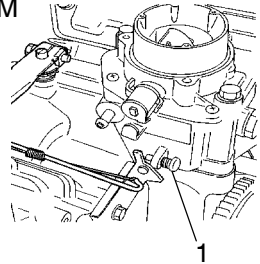
1. Engage the parking brake and place the gear shift lever in the neutral position.
2. Warm up the engine by running the vehicle approximately five minutes.
3. Remove the seat and locate the idle adjust screw (1).
4. Place the transmission in gear (with park brake engaged).
5. Turn the carburetor idle adjust screw in or out until the desired idle RPM is reached. Turn the screw in (clockwise) to raise RPM. Turn the screw out (counterclockwise) to lower RPM.

2X4

4X4



TM



# MAINTENANCE AND LUBRICATION

## Spark Arrestor

### **WARNING**

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

Do not perform service on the spark arrestor while the system is hot. Exhaust system temperatures can reach 1000° F. Allow components to cool sufficiently before proceeding.

Remove any combustible materials from the area.

Wear eye protection and 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 that can cause loss of consciousness or death in a very short time.

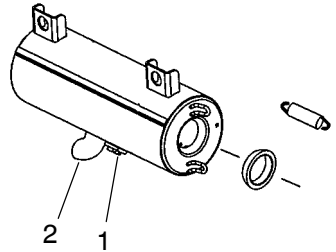
Never go under the vehicle while it's inclined.

# MAINTENANCE AND LUBRICATION

## Spark Arrestor

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

1. Remove the arrestor clean-out plugs (1) located on the bottom of the muffler.
2. Place the transmission in neutral and start the engine.
3. Purge accumulated carbon from the system by momentarily revving the engine several times.
4. If carbon is expelled, cover or plug the exhaust outlet (2) and rap on the pipe around the clean-out plugs while revving the engine several more times.
5. If particles are still suspected to be in the muffler, elevate the rear of the vehicle one foot higher than the front. Set the parking brake and block the wheels. Make sure the vehicle is in neutral and repeat steps 2 and 4.
6. If particles are still suspected to be in the muffler, drive the vehicle onto the incline so the front of the vehicle is one foot higher than the rear. Set the parking brake and block the wheels. Make sure the vehicle is in neutral and repeat steps 3 and 4 until no more particles are expelled when the engine is revved.
7. Stop the engine and allow the arrestor to cool.
8. Reinstall the arrestor plugs and remove the outlet cover or plug.



# MAINTENANCE AND LUBRICATION

## Throttle System

### **⚠ WARNING**

Failure to check or maintain proper operation of the throttle system can result in an accident and lead to serious injury or death if the throttle pedal sticks during operation.

Never start or operate this vehicle if it has a sticking or improperly operating throttle pedal.

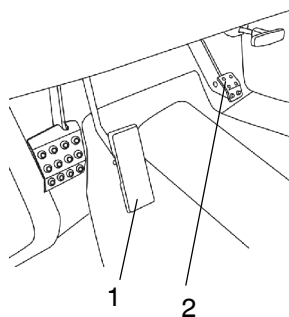
Immediately contact your dealer for service if throttle problems arise.

Always check the pedal for free movement and return before starting the engine and occasionally during operation.

### **Throttle Freeplay**

If the throttle pedal (1) has excessive play due to cable stretch or misadjustment, it will cause a delay in throttle response, especially at low engine speed. The throttle may also not open fully. If the throttle pedal has no freeplay, the throttle may be hard to control, and the idle speed may be erratic.

Check the throttle pedal freeplay at the intervals outlined in the Periodic Maintenance Chart beginning on page 53. Adjust the freeplay if necessary.



# MAINTENANCE AND LUBRICATION

## Throttle System

### Throttle Freeplay Inspection

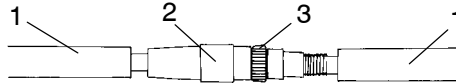
1. Apply the parking brake (2) and shift the transmission to neutral.
2. Start the engine and warm it up thoroughly.
3. Measure the distance the throttle pedal moves before the engine begins to pick up speed. Freeplay should be 1/16 to 1/8 inches.

### Throttle Freeplay Adjustment

1. Slide the boots (1) off the inline cable adjuster sleeve (2). Loosen the adjuster locknut (3).
2. Turn the adjuster until 1/16 to 1/8 inch freeplay is achieved.

**NOTE:** While adjusting, flip the throttle lever back and forth.

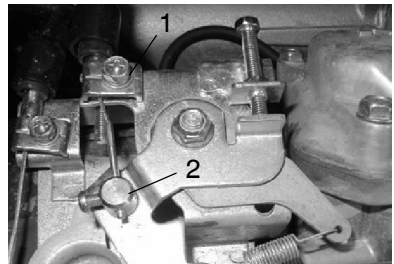
3. Tighten the locknut and slide the boots over the cable adjuster until they touch at the midpoint of adjuster.



### Throttle Cable Adjustment (TM)

If the proper freeplay cannot be obtained with the throttle block adjuster, adjust the cable at the carburetor using the following procedure.

1. Remove the seat and loosen the clamp screw (1) and the throttle cable adjustment screw (2).
2. Adjust the cable as needed.
3. Tighten both screws and reinstall the seat.
4. Check for proper throttle operation and correct freeplay in all steering wheel positions.





# MAINTENANCE AND LUBRICATION

## Brakes

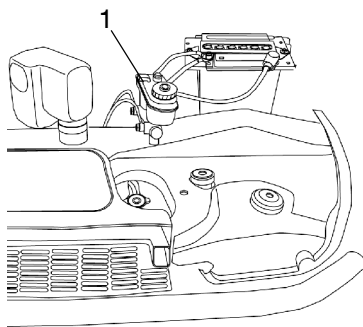
The front and rear brakes are hydraulic disc type brakes. Press down on the brake pedal to engage the brakes. See page 31.

### Brake Fluid

Routine inspections are recommended to keep the brake system in good operating condition. Inspect the level of the brake fluid before each operation.

Change the brake fluid at the intervals outlined in the Periodic Maintenance Chart beginning on page 53. The brake fluid should also be changed if it becomes contaminated, if the fluid level is below the minimum, or if the type and brand of the fluid in the reservoir are unknown.

1. Position the vehicle on a level surface.
2. View the brake fluid level at the reservoir (1) under the hood. Maintain the fluid level between the upper (MAX) and lower (MIN) marks on the reservoir.
3. If the fluid level is lower than the lower level line, add brake fluid to the upper (MAX) line.
4. Apply the brake forcefully for a few seconds and check for fluid leakage around the fittings.



### WARNING

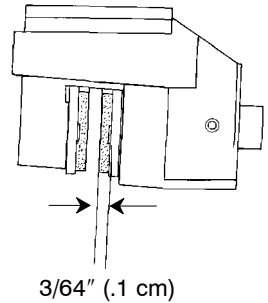
After opening a bottle of brake fluid, always discard any unused portion. Never store or use a partial bottle. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the air. The moisture causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the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

# MAINTENANCE AND LUBRICATION

## Brakes

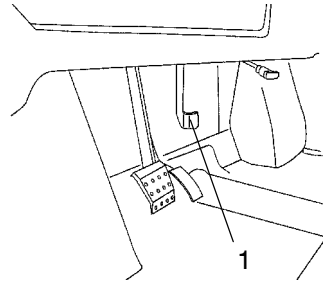
### Brake Inspection

1. Check the brake system for fluid leaks.
2. Check the brake pedal for excessive travel or a spongy feel.
3. Check the friction pads for wear, damage and looseness.
4. Inspect the brake disc spline and pad wear surface for excessive wear.
5. Change pads when worn to 3/64" (.1 cm).



### Parking Brake Inspection

1. Slowly push the parking brake down with your foot.
2. After 8 to 12 clicks of lever travel, check the vehicle for movement. The vehicle should not roll while parked. If the vehicle moves, adjustment is necessary.



### Parking Brake Adjustment

1. Position the vehicle on a level surface.
2. Place the transmission in neutral.
3. Loosen or tighten the nuts on each end of the parking brake cable as needed.

# MAINTENANCE AND LUBRICATION

## Steering Wheel Inspection

Check the steering wheel for specified freeplay and smooth operation at the intervals outlined in the Periodic Maintenance Chart beginning on page 53.

1. Position the vehicle on level ground.
2. Lightly turn the steering wheel left and right.
3. There should be 0.8 - 1.0 in (20 - 25 mm) of free play.
4. If there is excessive freeplay or strange noises, or the steering feels rough or “catchy,” have the steering system inspected by an authorized Polaris dealer.

## Cylinder Head/Cylinder Base Fastener Torque

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

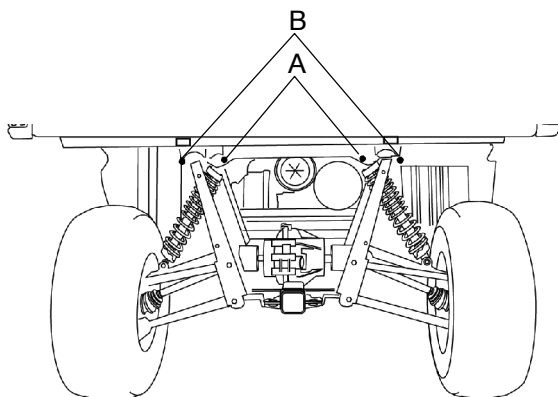
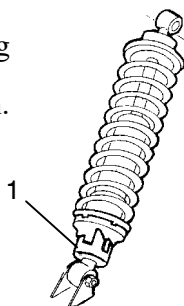
## Rear Spring Adjustment

The rear shock absorber springs are adjusted by rotating the adjustment cam (1) either clockwise or counterclockwise to increase or decrease spring tension.

## Suspension Adjustment (2x4, 4X4)

The rear suspension of the *RANGER* 2X4 and 4X4 may be adjusted to provide a stiffer suspension if necessary. The shocks are mounted to the inside mounting holes (A) at the factory, but they may be relocated to the outside mounting holes (B).

1. Remove the shock mounting bolts.
2. Reposition the shocks to the outside mounting holes.
3. Reinstall the shock mounting bolts. Torque to 30 ft. lbs. (40 Nm).



# MAINTENANCE AND LUBRICATION

## Seat Belts

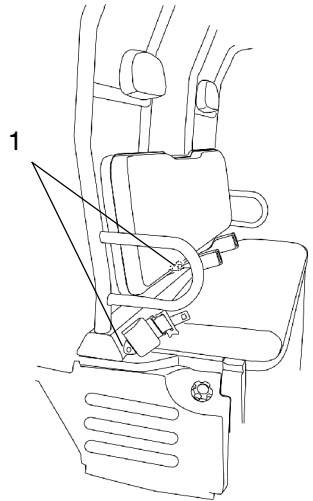
Inspect all three seat belts for proper operation before each use of the vehicle.

1. Push the latch plate into the buckle until it clicks. The latch plate must slide smoothly into the buckle. A click indicates that it's securely latched.
2. Push the red button in the middle of the buckle to make sure it releases freely.
3. Check the belt webbing for wear, cuts or damage. If any irregularities are found, have the seat belt system checked and/or replaced by an authorized Polaris dealer.

The *RANGER* seat belt is adjustable and should be adjusted for both the operator and passenger before driving. Although having the belt at 30° is typical for many people, it will not accommodate all body sizes and shapes. *Make sure the seat belt is adjusted to the lowest possible lap position before riding.*

1. To adjust, loosen the bolts (1).
2. Reposition both the buckle and retractor. Tighten the bolts.

**NOTE:** The center belt does not self adjust. Before riding, pull on the strap to secure the belt on the lap of the center passenger.



## **⚠** WARNING

Failure to follow the age recommendations for this vehicle could result in serious injury or death. No one under the age of 16 may operate this vehicle. No one under the age of 5 may ride as a passenger in this vehicle.

# MAINTENANCE AND LUBRICATION

## Tires

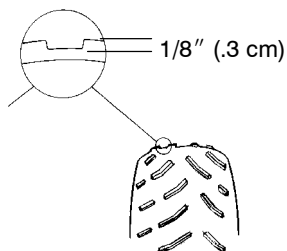
### **⚠ WARNING**

Operating your vehicle with worn tires will increase the possibility of skidding, loss of control and an accident, which could result in serious injury or death. Always replace tires when the tread depth measures 1/8" (.3 cm) or less.

Improper tire inflation or the use of non-standard size or type of tires may adversely affect vehicle handling, which could result in vehicle damage or personal injury. Always maintain proper tire pressure. When replacing tires, always use original equipment size and type.

### **Tire Tread Depth**

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



### **Axle and Wheel Nut Torque Specifications**

Inspect the following items occasionally for tightness, and if they've been loosened for maintenance service.

<b>Location</b>	<b>Specification</b>
Front Wheel Nuts	35 ft. lbs. (47 Nm)
Rear Wheel Nuts	35 ft. lbs. (47 Nm)
Front Spindle Nut	70 ft. lbs. (95 Nm)
Center and Rear Hub Retaining Nuts	110 ft. lbs. (150 Nm)

# MAINTENANCE AND LUBRICATION

## Tires

### **⚠ WARNING**

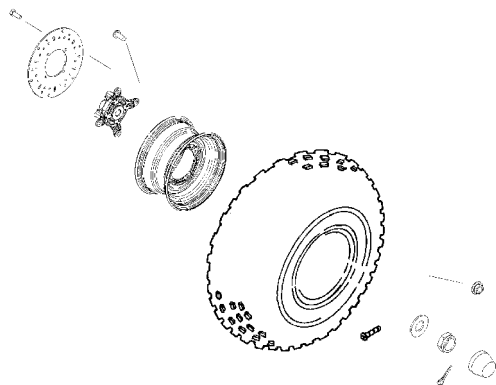
Improperly installed wheels can adversely affect tire wear and vehicle handling, which can result in serious injury or death. Always ensure that all nuts are torqued to specification. Do not service axle nuts that have a cotter pin installed. See your Polaris dealer.

### **Wheel Removal**

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

### **Wheel Installation**

1. With the transmission in gear and the parking brake locked, place the wheel in the correct position on the wheel hub. Be sure the valve stem is toward the outside and rotation arrows on the tire point toward forward rotation.
2. Attach the wheel nuts and washers and finger tighten.
3. Carefully lower the vehicle to the ground.
4. Torque the wheel nuts according to the specifications on page 90.



# MAINTENANCE AND LUBRICATION

## 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.

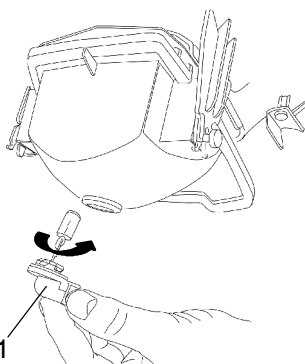
Hot components can cause serious burns to skin. Do not service the headlamps until they've cooled sufficiently.

### Headlight Lamp Replacement

1. Open the hood.
2. Unplug the headlamp from the wiring harness (1). Be sure to pull on the connector, not on the wiring.
3. Turn the lamp counterclockwise to remove it.
4. Install the new lamp.

**NOTE:** Make sure the tab on the lamp locates properly in the housing.

5. Reinstall the harness assembly into the headlight assembly.

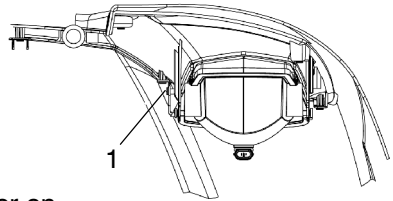


# MAINTENANCE AND LUBRICATION

## Lights

### Headlight Beam Adjustment

1. Place the vehicle on a level surface with the headlight approximately 25 ft. (7.6 m) from a wall.
2. Measure the distance from the floor to the center of the headlight and make a mark on the wall at the same height.
3. Start the engine and switch on the headlight.
4. Observe the headlight aim. The most intense part of the headlight beam should be aimed 8" (20.3 cm) below the mark placed on the wall in step 2.



**NOTE:** Include the weight of a rider on the seat while performing this step.

5. Adjust the beam to the desired position by turning the adjustment screw (1).

### Brake Lights

When the brake pedal is depressed, the console brake light comes on. Check the brake light before each ride.

1. Turn the ignition switch to the ON position.
2. Depress the brake pedal. The brake light should come on after about 10mm (0.4 in.) of pedal travel. If the light doesn't come on, check the bulb.

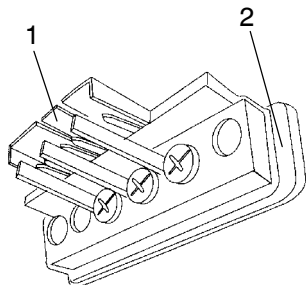


# MAINTENANCE AND LUBRICATION

## Lights

### Indicator Lamp Replacement

1. Lift the hood.
2. Reach in behind the console panel and lift the release (1) to unplug the light from the harness.
3. Using a flathead screwdriver, press on the tab (2) on the top of the light to remove the indicator light assembly from the console panel.
4. Using a screwdriver, turn the light that needs to be replaced 1/4 turn counterclockwise.
5. Grip the light with a needle nose plier and remove the light from the assembly.
6. Install the new light and use a small flat head screwdriver to seat it into place, 1/4 turn clockwise.
7. Snap the assembly back into the console panel and reconnect the harness.
8. Close the hood.



### Tool Kit

To help you perform routine maintenance, a tool kit is provided with your vehicle. Keep the tool kit with your vehicle at all times.

- A screwdriver
- An open-end wrench (8-10 mm)
- An open-end wrench (12-14 mm)
- A tire pressure gauge
- A spark plug wrench and handle
- A spanner wrench (for shock adjustment)

**NOTE:** Additional tools will be necessary to perform routine maintenance.

# MAINTENANCE AND LUBRICATION

## Cleaning Your *RANGER*

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

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

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

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

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

# MAINTENANCE AND LUBRICATION

## Storage

If your vehicle is to be placed in extended or off season storage, the following steps should be taken to preserve its condition.

1. Perform all necessary repairs and thoroughly clean the vehicle.
2. Remove the spark plug and pour approximately one ounce of Premium 4 oil into the cylinder. Operate the starter for a few seconds and reinstall the spark plug.
3. Remove the battery. Store it in a cool, dry place out of the sun.
4. Lubricate suspension pivot points, lower steering post and rear axle fittings.
5. Drain the engine side cover (4X4).
6. Block the vehicle so all tires are suspended off the ground.
7. Spray oil on all unpainted metal surfaces to prevent rusting. Avoid getting oil on rubber parts or in the brakes.
8. Lubricate all cables.
9. Tie a plastic bag over the exhaust pipe and air cleaner inlet to prevent moisture or small animals from entering.
10. Cover the vehicle with a canvas cover. Do not use plastic or coated materials since they do not allow ventilation for the vehicle.

# MAINTENANCE AND LUBRICATION

## Removal from Storage

1. Check the battery electrolyte level and charge the battery if necessary. Install it in the vehicle. Make sure the battery vent hose is routed properly and that it's not pinched or restricted in any way.
2. Make sure the spark plug is tight.
3. Fill the fuel tank with fuel.
4. Check all the points listed in the Daily Pre-Ride Inspection section on page 33.

**NOTE:** Tightness of the bolts, nuts and other fasteners should be checked by an authorized Polaris dealer.

5. Lubricate at the intervals outlined in the Periodic Maintenance Chart beginning on page 53.

## **WARNING**

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

# MAINTENANCE AND LUBRICATION

## Battery

Keep the battery terminals and connections free of corrosion. If cleaning is necessary, remove the corrosion with a stiff wire brush. Wash with a solution of one tablespoon baking soda and one cup water. Rinse well with tap water and dry off with clean shop towels. Coat the terminals with dielectric grease or petroleum jelly.

Be careful not to allow cleaning solution or tap water into the 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.**

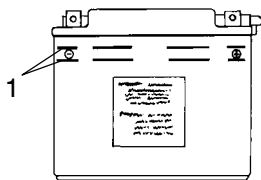
# MAINTENANCE AND LUBRICATION

## Battery

### Replenishing Battery Fluid (Conventional Battery)

A poorly maintained battery will deteriorate rapidly. Check the battery fluid level often. The fluid level should be kept between the upper and lower level marks (1).

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

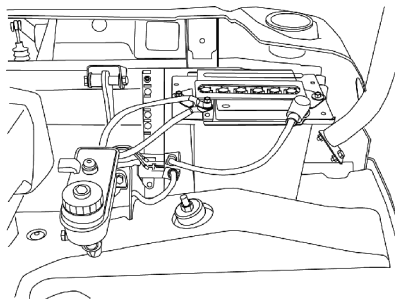


### **⚠ WARNING**

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. Open the hood.
2. Remove the battery vent tube from the battery.
3. Disconnect the black (negative) battery cable first.
4. Disconnect the red (positive) battery cable next.
5. Lift the battery out of the vehicle, being careful not to tip it sideways and spill any 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 AND LUBRICATION

## Battery

### Battery Installation

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

**NOTE:** When installing a new battery, make sure it's fully charged prior to its initial use. 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.

### Battery Storage

When the vehicle is placed in storage for three months or more, the battery should be removed, stored out of the sun in a cool, dry place and tested monthly. Before reusing, take the battery to your dealer for testing and recharging.

# POLARIS PRODUCTS

Part No.	Description
<b>Engine Lubricant</b>	
2870791	Fogging Oil (12 oz. Aerosol)
2871281	Premium 4 Synthetic 0W-40 (4-Cycle) Engine Oil (qt.)
2871844	Premium 4 Synthetic 0W-40 (4-Cycle) Engine Oil (gal.)
<b>Gearcase / Transmission Lubricants</b>	
2873602	Premium AGL Synthetic Gearcase Lube (qt.)
2873603	Premium AGL Synthetic Gearcase Lube (gal.)
2871653	Premium ATV Angle Drive Fluid (8 oz.)
2872276	Premium ATV Angle Drive Fluid (2.5 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>	
2871322	Premium All Season Grease (3 oz. cartridge)
2871423	Premium All Season Grease (14 oz. cartridge)
2871460	Starter Drive Grease
2871515	Premium U-Joint Lube (3 oz.)
2871551	Premium U-Joint Lube (14 oz.)
2871312	Grease Gun Kit
2871329	Dielectric Grease (Nyogel™)
2872073	Chain Lube (6.25 oz. aerosol)
2872348	Chain Lube (16 oz. aerosol)
<b>Coolant</b>	
2871323	60/40 Coolant (gal.)
2871534	60/40 Coolant (qt.)
<b>Additives / Miscellaneous</b>	
2872889	Brake and Clutch Cleaner
2871326	Carbon Clean Plus (12 oz.)
2870652	Fuel Stabilizer (16 oz.)
2870990	DOT3 Brake Fluid
2872893	Engine Degreaser
2871956	LOCTITE 565 Thread Sealant



# SPECIFICATIONS

<b>RANGER TM</b>	
Gross Vehicle Weight	2400 lbs. (1089 kg)
Fuel Capacity	8.5 gal. (32.2 l)
Towing Capacity	1000 lbs. (454 kg)
Max. Cargo Box Load	750 lbs. (340 kg)
Overall Length	113 in. (282 cm)
Overall Width (box)	60 in. (152.4 cm)
Overall Width (tires)	58 in. (147.3 cm)
Overall Height	51 in. (129.5 cm)
Wheelbase	76 in. (193 cm)
Ground Clearance	7.2 in. (183 mm)
Dry Weight	1050 lbs. (476 kg)
Cargo Box (L x W x H)	58 x 42 x 10 in. (147 x 106.7 x 25.4 cm)
Min. Turning Radius	132 in. (335.3 cm)
Engine Oil Capacity	1.64 qts. (1.55 l)
Coolant Capacity	NA
Engine	2 valve 4 stroke twin cylinder
Displacement	653 cc
Bore x Stroke	2-80 x 65
Pilot Jet	50
Main Jet	140
Needle Jet	NA
Jet Needle	NA
Air Screw	2.0
Alternator Output	360 W
Compression Ratio	8.3
Starting System	Electric
Carburetor	27 mm Nikki
Ignition System	Magneto
Ignition Timing	26° @ 3600 rpm
Spark Plug	BPR4EY

# SPECIFICATIONS

## **RANGER TM**

Lubrication System	Full Pressure
Engine Oil	0W/40
Driving System Type	PVT
Shift Type	Single Lever (console)
Gear Reduction - Low	NA
Gear Reduction - Reverse	6.84:1
Gear Reduction - High	4.71:1
Drive Ratio - Front	NA
Drive Ratio - Final	3.70:1
Tire Size - Front	25 x 10 - 12
Tire Size - Rear	25 x 11 - 12
Tire Pressure - Front	10 psi
Tire Pressure - Rear	10 psi
Brakes, Front/Rear	Foot Activated, 4 wheel hydraulic disc
Brake, Parking	Foot activated, mechanical
Hood Headlight	2 dual beam, 35W, quartz/halogen
Taillights	2 single beam, 5W
Brake Light	2 single beam, 5W
Indicator Light	1.0 W

**NOTE:** See your Polaris dealer for jetting and clutching specifications.

# SPECIFICATIONS

<b>RANGER 2x4</b>	
Gross Vehicle Weight	2500 lbs. (1135 kg)
Fuel Capacity	8.5 gal. (32.2 l)
Towing Capacity	1400 lbs. (636 kg)
Max. Cargo Box Load	850 lbs. (386 kg)
Overall Length	113 in. (282 cm)
Overall Width (box)	60 in. (152.4 cm)
Overall Width (tires)	58 in. (147.3 cm)
Overall Height	75 in. (190.5 cm)
Wheelbase	76 in. (193 cm)
Ground Clearance	11.5 in. (29.2 cm)
Dry Weight	1105 lbs. (501 kg)
Cargo Box (L x W x H)	58 x 42 x 10 in. (147 x 106.7 x 25.4 cm)
Min. Turning Radius	132 in. (335.3 cm)
Engine Oil Capacity	2 qts. (2.1 l)
Coolant Capacity	2.25 qts. (2.4 l)
Engine	4 valve 4 stroke single cylinder with counter balance
Displacement	499 cc
Bore x Stroke	92 x 75
Pilot Jet	42.5
Main Jet	135
Needle Jet	P-6 (829)
Jet Needle	4MB32-3
Air Screw	2.5
Alternator Output	250 W
Compression Ratio	10.2:1
Starting System	Electric
Carburetor	34 mm CV Mikuni
Ignition System	CDI
Ignition Timing	30° @ 5000 rpm
Spark Plug	NGK BKR5E

# SPECIFICATIONS

## ***RANGER 2x4***

Lubrication System	Dry Sump
Engine Oil	0W/40
Driving System Type	PVT
Shift Type	Single Lever (console)
Gear Reduction - Low	8.71:1
Gear Reduction - Reverse	5.9:1
Gear Reduction - High	3.83:1
Drive Ratio - Front	NA
Drive Ratio - Final	3.70:1
Tire Size - Front	25 x 10 - 12
Tire Size - Rear	25 x 11 - 12
Tire Pressure - Front	8-12 psi
Tire Pressure - Rear	8-12 psi
Brakes, Front/Rear	Foot activated, 4 wheel hydraulic disc
Brake, Parking	Foot activated, mechanical
Hood Headlight	2 dual beam, 35W, quartz/halogen
Taillights/Brake Light	5W
Indicator Light	1.0 W

**NOTE:** See your Polaris dealer for jetting and clutching specifications.

# SPECIFICATIONS

<b>RANGER 4X4</b>	
Gross Vehicle Weight	2700 lbs. (1226 kg)
Fuel Capacity	8.5 gal. (32.2 l)
Towing Capacity	1500 lbs. (681 kg)
Max. Cargo Box Load	1000 lbs. (454 kg)
Overall Length	113 in. (282 cm)
Overall Width (box)	60 in. (152.4 cm)
Overall Width (tires)	58 in. (147.3 cm)
Overall Height	75 in. (190.5 cm)
Wheelbase	76 in. (193 cm)
Ground Clearance	11.5 in. (29.2 cm)
Dry Weight	1185 lbs. (537 kg)
Cargo Box (L x W x H)	58 x 42 x 10 in. (147 x 106.7 x 25.4 cm)
Min. Turning Radius	132 in. (335.3 cm)
Engine Oil Capacity	2 qts. (2.1 l)
Coolant Capacity	2.25 qts. (2.4 l)
Engine	4 valve 4 stroke single cylinder with counter balance
Displacement	499 cc
Bore x Stroke	92 x 75
Pilot Jet	42.5
Main Jet	135
Needle Jet	P-6 (829)
Jet Needle	4MB32-3
Air Screw	2 1/2
Alternator Output	250 W
Compression Ratio	10.2:1
Starting System	Electric
Carburetor	34 mm CV Mikuni
Ignition System	CDI
Ignition Timing	30° @ 5000 rpm
Spark Plug	NGK BKR5E

# SPECIFICATIONS

## **RANGER 4X4**

Lubrication System	Dry Sump
Engine Oil	0W/40
Driving System Type	PVT
Shift Type	Single Lever (console)
Gear Reduction - Low	8.71:1
Gear Reduction - Reverse	5.9:1
Gear Reduction - High	3.83:1
Drive Ratio - Front:	3.83:1
Drive Ratio - Final	3.70:1
Tire Size - Front	25 x 10 - 12
Tire Size - Rear	25 x 11 - 12
Tire Pressure - Front	8-12 psi
Tire Pressure - Rear	8-12 psi
Brakes, Front/Rear	Foot Activated, 4 wheel hydraulic disc
Brake, Parking	Foot activated, mechanical
Hood Headlight	2 dual beam, 35W, quartz/halogen
Taillights	2 single beam, 5W
Brake Light	2 single beam, 5W
Indicator Light	1.0 W

**NOTE:** See your Polaris dealer for jetting and clutching specifications.

# TROUBLESHOOTING

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

## Engine Doesn't Turn Over

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

## Engine Turns Over, Fails to Start

Possible Cause	Solution
Out of fuel	Refuel
Clogged fuel filter	Inspect and clean or replace
Water is present in fuel	Drain the fuel system and refuel
Old or non-recommended fuel	Replace with new fuel
Fouled or defective spark plug(s)	Inspect plug(s), replace if necessary
No spark to spark plug	Inspect plug(s), replace if necessary
Crankcase filled with water or fuel	Immediately see your Polaris dealer
Overuse of choke	Inspect, clean and/or replace spark plugs
Clogged fuel filter	Replace the filter
Low battery voltage	Recharge battery to 12.5 VDC
Mechanical failure	See your Polaris dealer

## Engine Pings or Knocks

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

# TROUBLESHOOTING

## Engine Backfires

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

## Engine Runs Irregularly, Stalls or Misfires

Possible Weak Spark Cause	Solution
Fouled or defective spark plugs	Inspect, clean and/or replace spark plugs
Worn or defective spark plug wires	See your Polaris dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with new fuel
Low battery voltage	Recharge battery to 12.5 VDC
Kinked or plugged fuel vent line	Inspect and replace
Incorrect fuel	Replace with recommended fuel
Clogged air filter	Inspect and clean or replace
Other mechanical failure	See your Polaris dealer
Possible Lean Fuel Mixture 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 Polaris dealer
Possible Rich Fuel Mixture 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 Polaris dealer



# TROUBLESHOOTING

## Engine Stops or Loses Power

Possible Cause	Solution
Out of fuel	Refuel
Kinked or plugged fuel vent line	Inspect and replace
Water present in fuel	Replace with new fuel
Overuse of choke	Inspect, clean and/or replace spark plugs
Fouled or defective spark plugs	Inspect, clean and/or replace spark plugs
Worn or defective spark plug wires	See your Polaris dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs
Loose ignition connections	Check all connections and tighten
Low battery voltage	Recharge battery to 12.5 VDC
Incorrect fuel	Replace with recommended fuel
Clogged air filter	Inspect and clean or replace
Other mechanical failure	See your Polaris dealer
Overheated engine	Clean radiator screen and core if equipped Clean engine exterior See your Polaris dealer

# WARRANTY

## LIMITED WARRANTY

Polaris Sales Inc., 2100 Highway 55, Medina, MN 55340, gives a SIX MONTH LIMITED WARRANTY on all components of the Polaris *RANGER* 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 transferrable 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. 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 VEHICLE 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 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 vehicle that has been altered structurally, 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 caused by 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 vehicle. The exclusive remedy for breach of this warranty shall be, at Polaris' exclusive option, repair or replacement of any defective materials, or components or products. **THE REMEDIES SET FORTH IN THIS WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. POLARIS SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE, OR OTHER TORT OR OTHERWISE.** Some states do not permit the exclusion or limitation of incidental or consequential damages or implied warranties, so the above limitations or exclusions may not apply to you if inconsistent with controlling state law.

# WARRANTY

## LIMITATIONS OF WARRANTIES AND REMEDIES

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

## HOW TO OBTAIN WARRANTY SERVICE

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

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

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

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

## Lubricants

1. Mixing oil brands or using non-recommended oil may cause engine damage. We recommend the use of Polaris engine oil.
2. Damage resulting from the use of non-recommended lubricants may not be covered by warranty.

## SPARK ARRESTOR

Polaris warrants that the spark arrestor in this vehicle will meet the efficiency requirements of 43 CFR 8340.1(c) for at least 1000 hours when subjected to normal use and when maintenance and installation are in accordance with Polaris recommendations.

# WARRANTY

## Exported Vehicles

EXCEPT WHERE SPECIFICALLY REQUIRED BY LAW, THERE IS NO WARRANTY OR SERVICE BULLETIN COVERAGE ON THIS VEHICLE IF IT IS SOLD OUTSIDE THE COUNTRY OF THE SELLING DEALER'S AUTHORIZED LOCATION.

This policy does not apply to vehicles that have received authorization for export from Polaris Industries. Dealers may not give authorization for export. You should consult an authorized dealer to determine this vehicle's warranty or service bulletin coverage if you have any questions.

This policy does not apply to vehicles registered to government officials or military personnel on assignment outside the country of the selling dealer's authorized location.

This policy does not apply to Safety Recalls.

## How to Get Service

In the Country where your vehicle was purchased:

Warranty or Service Bulletin repairs must be done by an authorized Polaris dealer. If you move or are traveling within the country where your vehicle was purchased, Warranty or Service Bulletin repairs may be requested from any authorized Polaris dealer who sells the same line as your vehicle.

Outside the Country where your vehicle was purchased:

If you are traveling temporarily outside the country where your vehicle was purchased, you should take your vehicle to an authorized Polaris dealer. You must show the dealer photo identification from the country of the selling dealer's authorized location as proof of residence. Upon residence verification, the servicing dealer will be authorized to perform the warranty repair.

If You Move:

If you move to another country, be sure to contact Polaris Customer Assistance and the customs department of the destination country before you move. Vehicles importation rules vary considerably from country to country. You may be required to present documentation of your move to Polaris Industries in order to continue your warranty coverage. You may also be required to obtain documentation from Polaris Industries in order to register your vehicle in your new country.

## How to Get Service

If Purchased From A Private Party:

If you purchase a Polaris product from a private citizen outside of the country in which the vehicle was originally purchased, all warranty coverage will be denied.

## Notice

If your vehicle is registered outside of the country where it was purchased, and you have not followed the procedure set out above, your vehicle will no longer be eligible for warranty or service bulletin coverage of any kind. (Vehicles registered to Government officials or military personnel on assignment outside of the country where the vehicle was purchased will continue to be covered by the basic warranty.)

For questions call Polaris Customer Assistance:

United States: 1-763-417-8650

Canada: 1-204-925-7100

# WARRANTY

## California Emission Control Warranty Statement Your Warranty Rights and Obligations

The California Air Resources Board and Polaris Industries Inc., 2100 Highway 55, Medina, Minnesota 55340 (herein "POLARIS") are pleased to explain the emission control system warranty on your 2005 and later Large Spark Ignition Engine (herein "LSI engine"). "The California Air Resources Board has designated this engine for this vehicle as an LSI engine which produces 25 and greater horsepower and the vehicle has a six (6) or four (4)-wheel drive and/or a round steering wheel." In California, this LSI engine must be designed, built and equipped to meet the state's stringent anti-smog standards. Polaris must warrant the emission control system on your LSI engine for the period of time described below, provided there has been no abuse, neglect or improper maintenance of your LSI engine.

Your emission control system includes parts such as the carburetor and the ignition system. Also included may be hoses, connectors and other emission-related assemblies.

Where a warrantable condition exists, POLARIS will repair your LSI engine at no cost to you, including diagnosis, parts and labor.

### Manufacturer's Warranty Coverage:

The 2005 and later LSI engines are warranted for two (2) years. If any emission related part on your LSI engine is defective, the part will be repaired or replaced by POLARIS.

### Owner's Warranty Responsibilities:

- As the LSI engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Safety and Maintenance Manual (herein "Owner's Manual"). POLARIS recommends that you retain all receipts covering maintenance on your LSI engine, but POLARIS cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.
- As the LSI engine owner, you should, however, be aware that POLARIS may deny you warranty coverage if your LSI engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.
- You are responsible for presenting your LSI engine to a dealer authorized by POLARIS as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact the Polaris Warranty Department at 1-763-417-8650.

### Limited Warranty

#### California Only

POLARIS warrants to the owner of 2005 and later LSI engines that the LSI engine (1) has been designed, built, and equipped at the time of manufacture so as to conform with the applicable regulations of the California Air Resources Board and, (2) is free from defects in materials and workmanship which may cause it to fail to conform with those regulations as applicable according to the terms and conditions stated below.

# WARRANTY

## California Emission Control Warranty Statement

### Warranty Period

This warranty period begins on the date, which the LSI engine is delivered, to the original retail purchaser and ends two years after that date. During this two year period POLARIS warrants to the original retail purchaser and each subsequent purchaser that the LSI engine is free from defect in material and workmanship that can cause the failure of a warranted emission-related part.

### What is Covered Under This Warranty

Repair and/or replacement of any warranted emission-related part will be performed at no charge provided the work is performed at an authorized dealer. There will also be no charge for any diagnostic labor performed at an authorized dealer, which leads to the determination that a warranted emission-related part is defective.

Any warranted part which is not scheduled for replacement as required maintenance, or which is scheduled only for regular inspection to the effect of "repair or replace as necessary" shall be warranted for the warranty period. Any warranted part which is scheduled for replacement as required maintenance shall be warranted for the period of time up to the first scheduled replacement of that part. This warranty shall apply only towards the repair, replacement, and/or adjustment of the component parts listed below.

### Emission-Related Parts Covered Under This Warranty

- (1) Fuel Metering System
  - (i) Carburetor and internal parts (and/or pressure regulator or fuel injection system).
  - (ii) Air/fuel ratio feedback and control system, if applicable.
  - (iii) Cold start enrichment system, if applicable.
  - (iv) Regulator assy (gaseous fuel, if applicable)
- (2) Air Induction System
  - (i) Intake manifold, if applicable
  - (ii) Air filter
- (3) Ignition System
  - (i) Spark plugs.
  - (ii) Magneto or electronic ignition system.
  - (iii) Spark advance/retard system, if applicable.
- (4) Exhaust manifold, if applicable
- (5) Miscellaneous Items Used in Above Systems
  - (i) Electronic controls, if applicable
  - (ii) Hoses, belts, connectors, and assemblies.
  - (iii) Filter lock assy (gaseous fuel, if applicable)

If an authorized dealer determines that other LSI engine components have been damaged due to the failure of a warranted emission-related part during the warranty period, POLARIS will repair and/or replace the necessary components.

# WARRANTY

## California Emission Control Warranty Statement

### What is Not Covered Under This Warranty

This warranty does not cover any emission-related part, which malfunctions, fails, or is damaged due to alterations and/or modifications such as changing, adding, or removing parts.

When the LSI engine is being serviced under warranty, POLARIS and any of its authorized dealers shall not be liable for any loss of use of the LSI engine, for any damage to goods, or loss of time or inconvenience. This limited warranty also does not apply to any emission-related part which malfunctions, fails, or is damaged due to failure to follow the maintenance and operating instructions specified in the 2005 and later Owner's Manual including:

- (a) Improper or inadequate maintenance of any warranted emission-related part
- (b) Improper installation, adjustment, or repair of the LSI engine or any warranted emission-related part unless performed by an authorized dealer
- (c) Failure to use recommended fuel as specified in the 2005 and later Owner's Manual
- (d) Repairs and diagnosis performed outside of an authorized dealer
- (e) Use of parts which are not authorized by POLARIS

### Maintenance Schedule

The LSI engine owner is responsible for having all scheduled inspection and maintenance services performed at the intervals specified in the 2005 and later Owner's Manual and to retain records of these services as having been performed. These records should be transferred to each subsequent owner of the LSI engine. POLARIS cannot deny a claim solely because there are no records of scheduled maintenance, however, a warranty claim may be denied if the failure to perform the scheduled maintenance and inspection resulted in the failure of a warranted emission-related part. As a minimum, the LSI engine owner is responsible for the scheduled inspection and maintenance described below which are based on the procedures described in the Owner's Manual.

### NOTE:

- ▶ Perform these procedures more often for vehicles subjected to severe use.
- E Emission Control System Service (California)
- Have an authorized Polaris dealer perform these services.

# WARRANTY

## California Emission Control Warranty Statement Maintenance Schedule

Item		Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Miles (Km)	
▶ E	Engine oil level	-	Pre-Ride	-	Make adjustments as needed. See Pre-Ride Checklist on page 33.
▶ E	Air filter, pre-filter	-	Daily	-	Inspect; clean often
▶ E	Air box sediment tube	-	Daily	-	Drain deposits when visible
▶ E	Air filter, main element	-	Weekly	-	Inspect; replace as needed
▶ E	Engine breather filter (if equipped)	25 H	Monthly	-	Inspect; replace if necessary
▶ E	Engine oil change (break-in)	25 H	1 M	-	Perform a break-in oil change at one month
■ E	Throttle Cable/ETC Switch	50 H	6 M	-	Inspect; adjust; lubricate; replace if necessary
■ E	Choke cable	50 H	6 M	-	Inspect; adjust; lubricate; replace if necessary
E	Carburetor air intake ducts/flange	50 H	6 M	-	Inspect ducts for proper sealing/air leaks
▶ E	Engine oil change	100 H	6 M	-	Perform a break-in oil change at 25 hours/one month
▶ E	Oil filter change	100 H	6 M	-	Replace with oil change
▶ E	Oil tank vent hose	100 H	12 M	-	Inspect routing, condition
■ E	Valve clearance	100 H	12 M	-	Inspect; adjust
■ E	Fuel system	100 H	12 M	-	Check for leaks at tank cap, lines, fuel valve, filter, pump, carburetor; replace lines every two years
■ E	Fuel filter	100 H	12 M	-	Replace yearly
■ E	Spark plug	100 H	12 M	-	Inspect; replace as needed
■ E	Ignition Timing	100 H	12 M	-	Inspect



# **WARRANTY**

## **California Emission Control Warranty Statement Repair and Replacement of Emission-Related Parts**

It is recommended that only LSI engine replacement parts, which have been authorized and approved by POLARIS, should be used in the performance of any warranty maintenance or repairs of emission-related parts. These replacement parts will be provided at no charge if the part is still under warranty.

### **How to File a Warranty Claim/Where to Get Warranty Service**

All repairs qualifying under this Limited Warranty must be performed by a dealer who sold you the LSI engine or a dealer authorized by POLARIS. In the event that any emission-related part is found to be defective during the warranty period, you must notify the Polaris Warranty Department at 1-763-417-8650 and you will be advised of the appropriate dealer where the warranty repair is to be performed.

# WARRANTY

## U.S.A. EPA Emissions Limited Warranty

This All Terrain Vehicle (ATV) or Off Road Utility Vehicle (ORUV) emissions limited warranty is in addition to the Polaris standard limited warranty for this vehicle.

Polaris warrants that this vehicle is: (1) designed, built, and equipped to conform at the time of initial sale with the requirements of 40 CFR 1051 and, (2) free from defects in materials and workmanship that may keep it from meeting these requirements.

The emissions warranty period for this vehicle begins on the date the vehicle is delivered to the original retail purchaser and ends 30 months (2.5 years) after that date, or after 5000 km (3100 miles), whichever comes first.

This emission-related warranty covers components whose failure would increase an engine's emissions, including electronic controls, fuel injection, exhaust-gas recirculation, aftertreatment, or any other system utilized in this vehicle to control emissions. Replacing or repairing other components not covered by this emissions warranty or the standard warranty is the responsibility of the owner; including the parts, labor and other costs associated with recommended maintenance.

The exclusive remedy for breach of this limited warranty shall be, at the exclusive option of Polaris, repair or replacement of any defective materials, components or products. THE REMEDIES SET FORTH IN THIS LIMITED 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.

ALL IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO THE WARRANTY PERIOD DESCRIBED HEREIN. POLARIS 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 if it is inconsistent with the controlling state law.

This limited warranty excludes failures not caused by a defect in material or workmanship. This limited warranty does not cover damage due to accidents, abuse or improper handling, maintenance or use. This limited warranty also does not cover any engine that has been structurally altered, or any engine that has been used in racing competition. This limited warranty also does not cover physical damage, corrosion or defects caused by fire, explosions or other similar causes beyond the control of Polaris.

If you have any questions regarding your warranty rights and responsibilities, you should contact the Polaris Warranty Department at 1-763-417-8650.



# MAINTENANCE LOG

DATE	MILES (KM)	TECHNICIAN	SERVICE PERFORMED / COMMENTS

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