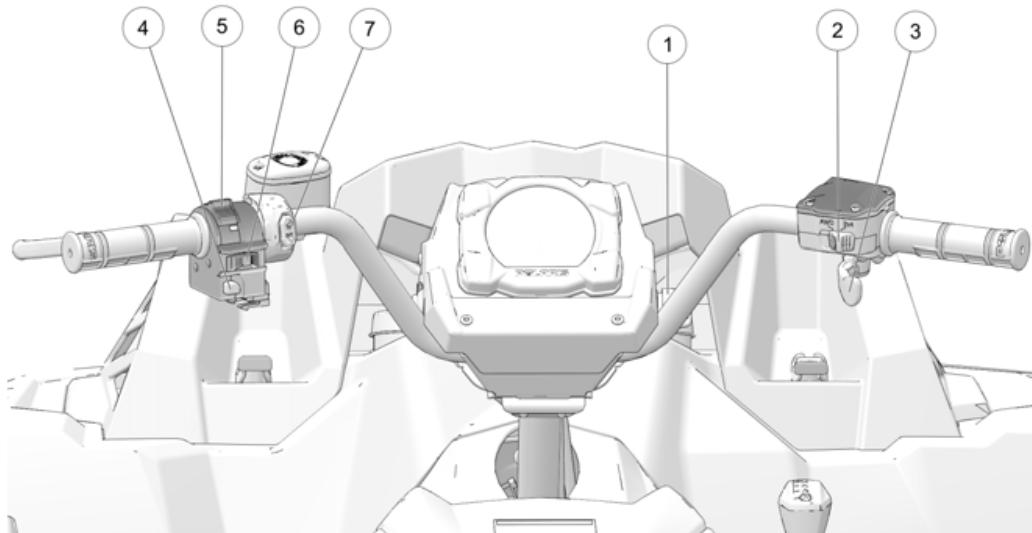


## FEATURES AND CONTROLS

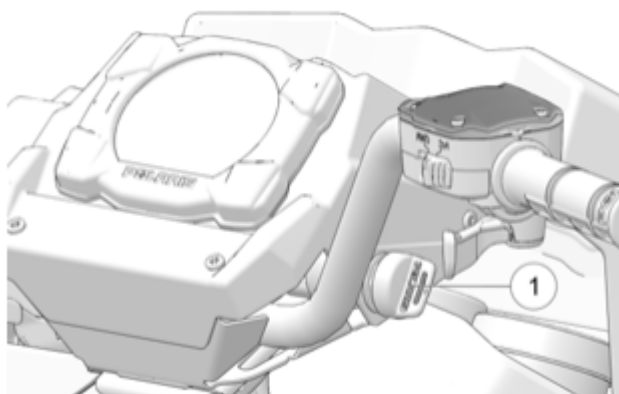
### SWITCHES



- ① Ignition Switch
- ② Throttle Lever Switch
- ③ Mode/Reverse Override Switch
- ④ Drive Line Switch
- ⑤ Headlight Switch
- ⑥ Engine Stop Switch
- ⑦ Winch Switch (if equipped)

### IGNITION SWITCH/LIGHT SWITCH

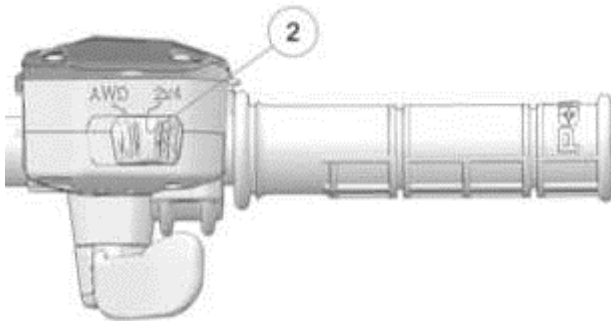
Use the ignition switch 1 to start the engine. The key can be removed from the switch when it is in the OFF position.



OFF	Turn the key to the OFF position to stop the engine. Electrical circuits are off.
RUN	Turn the key the RUN position to activate electrical components. Electrical circuits are on. Electrical equipment can be used.
START	Turn the key to the START position to engage the electric starter. See the Starting the Engine section for starting procedures.

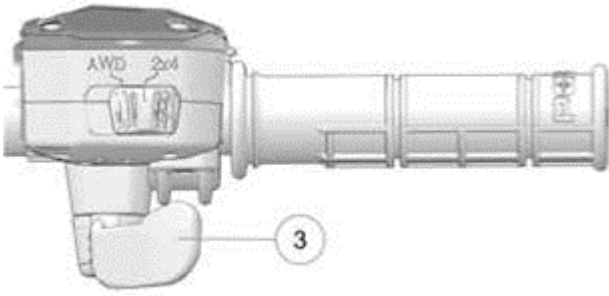
### **AWD MODE SWITCH (IF EQUIPPED)**

The AWD switch 2 controls the All Wheel Drive (AWD) system. Use this switch to engage AWD or 2X4. The vehicle automatically engages AWD when operating in reverse if the drive mode is set to AWD.



### **THROTTLE LEVER**

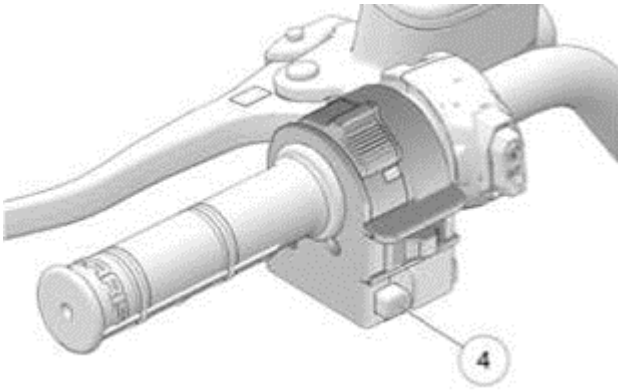
Engine speed and vehicle movement are controlled by pressing the throttle lever 3. The throttle lever is spring loaded. Engine speed returns to idle when the lever is released. This ATV is equipped with a throttle release switch, which is designed to reduce the risk of a frozen or stuck throttle.



### **ENGINE STOP SWITCH**

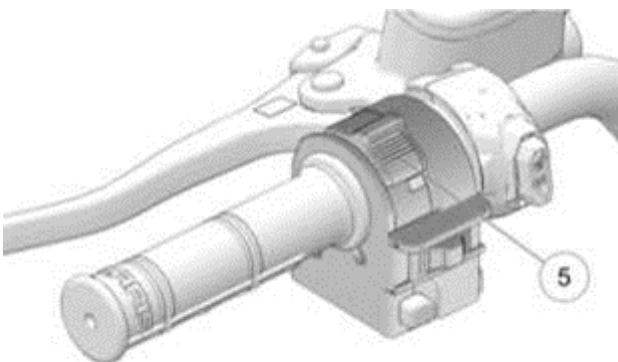
Move the stop switch 4 either left or right to the OFF position to stop the engine quickly.

Move the stop switch to the RUN position before attempting to start the engine. The engine will not start or run when the switch is off. Both the main switch and the engine stop switch will shut off all electrical power to the vehicle, including lights.



### **HEADLIGHT SWITCH**

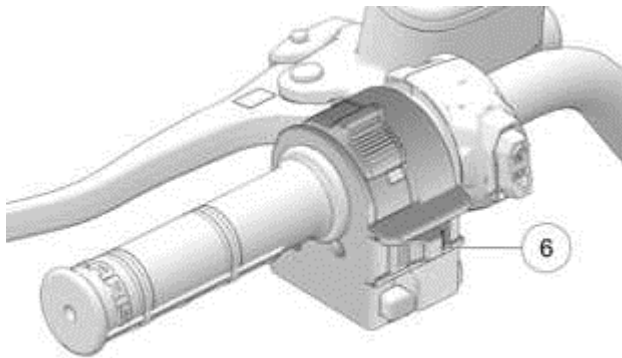
Use the headlight switch 5 to turn the lights on and off. The key must be in the ON position and the engine stop switch must be in the RUN position.



### **MODE/REVERSE OVERRIDE SWITCH**

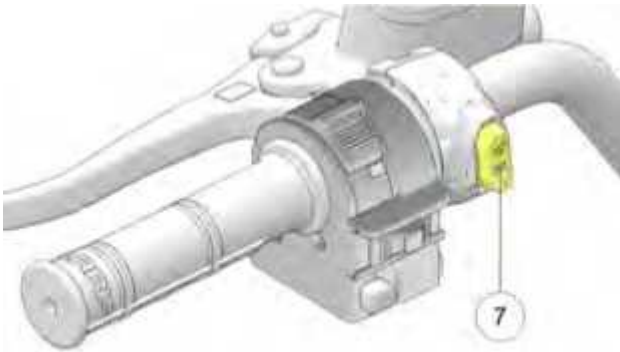
This vehicle is equipped with a reverse speed limiter system. To gain additional wheel speed while backing, release the throttle and depress the override button 6. The reverse override button also

acts as a MODE button when held down for approximately one half second. The override button will not function as a MODE button if the transmission is in reverse.



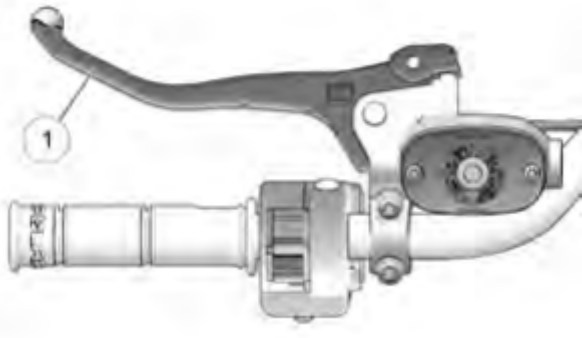
### **WINCH SWITCH**

Use the Winch Switch 7 to control the Winch (if equipped). See the Winch Guide chapter of your owner's manual for winch information.



### **BRAKE LEVER**

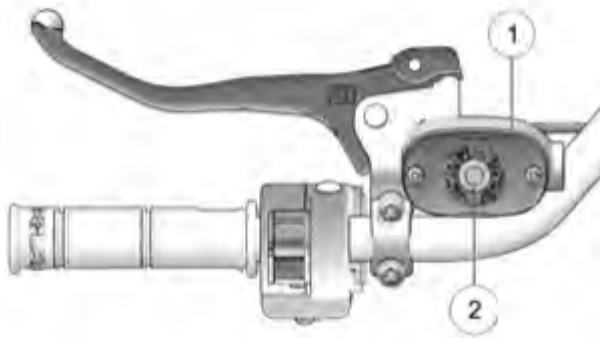
Squeeze the brake lever 1 toward the handlebar to apply the front and rear brakes. These brakes are hydraulically activated disc type brakes that are activated by only one lever. Always test brake lever travel and master cylinder fluid level before riding. When squeezed, the lever should feel firm. Any sponginess would indicate a possible fluid leak or low master cylinder fluid level, which must be corrected before riding. Contact your POLARIS dealer or other qualified service facility for proper diagnosis and repairs.



## MASTER CYLINDER/BRAKE FLUID

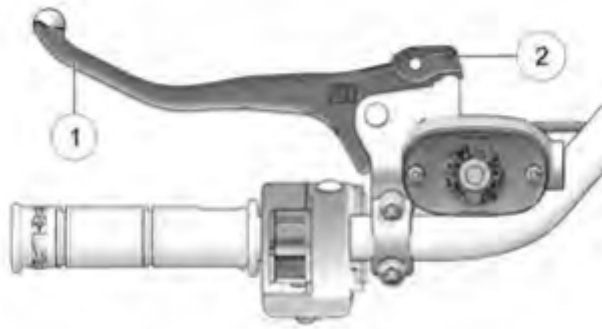
Check the brake fluid in the master cylinder before each ride.

1. Position the ATV on a level surface.
2. Position the handlebars so the master cylinder 1 is level.
3. View the brake fluid level through the indicator window 2 on the top of the master cylinder. The eye will appear dark when the fluid level is full. When fluid is low, the eye will be clear.
4. If the fluid level is low, remove the cover screws and add fluid to the fill line. Do not overfill. Use DOT 4 brake fluid only.
5. Reinstall the cover. Torque screws to in-lbs (.8 Nm).



## PARKING BRAKE

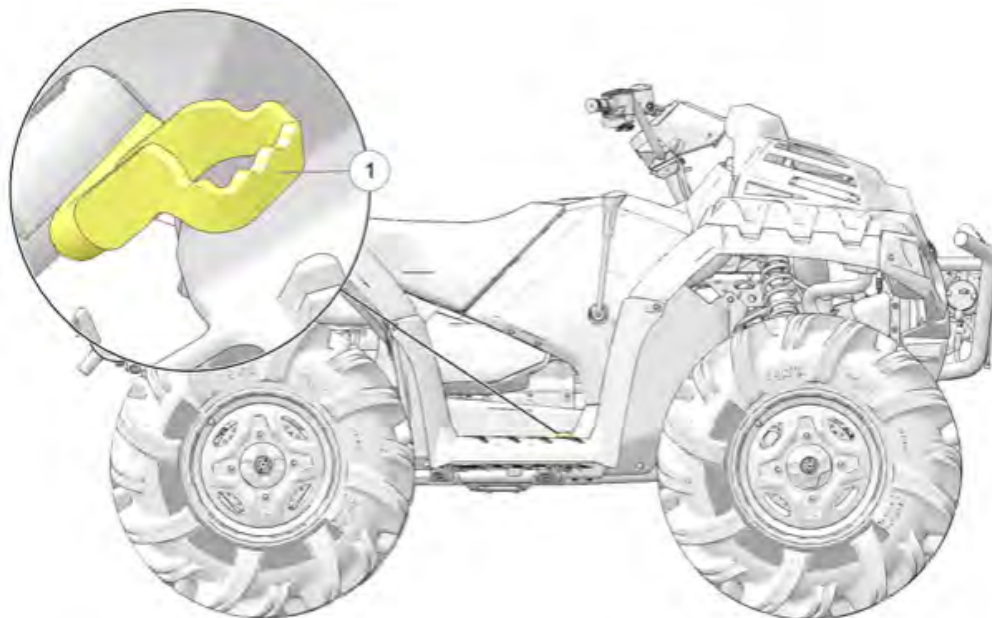
### LOCKING THE PARKING BRAKE



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

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

## AUXILIARY FOOT BRAKE



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

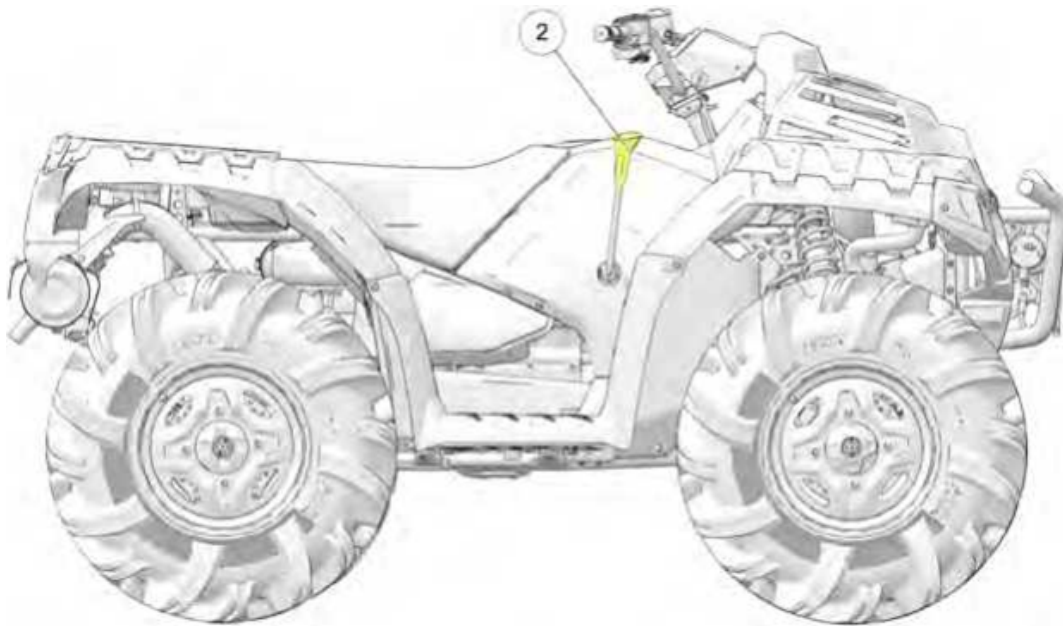
of the right footrest. Operate this brake with your right foot. If the rear wheels slide while using the auxiliary brake, *reduce* brake pedal pressure to brake the rear wheels without skidding.

### **BRAKE FLUID LEVEL**

Check the brake fluid level frequently for the auxiliary brake system. The reservoir is located under the front storage box.

Maintain the fluid level between the maximum and minimum marks. Use DOT 4 brake fluid only.

### **AUTOMATIC TRANSMISSION GEAR SELECTOR**



The transmission gear selector 2 is located on the right side of the vehicle.

**H:** High Gear

**L:** Low Gear

**N:** Neutral

**R:** Reverse

**P:** Park



To shift gears, brake to a complete stop. When the engine is idling, move the lever to the desired gear.

Whenever the ATV is left unattended, always place the transmission in PARK and lock the parking brake.

TIP To extend belt life, use low forward gear when pulling a heavy load at less than seven miles per hour for extended periods and when operating uphill at a slow speed.

## **ELECTRONIC POWER STEERING (EPS)**

Electronic power steering (EPS), if equipped, engages when the ignition key is turned to the ON position. EPS remains engaged whether the vehicle is moving or idle. See the Instrument Cluster section for EPS Warning Indicator information.

## **FUEL CAP**

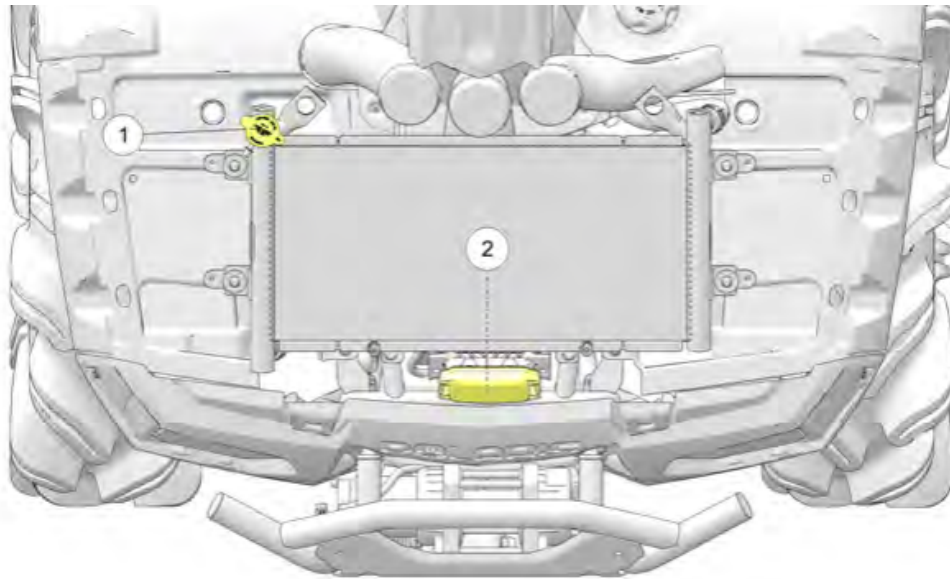
This vehicle is equipped with a digital fuel gauge that will indicate a low fuel condition. Refuel when the gauge indicates a low fuel condition.

Always refuel with the engine stopped, and outdoors or in a well ventilated area. Refuel on a level surface.



Remove the fuel tank cap to add fuel to the fuel tank. Use either leaded or unleaded gasoline with a minimum pump octane number of 87 = (R + M/2) octane. Do not use fuel with ethanol content greater than 10 percent, such as E-85 fuel.

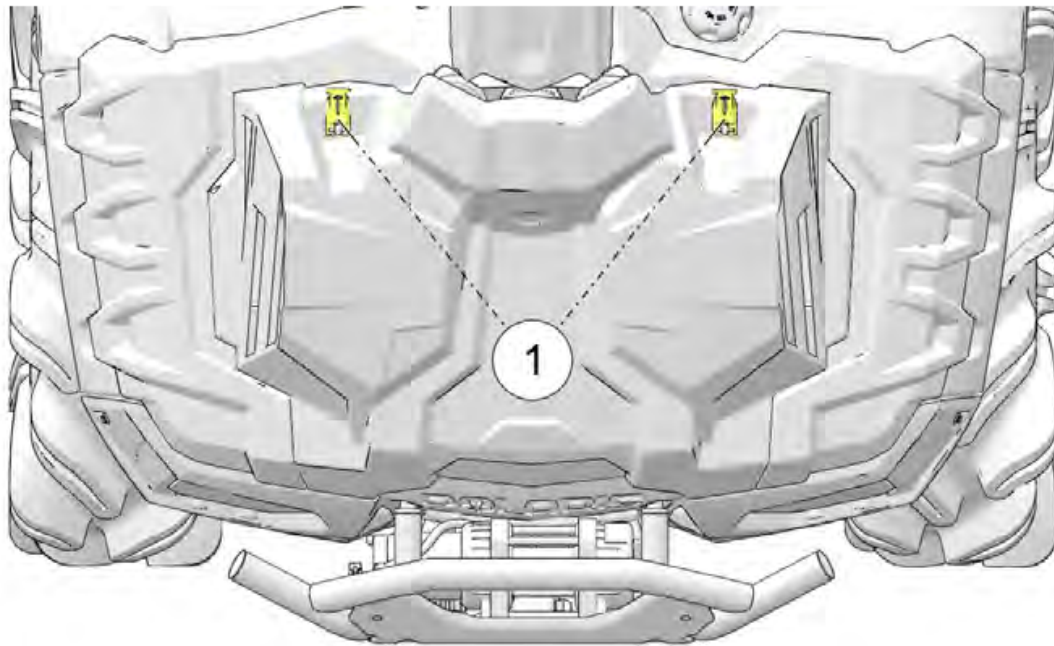
## FRONT COMPARTMENT



- ① Radiator Cap
- ② Electrical/Fuse/Relay

## FAN SHROUD

Release the front fan shroud latches and remove the shroud to gain access to the front compartment. Always reinstall the shroud and secure the latches before operating the vehicle



## **ELECTRONIC POWER STEERING (EPS)**

Electronic power steering (EPS), if equipped, engages when the ignition key is turned to the ON position. EPS remains engaged whether the vehicle is moving or idle. See the Instrument Cluster section for EPS Warning Indicator information.

## **EXTREME USE BATTERY**

An optional extreme use battery may be available for your model. If the performance of the factory-installed battery is inadequate due to operation in extreme cold or due to extended use of multiple electrical accessories, your POLARIS dealer can assist. Your dealer can provide any installation procedures that may differ for an extreme use battery

## **ALL WHEEL DRIVE SYSTEM**

The All Wheel Drive system is controlled by the Drive Line switch.

### **4X4 MODE**

When the switch is on 4X4, the ATV is four-wheel drive, and the 4X4 indicator icon in the instrument cluster display will be visible.

When in 4X4, the demand drive unit will automatically engage any time the rear wheels lose traction. When the rear wheels regain traction, the demand drive unit will automatically disengage.

There is no limit to the length of time the vehicle may remain in 4X4. The vehicle automatically engages 4X4 when operating in reverse if the switch is set to either 4X4 position.

### **2X4 MODE**

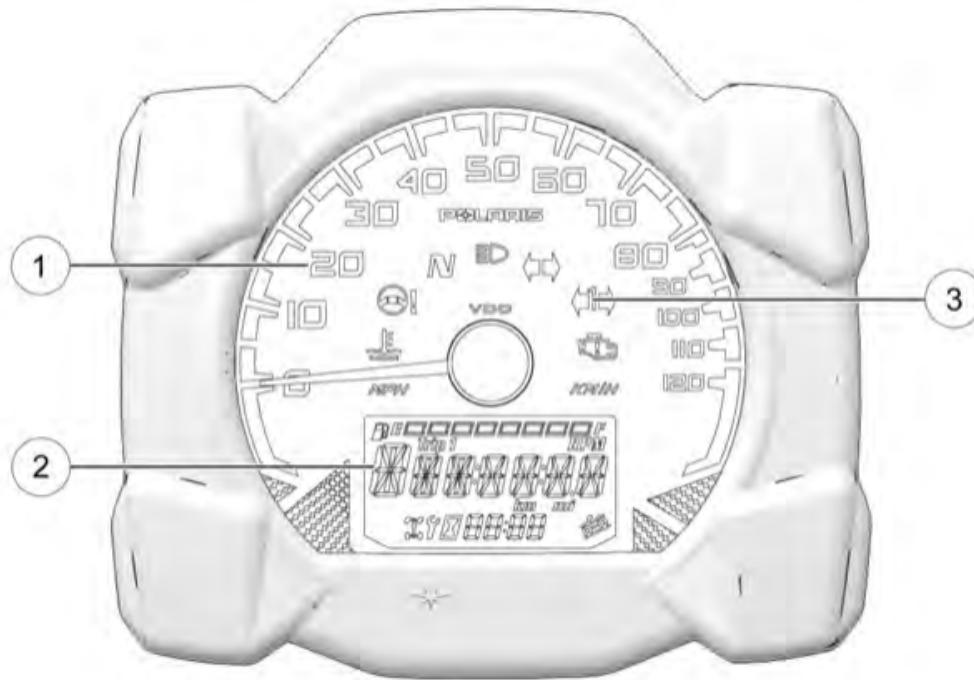
When the switch is on 2X4, the ATV is in two-wheel drive at all times.

### **ENGAGING 4X4**

The 4X4 switch may be turned on or off while the vehicle is moving. Initially, the vehicle's electronic system will not enable 4X4 until the engine RPM is below 3000. Once enabled, 4X4 remains enabled until the 4X4 switch is turned off. If the switch is turned off while the demand drive unit is moving, it will not disengage until the rear wheels regain traction.

Engage the 4X4 switch before getting into conditions where front wheel drive may be needed. If the rear wheels are spinning, release the throttle before switching to 4X4.

## INSTRUMENT CLUSTER



- ① Speedometer
- ② Rider Information Center
- ③ Indicator Lamps

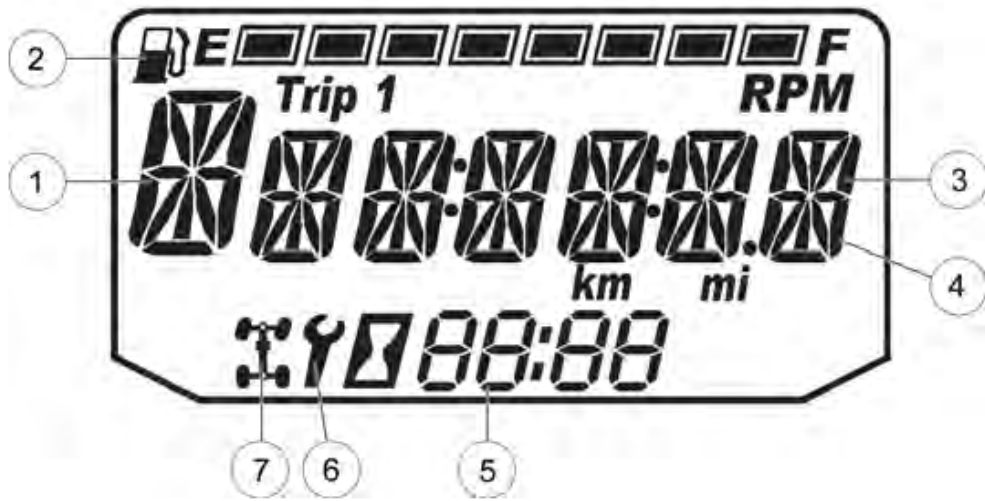
### SPEEDOMETER

The speedometer displays vehicle speed in either miles per hour (MPH) or kilometers per hour (km/h).

### RIDER INFORMATION CENTER

The rider information center is located in the instrument cluster. All segments will light up for one second at start-up. If the instrument cluster fails to illuminate, a battery over-voltage may have occurred and the instrument cluster may have shut off to protect the electronic speedometer. If this occurs, your POLARIS dealer can provide proper diagnosis.

The information center is set to display standard units of measurement and a 12-hour clock at the factory.



1	Gear Indicator	<p>This indicator displays gear shifter position.</p> <p><b>H:</b> High Gear</p> <p><b>L:</b> Low Gear</p> <p><b>N:</b> Neutral</p> <p><b>R:</b> Reverse Gear</p> <p><b>P:</b> Park</p> <p>-: Gear Signal Error (or shifter between gears)</p>
	Fuel Gauge	<p>The segments of the fuel gauge show the level of fuel in the fuel tank. When the last segment clears, a low fuel warning is activated. All segments including the fuel icon will flash. Refuel immediately.</p>
	Information Display Area	<p>This area displays odometer, trip meter, engine hour meter and programmable service hour interval.</p>
2	Under/Over Voltage	<p>This warning usually indicates that the vehicle is operating at an RPM too low to keep the battery charged. It may also occur when the engine is at idle and high electrical load (lights, cooling fan, accessories) is applied. Drive at a higher RPM or recharge the battery to clear the warning.</p>
3	Clock	<p>The clock displays time in a 12-hour or 24-hour format.</p>
4	Service Indicator	<p>A flashing wrench symbol alerts the operator that the preset service interval has been reached. Your dealer can provide scheduled maintenance.</p>
5	4x4 Indicator	<p>This indicator illuminates when the 4X4 system is engaged (switch is on 4X4, AWD or ADC 4X4).</p>

### **DISPLAY UNITS (STANDARD/METRIC)**

The display can be changed to display either standard or metric units of measurement.

The reverse override button acts as the MODE button when pressed and released quickly. The transmission cannot be in reverse when using the override button as a MODE button. This feature does not contain a vehicle speed lockout function and can be used at any operating speed.

	<b>Standard Display</b>	<b>Metric Display</b>
<b>Distance</b>	Miles	Kilometers
<b>Time</b>	12-Hour Clock	24-Hour Clock

1. Turn the key to the OFF position.
2. Place the transmission in neutral.
3. Press and hold the MODE button while turning the key to the ON position.
4. When the display flashes the distance setting, tap the MODE button to advance to the desired setting.
5. Press and hold the MODE button to save the setting and advance to the next display option.
6. Repeat the procedure to change remaining display settings.

### ***CLOCK MODE***

To set the clock time, do the following:

1. Turn key to the ON position. Use the Mode Button to toggle to the odometer display.
2. PRESS and HOLD the Mode Button until hour segment flashes. Release button.
3. With segment flashing, tap the Mode Button to advance to the desired hour.
4. PRESS and HOLD the Mode Button until the next segment flashes. Release button.
5. Repeat steps 3 and 4 twice to set the 10-minute and 1-minute segments.
6. PRESS and HOLD the Mode Button exit clock mode.
7. Turn key to the OFF position.

### ***ODOMETER***

The odometer records and displays the distance traveled by the vehicle.

### ***TRIP METER***

The trip meter records the distance traveled by the vehicle between resets.

To reset the trip meter, PRESS and HOLD the Mode Button until the meter changes to zero.

### ***ENGINE HOURS***



This screen displays total logged hours of engine operation. Hourglass icon is displayed to indicate this mode is active.

### **PROGRAMMABLE SERVICE INTERVAL**

When the number of logged engine operation hours reaches a programmed service interval, the Wrench icon will appear and flash for 5 seconds each time the engine is started. This feature provides a convenient reminder to perform routine maintenance on your vehicle.

To customize the service interval, do the following:

1. From the Service Interval screen, press the Mode Button until remaining service hours display.
2. PRESS and HOLD the Mode Button.
3. When service hours flash, press and RELEASE the Mode Button to set hours to desired setting. PRESS and HOLD the Mode Button to save the new service hour interval.
4. *To disable the service interval feature*, toggle through the hours setting until OFF appears. PRESS and HOLD the Mode Button to save setting.

### **DIAGNOSTIC DISPLAY MODE**

The EFI diagnostic display mode is for informational purposes only. Your POLARIS dealer or other qualified technician can provide all major repairs.

The diagnostic mode is accessible only when the check engine warning indicator is activated after the key is turned on. Leave key ON to view the active code (failure code).

Diagnostic mode becomes inaccessible once the warning has been resolved and key is turned OFF. This allows the determination of persistent as well as intermittent faults.

Inactive codes are stored in the history of the unit.

### **ENGINE ERROR CODES**

The error code screen displays only if the CHECK ENGINE indicator lamp has been activated.




If the CHECK ENGINE lamp illuminates, write down the error code(s) from the display and seek assistance from your dealer or other qualified technician.



If the CHECK ENGINE lamp illuminates but an error code is not displayed, do the following:

1. Toggle the Mode Button through each display screen until appears.
2. PRESS and HOLD the Mode Button to enter the diagnostics code menu.
3. Record the three numbers displayed in the gear position, clock and odometer displays.
4. Press the Mode Button to advance to the next error code.
5. PRESS and HOLD the Mode Button to exit the diagnostics menu.

Your authorized POLARIS dealer can provide code details and diagnosis.

### **INDICATOR LAMPS**

LAMP	INDICATES	CONDITION
<b>MPH</b>	Vehicle Speed	When standard mode is selected, speed displays in miles per hour.
<b>km/h</b>		When metric mode is selected, speed displays in kilometers per hour.
	Over Temperature (Coolant)	This lamp illuminates when the engine has reached 232° F (111° C). If the indicator begins to flash, the engine has reached 236° F (113° C); the system will automatically reduce engine power. When the engine reaches 246° F (118° C), the engine will automatically shut off.
	Electronic Power Steering (EPS) Warning (if equipped)	This indicator illuminates briefly when the key is turned to the ON position. If light remains on, the EPS system is inoperative. See your POLARIS dealer, or other qualified person, as soon as possible for repair. Continued operation could result in permanent damage to the EPS unit and increased steering effort.
<b>N</b>	Neutral	This lamp illuminates when the transmission is in neutral and the ignition key is in the ON position.
	High Beam (if equipped)	This lamp illuminates when the head lamp switch is set to high beam.

LAMP	INDICATES	CONDITION
	Helmet/Seat Belt	This lamp illuminates to alert operator to check all riders' seat belts are securely fastened before operating. The driver's seat belt is equipped with a seat belt interlock. Vehicle speed will be limited to 15 MPH (24 km/h) if the seat belt is not secured. ALWAYS check to ensure all riders are wearing proper safety gear.
	Check Engine	This indicator appears if an Electronic Fuel Injection (EFI) related fault occurs. DO NOT operate the vehicle if this warning appears or serious engine damage could result. Your dealer can assist.

## OPERATION

### TRAIL ETIQUETTE

Always practice good etiquette when riding. Allow a safe distance between your vehicle and other vehicles operating in the same area. Communicate to oncoming operators by signaling the number of vehicles in your group. When stopping, move your vehicle to the edge of the trail as far as possible to allow others to pass safely.

## **KNOW YOUR RIDING AREA/TREAD LIGHTLY®**

Familiarize yourself with all laws and regulations concerning the operation of this vehicle in your area. Respect the environment in which you ride your vehicle. Find out where the designated riding areas are by contacting your POLARIS dealer, a local riding club, or local officials.

Help keep our trails open for recreational vehicle use. As an off-road enthusiast, you represent the sport and can set a good example (or a poor example) for others to follow. Tread lightly® Operate with respect for the terrain, avoid littering, and always stay on the designated trails.

## **DRIVING PROCEDURES**

### **NEW OPERATOR DRIVING PROCEDURES**

1. Wear protective riding gear. See the Safe Riding Gear section.
2. Perform the pre-ride inspection.
3. Place the transmission in PARK.
4. Lock the brake holding latch.
5. Mount the vehicle from the left side.
6. Sit upright with both feet on the footrests and both hands on the handlebars.
7. Start the engine and allow it to warm up.
8. Shift the transmission into gear.
9. Check your surroundings and determine your path of travel.
10. Release the brake holding latch.
11. Slowly depress the throttle with your right thumb and begin driving.
12. Drive slowly. Practice maneuvering and using the throttle and brakes on level surfaces.



## **TURNING THE VEHICLE**

Both rear wheels drive equally at all times. This means that the outside wheel must travel a greater distance than the inside wheel when turning, and the inside tire must slip traction slightly.

1. Slow down.
2. Never turn quickly when carrying cargo.
3. Steer in the direction of the turn.
4. Keep both feet on the footrests.
5. Lean your upper body to the inside of the turn while supporting your weight on the outer footrest. This technique alters the balance of traction between the rear wheels, allowing the turn to be made smoothly. The same leaning technique should be used for turning in reverse.
6. Practice making turns at slow speeds before attempting to turn at faster speeds.

## **DRIVING ON SLIPPERY SURFACES**



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

1. Do not operate on excessively rough, slippery or loose terrain.
2. Slow down when entering slippery areas.
3. Engage 4X4 before wheels begin to lose traction.
4. Maintain a high level of alertness, reading the trail and avoiding quick, sharp turns, which can cause skids.

5. Never apply the brakes during a skid. Correct a skid by turning the handlebars in the direction of the skid and shifting your body weight forward.

### DRIVING UPHILL

Braking and handling are greatly affected when operating in hilly terrain. Improper procedure could cause loss of control or overturn. Whenever traveling uphill, follow these precautions:

1. Always engage ADC before ascending or descending a hill.
2. Drive straight uphill.
3. Avoid steep hills. **Maximum incline is: 25°**
4. Always check the terrain carefully before ascending any hill.
5. Never climb hills with excessively slippery or loose surfaces.
6. Keep both feet on the footrests.
7. Shift body weight uphill.
8. Proceed at a steady rate of speed and throttle opening. Opening the throttle suddenly could cause the ATV to flip over backwards.
9. Never go over the top of any hill at high speed. An obstacle, a sharp drop, or another vehicle or person could be on the other side of the hill.
10. Remain alert and be prepared to take emergency action. This may include quick dismounting of the vehicle.

### DRIVING DOWNHILL



When driving downhill, follow these precautions:

1. Always check the terrain carefully before descending a hill.
2. Always engage ADC mode before ascending or descending a hill.
3. Avoid steep hills. **Maximum incline is 25°**
4. Always descend a hill with the transmission in forward gear. Do not descend a hill with the transmission in neutral.
5. Slow down. Never travel down a hill at high speed.
6. Drive straight downhill. Avoid traveling down a hill at an angle, which would cause the vehicle to lean sharply to one side.
7. Shift body weight uphill.
8. Apply the brakes *slightly* to aid in slowing. Applying the brakes too firmly may cause the rear wheels to lock, which could result in loss of control.

### DRIVING ON A SIDEHILL (SIDEHILLING)



Driving on a sidehill is not recommended. Improper procedure could cause loss of control or overturn. Avoid crossing the side of any hill unless absolutely necessary.

If crossing a sidehill is unavoidable, follow these precautions:

1. Slow down.
2. Avoid crossing the side of a steep hill.
3. Lean into the hill, transferring your upper body weight toward the hill while keeping your feet on the footrests.

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

### **TURNING AROUND ON A HILL (K-TURN)**

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

1. Stop and lock the parking brake while keeping body weight uphill.
2. Always move the 4X4 switch to ADC 4X4 before ascending or descending a hill. See the Switch Location section for details.
3. Leave the transmission in forward and shut off the engine.
4. Dismount on the uphill side of the vehicle, or on the left if the vehicle is pointing straight uphill.
5. Staying uphill of the vehicle, turn the handlebars full left.
6. While holding the brake lever, release the parking brake lock and slowly allow the vehicle to roll around to your right until it's pointing across the hill or slightly downward.
7. Lock the parking brake. Remount the vehicle from the uphill side, keeping body weight uphill. Start the engine with the transmission still in forward.
8. Release the parking brake and proceed *slowly*, controlling speed with the brake lever, until the vehicle is on more level ground.

### **VEHICLE BREAK-IN PERIOD**

The break-in period for your new POLARIS vehicle is the first 25 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 and drive components will result in more efficient performance and longer life for these components. Perform the following procedures carefully.

#### **ENGINE AND DRIVETRAIN BREAK-IN**

1. Fill the fuel tank with gasoline. See the Fuel Tank section for details. Always exercise extreme caution whenever handling gasoline.
2. Check the oil level. See the Oil Check section for reference. Add the recommended oil as needed to maintain the oil level in the safe operating range.
3. Drive slowly at first. Select an open area that allows room to familiarize yourself with vehicle operation and handling.
4. Avoid aggressive use of the brakes.
5. Vary throttle positions. Do not operate at sustained idle.
6. Pull only light loads.

7. Perform regular checks on fluid levels, controls and areas outlined on the daily pre-ride inspection checklist.
8. During the break-in period, change both the oil and the filter at 25 hours or 250 miles.
9. Check fluid levels of transmission and all gearcases after the first 25 hours of operation and every 100 hours thereafter.

### **BRAKE SYSTEM BREAK-IN**

Apply only moderate braking force for the first 50 stops. Aggressive or overly forceful braking when the brake system is new could damage brake pads and rotors.

### **PVT BREAK-IN (CLUTCHES/BELT)**

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

If a belt fails, always clean any debris from the PVT intake and outlet duct and from the clutch and engine compartments when replacing the belt.

### **STARTING THE ENGINE**

1. Position the vehicle on a level surface outdoors or in a well-ventilated area.
2. Place the transmission in PARK.
3. Lock the parking brake.
4. Sit on the vehicle and move the engine stop switch to RUN.
5. Turn the ignition key past the ON position to engage the starter. Activate the starter for a maximum of five seconds, releasing the key when the engine starts.
6. If the engine does not start, return the key to the OFF position and wait five seconds before attempting to start again. Activate the starter for another five seconds if necessary. Repeat this procedure until the engine starts.

### **COLD WEATHER OPERATION**

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

### **PARKING THE VEHICLE**

1. Stop the vehicle on a level surface. 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.

2. Place the transmission in PARK.
3. Turn the engine off.
4. Engage the parking brake (if equipped).
5. Slowly release the brake pedal and make sure the transmission is in PARK before exiting the vehicle.
6. Remove the ignition key to prevent unauthorized use.

### **PARKING ON AN INCLINE**

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

1. Stop the engine.
2. Lock the parking brake.
3. Place the transmission in PARK.
4. Always block the rear wheels on the downhill side.

### **HAULING CARGO**

1. Never exceed the weight capacities specified for your ATV on warning labels and in the specifications section of this manual
2. When operating over rough or hilly terrain, reduce speed and cargo weight to maintain stable driving conditions.
3. NEVER exceed 50 MPH (80 km/h) when rear cargo loads are above 75 lbs. (34 kg).
4. Do not obstruct the headlight beam with cargo.
5. Slow down.
6. Use low forward gear when hauling or towing heavy cargo to extend belt life.
7. Always operate the vehicle with extreme caution whenever hauling or towing loads. Balance, handling and control may be affected.

### **TOWING LOADS**

Always attach a towed load to the hitch point. Remove the hitch from the ATV when not towing a trailer. If towing a load, reduce rear rack cargo weight by the amount of tongue weight.

- The combination of rear rack cargo weight and tongue weight must not exceed the rear rack capacity.
- The total load (operator, accessories, cargo and weight on hitch) must not exceed the maximum weight capacity of the vehicle.

### **MAXIMUM TOWING CAPACITIES**

Do not exceed maximum towing capacities. Avoid towing on inclines.

	<b>850 MODELS</b>	<b>XP 1000 MODELS</b>
Maximum Towed Load (Level Ground)	1500 lbs. (680 kg)	1500 lbs. (680 kg)
Maximum Vertical Hitch Weight	150 lbs. (68 kg)	150 lbs. (68 kg)

## **MAINTENANCE**

### **PERIODIC MAINTENANCE**

Any qualified repair shop or person may maintain, replace or repair the emission control devices or systems on your vehicle. An authorized POLARIS dealer can perform any service that may be necessary for your vehicle. POLARIS also recommends POLARIS parts for emissions-related service, however equivalent parts can be used.

It is a potential violation of the Clean Air Act if a part supplied by an aftermarket parts manufacturer reduces the effectiveness of the vehicle's emission controls. Tampering with emission controls is prohibited by federal law.

Owners are responsible for performing the scheduled maintenance identified in this owner's manual. Careful periodic maintenance will help keep your vehicle in safe, reliable condition. Inspect, clean, lubricate, adjust and replace parts as necessary. When inspection reveals the need for replacement parts, genuine POLARIS parts are available from your POLARIS dealer. Equivalent parts may be used for emissions-related service.

Record maintenance and service in the Maintenance Log beginning on page 137. Service and adjustments are important for proper vehicle operation. If you're not familiar with safe service and adjustment procedures, a qualified dealer can 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
- Frequent or prolonged operation in dusty environments
- Short trip cold weather operation
- Racing or race-style high RPM use
- Prolonged low speed, heavy load operation

- Extended idle

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. Your dealer can assist.

## ENGINE OIL

Always check and change the oil at the intervals outlined in the Periodic Maintenance Chart. Always use the recommended engine oil. Always change the oil filter whenever changing oil.

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. Your dealer can assist.

## OIL RECOMMENDATIONS

Always change the oil filter whenever changing oil.

POLARIS recommends the use of POLARIS PS-4 Full Synthetic 5W-50 4-cycle oil or a similar oil for this engine. Oil may need to be changed more frequently if POLARIS oil is not used. Always use 5W-50 oil. Follow the manufacturer's recommendations for ambient temperature operation.

See the Lubrication Guide section for fluid recommendations, capacities and plug torques.

## OIL LEVEL



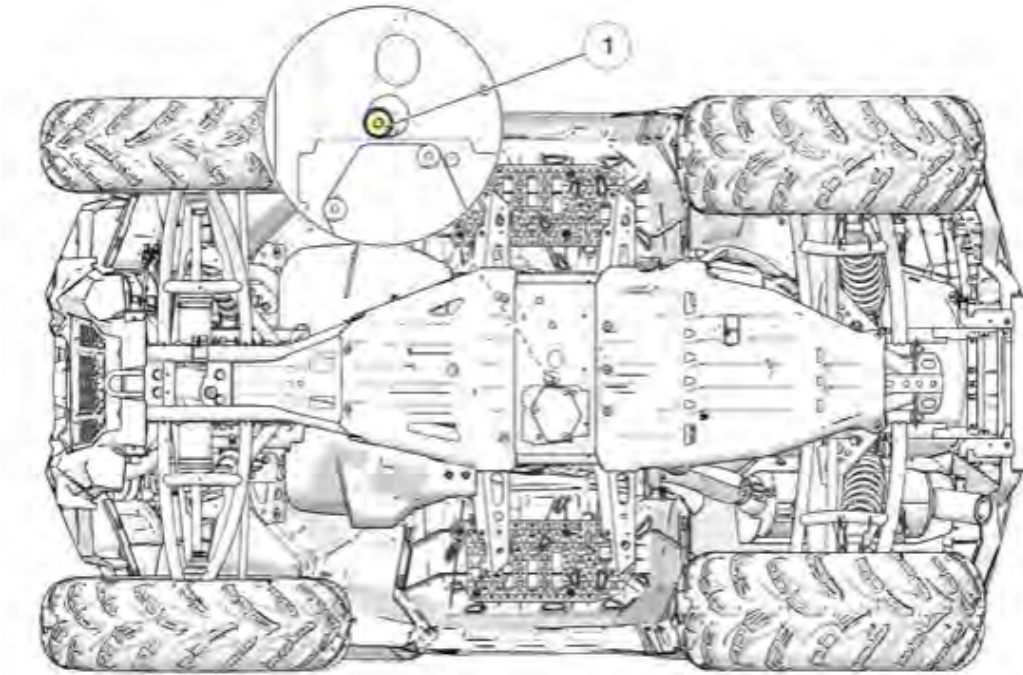
Check the oil level when the engine is cold. Never check the oil with the engine running.

1. Position the vehicle on a level surface.
2. Access the oil dipstick and fill tube from the left side of the ATV 1. Remove the dipstick. Wipe it dry with a clean cloth.
3. Reinstall and tighten the dipstick.
4. Remove the dipstick and check the oil level
5. Add the recommended fluid as needed. Maintain the oil level in the safe range between the FULL and ADD marks. Do not overfill.

6. Reinstall and tighten the dipstick.

## OIL AND FILTER CHANGE

See the fluid recommendation table for capacities and plug torques. Always change the oil and filter at the intervals outlined in the Periodic Maintenance Chart beginning on page 80. Always change the oil filter whenever changing oil.



1. Position the vehicle on a level surface.
2. Start the engine. Allow it to warm up at idle for two to three minutes.
3. Stop the engine.
4. Clean the area around the drain plug.
5. Place a drain pan under the crankcase.
6. Remove the drain plug. Allow the oil to drain completely.
7. Install a new sealing washer on the drain plug. The sealing surfaces on drain plug and crankcase should be clean and free of burrs, nicks or scratches.
8. Reinstall the drain plug. Torque to specification.
9. Remove the oil filter cover plate by loosening the three screws holding into place.
10. Place shop towels beneath the oil filter. Using an oil filter wrench (available from your POLARIS dealer), turn the filter counter- clockwise to remove it.
11. Using a clean dry cloth, clean the filter sealing surface on the crankcase.
12. Lubricate the o-ring on the new filter with a film of fresh engine oil. Check to make sure the o-ring is in good condition.

13. Install the new filter and rotate it clockwise by hand until the filter gasket contacts the sealing surface, then turn it an additional 1/2 turn.
14. Remove the dipstick. Add the proper amount of the recommended oil. Do not overfill.
15. Reinstall the dipstick.
16. Place the transmission in PARK.
17. Lock the parking brake.
18. Start the engine. Allow it to idle for one to two minutes.
19. Stop the engine.
20. Check for leaks.
21. Check the oil level. Add oil as needed to bring the level to the upper mark on the dipstick.
22. Dispose of used filter and oil properly.

## TRANSMISSION OIL

Always check and change the transmission oil at the intervals outlined in the Periodic Maintenance Chart. See the Fluid Recommendation table for capacities and plug torques. Maintain the oil level at the bottom of the fill plug hole 2. The fill plug is located on the right side of the ATV behind the footwell. The drain plug 1 is located on the bottom rear side of the gearcase



## OIL CHECK

1. Remove the fill plug. Check the oil level.
2. Add the recommended fluid as needed to bring the level to the bottom of the fill hole threads.
3. Reinstall the fill plug. Torque to specification.
4. Reinstall the footwell.

## OIL CHANGE

1. Place a drain pan under the gearcase. Remove the drain plug. Allow the oil to drain completely.

2. Clean and reinstall the drain plug. Torque to specification.
3. Remove the fill plug. Add the proper amount of the recommended oil.
4. Reinstall the fill plug. Torque to specification.
5. Check for leaks.
6. Reinstall the footwell.
7. Dispose of used oil properly.

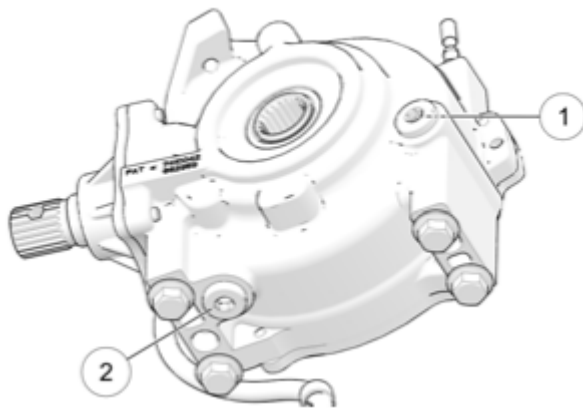
### **FRONT GEARCASE (DEMAND DRIVE) FLUID**

Always check and change the demand drive fluid at the intervals outlined in the Periodic Maintenance Chart. Use the recommended fluid.

Use of other fluids may result in improper operation of components. Maintain the fluid level at the bottom of the fill hole threads. The fill plug is located on the right side of the demand drive unit. The drain plug is located on the bottom right side of the unit.

### **FLUID CHECK**

1. Position the vehicle on a level surface. Remove the fill plug 1. Check the fluid level.
2. Add the recommended fluid as needed to bring the level to the bottom of the fill hole threads.
3. Reinstall the fill plug. Torque to specification.



### **FLUID CHANGE**

1. Position the vehicle on a level surface. Remove the fill plug.
2. Place a drain pan under the demand drive unit. Remove the drain plug w. Allow the fluid to drain completely.
3. Clean and reinstall the drain plug. Torque to specification.
4. Add the proper amount of the recommended fluid.
5. Reinstall the fill plug. Torque to specification.

6. Check for leaks. Dispose of used fluid properly

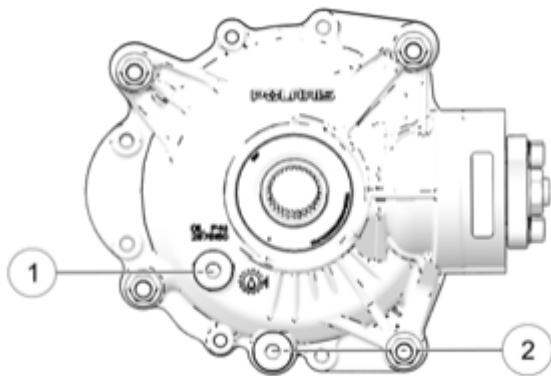
## REAR GEARCASE OIL

Always check and change the rear gearcase oil at the intervals outlined in the Periodic Maintenance Chart. See page 123 for the part numbers of POLARIS products.

The fill plug is located on the rear of the gearcase. The drain plug is located on the bottom of the gearcase.

Maintain the fluid level at the bottom of the fill hole threads. Do not overfill.

## OIL CHECK

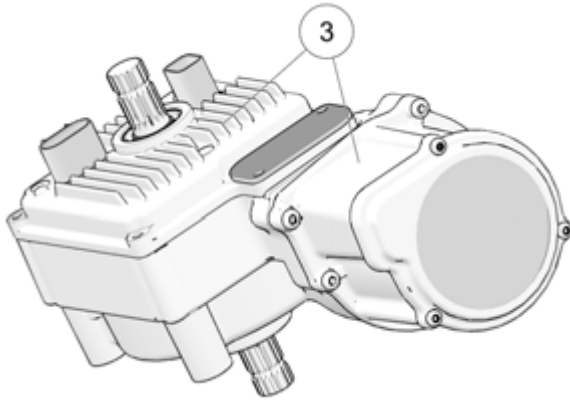


1. Position the vehicle on a level surface.
2. Remove the fill plug 1. Check the oil level.
3. Add the recommended oil as needed to bring the level to the bottom of the fill hole threads. Do not overfill.
4. Reinstall the fill plug. Torque to specification.

## OIL CHANGE

1. Position the vehicle on a level surface.
2. Place a drain pan under the drain holew.
3. Remove the drain plug. Allow the oil to drain completely.
4. Clean and reinstall the drain plug with a new sealing washer. Torque to specification.
5. Remove the fill plug. Add the proper amount of the recommended oil. Do not overfill.
6. Reinstall the fill plug. Torque to specification.
7. Check for leaks.
8. Dispose of used oil properly

## POWER STEERING UNIT (IF EQUIPPED)



If your model is equipped with power steering, frequently clean the areas around and on the power steering unit to allow proper cooling. Clean these areas 3 thoroughly.

## STEERING ASSEMBLY

The steering assembly of the ATV should be checked periodically for loose nuts and bolts. If loose nuts and bolts are found, see your authorized dealer or other qualified service facility before operating the vehicle.

## COOLING SYSTEM

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

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

Some coolant level drop on new vehicles is normal as the system is purging itself of trapped air. Check the coolant level and maintain as recommended by adding coolant to the recovery bottle.

POLARIS recommends the use of POLARIS Antifreeze 50/50 Premix. This antifreeze is already premixed and ready to use. Do not dilute with water. See the Polaris Products section for the part numbers.

## RECOVERY BOTTLE COOLANT

The recovery bottle fluid level can be viewed from inside the front right wheel well. Access the recovery bottle cap under the front box.

1. View the fluid level in the bottle.

2. If the level is low, remove the bottle cap and add coolant as needed. Maintain the coolant level between the minimum and maximum marks on the bottle (when the fluid is cool).
3. Reinstall the cap.
4. Close and secure the fan shroud.

## **RADIATOR COOLANT**

To ensure that the coolant maintains its ability to protect the engine, we recommend that the system be completely drained every five (5) years and fresh Antifreeze 50/50 Premix added.

Any time the cooling system has been drained for maintenance or repair, replace the coolant with fresh Antifreeze 50/50 Premix. If the recovery bottle has run dry, check the level in the radiator. Add coolant as needed.

1. Access the pressure cap. See the Front Compartment section for details.
2. Remove the pressure cap.
3. Using a funnel, slowly add coolant through the radiator filler neck.
4. Reinstall the pressure cap. Use of a non-standard pressure cap will not allow the recovery system to function properly. Your POLARIS dealer can provide the correct replacement part.
5. Close and secure the cover.

## **BRAKES**

### **HAND BRAKE**

The front and rear brakes are hydraulic disc brakes, activated by moving the single brake lever toward the handlebar. These brakes are self-adjusting.

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

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

1. Always keep brake fluid at an adequate level. See the Master Cylinder/Brake Fluid section for details.
2. Check the brake system for fluid leaks.
3. Check the brakes for excessive travel or spongy feel.
4. Check the friction pads for wear, damage and looseness. Replace brake pads when they are worn to .030" (0.762 mm).

5. Check the security and surface condition of the disc. Clean any grease using a recommended brake cleaner or alcohol. Do not use spray lubricants or other petroleum-based products. If you discover any damage (cracks, excessive corrosion, warping) see your dealer for service before operating.

### **AUXILIARY FOOT BRAKE**

The hydraulic auxiliary brake system requires no adjustment. Check the brake fluid level frequently for the auxiliary brake system.

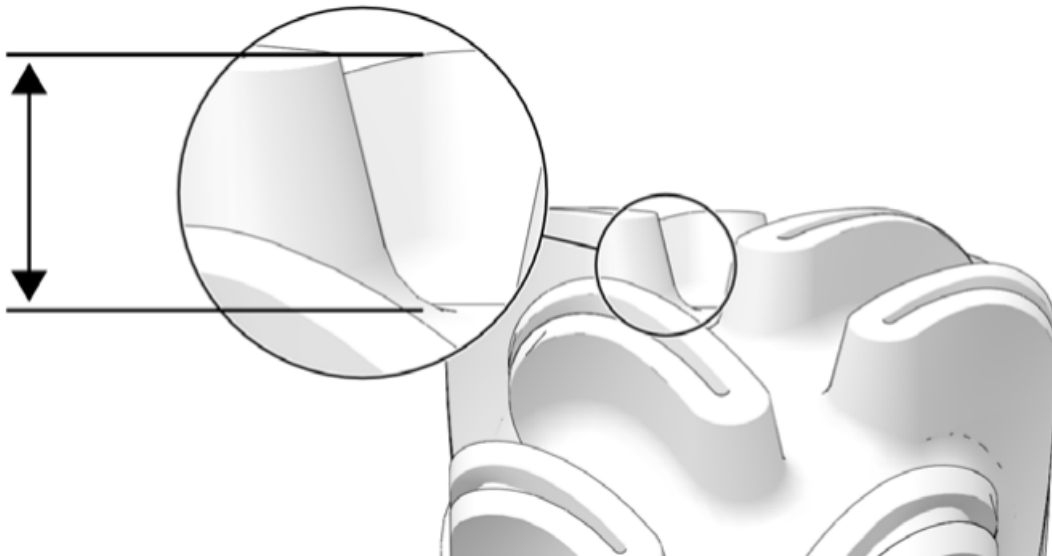
### **SEAT REMOVAL**

To remove the seat, do the following:

1. Grasp one side of the seat near the rear edge.
2. Pull upward abruptly to disengage the under-seat fasteners.
3. Remove the seat.

### **TIRES**

#### **TIRE TREAD DEPTH**



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

#### **FRONT WHEEL HUB TIGHTENING**

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

#### **WHEEL REMOVAL**

1. Stop the engine.
2. Place the transmission in PARK.

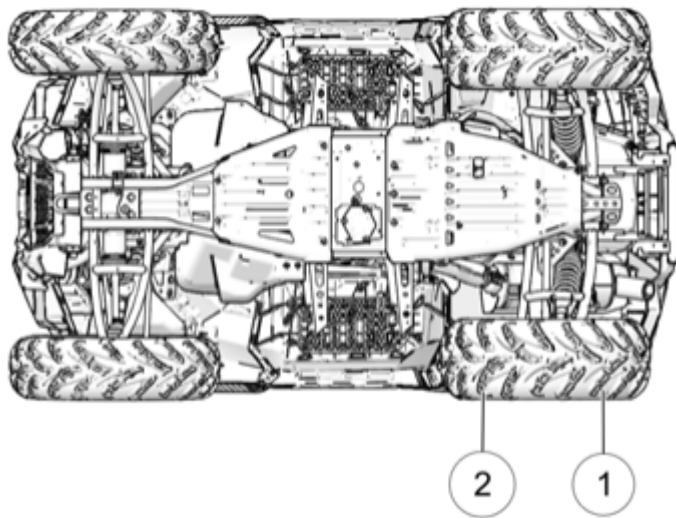
3. Lock the parking brake.
4. Loosen the wheel nuts slightly.
5. Elevate the side of the vehicle by placing a suitable stand under the foot rest frame.
6. Remove the wheel nuts.
7. Remove the wheel.

## WHEEL INSTALLATION

1. Place the transmission in PARK.
2. Lock the parking brake.
3. Place the wheel on the hub with the valve stem toward the outside and rotation arrows on the tire pointing toward forward rotation (if equipped).
4. Install the wheel nuts and finger-tighten them.
5. Lower the vehicle to the ground.
6. Torque the wheel nuts to specification.

## TOE ALIGNMENT

Use the following procedure to check the toe alignment of the vehicle. The recommended toe alignment is 1/4-1/2 inch (6-12 mm)



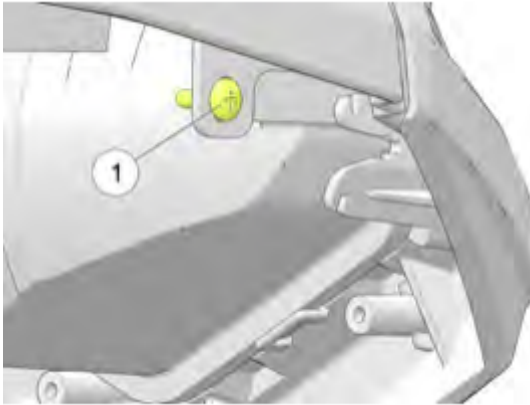
1. Position the vehicle on a level surface.
2. Place the handlebars in a straight-ahead position.
3. Tie a length of string between two stands. Position the stands so that the string is flush with the side of the rear tire. If available, you may use a long straight-edge instead of string.

4. Measure the distance from the string to the rim at the front 1 and rear 2 of the front rim. The rear measurement should be 1/8—1/4 inch (3-6 mm) more than the front measurement on each side of the vehicle to obtain the recommended 1/4-1/2 inch (6-12 mm) toe out alignment.
5. Repeat the measurement procedure on the other side of the vehicle.
6. If you discover improper alignment, see your POLARIS dealer for service.

## LIGHTS

### HEADLAMP ADJUSTMENT

The headlamps can be adjusted slightly upward or downward by rotating the adjustment screw located on either side of the vehicle.

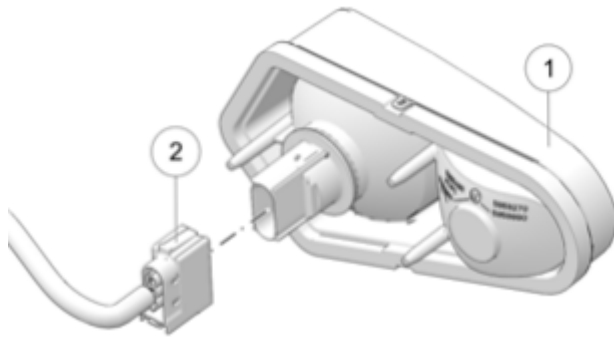


### HEADLAMP REPLACEMENT

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

### TAILLIGHT / BRAKELIGHT LAMP REPLACEMENT

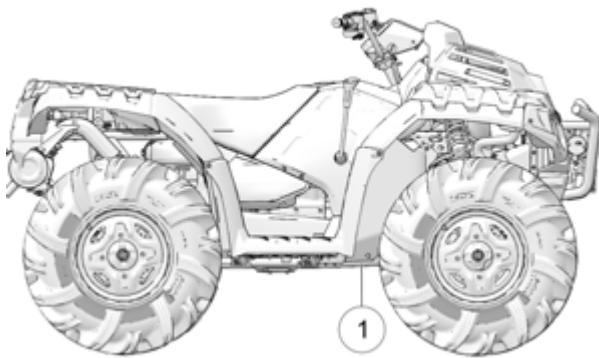
1. Remove the harness connector 2 from the back of the light assembly 1
2. Turn the lamp counter-clockwise to remove it.
3. Apply dielectric grease to the socket and install the new lamp.
4. Reinstall the harness connector 2.
5. Test the light for proper operation.



## VEHICLE IMMERSION

If your vehicle becomes immersed, major engine damage can result if the machine is not thoroughly inspected. Take the vehicle in for service before starting the engine. Your POLARIS dealer can provide this service.

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



1. Move the ATV to dry land or at the very least, to water below the footrests.
2. Check the air box. If water is present, dry the air box and replace the filter with a new filter. If equipped, remove the air box drain plug q to drain water. Reinstall the drain plug. Make sure the E-ring is on the drain plug and reinstall the drain plug.
3. Remove the spark plugs.
4. Turn the engine over several times using the electric start.
5. Dry the spark plugs. Reinstall the plugs or install new plugs.
6. Attempt to start the engine. If necessary, repeat the drying procedure.
7. Take the vehicle in for service as soon as possible, whether you succeed in starting it or not. Your authorized dealer can provide the required service.
8. If water has been ingested into the PVT, follow the procedure in the PVT System section for drying out the PVT.

## **BATTERY**

Your ATV is equipped with a sealed battery, which requires little maintenance. POLARIS does not recommend using a conventional battery in this vehicle. The orientation of the battery could result in electrolyte leakage, which would shorten the life of the battery considerably.

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

### **BATTERY REMOVAL**

1. Remove the fastener retaining the battery hold down strap.
2. Disconnect the battery negative (-) (black) cables first, followed by the positive (+) (red) cables.
3. Carefully lift the battery out of the vehicle.

### **BATTERY CHARGING**

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

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

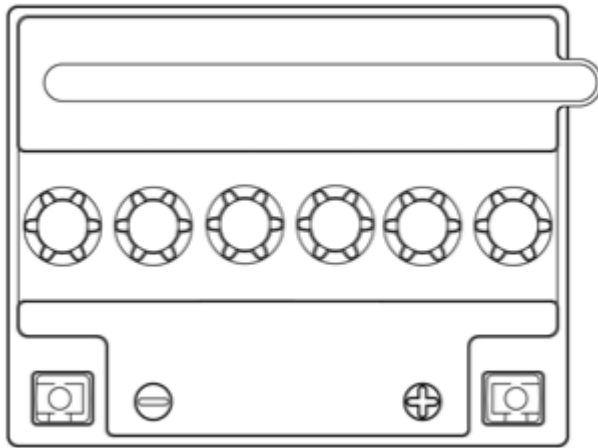
The single most important thing about maintaining a sealed battery is to keep it fully charged. Since the battery is sealed and the sealing strip cannot be removed, you must use a voltmeter or multimeter to measure DC voltage.

For a refresh charge, follow all instructions carefully.

1. The battery should be disconnected from a load or charger for at least two hours before checking voltage. Check the battery voltage with a voltmeter or multimeter. A fully charged battery will register 12.8 V or higher.
2. If the voltage is less than 12.8 volts, recharge the battery at 1.2 amps or less until battery voltage is 12.8 or greater.
3. When using an automatic charger, refer to the charger manufacturer's instructions for recharging. When using a constant current charger, use the following guidelines via the table below.

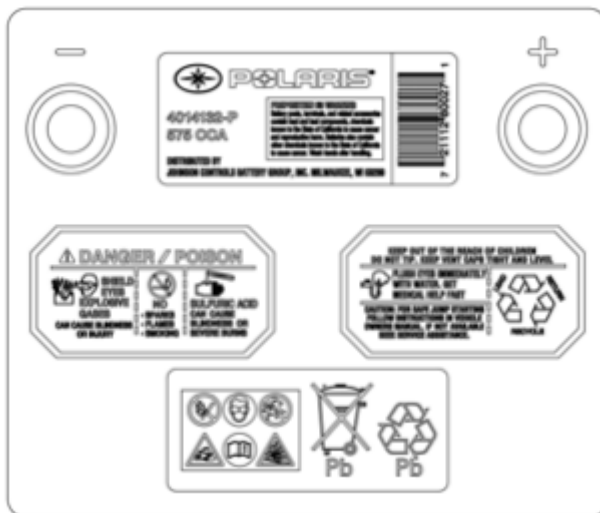
### **BATTERY IDENTIFICATION**

#### **CONVENTIONAL BATTERY**



- The battery is NOT activated when packaged
- Distilled water and electrolyte added as required
- Removable cap plugs located on top of battery
- Vent tube located on side of battery

#### LOW MAINTENANCE BATTERY



- Battery activated when packaged
- Distilled water and electrolyte NEVER added
- Non removable cap(s) located on top of battery

#### LEAD ACID CONVENTIONAL / DRY SHIPPED AGM BATTERY BEST PRACTICES

Some Polaris ORV models include either a Lead Acid Conventional battery or a Dry Shipped Absorbed Glass Mat (AGM) battery. See the Service Manual for procedures on how to activate, charge, maintain, and test a Lead Acid Conventional or Dry Shipped AGM battery

#### LEAD ACID CONVENTIONAL BATTERIES

##### ACTIVATION

- Do NOT activate the battery unless it will be put into regular service within 30 days. Bulk acid should be used to activate the battery.
- Always remove the sealing cap from the vent elbow before activating the battery. Never put the sealing cap back onto the battery. The gas pressure can cause the battery to rupture.
- Let the battery sit for 30 minutes after you add the initial electrolyte. Once absorbed, fill the battery with additional electrolyte to the upper line of the electrolyte level indicator. This is the only time that electrolyte should be added to the battery.
- Once the battery is fully charged, replace cap plugs by hand. Do NOT use a tool to install the cap plugs.

## CHARGING

- The battery must be fully charged before use or battery life will be significantly reduced by 10-30% of the battery's full potential.
- Nominal voltage is 12.6 to 12.8 Volts when fully charged. If the voltage falls below 12.5V, charge it immediately, or the battery service life and vehicle performance may be affected.
- Polaris recommends using a BatteryMINDER® 12V 1.5 AMP Convertible (PN 2830511) charger (or a similar charger), which can be ordered through your normal parts channel.
- Charge the battery with a charging output no larger than 10% of the battery's amp-hour rating.

## MAINTENANCE

- Recharge the battery to its full capacity every 30 to 60 days.
- If the battery is stored or used in a partially charged condition, battery service life and vehicle performance may be adversely affected.
- Never add any electrolyte to the battery once the battery is in service. After the battery is initially activated, only distilled water should be added to maintain electrolyte levels.
- Store the battery in the vehicle with the cables disconnected, or store the battery in a cool / dry location. Batteries will self discharge more rapidly when stored in extreme temperatures.

## TESTING

- If the test fails, fully charge the battery.
- Proper load testing of the battery requires special equipment and can be performed by your dealer.

## **DRY SHIPPED AGM BATTERIES**

### ACTIVATION

- Do NOT activate the battery unless it will be put into regular service within 30 days. Only use the electrolyte container supplied with the battery to activate the battery.

- Keep the electrolyte container in place for 20 minutes or longer until the container is completely empty. If necessary, gently tap the container to empty it.
- Once the battery is fully charged, replace the strip of caps by hand. Do NOT use a tool to install the strip.

## CHARGING

- Polaris recommends using a BatteryMINDer® 2012 AGM - 2 AMP (PN 2830438) charger, which can be ordered through your normal parts channel.
- Nominal voltage is 12.8 Volts when fully charged. If the voltage falls below 12.5V, charge it immediately, or the battery runs the risk of sulfation.

## MAINTENANCE

- Never add any electrolyte or distilled water to the battery once the battery is in service.
- If you do not drive the vehicle for more than TWO weeks, maintain the battery with the BatteryMINDER® 2012 AGM - 2 AMP (PN 2830438) charger.
- If you plan to store the vehicle for ONE month or longer, remove the battery from the vehicle and store the battery in a cool / dry location. Continue to maintain the battery with the BatteryMINDER® 2012 AGM - 2 AMP (PN 2830438) charger and inspect the battery every 60 days.

## TESTING

- If the test fails, fully charge the battery.
- If the battery is too low to accept a charge, see the AGM Battery Charging -Deeply Discharged (Below 3 Volts) procedure in the Service Manual.
- Proper load testing of the battery requires special equipment and can be performed by your dealer.

## **LOW MAINTENANCE BATTERY BEST PRACTICES**

Some Polaris ORV models include either a Lead Acid or Absorbed Glass Mat (AGM) Low Maintenance battery. See the Service Manual for procedures on how to charge, maintain, and test a Lead Acid or AGM Low Maintenance battery.

### **LEAD ACID LOW MAINTENANCE BATTERY**

#### CHARGING

- The battery must be fully charged before use or battery life will be significantly reduced by 10-30% of the battery's full potential.
- Nominal voltage is 12.6 to 12.8 Volts when fully charged. If the voltage falls below 12.5V, charge it immediately, or the battery service life and vehicle performance may be affected.

- Polaris recommends using a BatteryMINDer® 12V 1.5 AMP Convertible (PN 2830511) charger (or a similar charger), which can be ordered through your normal parts channel.
- Charge the battery with a charging output no larger than 10% of the battery's amp-hour rating.

#### MAINTENANCE

- Recharge the battery to its full capacity every 30 to 60 days.
- If the battery is stored or used in a partially charged condition, hard crystal sulfation will form on the plates, reducing the efficiency and service life of the battery.
- Never add electrolyte or distilled water to the battery. Doing so will damage the case and shorten the life of the battery.
- Store the battery in the vehicle with the cables disconnected, or store the battery in a cool / dry location. Batteries will self discharge more rapidly when stored in extreme temperatures.

#### TESTING

- Test the battery using the PU-50296 battery tester.
- Proper load testing of the battery requires special equipment and can be performed by your dealer.

#### **AGM LOW MAINTENANCE BATTERIES**

#### CHARGING

- Polaris recommends using a BatteryMINDer® 2012 AGM - 2 AMP (PN 2830438) charger, which can be ordered through your normal parts channel.
- Nominal voltage is 12.6-12.8 Volts when fully charged. If the voltage falls below 12.5V, charge it immediately, or the battery runs the risk of sulfation.

#### MAINTENANCE

- Never add electrolyte or distilled water to the battery. Doing so will damage the case and shorten the life of the battery.
- If you do not drive the vehicle for more than TWO weeks, maintain the battery with the BatteryMINDer® 2012 AGM - 2 AMP (PN 2830438) charger.
- If you plan to store the vehicle for ONE month or longer, remove the battery from the vehicle and store the battery in a cool / dry location. Continue to maintain the battery with the BatteryMINDer® 2012 AGM - 2 AMP (PN 2830438) charger and inspect the battery every 60 days.

#### TESTING

- If the test fails, fully charge the battery.
- If the battery is too low to accept a charge, see the AGM Battery Charging -Deeply Discharged (Below 3 Volts) procedure in the Service Manual.

- Proper load testing of the battery requires special equipment and can be performed by your dealer.

## **CLEANING AND STORAGE**

### **WASHING THE VEHICLE**

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

- Wheel bearings
- Radiator
- Transmission seals
- Cab and body panels
- Electrical components
- Switches and controls
- Fuel system components
- Labels and decals

If an informational or graphic label becomes illegible or comes off, contact your POLARIS dealer to purchase a replacement. Replacement *safety* labels are provided by POLARIS at no charge.

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

### **WASHING TIPS**

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

### **POLISHING THE VEHICLE**

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

### **POLISHING TIPS**

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

## **STORAGE TIPS**

### ***CLEAN THE EXTERIOR***

Make any necessary repairs and clean the vehicle as recommended. See the Washing the Vehicle section.

### ***STABILIZE THE FUEL***

1. Fill the fuel tank.
2. Add POLARIS Carbon Clean Fuel Treatment or POLARIS Fuel Stabilizer or equivalent fuel treatments or stabilizers. Follow the instructions on the container for the recommended amount. Carbon Clean removes water from fuel systems, stabilizes fuel and removes carbon deposits from pistons, rings, valves and exhaust systems.
3. Allow the engine to run for 15-20 minutes to allow the stabilizer to disperse through the entire fuel delivery system.

### ***OIL AND FILTER***

Change the oil and filter. See the Engine Oil section.

### ***AIR FILTER / AIR BOX***

Replace the air filter. See Maintenance Chapter. Clean the air box.

### ***FLUID LEVELS***

Inspect the fluid levels. Add or change fluids as recommended in the Periodic Maintenance Chart.

- Demand drive fluid (front gearcase)
- Rear gearcase fluid (if equipped)
- Transmission fluid
- Brake fluid (change every two years and any time the fluid looks dark or contaminated)
- Coolant (test strength/fill)

### ***INSPECT AND LUBRICATE***

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

### ***FOG THE ENGINE***

1. Treat the fuel system with POLARIS Carbon Clean or other equivalent fuel treatment. Follow the instructions on the container. Start the engine. Allow it to idle for several minutes so the Carbon Clean reaches the injectors. Stop the engine.
2. Remove the spark plugs and add 1-1.5 oz. (29.5-44 cc.) of engine oil. To access the plug holes, use a section of clear 6 mm (1/4") hose and a small plastic squeeze bottle filled with the pre-measured amount of oil. *Do this carefully! If you miss the plug holes, oil will drain*

*from the spark plug cavities into the hole at the front of the cylinder head, and appear to be an oil leak.*

3. Reinstall the spark plugs. Torque to specification.
4. Apply dielectric grease to the inside of each spark plug cap. *Do not reinstall the cap onto the plug at this step.*
5. Turn the engine over several times. Oil will be forced in and around the piston rings and ring lands, coating the cylinder with a protective film of fresh oil.
6. Reinstall the spark plug caps.
7. If POLARIS fuel system additive is not used, fuel tank, fuel lines, and injectors should be completely drained of gasoline.

### **BATTERY MAINTENANCE**

See the Battery Storage and Battery Charging sections for storage and charging procedures.

### **STORAGE AREA / COVERS**

Be sure the storage area is well ventilated. Cover the vehicle with a genuine POLARIS cover. Do not use plastic or coated materials. They do not allow enough ventilation to prevent condensation, and may promote corrosion and oxidation.

### **TRANSPORTING THE ATV**

Follow these procedures when transporting the vehicle.

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

# **TROUBLESHOOTING**

## **DRIVE BELT WEAR/BURN**



POSSIBLE CAUSE	SOLUTION
Driving onto a pickup or tall trailer in high range	Use low range during loading.
Starting out going up a steep incline	Use low range.
Driving at low RPM or ground speed - 3-7 mph (4.8-11.3 km/h)	Drive at a higher speed or use low range more frequently.
Insufficient warm-up at low ambient temperatures	Warm the engine at least 5 minutes. With the transmission in neutral, advance the throttle to about 1/8 throttle in short bursts, 5 to 7 times. The belt will become more flexible and prevent belt burning.
Slow/easy clutch engagement	Use the throttle quickly and effectively.
Towing/pushing at low RPM/ low ground speed	Use low range only.
Utility use/plowing	Use low range only.
Stuck in mud or snow	Shift the transmission to low range and carefully use fast, aggressive throttle application to engage clutch.  WARNING: Excessive throttle may cause loss of control and vehicle rollover.
Climbing over large objects from a stopped position	Shift the transmission to low range and carefully use fast, brief, aggressive throttle application to engage clutch.  WARNING: Excessive throttle may cause loss of control and vehicle rollover.



Belt slippage from water or snow ingestion into the PVT system	Dry out the PVT. Prevent water from entering the PVT intake duct. See Intake Pre-Filters for more information. Inspect clutch seals for damage if repeated leaking occurs.
Clutch malfunction	An authorized dealer can assist.
Poor engine performance	Check for clogged air filter, clogged fuel filter, water in the fuel or foreign material in fuel tank or fuel lines. An authorized dealer can assist.
Slippage from failure to warm up belt	Always warm up the belt by operating below 30 mph (48 km/h) for 1 miles (1.6 km) (5 miles (8 km) or more when temperature is below freezing).
Wrong or missing belt	Install the recommended belt.
Improper break-in	Always break in a new belt and/or clutch.

## ENGINE DOESN'T TURN OVER

POSSIBLE CAUSE	SOLUTION
Low battery voltage	Recharge the battery
Loose battery connections	Check all connections and tighten
Loose solenoid connections	Check all connections and tighten
Loose electronic control box connections	Inspect, clean, reinstall connectors

## ENGINE TURNS OVER, FAILS TO START

POSSIBLE CAUSE	SOLUTION
Out of fuel	Refuel
Water is present in fuel	Drain the fuel system and refuel
Old or non-recommended fuel	Replace with fresh recommended fuel
Fouled or defective spark plug	Inspect plug and replace if necessary
No spark to spark plug	Inspect plug and replace if necessary
Water or fuel in crankcase	Your authorized dealer can assist
Low battery voltage	Recharge the battery to 12.8 VDC
Mechanical failure	Your authorized dealer can assist

## ENGINE PINGS OR KNOCKS

POSSIBLE CAUSE	SOLUTION
Poor quality or low octane fuel	Replace with recommended fuel
Incorrect spark plug gap or heat range	Set gap to specs or replace plug

## ENGINE RUNS IRREGULARLY, STALLS OR MISFIRES

POSSIBLE CAUSE	SOLUTION
Fouled or defective spark plug	Inspect, clean and/or replace spark plug
Worn or defective spark plug wires	Your authorized dealer can assist
Incorrect spark plug gap or heat range	Set gap to specs or replace plug

Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with new fuel
Low battery voltage	Recharge battery to 12.8 VDC
Incorrect fuel	Replace with recommended fuel
Clogged air filter	Inspect and clean or replace
Clogged intake pre-filter	Inspect and clean (with soapy water) or replace
Other mechanical failure	Your authorized dealer can assist

## ENGINE STOPS OR LOSES POWER

POSSIBLE CAUSE	SOLUTION
Out of fuel	Refuel
Kinked or plugged fuel vent line	Inspect and replace
Water is present in fuel	Replace with new fuel
Fouled or defective spark plug	Inspect, clean and/or replace spark plug
Worn or defective spark plug wires	Your authorized dealer can assist
Incorrect spark plug gap or heat range	Set gap to specs or replace plug
Loose ignition connections	Check all connections and tighten
Low battery voltage	Recharge the battery
Incorrect fuel	Replace with fresh recommended fuel
Clogged air filter	Inspect and clean or replace
Clogged intake pre-filter	Inspect and clean (with soapy water) or replace
Other mechanical failure	Your authorized dealer can assist
Overheated engine	Clean radiator screen and core, clean engine exterior, and check coolant level. Your dealer can assist.

**Warning**

This content is compiled from multiple sources and is provided for reference purposes only. It may not be complete or fully applicable to all situations. If you are unable to resolve your issue, please contact the product manufacturer or an authorized service provider for official support.

---

Document generated by [ManualsFile](#)