

## OPERATION

**WARNING** Failure to operate the vehicle properly can result in a collision, loss of control, accident or rollover, which may result in serious injury or death. Read and understand all safety warnings outlined in the safety section of this owner's manual.

### VEHICLE BREAK-IN PERIOD

The break-in period for your new vehicle is the first 20 hours of operation, or the time it takes to use the first 2 full tanks 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.

**NOTICE** Excessive heat build-up during the first 3 hours of operation will damage closefitted engine parts and drive components. Do not operate at full throttle or high speeds during the first 3 hours of use.

### 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.

### 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.

## STARTING THE ENGINE

1. Position the vehicle on a level surface outdoors or in a well ventilated area.
2. Sit in the driver's seat and fasten the seat belt. Secure the cab nets.
3. Place the transmission in NEUTRAL and apply the PARKING BRAKE.
4. Apply the brakes. Do not press the throttle pedal while starting the engine.
5. Turn the ignition key past the ON/RUN position to START. Engage the starter for a maximum of five seconds. Release the key when the engine starts.
6. If the engine does not start within five seconds, return the ignition switch to the OFF position and wait five seconds. Repeat steps 5 and 6 until the engine starts.
7. Vary the engine RPM slightly with the throttle to aid in warm up until the engine idles smoothly.

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

## STOPPING THE ENGINE

1. Release the throttle pedal completely and brake to a complete stop.
2. Place the transmission in NEUTRAL and apply the PARKING BRAKE.
3. Turn the engine off.
4. Slowly release the brake pedal and make sure the transmission is in PARK before exiting the vehicle

**NOTE** A rolling vehicle can cause serious injury. Always place the transmission in PARK when stopping the engine.

## 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.

## BRAKING

1. Release the throttle pedal completely.

**CAUTION** When the throttle pedal is released completely and engine speed slows to near idle, the vehicle has no engine braking.

2. Press on the brake pedal evenly and firmly. Practice starting and stopping using the brakes) until you're familiar with the controls.

## **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 NEUTRAL and apply the PARKING BRAKE.
3. Turn the engine off.
4. Slowly release the brake pedal.
5. 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. Apply the brakes.
2. Place the transmission in NEUTRAL and apply the PARKING BRAKE.
3. Turn the engine off.
4. Slowly release the brake pedal.
5. Block the rear wheels on the downhill side.

## **HAULING CARGO**

### **WARNING**

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

- Never exceed the stated load capacity for this vehicle.
- REDUCE SPEED AND ALLOW GREATER DISTANCES FOR BRAKING WHEN HAULING CARGO.
- NEVER EXCEED THE MAXIMUM WEIGHT CAPACITY of the vehicle. When determining the weight you are adding to the vehicle, include the weight of the operator, accessories, and loads in the rack or box. The combined weight of these items must not exceed the maximum weight capacity.
- Always load the cargo box with the load centered and as low as possible.
- When operating over rough or hilly terrain, reduce speed and cargo to maintain stable driving conditions.
- Always operate the vehicle with extreme care when hauling loads.
- SECURE ALL LOADS BEFORE OPERATING. Unsecured loads can create unstable operating conditions, which could result in loss of control of the vehicle.

- OPERATE ONLY WITH STABLE AND SAFELY ARRANGED LOADS. When handling off-centered loads that cannot be centered, securely fasten the load and operate with extra caution.
- HEAVY LOADS CAN CAUSE BRAKING AND CONTROL PROBLEMS. Use extreme caution when applying brakes with a loaded vehicle. Avoid terrain or situations that may require backing downhill.
- USE EXTREME CAUTION when operating with loads that extend over the rack sides. Stability and maneuverability may be adversely affected, causing vehicle rollover.
- Carrying a passenger in the cargo box could result in a fall from the vehicle or contact with moving components. Never allow a passenger to ride in the cargo box.

## DRIVING PROCEDURES

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### NEW OPERATOR DRIVING PROCEDURES

1. Read and understand the owner's manual and all warning and instruction labels before operating this vehicle.
2. Visit the Recreational Off-Highway Vehicle Association web site and take the free on-line training course. Visit [www.rohva.org](http://www.rohva.org) or call 866-267-2751. Hands-on training is also available through ROHVA.
3. Perform the pre-ride inspection.
4. Do not carry cargo during this period.
5. Select an open area that allows room to familiarize yourself with vehicle operation and handling.
6. The driver and passenger must wear helmet, eye protection, gloves, long-sleeve shirt, long pants, over-the-ankle boots and seat belt at all times.
7. Sit in the driver's seat and fasten the seat belt.
8. Always make sure all cab nets are closed and latched when riding in this vehicle.
9. Place the transmission in NEUTRAL.
10. Start the engine and disengage the parking brake.
11. Apply the brakes and shift into gear.
12. Check your surroundings and determine your path of travel.
13. Keeping both hands on the steering wheel, slowly release the brakes and depress the throttle with your right foot to begin driving.
14. Drive slowly at first. On level surfaces, practice starting, stopping, turning, maneuvering, using the throttle and brakes and driving in reverse. Learn how the vehicle handles when making both left and right turns at a slow speed.

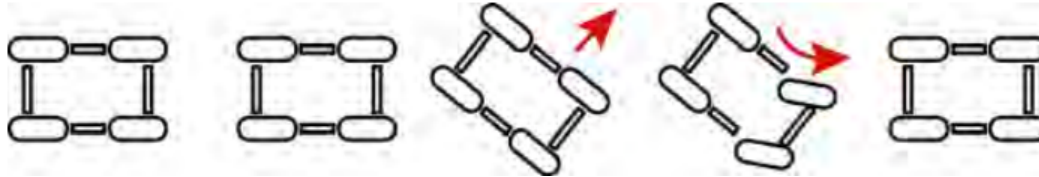
15. Increase speed only after mastering all maneuvers at a slow speed.
  16. After you become skilled at making turns and begin to operate at faster speeds, follow these precautions:
    - Avoid sharp turns.
    - Never turn while applying heavy throttle.
    - Never make abrupt steering maneuvers.
    - Operate at speeds appropriate for your skills, the conditions and the terrain.
    - DO NOT do power slides, “donuts”, jumps or other driving stunts
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## **DRIVING WITH A PASSENGER**

1. Perform the pre-ride inspection.
  2. Make sure all passengers are at least 10 years of age and tall enough to comfortably and safely sit in the passenger seat with the seat belt secured, put both feet on the floor and grasp the hand hold.
  3. Make sure passenger is wearing helmet, eye protection, gloves, long-sleeve shirt, long pants and over-the-ankle boots.
  4. Make sure passenger secures their seat belt.
  5. Make sure all cab nets are properly secured.
  6. Do not carry more than the recommended number of passengers for your vehicle.
  7. Allow a passenger to ride only in a passenger seat.
  8. Slow down. Always travel at a speed appropriate for your skills, your passenger’s skills, and operating conditions. Avoid unexpected or aggressive maneuvers that could cause discomfort or injury to a passenger.
  9. Vehicle handling may change with a passenger and/or cargo on board. Allow more time and distance for braking.
  10. Always follow all operating guidelines as outlined on safety labels and in this manual.
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## **DRIVING ON SLIPPERY SURFACES**

**WARNING** Skidding or sliding can cause loss of control or rollover (if tires regain traction unexpectedly). When operating on slippery surfaces such as ice or loose gravel, reduce speed and use extra caution to reduce the chance of skidding or sliding out of control. Do not operate on excessively slippery surfaces.



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

1. Do not operate on excessively rough, slippery or loose terrain.
  2. Slow down before entering slippery areas.
  3. Maintain a high level of alertness, reading the trail and avoiding quick, sharp turns, which can cause skids.
  4. Correct a skid by turning the steering wheel in the direction of the skid. Never apply the brakes during a skid.
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## DRIVING OVER OBSTACLES

Follow these precautions when operating over obstacles:

1. Always check for obstacles before operating in a new area.
  2. Look ahead and learn to read the terrain. Be constantly alert for hazards such as logs, rocks and low hanging branches.
  3. Travel slowly and use extra caution when operating on unfamiliar terrain. Not all obstacles are immediately visible.
  4. Move the drive mode switch to low mode if needed.
  5. Avoid operating over large obstacles such as large rocks and fallen trees. If unavoidable, use extreme caution and operate slowly.
  6. Always have all passengers dismount and move away from the vehicle before operating over an obstacle that could cause a rollover.
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## DRIVING UPHILL

Whenever traveling uphill, follow these precautions:

1. Avoid excessively steep hills.
2. Always travel straight uphill.
3. Keep both feet on the floor.
4. Always check the terrain carefully before ascending any hill. Never climb hills with excessively slippery or loose surfaces.
5. Proceed at a steady rate of speed and throttle opening. Never open the throttle suddenly.

6. 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.
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## **DRIVING DOWNHILL**

When driving downhill, follow these precautions:

1. Avoid excessively steep hills.
  2. Always descend a hill with the direction selector switch on forward. Never descend a hill with the switch on neutral.
  3. Drive straight downhill. Avoid descending a hill at an angle, which would cause the vehicle to lean sharply to one side. Travel straight downhill when possible.
  4. Slow down.
  5. Apply the brakes slightly to aid in slowing.
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## **DRIVING ON A SIDEHILL (SIDEHILLING)**

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

If crossing a sidehill is unavoidable, follow these precautions:

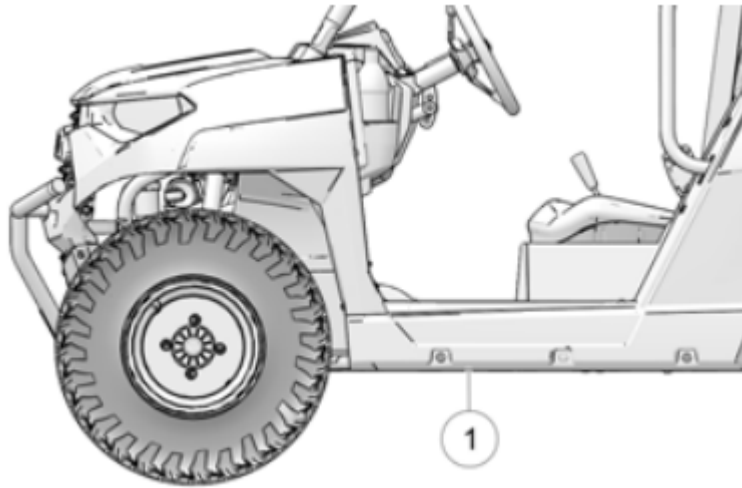
1. Slow down.
  2. Exercise extreme caution.
  3. Avoid crossing the side of a steep hill.
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## **DRIVING THROUGH WATER**

Your vehicle can drive through shallow water. Make sure the water is no deeper than the floor of the vehicle.

Follow these precautions when driving through water:

1. Check water depth. Never drive through water that is deeper than the floor level.
2. After driving through water, test the brakes. Apply the lightly several times while driving slowly. The Friction will help dry out the pads.



**NOTE** Major engine damage can result if the vehicle is not thoroughly inspected after operation in water. Perform the services outlined in the maintenance chart. Give special attention to engine oil, transmission oil, and all grease fittings. If your vehicle becomes immersed or is operated in water that exceeds the floor level, service is required before starting the engine. Your Polaris dealer can provide this service. If it's impossible to bring the vehicle in before starting the engine, perform the services outlined, and take the vehicle in for service at the first opportunity.

## **DRIVING IN REVERSE**

Follow these precautions when operating in reverse:

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

## **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 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, genuine POLARIS parts are available from your POLARIS dealer. Equivalent parts may be used for emissions-related service.

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.

Vehicles subjected to heavy or severe use patterns 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.

#### **MAINTENANCE CHART KEY**

SYMBOL	DESCRIPTION
<b>XU</b>	Perform these procedures more often for vehicles subjected to severe use.
<b>D</b>	Have an authorized dealer or other qualified person perform these services.

**WARNING** Improperly performing the procedures marked with a **D** could result in component failure and lead to serious injury or death. Have an authorized dealer or other qualified person perform these services.

## MAINTENANCE INTERVALS

**NOTE** The maintenance interval charts outline required maintenance and inspection based on estimated vehicle engine hours / miles. Each table states the number of hours / miles that service is required on the vehicle. Some items or components may need to be serviced more often due to severe use, such as operation in water or under severe loads. When the vehicle goes beyond 400 hours, return to the 25 hours chart and start the interval process over.

### 5 HOUR / BREAK-IN SERVICE

ITEM		REMARKS
<b>XU</b>	Engine Oil Change (Break-in)	Perform a break-in oil change at one month
	Drive Chain (Break-in)	Adjust and lubricate
<b>XU D</b>	Brake pad wear (Break-in)	Inspect periodically

### 10 HOUR / 100 MILE (160 KM) SERVICE

ITEM		REMARKS
<b>D</b>	Valve Clearance (Break-in)	Valve lash adjustment: Every 50 hours after first 10-hour adjustment

**25 HOUR / 250 MILE (400 KM) SERVICE**

ITEM		REMARKS
	Fuel System	Inspect; cycle key to pressurize fuel pump; check lines and fittings for leaks and abrasion
	Battery	Check terminals; clean; test
<b>XU</b>	Engine Oil Change	

**50 HOUR / 500 MILE (800 KM) SERVICE**



ITEM		REMARKS
<b>XU</b>	Fuel System	Inspect; cycle key to pressurize fuel pump; check lines and fittings for leaks and abrasion
	Battery	Check terminals; clean; test
<b>XU</b>	Main Gearcase Oil	Inspect level; change yearly
<b>XU</b>	Engine Oil Change	
<b>D</b>	Valve Clearance	Valve lash adjustment: Every 40 hours after first 10-hour adjustment
<b>XU</b>	General Lubrication	Lubricate all fittings, pivots, cables, etc.
	Shift Linkage	Inspect, lubricate, adjust
<b>XU</b>	Steering	Lubricate
<b>XU</b>	Front Suspension	Lubricate
<b>XU</b>	Rear Suspension	Lubricate
	Throttle Body Intake Duct	Inspect duct for proper sealing/air leaks

### 75 HOUR / 750 MILE (1200 KM) SERVICE



ITEM		REMARKS
	Fuel System	Inspect; cycle key to pressurize fuel pump; check lines and fittings for leaks and abrasion
	Battery	Check terminals; clean; test
<b>XU</b>	Main Gearcase Oil	Inspect level; change yearly
<b>XU</b>	Engine Oil Change	

**100 HOUR / 1000 MILE (1600 KM) SERVICE**



ITEM		REMARKS
	Battery	Check terminals; clean; test
<b>XU</b>	Transmission (Main Gearcase)	Replace transmission fluid
<b>XU</b>	Engine Oil Change	
<b>D</b>	Valve Clearance	Valve lash adjustment
<b>XU</b>	General Lubrication	Lubricate all fittings, pivots, cables, etc.
	Shift Linkage	Inspect, lubricate, adjust
<b>D</b>	Steering	Lubricate
<b>XU</b>	Front Suspension	Lubricate
<b>XU</b>	Rear Suspension	Lubricate
	Throttle Body Intake Duct	Inspect duct for proper sealing/air leaks
<b>D</b>	Fuel System / Filter	Cycle key to pressurize fuel pump; check for leaks at fill cap, fuel lines/rail and fuel pump; replace lines every two years
<b>XU</b>	Spark Plug	Inspect; replace as needed
<b>XU</b>	Engine Mounts	Inspect
	Exhaust Muffler / Pipe	Inspect

<b>XU</b>	Wiring	Inspect for wear, routing, security; apply dielectric grease to connectors subjected to water, mud, etc.
<b>D</b>	Clutches (Drive and Driven)	Inspect; clean; replace worn parts
	Drive belt	Inspect; replace as needed
<b>D</b>	Front wheel bearings	Inspect; replace as needed

### 125 HOUR / 1250 MILE (2000 KM) SERVICE

ITEM		REMARKS
	Fuel System	Inspect; cycle key to pressurize fuel pump; check lines and fittings for leaks and abrasion
	Battery	Check terminals; clean; test
<b>XU</b>	Main Gearcase Oil	Inspect level; change yearly
<b>XU</b>	Engine Oil Change	

### 150 HOUR / 1500 MILE (2400 KM) SERVICE



ITEM		REMARKS
<b>XU</b>	Fuel System	Inspect; cycle key to pressurize fuel pump; check lines and fittings for leaks and abrasion
	Battery	Check terminals; clean; test
<b>XU</b>	Main Gearcase Oil	Inspect level; change yearly
<b>XU</b>	Engine Oil Change	
<b>D</b>	Valve Clearance	Valve lash adjustment
<b>XU</b>	General Lubrication	Lubricate all fittings, pivots, cables, etc.
	Shift Linkage	Inspect, lubricate, adjust
<b>D</b>	Steering	Lubricate
<b>XU</b>	Front Suspension	Lubricate
<b>XU</b>	Rear Suspension	Lubricate
	Throttle Body Intake Duct	Inspect duct for proper sealing/air leaks

**175 HOUR / 1750 MILE (2800 KM) SERVICE**



ITEM		REMARKS
	Fuel System	Inspect; cycle key to pressurize fuel pump; check lines and fittings for leaks and abrasion
	Battery	Check terminals; clean; test
XU	Main Gearcase Oil	Inspect level; change yearly
XU	Engine Oil Change	

**200 HOUR / 2000 MILE (3200 KM) SERVICE**



ITEM		REMARKS
	Battery	Check terminals; clean; test
<b>XU</b>	Main Gearcase Oil	Inspect level; change yearly
<b>XU</b>	Engine Oil Change	
<b>D</b>	Valve Clearance	Valve lash adjustment
<b>XU</b>	General Lubrication	Lubricate all fittings, pivots, cables, etc.
	Shift Linkage	Inspect, lubricate, adjust
<b>D</b>	Steering	Lubricate
<b>XU</b>	Front Suspension	Lubricate
<b>XU</b>	Rear Suspension	Lubricate

## LUBRICATION RECOMMENDATIONS

	ITEM	LUBE
	Engine Oil	PS-4 5W-50 4-Cycle Oil
	Brake Fluid	DOT 4 Brake Fluid
	Transmission Oil (Main Gearcase)	AGL Gearcase Lubricant & Transmission Fluid
	Drive Chain	POLARIS Chain Lube or SAE 80/90
	A-Arm Pivots	POLARIS All Season Grease or grease conforming to NLGI No. 2 Grease at general lubrication interval, also after XU Steering Arm Pivots washing vehicle or driving in water.
<b>XU</b>	Steering Arm Pivots	

**XU** Perform these procedures more often for vehicles subjected to severe use

## ENGINE OIL

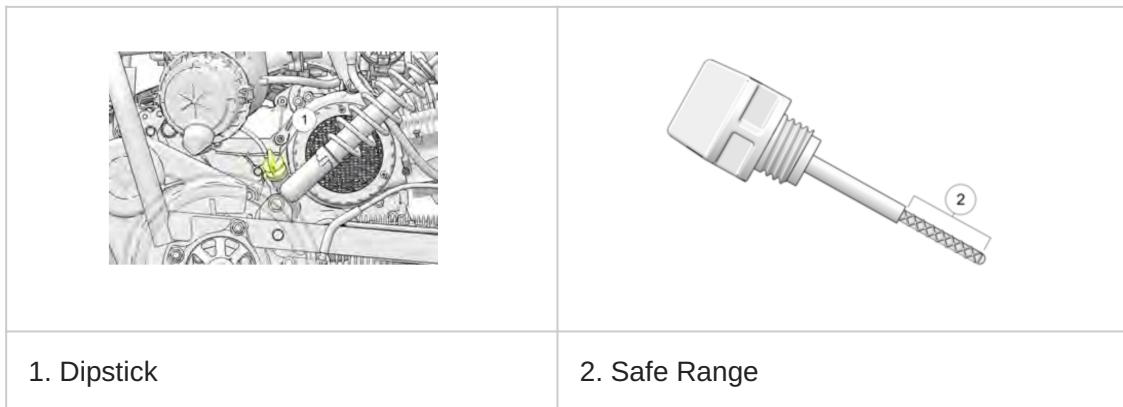
### OIL RECOMMENDATIONS

Always check and change the engine oil at the intervals outlined in the Periodic Maintenance Chart. POLARIS recommends the use of POLARIS PS-4 5W-50 4-Cycle Oil for this vehicle. Oil may need to be changed more frequently if POLARIS oil is not used. Do not use automotive oil. See page 113 for the part numbers of POLARIS products

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

### OIL CHECK

Maintain the oil level within the safe range on the dipstick. Do not overfill



1. Position the vehicle on a level surface.
2. Remove the dipstick. Wipe it dry with a clean cloth.
3. Reinstall the dipstick completely.
4. Remove the dipstick and check the oil level.

**TIP** A rising oil level between checks in cool weather driving can indicate contaminants such as gas or moisture collecting in the crankcase. If the oil level is over the full/safe mark, change the oil immediately

5. Add the recommended oil as needed.
6. Reinstall the dipstick.

### OIL CHANGE

1. Position the vehicle on a level surface. Set the parking brake.
2. Clean the area around the pre-filter plug.
3. Start the engine. Allow it to idle for two to three minutes.
4. Stop the engine.

## **⚠ WARNING**

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

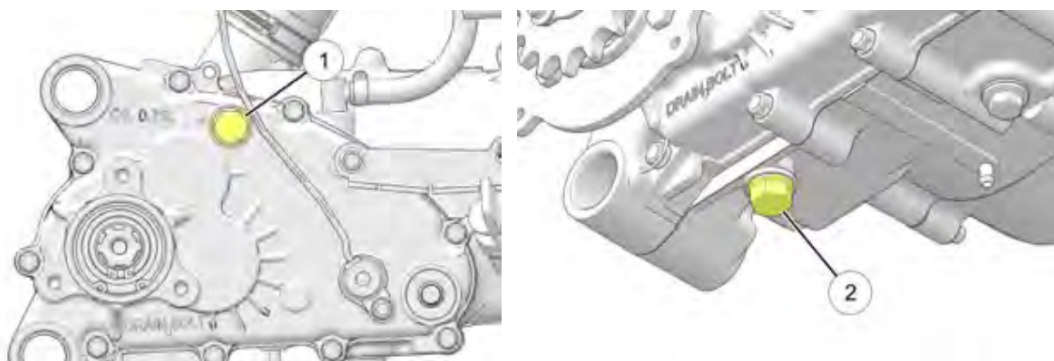
5. Place a drain pan under the engine crankcase.
6. Remove the pre-filter plug. Allow the oil to drain completely
7. Wash the oil pre-filter screen with solvent to remove debris. Allow the screen to air dry.
8. Clean the pre-filter plug. Install a new sealing washer on the plug. The sealing surfaces on the plug and crankcase should be clean and free of burrs, nicks or scratches.
9. Reassemble the pre-filter screen and spring to the pre-filter plug.
10. Reinstall the pre-filter drain plug. Torque to 11 ft. lbs. (15 Nm).
11. Remove the dipstick. Add 37 oz. (1.1 liters) of the recommended oil. Do not overfill. See the specifications section for capacities.
12. Reinstall the dipstick.
13. Start the engine. Allow it to idle for one to two minutes.
14. Stop the engine and inspect for leaks.
15. Check the oil level. Add oil as needed to bring the level to the upper mark on the dipstick.
16. Dispose of used oil properly.

## **TRANSMISSION**

### **TRANSMISSION OIL CHANGE**

#### **NOTE**

Maximum transmission fluid volume cannot exceed 25oz. (750ml). Fill / check method is not fill to spill. Follow Fluid Change Procedure to verify transmission is filled with fluid. Do not overfill.



Always change the fluid at the intervals outlined in the Periodic Maintenance Interval Chart. Polaris recommends the use of AGL Gearcase Lubricant and Transmission Fluid for this vehicle. The fill

plug (1) is located on the side of the transmission gearcase. Access the fill plug on the right-hand side of the gearcase. The drain plug (2) is located on the bottom of the transmission gearcase. Access the drain plug from the bottom of the vehicle.

To change the transmission fluid, do the following:

1. Remove the fill plug.
2. Place a drain pan under the transmission drain plug.
3. Remove drain plug w and allow lubricant to drain completely.
4. Clean the drain plug magnetic surface.
5. Reinstall the drain plug and torque to specification.

<b>TORQUE</b>
Transmission Fill / Drain Plug: <b>14 ft-lbs (19 Nm)</b>

6. Add the recommended amount of lubricant through the fill plug holeq. Do NOT overfill or fill to the bottom of the fill plug hole.

<b>FLUID CAPACITY</b>
Recommended Transmission Lubricant: <b>Polaris AGL</b> Capacity: <b>25 oz. (750 ml)</b>

7. Reinstall the fill plug and torque to specification.

<b>TORQUE</b>
Transmission Fill / Drain Plug: <b>14 ft-lbs (19 Nm)</b>

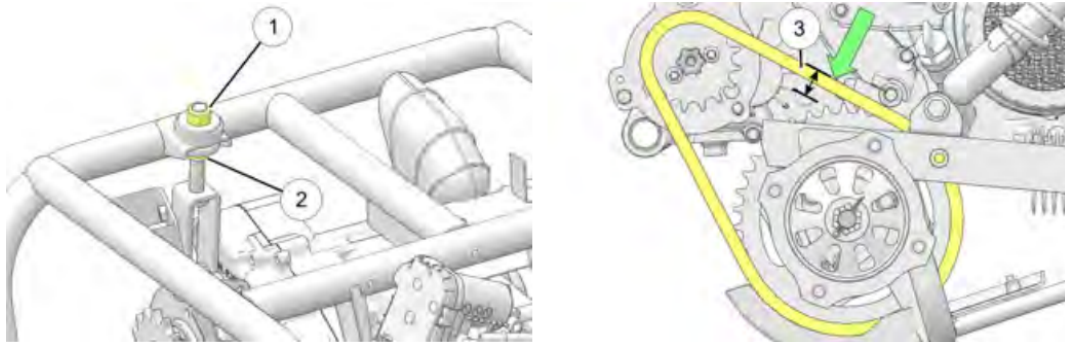
8. Check for leaks. Dispose of used lubricant properly.

## **DRIVE CHAIN LUBRICATION AND ADJUSTMENT**

Lubricate the drive chain with Polaris chain spray lube or an approved chain lube at the interval specified in the Periodic Maintenance Chart. Lubricate more often under severe use, such as in dirty or wet conditions.

**IMPORTANT** Washing the drive chain with a high pressure washer or solvents can cause premature wear and chain failure. Do not use a high pressure washer or gasoline to clean the drive chain. Operating the vehicle with improper rear drive chain deflection can result in severe damage

to the transmission and drive components. Always make sure the chain adjusted within the stated specifications



1. Loosen upper nut (1) on the chain tensioner bracket.
2. Turn lower nut (2) clockwise in 1/2 turn increments, then turn upper nut until tight. Follow this procedure until chain is at proper tension. To check for proper tension, press the down on the middle of the chain with thumb using 22 lbs (100N) of force. Chain deflection  $e$  should be within specification.

### MEASUREMENT

Chain Deflection:  
Using 22 lbs (100N) of force  
New Chain:  $3/16 - 13/32$ " (5 - 10 mm)  
Broken In Chain:  $13/32 - 19/32$ " (10 - 15 mm)

### NOTE

A new chain will stretch after the vehicle is used for a period of time.

3. Repeat these steps until chain is adjusted to desired deflection.

## PARKING BRAKE

### PARKING BRAKE CABLE FREEPLAY ADJUSTMENT

1. Inspect and perform any needed service on the brake pads before adjusting parking brake cable freeplay.
2. Make sure the parking brake is NOT set (the lever should be in the DOWN position).
3. Pull the brake cable back to inspect freeplay between the cable end and the caliper bracket. Freeplay should be  $1/16$ " -  $1/8$ " (1.5-3 mm).
4. To adjust freeplay, loosen the jam nut. Turn the in-line adjuster nut outward to decrease freeplay. Turn the adjuster nut inward to increase freeplay.
5. Tighten the jam nut against the adjuster nut.

## PARKING BRAKE ADJUSTMENT

1. Inspect and perform any needed service on the brake pads before adjusting the parking brake.
2. Position the vehicle on a level surface. Place the transmission in neutral.
3. Carefully elevate the rear of the vehicle slightly. Use an appropriate lift.
4. Loosen the jam nut on the parking brake adjustment bolt (1)



5. While rotating the rear wheels by hand, tighten the adjustment bolt until significant brake drag is detected. Then back the adjustment bolt out 1/4 turn.
6. Hold the adjustment bolt in place and tighten the jam nut securely against the lever arm.
7. Check parking brake lever movement. Verify that the rear wheels rotate freely with the parking brake off (lever in DOWN position) and that the vehicle will not move when the parking brake is applied (lever in UP position).
8. Verify that the park brake lever stays in the UP position when the brake is fully applied.

## SPARK PLUG

### SPARK PLUG GAP/TORQUE

Electrode Gap	New Plug Torque	Used Plug Torque
0.6-0.7 mm	9-11 ft. lbs. (12-15 Nm)	17-20 ft. lbs. (23-27 Nm)

**NOTICE** 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 burns. Wear protective gloves when removing a spark plug for inspection.

### **SPARK PLUG CONDITION**

#### ***Normal Plug***

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

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

#### **Wet Fouled Plug**

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

### **SPARK PLUG REMOVAL AND REPLACEMENT**

<ol style="list-style-type: none"><li>1. Remove the spark plug cap (1).</li><li>2. Using the spark plug wrench provided in the tool kit, remove the plug by rotating it counterclockwise.</li><li>3. Reverse the procedure for spark plug installation. Torque to specification.</li></ol>	
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### **CONSTANT VARIABLE TRANSMISSION (CVT) 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 CVT system. Doing so may reduce its strength so that a failure may occur at a high speed. The CVT system has been precision balanced. Any modification will cause the system to be out of balance, creating vibration and additional loads on components.

- Always follow all recommended maintenance procedures. See your POLARIS dealer, or other qualified person, for service and repair assistance.
- This CVT system is intended for use on POLARIS products only. Do not install it in any other product.
- Always make sure the CVT housing is securely in place during operation.

### **CVT DRYING**

**NOTE** After operating in water, the vehicle's CVT system should be checked immediately. Use the following instructions to dry it out before operating.

1. Shift the transmission to neutral. Set the parking brake.
2. Start the engine. Apply varying throttle for 10-15 seconds to expel the moisture and air-dry the belt and clutches.

**NOTE** Do not hold the throttle pedal wide open for more than 5 seconds

3. Allow the engine RPM to return to idle, then shift the transmission into gear.
4. Test the CVT system for belt slippage. If the belt slips, repeat the process or remove the outer clutch cover to inspect the CVT system.

**NOTE** If the vehicle has ingested a large amount of water into the CVT system and has not been operated for a period of time, be sure to check the CVT system components for water damage.

### **AIR FILTER**

Inspect the air filter at the intervals outlined in the Periodic Maintenance Chart. In extremely dusty conditions, air filter replacement will be required more often. Access the air box near the right rear wheel.



1. Disengage the two cover latches (1).
2. Unlatch the cover and carefully remove it from the air box.
3. Remove the filter (2).
4. Inspect the air box for oil or water deposits. Wipe away any deposits with a clean shop towel.

**NOTE** If the filter has been soaked with fuel or oil it must be replaced.

5. Inspect the air filter and replace if necessary.

**NOTE DO NOT** attempt to clean the air filter with compressed air .

6. Place the air filter into the air box and reinstall the air box cover.

**NOTE** Make sure the tabs are properly positioned into the hinge. Ensure the O-ring is installed inside the lid properly.

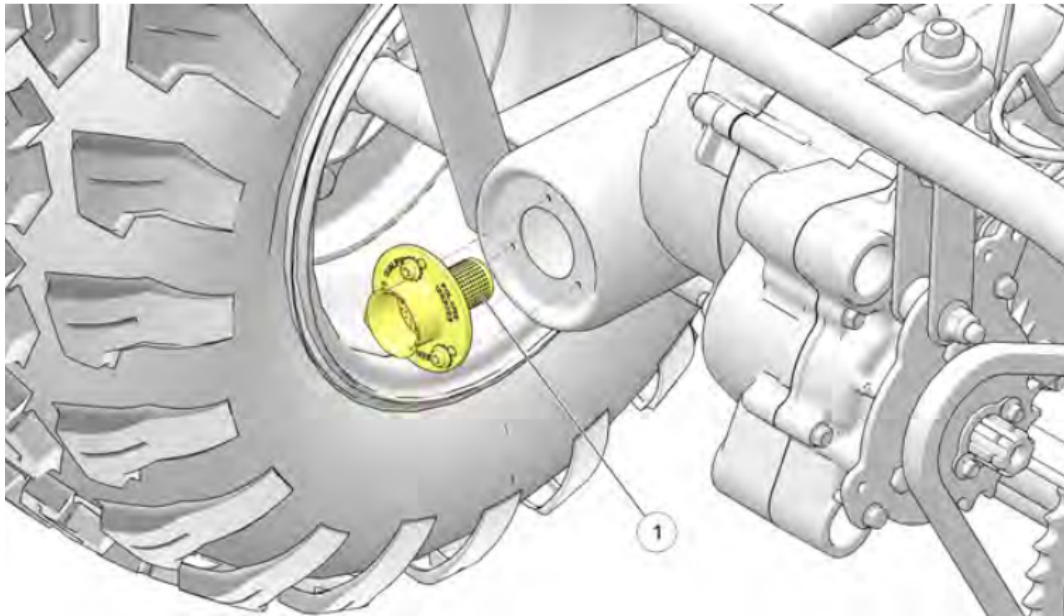
7. Engage the cover latches.

## SPARK ARRESTER

### **WARNING**

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

- Do not perform service on the spark arrester while the system is hot. Allow components to cool sufficiently before proceeding.
- Wear eye protection and gloves.
- Never operate without the spark arrester.
- Never run the engine in an enclosed area. Exhaust contains poisonous carbon monoxide gas.



To remove accumulated carbon, clean the spark arrester at the intervals recommended in the Periodic Maintenance Chart beginning on page 72.

1. Remove the 3 bolts and remove the arrester q from the end of the muffler.
2. Use a non-synthetic brush to clean the arrester screen. A synthetic brush may melt if components are warm. If necessary, blow debris from the screen with compressed air.
3. Inspect the screen for wear and damage. Replace the arrester if damage is found.
4. Reinstall the arrester.
5. Torque the bolts to 7 ft. lbs. (9.5 Nm).

## **BRAKES**

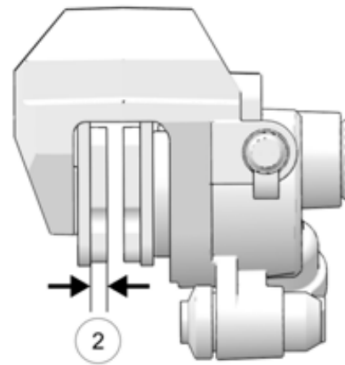
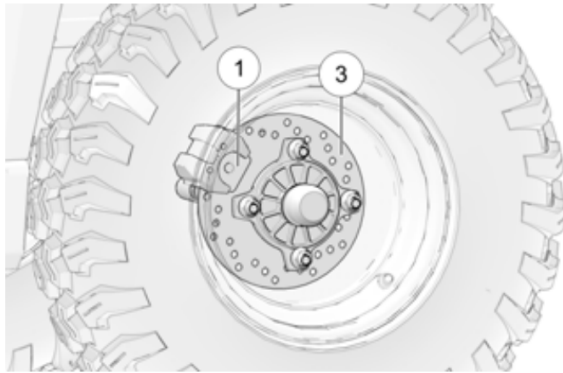
The front and rear brakes are hydraulic disc type brakes activated by the brake pedal.

Always check brake pedal travel and the brake fluid reservoir level before each use of the vehicle. When applied, the brake pedal should feel firm. Any sponginess would indicate a possible fluid leak or low brake fluid level, which must be corrected before riding.

If you discover any irregularities in brake system operation, including excessive pedal travel, contact your dealer for proper diagnosis and repairs.

**WARNING** Operating the vehicle with a spongy brake pedal can result in loss of braking, which could cause an accident resulting in severe injury or death. Never operate the vehicle with a spongy-feeling brake pedal.

## **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 brake pads (1) for wear, damage and looseness.
4. Inspect the brake pad wear surface for excessive wear.
5. Change pads when the friction material is worn to .04" (1 mm) (2).
6. Check the surface condition of the brake discs e. Measure the thickness. Replace a disc if the thickness is less than .170" (4.32 mm).
7. Check brake system hoses and fittings for cracks, deterioration, abrasion and leaks.  
Tighten any loose fittings and replace any worn or damaged parts.

## BRAKE FLUID

Inspect the level of the brake fluid before each operation. If the fluid level is low add DOT 4 brake fluid only. See page 113 for the part numbers of POLARIS products.

**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.

Change the brake fluid every two years and any time the fluid becomes contaminated, the fluid level is below the minimum, or if the type and brand of the fluid in the reservoir are unknown.

Access the brake fluid reservoir through the left front wheel well.

1. Position the vehicle on a level surface.
2. Place the transmission in neutral. Set the parking brake.
3. View the brake fluid level in the reservoir q. The level should be between the maximum w and minimum e level lines. Add brake fluid as needed.
4. Apply the brake forcefully for a few seconds and check for fluid leakage around the fittings.

## STEERING WHEEL INSPECTION

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

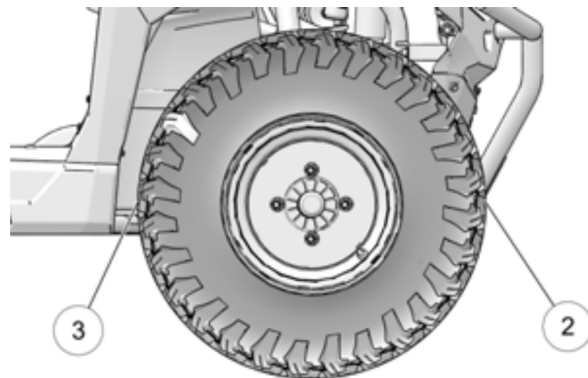
1. Position the vehicle on level ground.
2. Lightly turn the steering wheel left and right.
3. There should be 0.8"-1.0" (20-25 mm) of freeplay.
4. If there is excessive freeplay or strange noises, or the steering feels rough or "catchy," have the steering system inspected by an authorized POLARIS dealer or other qualified service facility before operating the vehicle.

## SHOCK SPRING ADJUSTMENT

**WARNING** Uneven adjustment may cause poor handling of the vehicle, which could result in an accident. Always adjust both the left and right spring preloads equally or have your POLARIS dealer perform the adjustments.

The front and rear shock absorber springs are adjustable to increase or decrease spring tension. Rotate the adjuster (1) either clockwise or counter-clockwise to make adjustments. Always apply the same adjustment setting to all four wheels.	
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## WHEEL TOE ALIGNMENT



1. Place machine on a smooth level surface and set steering wheel in a straight ahead position. Secure the steering wheel in this position.
2. Place a chalk mark on the center line of the front tires approximately 10" (25.4 cm) from the floor or as close to the hub/axle center line as possible (1).

**NOTE** It is important the height of both marks be equally positioned to get an accurate measurement.

3. Measure the distance between the marks and record the measurement. Call this measurement "2".
4. Rotate the tires 180° by moving the vehicle forward. Position chalk marks facing rearward, even with the hub/axle center line.
5. Again measure the distance between the marks and record. Call this measurement "3". Subtract measurement "3" from measurement "2". The difference between measurements "2" and "3" is the vehicle toe alignment. The recommended vehicle toe tolerance is 0 to 1/8" (0 to 3.2 mm) toe out. This means the measurement at the front of the tire w is 0 to 1/8" (0 to 3.2 mm) wider than the measurement at the rear (3).

<b>MEASUREMENT</b>
Wheel Toe-Out: <b>0 to 1/8" (0 to 3.2 mm)</b>

If toe alignment is incorrect, repeat steps 3-5 of "Wheel Toe Alignment Inspection", but instead measure the distance between each wheel and the vehicle center. This will tell you which tie rod needs adjusting.

**NOTE** Be sure steering wheel is straight ahead before determining which tie rod needs adjustment.

**CAUTION** During tie rod adjustment, it is very important that the following precautions be taken when tightening tie rod end jam nuts. If the rod end is positioned incorrectly it will not pivot, and may break.

### **WHEEL TOE ALIGNMENT**

1. Hold tie rod end to keep it from rotating.
2. Loosen jam nuts at both end of the tie rod.
3. Shorten or lengthen the tie rod until alignment is as required to achieve the proper toe setting as specified in above.

**IMPORTANT** When tightening the tie rod end jam nuts, the rod ends must be held parallel to prevent rod end damage and premature wear. Damage may not be immediately apparent if done incorrectly.

4. After alignment is complete, torque jam nuts to specification

<b>TORQUE</b>
Tie Rod Jam Nut: <b>13 ft-lbs (18 Nm)</b>

## 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 mm) 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. Always use POLARIS approved size and type of tires for this vehicle when replacing tires.

### TIRE TREAD DEPTH

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

<ol style="list-style-type: none"><li>1. Position the vehicle on a level surface.</li><li>2. Apply the parking brake and stop the engine.</li><li>3. Loosen the wheel nuts slightly. If wheel hub removal is required, remove the wheel cap, cotter pin and loosen the hub nut slightly.</li><li>4. Elevate the appropriate side of the vehicle by placing a suitable stand under the frame.</li><li>5. Remove the wheel nuts (1) and remove the wheel.</li></ol>	
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### WHEEL INSTALLATION

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

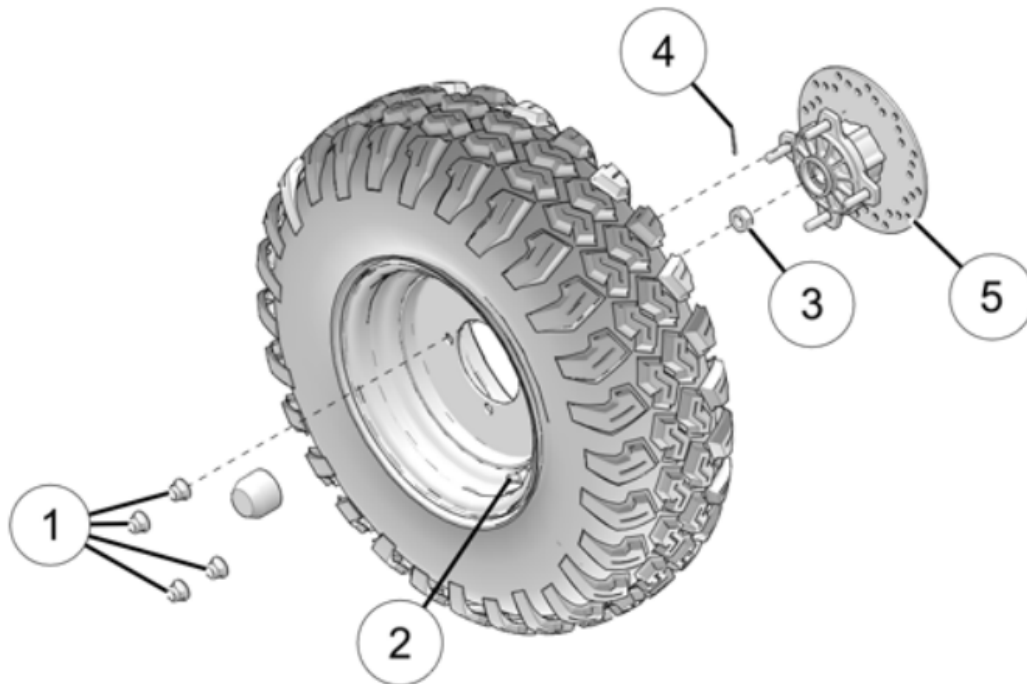
1. Verify the parking brake is still applied.
2. Place the wheel in the correct position on the wheel hub t. Be sure the valve stem w is toward the outside and rotation arrows on the tire point toward forward rotation.
3. Install the wheel nuts q and finger tighten.
4. Carefully lower the vehicle to the ground.
5. Torque the wheel nuts and/or hub nut e to the proper torque specification.



## TORQUE

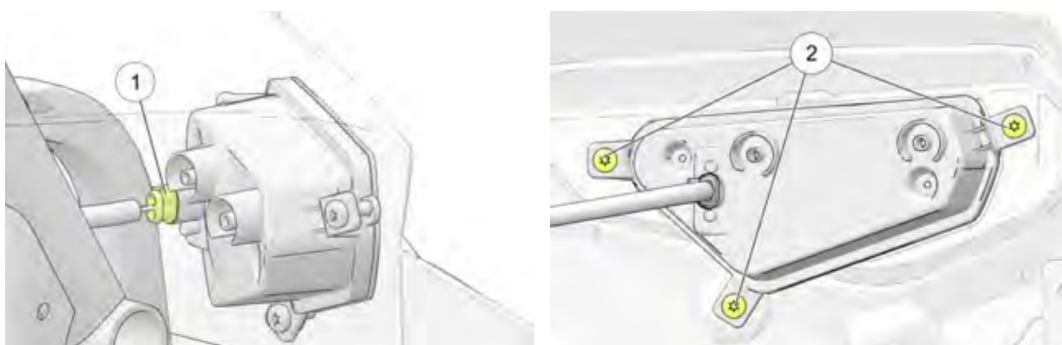
Wheel Lug Nuts:  
**30 ft-lbs (41 Nm)**  
Hub Castle Nuts:  
**Front: 60 ft-lbs (81 Nm)**  
**Rear: 85 ft-lbs (115 Nm)**

6. If hub nut was removed, install a new cotter pin after the hub nut has been tightened. If the holes do not line up, turn the hub nut until the cotter pin r can be installed.



## LIGHTS

### DAYTIME RUNNING LIGHT REPLACEMENT



To remove the headlight, do the following:

1. Disconnect the headlight to harness connection q.
2. Remove the three fasteners w retaining the headlight.

3. Remove the headlight from the inside of the front bumper.

## VEHICLE IMMERSION

**NOTICE** 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.

1. Move the vehicle to dry land.
2. Check the air box. If water is present, dry the air box and replace the filter with a new filter. Thoroughly dry the air pre-filter..
3. Remove the air box drain plug to drain any water. Reinstall the drain plug securely.
4. Remove the spark plug.
5. Turn the engine over several times using the electric start.
6. Dry the spark plug and reinstall it, or install a new plug.
7. Attempt to start the engine. If necessary, repeat the drying procedure.
8. Take the vehicle in for service as soon as possible, whether you succeed in starting it or not. Your POLARIS dealer can provide the required service.
9. If water has been ingested into the transmission follow the procedure in the Constant Variable Transmission (CVT) System section for details on drying.

## 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.**

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

Always keep 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 a conventional 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 FLUID (CONVENTIONAL BATTERY)**

<p>A poorly maintained battery will deteriorate rapidly. Check the battery fluid level often. Maintain the fluid level between the upper (1) and lower level (2) marks.</p> <p>Add only distilled water. Tap water contains minerals that are harmful to a battery.</p>	
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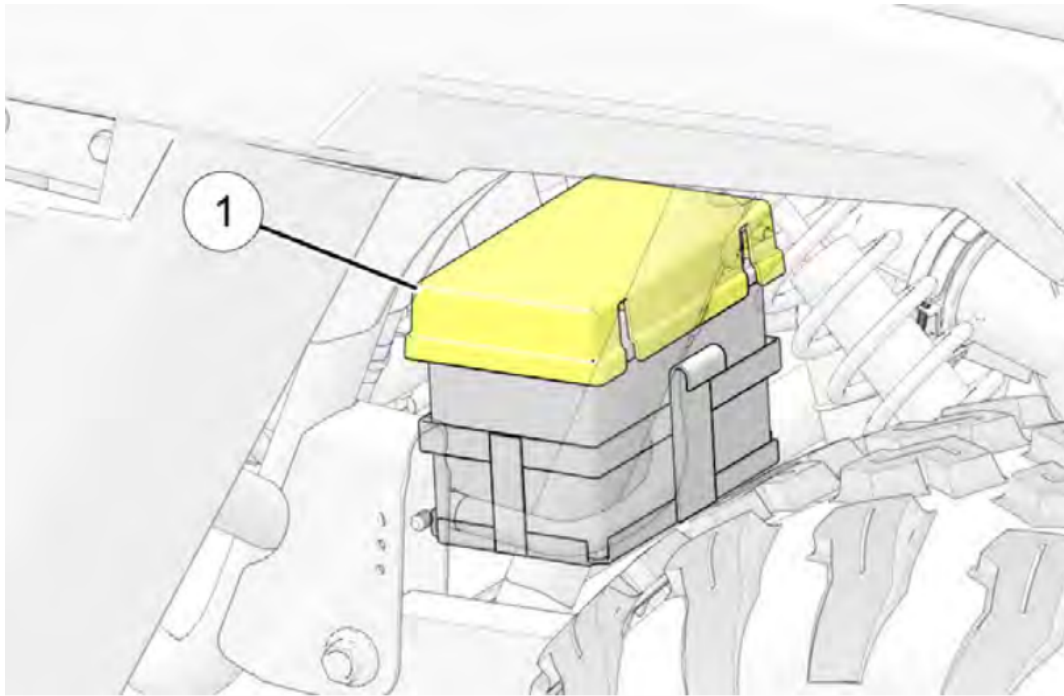
### **BATTERY REMOVAL**

**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.

To remove the battery, do the following:

1. Through the rear left wheel well undo the battery cover strap and remove the battery cover





2. Disconnect the brown (negative) battery cable(s).
3. Disconnect the red (positive) battery cable(s).
4. Carefully lift the battery out of the vehicle.
5. Inspect the rubber battery cover gasket for damage or wear

**NOTICE** 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.

### **BATTERY INSTALLATION**

Using a new battery that has not been fully charged can damage the battery and result in a shorter life. It can also hinder vehicle performance. Follow instructions in the Battery Charging (Conventional Battery) section before installing the 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 dealer can assist. Your dealer can provide any installation procedures that may differ for an extreme use battery

1. Ensure that the battery is fully charged.
2. Place the battery in the battery holder.
3. On conventional batteries, install the battery vent tube (sealed batteries do not have a vent tube). The vent tube must be free of obstructions and securely installed. Route the tube away from the frame and vehicle body to prevent contact with electrolyte.

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

4. Coat the terminals with dielectric grease or petroleum jelly.
5. Connect and tighten the red (positive) cable first.
6. Connect and tighten the black (negative) cable last.
7. Install the battery hold-down strap and tighten the screws.
8. Verify that cables are properly routed. 9. Reinstall the seat.

## **BATTERY STORAGE**

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

**TIP** Battery charge can be maintained by using a POLARIS Battery Tender charger or by charging about once a month to make up for normal self discharge. Battery Tender can be left connected during the storage period, and will automatically charge the battery if the voltage drops below a predetermined point.

## **BATTERY CHARGING (CONVENTIONAL BATTERY)**

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

## **BATTERY CHARGING (SEALED BATTERY)**

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

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

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

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

For a refresh charge, follow all instructions carefully

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

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

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

STATE OF CHARGE	VOLTAGE	ACTION	CHARGE TIME*
<b>*(USING CONSTANT CURRENT CHARGER @ STANDARD AMPS SPECIFIED ON TOP OF BATTERY)</b>			
100%	12.8-13.0 volts	None, check at 3 mos. from date of manufacture	None required
75%-100%	12.5-12.8 volts	May need slight charge, if no charge given, check in 3 months	3-6 hours
50%-75%	12.0-12.5 volts	Needs charge	5-11 hours
25%-50%	11.5-12.0 volts	Needs charge	At least 13 hours, verify state of charge
0%-25%	11.5 volts or less	Needs charge with desulfating charger	At least 20 hours

## CLEANING AND STORAGE

### WASHING THE VEHICLE

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

**NOTE** High water pressure may damage components. POLARIS recommends washing the vehicle by hand or with a garden hose, using mild soap.

**NOTE** Certain products, including insect repellents and chemicals, will damage plastic surfaces. Do not allow these types of products to contact the vehicle.

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

1. Use a professional-type washing cloth, cleaning the upper body first and the lower parts last.

2. Rinse with clean water frequently.
3. Dry surfaces with a chamois to prevent water spots.

## WASHING TIPS

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

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 labels. Avoid directing the water stream at the following items:

<ul style="list-style-type: none"> <li>• Wheel bearings</li> <li>• Radiator</li> <li>• Transmission seals</li> <li>• Brakes</li> </ul>	<ul style="list-style-type: none"> <li>• Cab and body panels</li> <li>• Labels and decals</li> <li>• Electrical components and wiring</li> <li>• Air intake components</li> </ul>
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If an informational or graphic label becomes illegible or comes off, contact your POLARIS dealer, or other qualified person, to purchase a replacement.

Replacement safety labels are provided by POLARIS at no charge.

## 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

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

## **CLEAN THE EXTERIOR**

Make any necessary repairs and clean the vehicle as recommended.

## **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.

- Rear gearcase fluid
- Transmission fluid
- Brake fluid (change every two years and any time the fluid looks dark or contaminated)

## **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 plug and add 2-3 tablespoons of engine oil. To access the plug holes, use a section of clear 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 plug. 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.

## **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.

## **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 spark plugs are tight.
3. Fill the fuel tank with fuel.
4. Check all the points listed in the Daily Pre-Ride Inspection. Tightness of the bolts, nuts and other fasteners should be checked by an authorized dealer or other qualified service facility.
5. Lubricate at the intervals outlined in the Periodic Maintenance Chart.

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

## **TRANSPORTING THE VEHICLE**

Follow these procedures when transporting the vehicle.

1. Apply the brakes.
2. Place the transmission in PARK. Stop the engine.
3. Slowly release the brake pedal and make sure the transmission is in PARK before exiting the vehicle.

4. Remove the key to prevent loss during transporting.

5. Secure the fuel cap and seat. Ensure that the seat is attached correctly and is not loose.

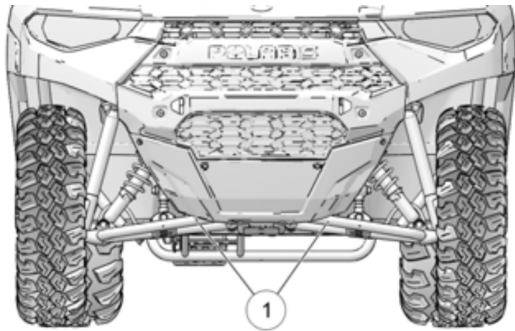
**WARNING**

Cargo and other loose vehicle parts may fly off while transporting this vehicle.

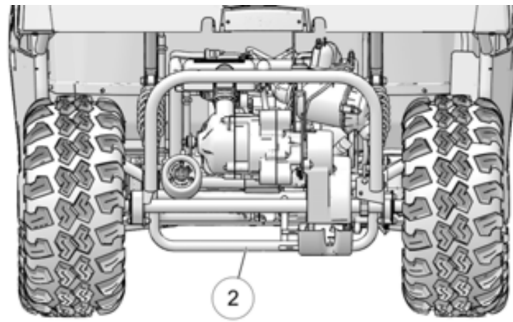
Secure or remove all cargo, and inspect the unit for loose parts prior to transport. For high-speed trailering, it is recommended to remove the safety flag.

6. Using suitable straps or rope, always secure the vehicle to the trailer using the designated tie down points (front and rear).

**TIE-DOWN LOCATIONS**



① Front tie-down points



② Rear tie-down points



## TROUBLESHOOTING

### DRIVE BELTWEAR/BURN

POSSIBLE CAUSE	SOLUTION
Driving at low RPM or ground speed	Drive at a higher speed.
Insufficient warm-up at low ambient temperatures	Warm the engine at least 5 minutes. With the transmission in neutral, apply small amount of 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.
Belt slippage from water or snow ingestion into the CVT system	Dry out the PVT <i>Prevent water from entering the PVT inlet and outlet ducts.</i> Inspect clutch seals for damage if repeated leaking occurs.
Clutch malfunction	Your POLARIS dealer can assist.
Poor engine performance	Check for fouled plug or foreign material in gas tank or fuel lines. Your POLARIS dealer can assist.
Wrong or missing belt	Install the recommended belt.
Improper break-in	Always break in a new belt and/or clutch.



## ENGINE DOES NOT TURN OVER

POSSIBLE CAUSE	SOLUTION
Low battery voltage	Recharge the battery to 12.8 VDC
Loose battery connections	Check all connections and tighten
Loose solenoid connections	Check all connections and tighten

## ENGINE TURNS OVER, FAILS TO START

POSSIBLE CAUSE	SOLUTION
Out of fuel	Refuel
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 POLARIS dealer can assist

Clogged Fuel Filter	Your POLARIS dealer can assist
Low battery voltage	Recharge the battery to 12.8VDC
Mechanical failure	Your POLARIS dealer can assist

## ENGINE BACKFIRE

POSSIBLE CAUSE	SOLUTION
Weak spark from spark plug	Inspect, clean and/or replace spark plug
Incorrect spark plug gap or heat range	Set gap to specs or replace plug
Old or non-recommended fuel	Replace with fresh recommended fuel
Incorrectly installed spark plug wires	Your POLARIS dealer can assist
Mechanical failure	Your POLARIS dealer can assist
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with fresh recommended fuel
Exhaust system leak	Your POLARIS dealer can assist

## ENGINE PINGS OR KNOCKS

POSSIBLE CAUSE	SOLUTION
Poor quality or low octane fuel	Replace with recommended fuel
Incorrect ignition timing	Your authorized dealer can assist
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs

## ENGINE RUNS IRREGULARLY, STALLS OR MISFIRES

POSSIBLE CAUSE	SOLUTION
Fouled or defective spark plug (s)	Inspect, clean and/or replace spark plugs
Worn or defective spark plug wires	Your POLARIS dealer can assist
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 newfuel
Low battery voltage	Recharge battery to 12.8VDC
Kinked or plugged fuel tank vent line	Inspect and replace
Incorrect fuel	Replace with recommended fuel
Clogged airfilter	Inspect and clean or replace
Reverse speed limiter malfunction	Your POLARIS dealer can assist
Electronic throttle control malfunction	Your POLARIS dealer can assist
Other mechanical failure	Your POLARIS dealer can assist

Low or contaminated fuel	Add or change fuel, clean the fuel system
Low octane fuel	Replace with recommended fuel
Clogged airfilter	Your POLARIS dealer can assist
Incorrect fuel	Replace with recommended fuel

Fuel is very high octane	Replace with lower octane fuel
Stopping/starting without adequate warmup	Allow engine to warm up before operating and/or stopping
Incorrectfuel	Replace with recommended fuel
Clogged airfilter	Inspect and clean or replace



## ENGINE STOPS OR LOSES POWER

POSSIBLE CAUSE	SOLUTION
Out of fuel	Refuel, cycle key to ON position three times for 5 seconds each, then start
Kinked or plugged fuel vent line	Inspect and replace
Water is present in fuel	Replace with newfuel
Fouled or defective spark plug (s)	Inspect, clean and/or replace spark plugs
Worn or defective spark plug wires	Your POLARIS 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 to 12.8VDC
Incorrect fuel	Replace with fresh recommended fuel
Clogged air filter	Inspect and clean or replace
Electronic throttle control malfunction	Your POLARIS dealer can assist
Other mechanical failure	Your POLARIS dealer can assist

## DIAGNOSTIC TROUBLE CODES

SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
29	3	Accelerator Position 2	P1228	Voltage Above Normal, Or Shorted To High Source
29	4		P1227	Voltage Below Normal, Or Shorted To Low Source
51	3	Throttle Position Sensor	P0123	Voltage Above Normal, Or Shorted ToHigh Source
51	4	1	P0122	Voltage Below Normal, Or Shorted To Low Source
84	2	Vehicle Speed Sensor	P0503	Data Erratic, Intermittent Or Incorrect

SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
91	3	Accelerator Position 1	P0228	Voltage Above Normal, Or Shorted To High Source
91	4		P0227	Voltage Below Normal, Or Shorted To Low Source
96	2	Fuel Level Signal	P0461	Data Erratic, Intermittent Or Incorrect
96	3		P0463	Voltage Above Normal, Or Shorted To High Source
96	4		P0462	Voltage Below Normal, Or Shorted To Low Source
96	16		P1462	Data Valid But Above Normal Operating Range - Moderately Severe Level
96	18		P1463	Data Valid But Below Normal Operating Range - Moderately Severe Level
102	3		Manifold Absolute Pressure Sensor	P0108
102	4	P0107		Voltage Below Normal, Or Shorted To Low Source



105	0	Intake Air Temperature Sensor	P1111	Data Valid But Above Normal Operational Range - Most Severe Level
105	3		P0113	Voltage Above Normal, Or Shorted To High Source
105	4		P0112	Voltage Below Normal, Or Shorted To Low Source
108	3	Barometric Pressure Sensor	P2229	Voltage Above Normal, Or Shorted To High Source
108	4		P2228	Voltage Below Normal, Or Shorted To Low Source
110	0	Engine Temperature Sensor	P1217	Data Valid But Above Normal Operational Range - Most Severe Level
110	2		P0116	Data Erratic, Intermittent Or Incorrect
110	3		P0118	Voltage Above Normal, Or Shorted To High Source



SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
110	4		P0117	Voltage Below Normal, Or Shorted To Low Source
110	10		P0119	Abnormal Rate Of Change
110	15		P1116	Data Valid But Above Normal Operating Range - Least Severe Level
110	16		P0217	Data Valid But Above Normal Operating Range - Moderately Severe Level
110	17		P0128	Data Valid But Below Normal Operating Range - Least Severe Level
168	0		P1562	Data Valid But Above Normal Operational Range - Most Severe Level
168	1	System Power	P1563	Data Valid But Below Normal Operational Range - Most Severe Level
168	2		P0561	Data Erratic, Intermittent Or Incorrect
168	3		P0563	Voltage Above Normal, Or Shorted To High Source
168	4		P0562	Voltage Below Normal, Or Shorted To Low Source



190	31	Engine Speed	P121C	Condition Exists
523	2		P0914	Data Erratic, Intermittent Or Incorrect
523	4	Gear Sensor Signal	P0916	Voltage Below Normal, Or Shorted To Low Source
523	9		P1914	Abnormal Update Rate
527	31	Cruise Control Panel Switches	P153D	Condition Exists
636	2	Crankshaft Position Sensor	P0335	Data Erratic, Intermittent Or Incorrect
637	8	Camshaft Position Sensor	P0340	Abnormal Frequency Or Pulse Width Or Period



SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
651	3	Injector 1 (Front) (MAG) (SDI Port Injector)	P0262	Voltage Above Normal, Or Shorted To High Source
651	4		P1262	Voltage Below Normal, Or Shorted To Low Source
651	5		P0261	Current Below Normal Or Open Circuit
652	3	Injector 2 (Rear) (PTO) (SDI Port Injector)	P0265	Voltage Above Normal, Or Shorted To High Source
652	4		P1265	Voltage Below Normal, Or Shorted To Low Source
652	5		P0264	Current Below Normal Or Open Circuit
677	3	Starter Solenoid Driver Circuit	P0617	Voltage Above Normal, Or Shorted To High Source
677	4		P0616	Voltage Below Normal, Or Shorted To Low Source
677	5		P0615	Current Below Normal Or Open Circuit
731	1	Knock Sensor 1	P0326	Data Valid But Below Normal Operational Range - Most Severe Level



746	3	Rear Differential Output (Turf)	P1692	Voltage Above Normal, Or Shorted To High Source
746	4		P1693	Voltage Below Normal, Or Shorted To Low Source
746	5		P1691	Current Below Normal Or Open Circuit
876	3	AC Compressor Clutch Relay	P0647	Voltage Above Normal, Or Shorted To High Source
876	4		P0646	Voltage Below Normal, Or Shorted To Low Source
876	5		P0645	Current Below Normal Or Open Circuit
1071	3	Fan Relay Driver Circuit	P1482	Voltage Above Normal, Or Shorted To High Source



SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
1071	4		P1483	Voltage Below Normal, Or Shorted To Low Source
1071	5		P1481	Current Below Normal Or Open Circuit
1127	0		P0234	Data Valid But Above Normal Operational Range - Most Severe Level
1127	2		P0236	Data Erratic, Intermittent Or Incorrect
1127	3	Boost Pressure Sensor	P0238	Voltage Above Normal, Or Shorted ToHigh Source
1127	4		P0237	Voltage Below Normal, Or Shorted To Low Source
1127	31		P1234	Condition Exists
1213	3		P1653	Voltage Above Normal, Or Shorted ToHigh Source
1213	4	Malfunction Indicator Lamp	P1652	Voltage Below Normal, Or Shorted To Low Source
1213	5		P1651	Current Below Normal Or Open Circuit

1268	3	Ignition Coil Primary Driver 1 (Front) (MAG)	P1353	Voltage Above Normal, Or Shorted ToHigh Source
1269	3	Ignition Coil Primary Driver 2 (Rear) (PTO)	P1354	Voltage Above Normal, Or Shorted ToHigh Source
1347	3		P0232	Voltage Above Normal, Or Shorted ToHigh Source
1347	4	Fuel Pump DriverCircuit	P0231	Voltage Below Normal, Or Shorted To Low Source
1347	5		P0230	Current Below Normal Or Open Circuit
1557	3	Fan Driver 2	P0694	Voltage Above Normal, Or Shorted ToHigh Source
1557	4		P0693	Voltage Below Normal, Or Shorted To Low Source



SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
1557	5		P0481	Current Below Normal Or Open Circuit
1856	3		B1150	Voltage Above Normal, Or Shorted To High Source
1856	4	Seat Belt Switch	B1250	Voltage Below Normal, Or Shorted To Low Source
1856	5		B1350	Current Below Normal Or Open Circuit
1856	31			Condition Exists
2629	3	Engine Turbocharger 1 Compressor Outlet Temperature	P1235	Voltage Above Normal, Or Shorted To High Source
2629	4		P1236	Voltage Below Normal, Or Shorted To Low Source
3056	2		P0130	Data Erratic, Intermittent Or Incorrect
3056	3		P0132	Voltage Above Normal, Or Shorted To High Source
3056	4	Oxygen Sensor Bank 1 Sensor 1	P0131	Voltage Below Normal, Or Shorted To Low Source
3056	5		P1134	Current Below Normal Or Open Circuit



3056	12		P113A	Bad Intelligent Device Or Component
3597	3	ECU Output Supply Voltage	P16A2	Voltage Above Normal, Or Shorted To High Source
3597	4	1	P16A1	Voltage Below Normal, Or Shorted To Low Source
3598	3	ECU Output Supply Voltage 2	P16A9	Voltage Above Normal, Or Shorted To High Source
3598	4		P16A8	Voltage Below Normal, Or Shorted To Low Source
3599	3	ECU Output Supply Voltage 3	P17AA	Voltage Above Normal, Or Shorted To High Source
3599	4		P17AB	Voltage Below Normal, Or Shorted To Low Source

SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
65590	7	Cylinder Misfire	P0314	Mechanical System Not Responding Or Out Of Adjustment
65591	7	Cylinder 1 Misfire	P0301	Mechanical System Not Responding Or Out Of Adjustment
65592	7	Cylinder 2 Misfire	P0302	Mechanical System Not Responding Or Out Of Adjustment
65613	2	ETC Accelerator Position Sensor Outputs 1 & 2 Correlation	P1135	Data Erratic, Intermittent Or Incorrect
520194	2	Throttle Release Signal	P1553	Data Erratic, Intermittent Or Incorrect
520194	3		P1555	Voltage Above Normal, Or Shorted To High Source
520194	4		P1554	Voltage Below Normal, Or Shorted To Low Source
520194	7		P1552	Mechanical System Not Responding Or Out Of Adjustment



520198	3	Throttle Position Sensor 2	P0223	Voltage Above Normal, Or Shorted ToHigh Source
520198	4		P0222	Voltage Below Normal, Or Shorted To Low Source
520200	2	Rollover Sensor (Tipover)	P1501	Data Erratic, Intermittent Or Incorrect
520200	3		P1503	Voltage Above Normal, Or Shorted ToHigh Source
520200	4		P1502	Voltage Below Normal, Or Shorted To Low Source
520200	14		P1504	Special Instructions
520202	3	Canister Purge Valve		Voltage Above Normal, Or Shorted To High Source
520202	4		P0445	Voltage Below Normal, Or Shorted To Low Source
520202	5			Current Below Normal Or Open Circuit

SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
520203	3	Front Wheel Back Drive (Active Descent System)	P1686	Voltage Above Normal, Or Shorted To High Source
520203	4		P1687	Voltage Below Normal, Or Shorted To Low Source
520203	5		P1685	Current Below Normal Or Open Circuit
520204	15	Fuel Correction Front	P0172	Data Valid But Above Normal Operating Range - Least Severe Level
520204	17		P0171	Data Valid But Below Normal Operating Range - Least Severe Level
520205	15	Fuel Correction Rear	P0175	Data Valid But Above Normal Operating Range - Least Severe Level
520205	17		P0174	Data Valid But Below Normal Operating Range - Least Severe Level
520206	2	Reverse Alarm	P1684	Data Erratic, Intermittent Or Incorrect
520206	3		P1682	Voltage Above Normal, Or Shorted To High Source
520206	4		P1683	Voltage Below Normal, Or Shorted To Low Source



520206	5		P1681	Current Below Normal Or Open Circuit
520207	3	All Wheel Drive Control Circuit	P1835	Voltage Above Normal, Or Shorted To High Source
520207	4		P1834	Voltage Below Normal, Or Shorted To Low Source
520207	5		P1836	Current Below Normal Or Open Circuit
520208	3	Chassis Relay	P1614	Voltage Above Normal, Or Shorted To High Source
520208	4		P1613	Voltage Below Normal, Or Shorted To Low Source



SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
520208	5		P1611	Current Below Normal Or Open Circuit
520209	2	Oxygen Sensor Heater 1	P0135	Data Erratic, Intermittent Or Incorrect
520209	3			Voltage Above Normal, Or Shorted To High Source
520209	4		P0031	Voltage Below Normal, Or Shorted To Low Source
520209	5			Current Below Normal Or Open Circuit
520210	2	Oxygen Sensor Heater 2	P0141	Data Erratic, Intermittent Or Incorrect
520210	3		P0038	Voltage Above Normal, Or Shorted ToHigh Source
520210	4		P0037	Voltage Below Normal, Or Shorted To Low Source
520210	5		P0036	Current Below Normal Or Open Circuit
520211	3	Idle Speed	P0507	Voltage Above Normal, Or Shorted ToHigh Source
520211	4		P0506	Voltage Below Normal, Or Shorted To Low Source

520211	7			Mechanical System Not Responding Or Out Of Adjustment
520268	3	Idle Air Control M17 Stepper Pin 3	P1519	Voltage Above Normal, Or Shorted ToHigh Source
520268	4		P1518	Voltage Below Normal, Or Shorted To Low Source
520268	5		P1515	Current Below Normal Or Open Circuit
520269	3	Idle Air Control M17 Stepper Pin 4	P1529	Voltage Above Normal, Or Shorted ToHigh Source
520269	4		P1528	Voltage Below Normal, Or Shorted To Low Source
520269	5		P1525	Current Below Normal Or Open Circuit



SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
520270	3	Idle Air Control M17 Stepper Pin 6	P1539	Voltage Above Normal, Or Shorted To High Source
520270	4		P1538	Voltage Below Normal, Or Shorted To Low Source
520270	5		P1535	Current Below Normal Or Open Circuit
520271	3	Idle Air Control M17 Stepper Pin 1	P1509	Voltage Above Normal, Or Shorted To High Source
520271	4		P1508	Voltage Below Normal, Or Shorted To Low Source
520271	5		P1505	Current Below Normal Or Open Circuit
520275	31	Accelerator Position/Brake Position Interaction	P150A	Condition Exists
520276	2	Throttle Position Sensor (1 or 2 Indeterminable)	P150C	Data Erratic, Intermittent Or Incorrect
520276	12		P150B	Bad Intelligent Device Or Component

520277	2	Throttle Body Control - Power Stage	P151A	Data Erratic, Intermittent Or Incorrect
520277	3		P150D	Voltage Above Normal, Or Shorted To High Source
520277	4		P150E	Voltage Below Normal, Or Shorted To Low Source
520277	8		P151B	Abnormal Frequency Or Pulse Width Or Period
520279	31	Throttle Body Control - Adaption Aborted	P151D	Condition Exists
520280	31	Throttle Body Control - Limp Home Position Check Failed	P151E	Condition Exists



SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
520281	31	Throttle Body Control - Mechanical Stop Adaptation Failure	P152A	Condition Exists
520282	31	Throttle Body Control - Repeated Adaptation Failed	P152B	Condition Exists
520283	3	Throttle Body Control	P152C	Voltage Above Normal, Or Shorted To High Source
520283	4		P152D	Voltage Below Normal, Or Shorted To Low Source
520284	31	Throttle Body Control -Position Deviation Fault	P152E	Condition Exists
520285	2	Brake Switch (1 or 2 Indeterminable)	P153E	Data Erratic, Intermittent Or Incorrect
520286	31	ECU Monitoring Error	P1540	Condition Exists

520287	31	ECU Monitoring Error (Level 3)	P1541	Condition Exists
520288	31	ECU Monitoring of Injection Cut Off (Level 1)	P1542	Condition Exists
520289	31	ECU Monitoring of Injection Cut Off (Level 2)	P1543	Condition Exists
520305	31	Throttle Body Control - Requested Throttle Angle Not Plausible	P1530	Condition Exists
520306	31	ECU ADC Fault - No Load	P1531	Condition Exists
520307	31	ECU ADC Fault - Voltage	P1532	Condition Exists



SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
520308	31	Accelerator Sensor Sync Fault - Sensor Diff Exceeds Limit	P1533	Condition Exists
520309	31	ECU Fault -ICO	P1534	Condition Exists
520311	31	ECU Fault - Hardware Disruption	P1537	Condition Exists
520329	9	Operator Switch Status (pOSS1)	P1063	Abnormal Update Rate
520331	3	Knock Sensor Positive Line	P1327	Voltage Above Normal, Or Shorted To High Source
520331	4		P1328	Voltage Below Normal, Or Shorted To Low Source
520332	3	Knock Sensor Negative Line	P132A	Voltage Above Normal, Or Shorted To High Source
520332	4		P132B	Voltage Below Normal, Or Shorted To Low Source
520333	2	Oxygen Sensor Bank 1 Sensor	P1136	Data Erratic, Intermittent Or Incorrect

		2(3057 Duplicate)		
520333	3		P1137	Voltage Above Normal, Or Shorted To High Source
520333	4		P1138	Voltage Below Normal, Or Shorted To Low Source
520333	5		P3136	Current Below Normal Or Open Circuit
520333	12		P1139	Bad Intelligent Device Or Component
520336	31	ECU Monitoring (Pedal Map Mismatch)	P1545	Condition Exists
520338	31	Gross Air Leak	P2279	Condition Exists
520341	3	Wastegate Solenoid Driver	P0243	VoltageAbove Normal, OrShorted To High Source



SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
520341	4		P0246	Voltage Below Normal, OI Shorted To Low Source
520341	5		P0245	Current Below Normal OI Open Circuit
520342	15	Idle Fuel	P116C	Data Valid But Above Normal Operating Range - Least Severe Level
520342	17	Injection Bank 1	P116D	Data Valid But Below Normal Operating Range - Least Severe Level
520343	15	Idle Fuel	P116E	Data Valid But Above Normal Operating Range - Least Severe Level
520343	17	Injection Bank 2	P116F	Data Valid But Below Normal Operating Range - Least Severe Level
520344	15	Adaptive Fuel	P0170	Data Valid But Above Normal Operating Range - Least Severe Level
520344	17	Injection Bank 1	P1170	Data Valid But Below Normal Operating Range - Least Severe Level
520345	15	Adaptive Fuel	P0173	Data Valid But Above Normal Operating Range - Least Severe Level



520345	17	Collection Bank 2	P1173	Data Valid But Below Normal Operating Range - Least Severe Level
520346	31	Upstream O2 Sensor Signals Swapped	P1416	Condition Exists
520467	31	Momenta^ Driveline Left Press	P071A	Condition Exists
520468	31	Momenta^ Driveline Right Press	P071D	Condition Exists
520496	3	Intercooler Pump Drive Circuit	P107D	Voltage Above Normal, Oil Shutoff To High Source



SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
520496	4		P107C	Voltage Below Normal, Or Shorted To Low Source
520496	5		P107E	Current Below Normal Or Open Circuit
520624	3	AC Condenser Fan Relay	P15F5	Voltage Above Normal, Or Shorted To High Source
520624	4		P15F4	Voltage Below Normal, Or Shorted To Low Source
520624	5		P15F3	Current Below Normal Or Open Circuit
520625	3	Alternator Charge Disable Relay	P1D45	Voltage Above Normal, Or Shorted To High Source
520625	4		P1D44	Voltage Below Normal, Or Shorted To Low Source
520625	5		P1D42	Current Below Normal Or Open Circuit
524067	2	Drive Mode Select Switch	P153C	Data Erratic, Intermittent Or Incorrect
524067	3		P153A	Voltage Above Normal, Or Shorted To High Source



524067	4		P153B	Voltage Below Normal, Or Shorted To Low Source
524072	31	Foot On Cruise Control Switch	P154D	Condition Exists
524079	31	Cruise Control Input Checksum	U0405	Condition Exists
524080	31	Cruise Control Input Message Counter	U1405	Condition Exists
524081	31	Foot On Cruise Control Input Message Counter	U1407	Condition Exists

SPN	FMI	COMPONENT	P-CODE	CONDITION
DISPLAYED ON INSTRUMENT CLUSTER			DISPLAYED ON DIGITAL WRENCH DIAGNOSTIC SOFTWARE	
524082	31	Foot On Cruise Control Input Checksum	U1406	Condition Exists
524145	31	Reverse Override Switch	P188C	Condition Exists



**Warning**

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