



POLARIS[®]
The Way Out.

RANGER

Series 11

Owner's Manual

for

Vehicle Maintenance and Safety

Read this manual carefully. It contains important safety information.

This is an adult vehicle only.

Operation is prohibited for those under 16 years of age.

 **WARNING**

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

We've created a web site just for YOU!

- Technical tips
- New product introductions
- Event schedules
- Parts and Service Manual information
- Exciting details about The Way Out

Check it out...

www.polarisindustries.com/owner



POLARIS®
The Way Out.

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

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WELCOME

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

Polaris Recreational and Utility Vehicles

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

Polaris Professional Series Workmobiles™

- Utility Task Vehicles™ (UTVs)
- Personal Task Vehicles™ (PTVs)
- All-Surface Loaders (ASLs)

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

For safe and enjoyable operation of your vehicle, be sure to follow the instructions and recommendations in this owner's manual. Your manual contains instructions for minor maintenance, but information about major repairs is outlined in the Polaris Service Manual and should be performed only by a Factory Certified Master Service Dealer (MSD) Technician.

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

We also take great pride in our Parts Apparel and Accessories (PAA) products, available through our online store at www.purepolaris.com. Have your accessories and clothing delivered right to your door!

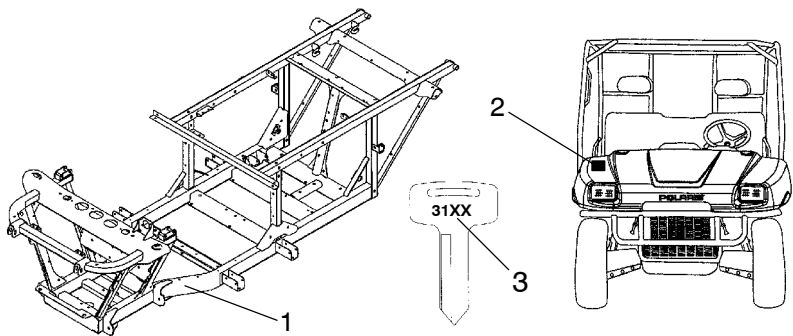
Polaris, Polaris The Way Out, and Workmobiles are registered trademarks of Polaris Industries Inc.

VEHICLE IDENTIFICATION NUMBERS

The vehicle frame vehicle identification number (VIN)(1), engine serial number and vehicle model number (2) are important for model identification when registering your vehicle, when obtaining insurance, and when ordering replacement parts. In the event your vehicle is stolen, these numbers are essential to the recovery and identification of your vehicle.

Remove the spare key and store it in a safe place. Your key can be duplicated only by mating a Polaris key blank with one of your existing keys. If both keys are lost, the ignition switch must be replaced. See your Polaris dealer.

NOTE: Record your vehicle's ID numbers and key number (3) in the spaces provided.



Frame VIN (behind left front wheel):

Vehicle Model Number (under hood):

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

Key Number:

TABLE OF CONTENTS

| | |
|--------------------------------------|-----|
| WELCOME | 3 |
| VEHICLE IDENTIFICATION NUMBERS | 4 |
| TABLE OF CONTENTS | 5 |
| SAFETY | 7 |
| FEATURES | 25 |
| FEATURES AND CONTROLS | 30 |
| CONTROLS | 31 |
| OPERATION | 34 |
| NOISE EMISSION CONTROL SYSTEM | 53 |
| MAINTENANCE AND LUBRICATION | 54 |
| SPECIFICATIONS | 94 |
| POLARIS RECOMMENDED PRODUCTS | 96 |
| TROUBLESHOOTING | 97 |
| WARRANTY | 100 |
| INDEX | 102 |

- NOTES -

Operator Safety

WARNING

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

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

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

Age Restrictions

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

Know Your Vehicle

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

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

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

SAFETY

Operator Safety

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



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

WARNING

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

CAUTION

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

CAUTION

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

NOTE

A note will alert you to important information or instructions.

Operator Safety

WARNING

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

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

SAFETY

Operator Safety

- Always follow proper procedures for turning as described in this manual. Practice turning at slow speeds before attempting to turn at faster speeds. Never turn at excessive speeds.
- Always have this vehicle checked by an authorized Polaris dealer if it has been involved in an accident.
- Never operate this vehicle on hills too steep for the vehicle or for your abilities. Practice on smaller hills before attempting larger hills.
- Always follow proper procedures for climbing hills as described in this manual. Check the terrain carefully before attempting to climb a hill. Never climb hills with excessively slippery or loose surfaces. Never open the throttle suddenly or make sudden gear changes. Never go over the top of a hill at high speed.
- Always follow the proper procedures outlined in this manual for traveling downhill and for braking on hills. Check the terrain carefully before descending a hill. Never travel downhill at high speed. Avoid going downhill at an angle, which would cause the vehicle to lean sharply to one side. Travel straight down the hill where possible.
- Always check for obstacles before operating in a new area. Never attempt to operate over large obstacles such as rocks or fallen trees. Always follow the proper procedures outlined in this manual when operating over obstacles.
- Always be careful of skidding or sliding. On slippery surfaces such as ice, travel slowly and exercise caution to reduce the chance of skidding or sliding out of control.
- Never operate your vehicle in fast-flowing water or in water deeper than that specified in this manual. Wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them lightly several times to let friction dry out the pads.
- Always be sure there are no obstacles or people behind your vehicle when operating in reverse. When it's safe to proceed in reverse, move slowly. Avoid turning at sharp angles in reverse.
- Always use the proper size and type of tires specified in this manual. Always maintain proper tire pressure as specified on page 95.

Operator Safety

- Never modify this vehicle through improper installation or use of accessories.
- Never exceed the stated load capacity for this vehicle. Cargo should be properly distributed and securely attached. Reduce speed and follow the instructions in this manual for hauling cargo or pulling a trailer. Allow a greater distance for braking.
- Always wear the seat belts when operating this vehicle. Seat belts reduce the severity of injury in case of a sudden stop or collision.
- Always keep arms and legs inside the cab frame while the vehicle is in motion.
- Always apply the parking brake before getting out of the vehicle. See page 33.
- Always activate the foot pedal brake before releasing the park brake.
- Always turn off the engine before refueling. Make sure the refueling area is well ventilated and free of any source of flame or sparks. Gasoline is extremely flammable. See page 24 for refueling instructions.
- Always remove the ignition key when the vehicle is not in use to prevent unauthorized use or accidental starting.

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

SAFETY

Operator Safety

WARNING

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

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

Do not make any modifications to your *RANGER*.

Equipment Modifications

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

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

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

Operator Safety

⚠ WARNING

POTENTIAL HAZARD

Stalling, rolling backwards while climbing a hill

WHAT CAN HAPPEN

Vehicle overturn

HOW TO AVOID THE HAZARD

Maintain a steady speed when climbing a hill.

If you lose all forward speed:

Apply the brakes.

Lock the parking brake after when fully stopped.

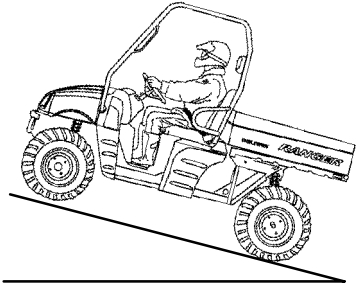
If you begin rolling backwards:

Never apply engine power.

Apply the brake gradually.

When fully stopped, lock parking brake.

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



SAFETY

Operator Safety

WARNING

POTENTIAL HAZARD

Operating this vehicle on paved surfaces

WHAT CAN HAPPEN

Loss of control

HOW TO AVOID THE HAZARD

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

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

WARNING

POTENTIAL HAZARD

Operating this vehicle without proper instruction

WHAT CAN HAPPEN

Loss of control, accident

HOW TO AVOID THE HAZARD

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

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

Operator Safety

WARNING

POTENTIAL HAZARD

Operating this vehicle on public streets, roads or highways

WHAT CAN HAPPEN

Collision with another vehicle

HOW TO AVOID THE HAZARD

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

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

WARNING

POTENTIAL HAZARD

Operating this vehicle after consuming alcohol or drugs

WHAT CAN HAPPEN

Could seriously affect your judgment.

Could cause you to react more slowly.

Could affect your balance and perception.

Could result in an accident.

HOW TO AVOID THE HAZARD

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

SAFETY

Operator Safety

WARNING

POTENTIAL HAZARD

Operating this vehicle at excessive speeds

WHAT CAN HAPPEN

Loss of control, accident

HOW TO AVOID THE HAZARD

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

WARNING

POTENTIAL HAZARD

Attempting jumps and other stunts

WHAT CAN HAPPEN

Loss of control, accident and/or vehicle overturn

HOW TO AVOID THE HAZARD

Never attempt jumps and other stunts. Avoid exhibition driving.

WARNING

POTENTIAL HAZARD

Operating on frozen bodies of water.

WHAT CAN HAPPEN

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

HOW TO AVOID THE HAZARD

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

Operator Safety

WARNING

POTENTIAL HAZARD

Failure to inspect the vehicle before operating

Failure to properly maintain the vehicle

WHAT CAN HAPPEN

Accident, equipment damage

HOW TO AVOID THE HAZARD

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

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

WARNING

POTENTIAL HAZARD

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

WHAT CAN HAPPEN

Loss of control, vehicle overturn

HOW TO AVOID THE HAZARD

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

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

SAFETY

Operator Safety

WARNING

POTENTIAL HAZARD

Failure to follow the minimum age recommendations for this vehicle

WHAT CAN HAPPEN

Serious injury or death (the child or others)

HOW TO AVOID THE HAZARD

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

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

WARNING

POTENTIAL HAZARD

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

WHAT CAN HAPPEN

Loss of control, accident and/or overturn

HOW TO AVOID THE HAZARD

Always use the size and type of tires specified in the Owner's Manual for this vehicle. See page 95.

Always maintain proper tire pressure as described on the decal and in the Owner's Manual. See page 95.

Operator Safety

WARNING

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

WARNING


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

CAUTION


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

SAFETY


Safety Decals and Locations

|  WARNING | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <ul style="list-style-type: none">• VEHICLE ROLLOVER could cause severe injury or death This cab frame is not designed or intended to provide rollover protection.• ALWAYS WEAR YOUR SEAT BELT for maximum protection. | 7079425 |

Location 1

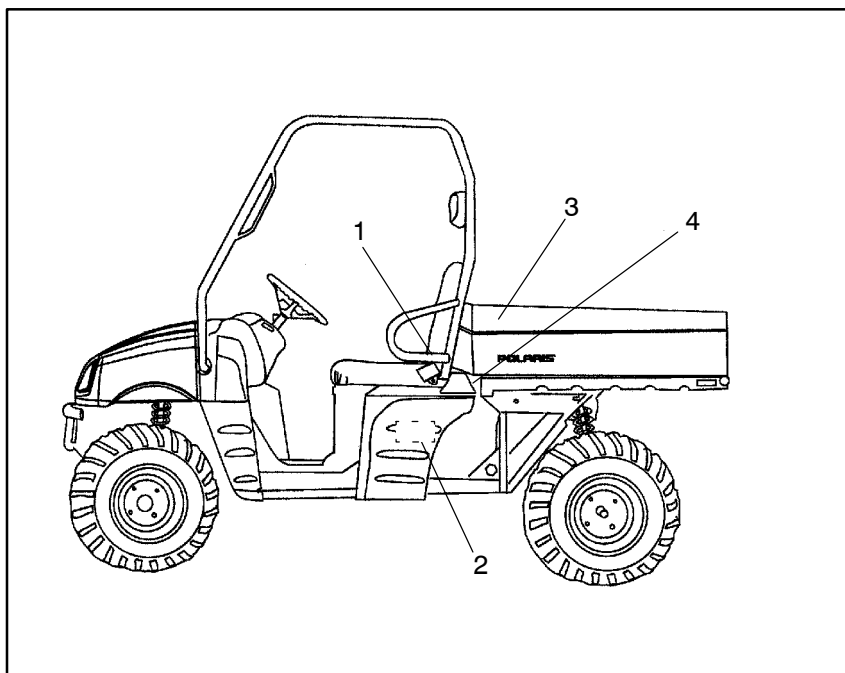
|  WARNING | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <ul style="list-style-type: none">• Moving parts hazard under belt-clutch guard. To prevent serious injury, do not operate vehicle with guard removed.• Do not modify engine or clutch. Doing so can cause part failure, possible imbalance, and excessive engine RPM which can result in serious injury or death. | 7078689 |
| NO STEP | |

Location 2

|  WARNING | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| IMPROPER TIRE PRESSURE OR OVERLOADING can cause loss of control resulting in SEVERE INJURY OR DEATH. | |
| TIRE PRESSURE (PSI): FRONT 10 REAR 10 | |
| MAXIMUM WEIGHT CAPACITY (Gross Vehicle Weight) INCLUDING MACHINE, DRIVER AND CARGO IS 2750 LBS. | |
| Reduce speed and allow greater distance for braking when carrying cargo. Overloading or carrying tall, off-center, or unsecured loads will increase your risk of losing control. Loads should be centered and carried as low as possible in box. For stability on rough or hilly terrain, reduce speed and cargo. Be careful if load extends over the side of the box. | |
| Read Owner's Manual for more detailed loading information. | |
| | 7079424 |

Location 3

Safety Decals and Locations



ATTENTION

- Operation of this vehicle without the filter element will severely damage the engine.
- Clean air filter often, more frequent cleaning required in dusty conditions
- Operation of this vehicle without engine breather filter(s) can cause engine damage. Consult owner's manual for details.
- Specific carburetor jetting and adjustments are required depending on temperature and altitude. See your Owner's Manual.

Factory setting:



40° to 80° F. at 0-3000 feet
(5° to 27° C. at 0-900 meters).

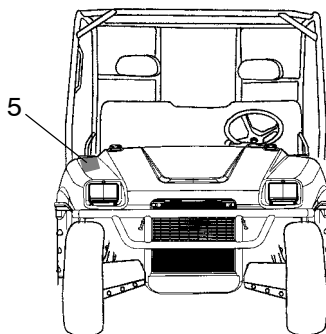
7079902

Location 4

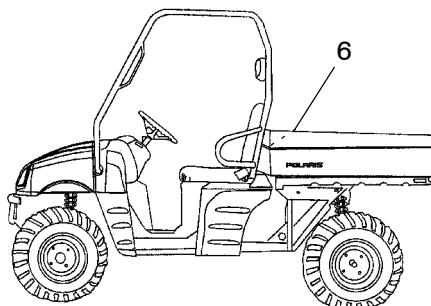
SAFETY


Safety Decals and Locations


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



Location 5 (under hood)



| |
|------------------------------------------------------------------------------------|
| ⚠ WARNING |
|  |
| Remove flammable containers from box before refueling. |

| | |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
|  | ⚠ WARNING Passengers can be thrown off. This can cause serious injury or death. Never carry passengers in cargo box. |
| ⚠ WARNING | Maximum 2x4 Box Load 850 lbs. Maximum 4x4 Box Load 1000 lbs. Maximum 6x6 Box Load 1000 lbs. |

Location 6 (inside front of box)

Fuel / Passenger Warning Decal Text

Remove flammable containers from box before refueling.

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

Maximum 2x4 Box Load 850 lbs.

Maximum 4x4 Box Load 1000 lbs.

Maximum 6x6 Box Load 1000 lbs.

Safety Decals and Locations

Warning Decal Text

⚠ WARNING

Improper vehicle use can result in SEVERE INJURY or DEATH.

NEVER:

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

ALWAYS:

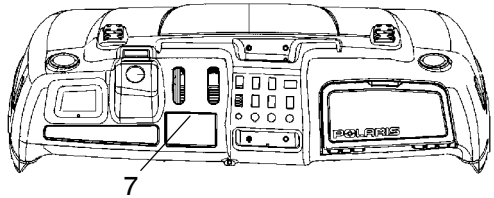
- Avoid paved surfaces which may adversely affect handling and control.
- Use proper RIDING TECHNIQUES to avoid vehicle overturns on hills and rough terrain and in turns.
- Wear eye protection.

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

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

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

THIS GENERAL PURPOSE OFF-ROAD UTILITY VEHICLE DOES NOT MEET FEDERAL MOTOR VEHICLE SAFETY STANDARDS FOR ON-ROAD VEHICLES. 710694



Location 7

Improper vehicle use can result in SEVERE INJURY or DEATH.

NEVER:

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

ALWAYS:

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

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

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

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

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

SAFETY

Fuel Safety

WARNING

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

Always stop the engine when refueling.

Always refuel outdoors or in a well ventilated area.

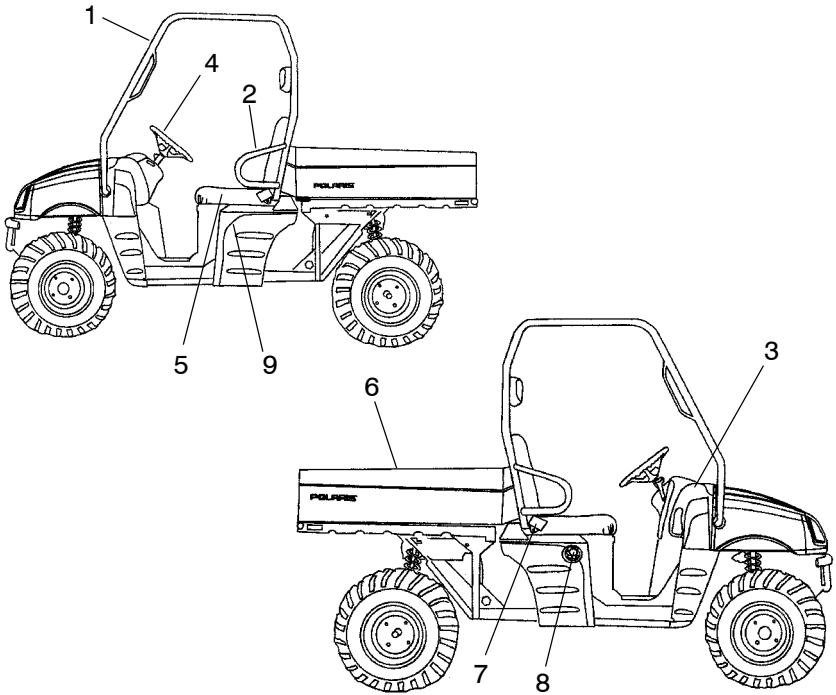
Do not smoke or allow open flames or sparks in or near the refueling area or where gasoline is stored.

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

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

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

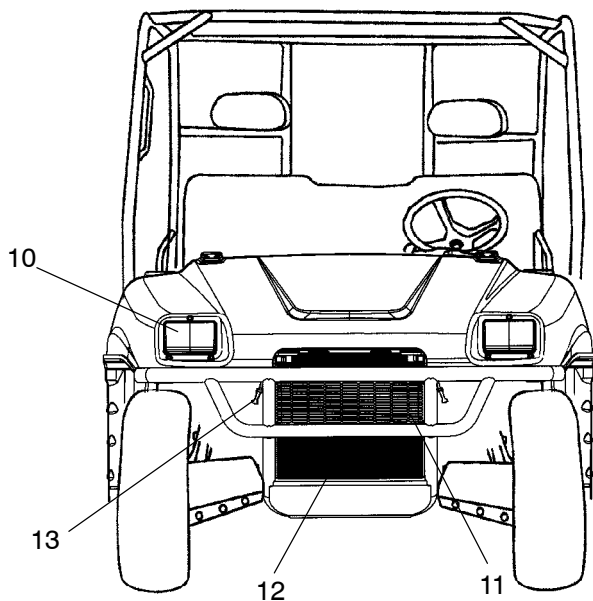
Component Locations



1. Cab Frame
2. Cab Frame Hand Hold
3. Console
4. Steering Wheel
5. Seat
6. Cargo Box
7. Seat Belts
8. Fuel Tank Cap / Fuel Gauge
9. Battery (under driver's seat)

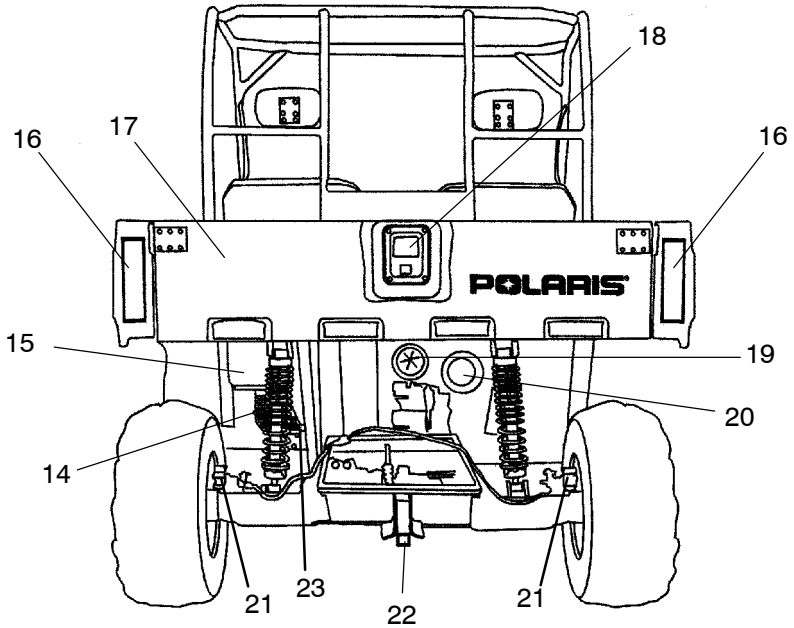
FEATURES

Component Locations



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

Component Locations

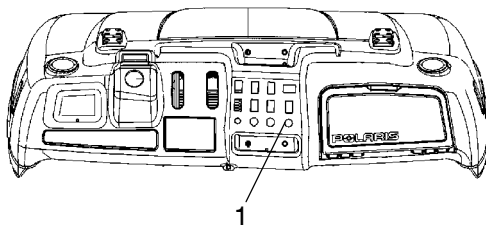


- 14. Oil Tank
- 15. Battery (under driver's seat)
- 16. Tail Lights
- 17. Tail Gate
- 18. Tailgate Latch Release
- 19. Air Box (under cargo box)
- 20. Muffler (Spark Arrester)
- 21. Rear Caliper
- 22. Trailer Hitch Receiver
- 23. Engine Oil Plug

FEATURES

Auxiliary Outlet

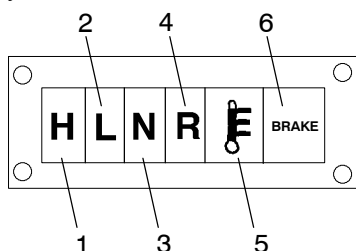
The 12-volt receptacle (1) has spade connections on the back that may be used to power an auxiliary light or other optional accessories or lights. The connections are behind the console, under the hood.



Indicator Lights

The indicator lights on the console display:

1. High Gear
2. Low Gear
3. Neutral Gear
4. Reverse Gear
5. High Temperature
6. Brakes



Trailer Hitch Bracket

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

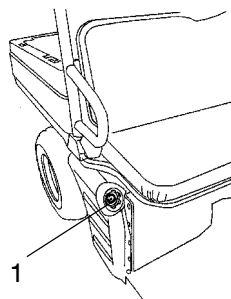
To avoid injury and property damage, observe the precautions on page 49.

Fuel Cap/Fuel Gauge

The fuel tank filler cap (1) is located on the right-hand side of the vehicle near the passenger seat. It has a built-in fuel gauge that indicates the amount of fuel remaining in the tank.

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

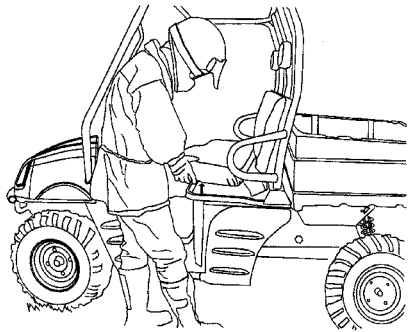
When refueling, always use either leaded or unleaded gasoline with a minimum pump octane number of 87 R+ M/2 octane.



Seat Removal

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

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



Seat Belts

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

⚠️ WARNING

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

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

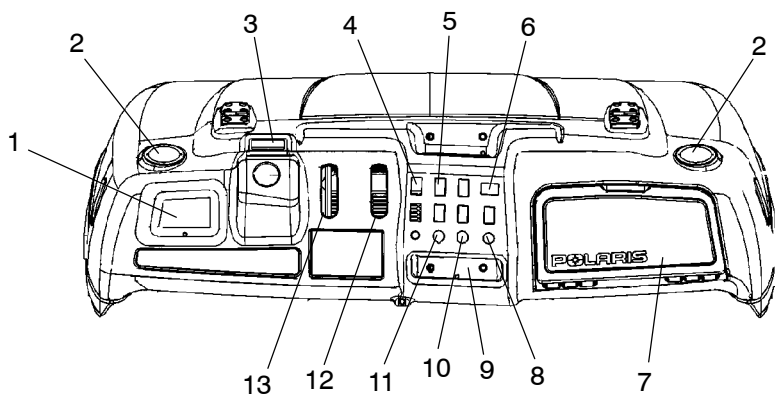
To wear the seat belt properly, follow this procedure:

1. Place the belt across your lap as low on your hips as possible, taking care that the belt is not twisted.
2. Push the latch plate into the buckle until it clicks.
3. Release the strap, it will self tighten. **NOTE:** The center belt must be tightened manually by pulling on the strap.

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

FEATURES AND CONTROLS

Console



1. Storage Box
2. Cup Holder
3. Indicator Lights
4. Light Switch
5. AWD Switch (if equipped)
6. Hour Meter
7. Glove Box with Lid
8. 12V Accessory Plug
9. Storage Tray
10. Choke Knob
11. Ignition Switch
12. Shift Lever
13. Differential Lock Lever (2x4 and 4x4)

Gear Selector

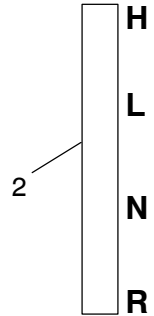
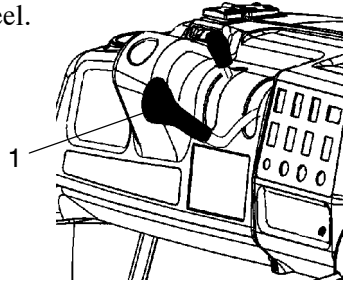
The transmission gear selector (1) is located on the console to the right of the steering wheel. It has four positions (2): high, low, neutral and reverse.

NOTE: Low is the primary driving range for this vehicle. High is intended for use on hard-packed surfaces with light loads.

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

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

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



CAUTION

Do not attempt to shift the transmission while the vehicle is moving or damage to the transmission could result.

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

CONTROLS

Switches

Ignition Switch

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

| | |
|-------|------------------------------------------------------------------------------------------------------------------------------------|
| OFF | Engine off. All electrical circuits are off except Acc. 12V. |
| ON | Electrical circuits are on. Electrical equipment can be used. |
| START | Electric starter is engaged by holding ignition switch key in this position. Upon release, the key will return to the ON position. |

WARNING

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

Light Switch

Turn the headlights and taillights on by flipping the light switch up (the ignition switch key must be in the ON position). Flip the switch down to turn the lights off.

AWD Switch

Vehicles equipped with AWD can be operated in either 2WD or AWD. Flip the AWD switch up to engage the AWD. Flip the switch down to return to 2WD.

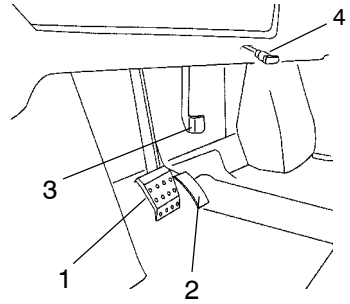
Under some conditions, it's possible for the AWD to remain engaged. See page 51 for manual disengagement instructions.

Brake Pedal

The brake pedal (1) is the left pedal on the foot board. Depress the brake pedal to slow or stop the vehicle.

Throttle Pedal

The throttle pedal (2) is the right pedal on the floor board. Push the pedal down to increase engine speed. Spring pressure returns the pedal to the rest position when released. Always check that the throttle pedal returns normally before starting the engine. In addition, there must be adequate throttle pedal freeplay. Refer to page 79 for throttle pedal adjustment procedures.



Parking Brake Lever

The parking brake (3) is located below the console in the center of the vehicle. It will help prevent the vehicle from rolling while parked.

To apply the parking brake, push down on the pedal with your foot.

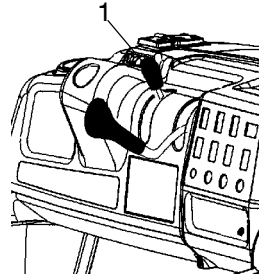
To release, pull the release handle (4), which is located on the lower console. Spring pressure helps return the lever to the released position.

Make sure the parking brake lever is functioning properly before each operation.

Differential Lock

The rear axle on 2x4 and 4x4 models is equipped with a lockable differential that allows the operator to choose between an open differential or a closed differential. It's beneficial to lock the differential in low traction situations.

The differential lever is located on the console (1). Push the lever up to lock.



CAUTION

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

OPERATION

Vehicle Break-In Period

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

CAUTION

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

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

1. Fill the fuel tank with gasoline. Heed the gasoline warnings on page 24.
2. Check the oil level on the dipstick. See page 61. Add Polaris Premium 4 Synthetic Oil if necessary to maintain the oil level in the normal (safe) operating range.
3. Drive slowly at first. Select an open area that allows room to familiarize yourself with vehicle operation and handling.
4. Vary throttle positions. Do not operate at sustained idle.
5. Perform regular checks on fluid levels, controls and areas outlined on the daily pre-ride inspection checklist. See page 35.
6. Pull only light loads.
7. During the break-in period, change both the oil and the filter at 25 hours or 250 miles.

Pre-Ride Inspection

WARNING

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

Inspect your vehicle before each operation to ensure it's in proper working order.

Before operating your vehicle, inspect all operating controls and parts.

Item/Inspection Procedure

1. Tires - check condition and pressures
2. Fuel and oil tanks - fill both tanks to their proper levels
3. All brakes - check operation, adjustment and fluid level (includes emergency/parking brake)
4. Throttle - check for free operation and closing
5. Headlight/Taillight/Brakelight - check operation of all indicator lights and switches
6. Engine ignition switch - check for proper function
7. Wheels - check for tightness of wheel nuts and axle nuts; check that axle nuts are secured by cotter pins
8. Air cleaner element - check for dirt; clean or replace
9. Steering - check for free operation noting any unusual looseness in any area
10. Loose parts - visually inspect vehicle for any damaged or loose nuts/bolts or fasteners
11. Operator and passenger should be properly dressed.
12. Engine coolant - check for proper level in the overflow bottle.
13. Check condition and operation of the dump box/bed latch mechanism.

OPERATION

Starting the Engine

⚠ WARNING

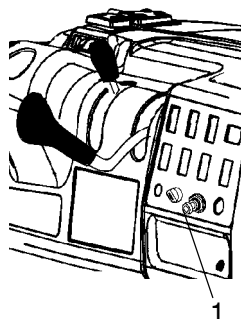
Engine exhaust contains poisonous carbon monoxide and can cause loss of consciousness resulting in severe injury or death. Never run an engine in an enclosed area.

CAUTION

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

Starting a Cold Engine

1. Place the transmission in neutral.
2. Lock the parking brake.
3. Sit in the driver's seat and fasten your seat belt.
4. Pull the choke knob (1) all the way out.
5. Turn the ignition key to START.
6. If the engine does not start within five seconds, release the ignition switch and wait five seconds. Turn the ignition switch to START for another five seconds.
Repeat this procedure until engine starts.



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

7. If the engine slows or stops, push the choke knob in half way.
8. Vary the engine RPM slightly with the throttle to aid in warm up until the engine idles smoothly. Then push the choke all the way in.

CAUTION

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

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

Starting the Engine

Starting a Warm Engine

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

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

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

Stopping the Engine

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

WARNING

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

OPERATION

Braking

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

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

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

WARNING

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

Driving Safely

Driving Procedures



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

NOTE: Low is the primary gear for operating this vehicle. High gear is intended for use on hard-packed surfaces with light loads.

SAFETY

Driving Safely

Driving On Slippery Surfaces

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

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

CAUTION

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

WARNING

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

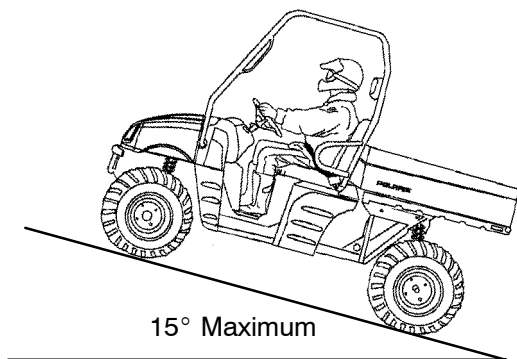
Never apply the brakes during a skid.

Do not operate on excessively slippery surfaces.

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

Driving Safely

Driving Uphill



Whenever traveling uphill, follow these precautions:

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

⚠️ WARNING

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

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

Avoid climbing steep hills (15° maximum).

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

Never climb hills with excessively slippery or loose surfaces.

Never open the throttle suddenly.

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

OPERATION

Driving Safely

Sidehilling

WARNING

Crossing hillsides or turning on hills can result in loss of control or vehicle overturn, resulting in severe injury or death. Avoid crossing the side of a hill when possible. When unavoidable, exercise extreme caution. Avoid operating on steep hills (15° maximum).

Driving Downhill

Whenever descending a hill, follow these precautions:

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

WARNING

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

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

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

Driving Safely

Driving Through Water

⚠️ WARNING

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

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

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



NOTE: After running your vehicle in water, it's *critical* that you perform the services outlined in the Periodic Maintenance Schedule beginning on page 54. Give special attention to engine oil, transmission oil, front and rear gearcases, and all grease fittings.

CAUTION

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

If it's impossible to bring the vehicle to your dealer before starting the engine, perform the service outlined on page 72, and take the vehicle to your dealer at the first opportunity.

OPERATION

Driving Safely

Driving Over Obstacles



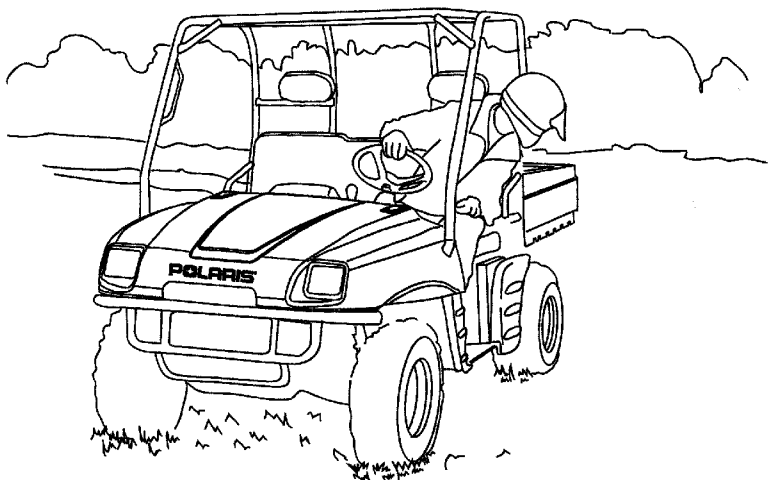
Be alert! Look ahead and learn to read the terrain you're traveling on. Watch for hazards such as logs, rocks and low hanging branches.

⚠️ WARNING

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

Driving Safely

Driving in Reverse



Follow these guidelines when operating in reverse:

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

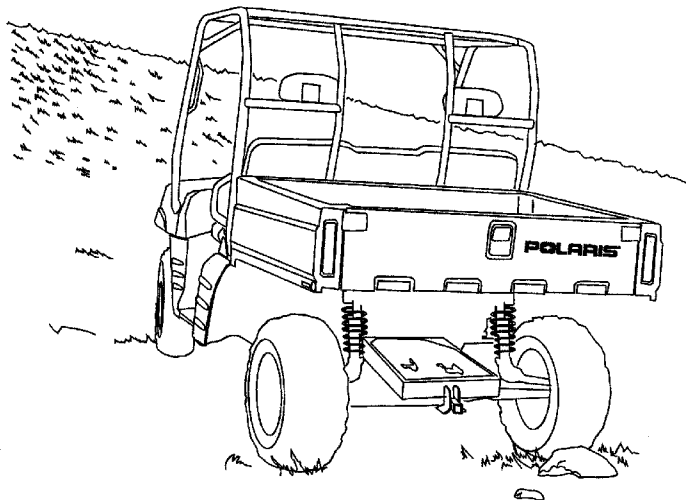
⚠️ WARNING

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

OPERATION

Driving Safely

Parking on an Incline



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

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

⚠️WARNING

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

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

Hauling Cargo

⚠️ WARNING

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

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

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

Slow down and *drive in low gear*.

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

| | Maximum Capacities (Level Ground) | Cargo Box |
|-------------------|----------------------------------------------|--------------------|
| <i>RANGER</i> 2X4 | 1350 lbs. (614 kg) | 850 lbs. (386 kg) |
| <i>RANGER</i> 4X4 | 1500 lbs. (681 kg) | 1000 lbs. (454 kg) |
| <i>RANGER</i> 6X6 | 1500 lbs. (681 kg) | 1000 lbs. (454 kg) |

⚠️ WARNING

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

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



OPERATION

Hauling Cargo

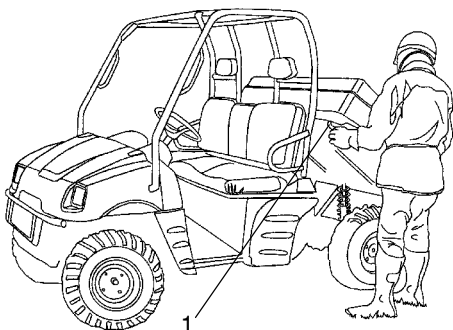
Dumping the Cargo Box

⚠️WARNING

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

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

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



⚠️WARNING

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

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

Hauling Cargo

Towing Loads

⚠️ WARNING

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

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

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

Do not tow more than the recommended weight for the vehicle. See the towing capacity chart below and the specifications charts beginning on page 94.

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

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

Maximum Towing Capacities (Level Ground)

| | Total Towed Load Weight (level ground) | Total Towed Load Weight (15° grade) | Total Hitch Vertical Weight | Towing Speed |
|----------------------|-----------------------------------------------|--------------------------------------------|------------------------------------|-------------------------------|
| <i>RANGER</i> 2X4 | 1400 lbs. (636 kg) | 800 lbs. (364 kg) | 150 lbs (68.1 kg) | 10 mph (16 kph) or less |
| <i>RANGER</i> 4X4 | 1500 lbs. (681 kg) | 850 lbs. (386 kg) | 150 lbs (68.1 kg) | 10 mph (16 kph) or less |
| <i>RANGER</i> 6X6 | 1500 lbs. (681 kg) | 850 lbs. (386 kg) | 150 lbs (68.1 kg) | 10 mph (16 kph) or less |

Belt Life

Use low forward gear when hauling or towing heavy cargo to extend belt life.

OPERATION

Driving Safely

Parking the *RANGER*

WARNING

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

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

WARNING

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

All Wheel Drive (AWD)

Your Polaris *RANGER* (4X4 and 6X6) is equipped with an exclusive Polaris All Wheel Drive (AWD) system that can be activated by a switch on the console. When the switch is off, the *RANGER* is in two-wheel drive at all times. When the switch is on, the *RANGER* is in AWD, and the front wheels will automatically engage anytime the rear wheels lose traction. When the rear wheels regain traction, the front wheels will automatically disengage.

The AWD switch position indicates whether the vehicle is in AWD. There is no limit to the length of time the vehicle may remain in AWD.

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

CAUTION

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

Disengaging AWD

Under certain conditions, it may be possible for one or both hubs to remain engaged unnecessarily. This condition causes increased steering effort and some vehicle speed restriction.

Take the following steps to disengage the AWD system:

1. Stop the vehicle.
2. Shift to reverse and back up a minimum of 10 feet.
3. Stop completely.
4. Shift into forward and drive.

If the hubs remain engaged after following these instructions, return the vehicle to your dealer for service.

WARNING

Operating with only one front hub engaged could result in loss of control, accident, and severe injury or death.

When hub engagement symptoms are present, use the disengaging procedure before proceeding.

- NOTES -

NOISE EMISSION CONTROL SYSTEM

TAMPERING WITH NOISE CONTROL SYSTEM IS PROHIBITED!

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

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

“AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW.”

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

CAUTION

Exhaust system components are very hot during and after use of the vehicle. Hot components can cause serious burns and can cause a fire to ignite.

Do not touch hot exhaust system components.

Use caution when traveling through tall grass, especially dry grass.

USFS Approved Spark Arrestor

The muffler on this vehicle was tested and approved in accordance with the USFS Forest Service Standard 5100-1A.

MAINTENANCE AND LUBRICATION

Periodic Maintenance Schedule

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

Maintenance intervals are based upon average operating conditions. Vehicles subjected to severe use, such as operation in wet or dusty areas, should be inspected and serviced more frequently. If you're not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

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

Maintenance Chart Key

► Perform these operations more often under severe use, such as in dirty or wet conditions, to purge water or dirt contamination from grease fittings and other critical components.

★ Emission Control System Service (California - 4-Cycle)

NOTE: Some 4-Cycle models may have an additional California -only emissions warranty. Please refer to your owner's manual supplement for model specific information.

■ Dealer service item.

MAINTENANCE AND LUBRICATION

Periodic Maintenance Schedule

WARNING

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

| | Item | Frequency | Remarks |
|---|------------------------------|---------------|-------------------------------------------------------------------------------------|
| | Brake System | Pre-operation | Inspect |
| | Tires | Pre-operation | Inspect |
| | Wheels | Pre-operation | Inspect |
| | Frame nuts, bolts, fasteners | Pre-operation | Inspect |
| | Parking Brake | Pre-operation | Check lever adjustment daily; adjust |
| | Throttle Cable | Pre-operation | Inspect |
| | Steering | Pre-operation | Inspect |
| | Coolant/Level | Daily | Replace coolant every two years |
| | Headlamp | Daily | Inspect operation daily; apply Polaris dielectric grease to connector when replaced |
| | Tail lamp | Daily | Check daily; apply Polaris dielectric grease to socket when replaced |
| ▶ | Air Filter - Main Element | Weekly | Inspect; replace if necessary |
| ▶ | Transmission Oil | 25 hrs | Check level; change oil annually |
| | Battery | 25 hrs | Check terminals; clean; check fluid level |

- ▶ More often under severe use, such as dirty or wet conditions
- ★ Emission Control System Service (California)
- Dealer service item

MAINTENANCE AND LUBRICATION

Periodic Maintenance Schedule

WARNING

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

| | Item | Frequency | Remarks |
|--------|----------------------------------------------|-----------|----------------------------------------------------------|
| ■ | Brake pad wear | 25 hrs | Inspect periodically |
| ▶ ★ | Engine breather filter | 25 hrs | Inspect, replace annually and as needed |
| ▶ | General Lubrication | 25 hrs | Lubricate all fittings, pivots, cables |
| | Engine Cylinder Head/Cylinder Base Fasteners | 25 hrs | Re-torque required at first service only |
| ▶ | Engine Oil - Level | 25 hrs | Check level daily; break-in service at 25 hours. |
| ▶ ★ | Engine Oil - Change (4-Cycle) | 100 hrs | Change oil at 100 hours, more often in cold weather use. |
| ▶ ★ | Oil Filter | 100 hrs | Replace with oil change |
| ★ | Engine breather hose | 100 hrs | Inspect |
| | Carburetor Float Bowl | 50 hrs | Drain bowl periodically and prior to storage |
| ■ | Throttle Cable | 50 hrs | Inspect; adjust, lubricate, replace if necessary |
| ★ | Choke (Enricher) Cable | 50 hrs | Inspect; adjust, lubricate, replace if necessary |
| | Shift linkage | 50 hrs | Inspect; adjust |
| ■ | Drive belt | 50 hrs | Inspect; adjust, replace if necessary |
| ■ | Steering | 50 hrs | Inspect; lubricate |
| ▶ | Front Suspension | 50 hrs | Inspect; lubricate, tighten fasteners |
| ▶ | Rear Suspension | 50 hrs | Inspect, tighten fasteners |

MAINTENANCE AND LUBRICATION

Periodic Maintenance Schedule

| | Item | Frequency | Remarks |
|--------|-------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------|
| | Coolant strength/ pressure test system | 100 hrs | Inspect strength seasonally; pressure test system annually |
| | Engine Mounts | 100 hrs | Inspect |
| ■ ★ | Valve Clearance | 100 hrs | Inspect; adjust |
| ★ | Spark Plug | 100 hrs | Inspect; replace if necessary |
| ■ ★ | Ignition Timing | 100 hrs | Inspect and adjust as needed |
| ■ | Front Hub Bearings | 100 hrs | Check at 100 hours and replace as required |
| ■ ★ | Fuel System | 100 hrs | Check for leaks at fuel cap, lines, fuel valve, filter, pump and carburetor. Replace lines every two years. |
| | Fuel Filter | 100 hrs | Replace annually |
| | Cooling System hoses | 100 hrs | Inspect |
| | Spark arrestor | 100 hrs | Clean out |
| ▶ | Front Gearcase Oil | 100 hrs | Check monthly; change annually |
| ■ | Clutches (drive and driven) | 100 hrs | Inspect, clean |
| ■ | Brake fluid | 200 hrs | Change every two years |
| ■ | Front wheel bearings | 300 hrs | Inspect; replace if necessary |
| ★ | Idle Speed | As required | Adjust |
| | Engine side cover | As required | Drain moisture after driving in water |
| ■ | Toe adjustment | As required | Periodic inspection, adjust when parts are replaced |
| | Headlight Aim | As required | Adjust if necessary |

- ▶ More often under severe use, such as dirty or wet conditions
- ★ Emission Control System Service (California)
- Dealer service item

MAINTENANCE AND LUBRICATION

Lubrication Recommendations

NOTE: Hours are based on 10 mph average. If service is due at 20 hours, the equivalent odometer reading would be 200 miles. Perform all services at whichever reading is reached first.

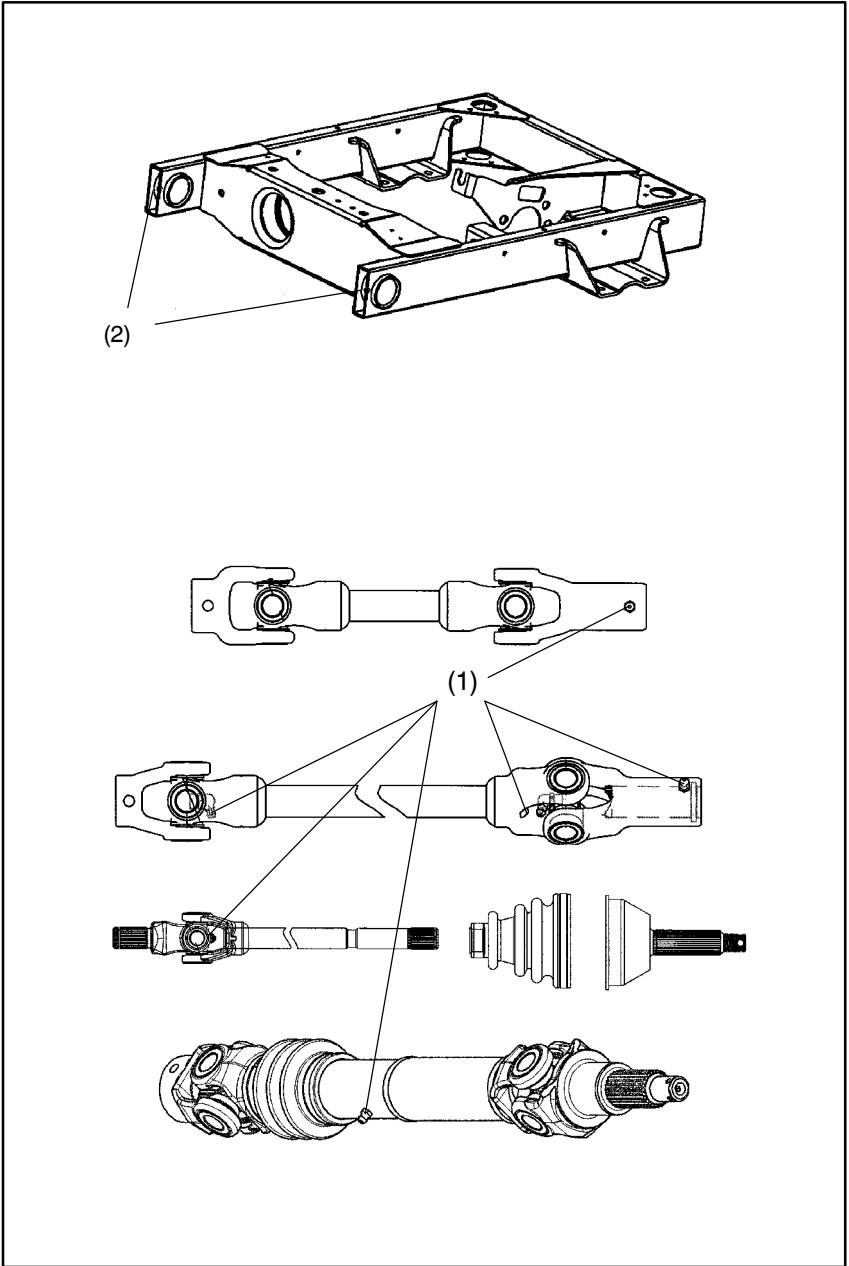
Lubrication Chart Key

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

| Item | Lube | Method | Frequency |
|----------------------------------|----------------------------------|-----------------------------------------------------------------------------------|-------------------------------------|
| Engine Oil | Polaris Premium 4 Synthetic 0W40 | Add to proper level on dipstick. | Check level daily. |
| Brake Fluid | DOT 3 or DOT 4 | Maintain level between fill lines. See page 81. | As required; change every 200 hours |
| Main Gearcase Oil (Transmission) | Premium Synthetic Gearcase Lube | Maintain at the bottom of the fill plug threads. See page 64. | Check monthly; Change annually |
| Front Gearcase Oil | Premium Drive Hub Fluid | Maintain 3/4" (19 mm) below the bottom thread of the fill plug hole. See page 65. | Check monthly; Change annually |
| Middle Gearcase Oil | Premium Gearcase Lube | Maintain at the bottom of the fill plug threads. See page 66. | Check monthly; Change annually |
| Rear Gearcase Oil | Premium Gearcase Lube | Maintain at the bottom of the fill plug threads. See page 67. | Check monthly; Change annually |
| (1) Prop Shaft U-joints | ●Grease | Locate fittings and grease | 50 hours |
| Front Prop Shaft Yoke | ●Grease | Locate fittings and grease (3 pumps maximum) | 50 hours |
| Front Drive Axle (U Joint) | ●Grease | Locate grease fitting and grease with grease gun. | 50 hours |
| Ball Joint | ▶★Grease | Locate fitting (back side of struts), grease with grease gun. | 50 hours |
| (2) Swing Arm Bushings | ★Grease | Locate fittings on swing arm and grease with grease gun. | 25 hours |

MAINTENANCE AND LUBRICATION

Lubrication Recommendations



MAINTENANCE AND LUBRICATION

Engine Oil

Premium 4 Synthetic Lubricant

Polaris Premium 4 All Season Synthetic engine oil has been specially formulated for use in Polaris 4-cycle engines. It's a fully synthetic, high performance, multi-viscosity oil designed to provide the ultimate in lubrication performance and protection. **NOTE:** See page 96 for the part numbers of Polaris-recommended products.

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

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

CAUTION

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

WARNING

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

MAINTENANCE AND LUBRICATION

Engine Oil

Maintain the engine oil at the proper level to ensure a properly functioning engine, and change the oil and oil filter every 100 hours or every six months, whichever comes first. Dirt and metal particles collect in the oil, and oil loses its lubricative quality if used too long.

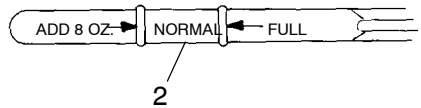
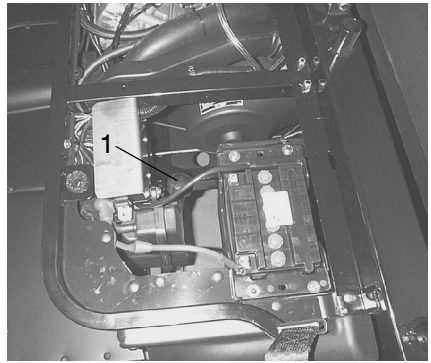
Suggested break-in oil change is at 25 hours, or one month, whichever comes first. Severe use operation requires more frequent service.

Severe use includes continuous duty in dusty or wet conditions, and cold weather operation. **NOTE:** Severe use/cold weather operation is when all operating is at below 10° F. and/or when operating between 10° F and 30°F if most trips are slow speed and less than five miles. Always change the oil filter when changing oil.

Oil Check

The oil tank is located under the seat.

1. Position the vehicle on a level surface.
2. Start the engine and let it idle for 20-30 seconds.
3. Stop the engine and remove the seat as described on page 29.
4. Remove the dipstick (1) and wipe it dry with a clean cloth.
5. Replace the dipstick and screw it in completely.
NOTE: The dipstick must be screwed in completely to keep the angle and depth of the stick consistent.
6. Remove the dipstick and check to see that the oil level is between the full and add marks (2). Add oil if necessary. Do not overfill.



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

MAINTENANCE AND LUBRICATION

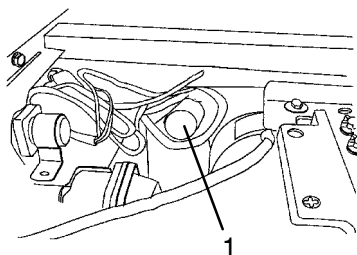
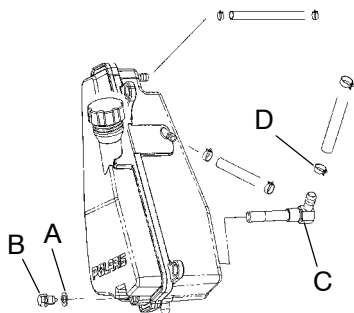
Engine Oil

Oil and Filter Change

⚠ CAUTION

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

1. Run the engine two to three minutes until warm. Stop the engine.
2. Clean the area around the drain plug (B) at the bottom of the oil tank.
3. Place a drain pan beneath the oil tank and remove the drain plug. Allow the oil to drain completely.
4. Replace the sealing washer (A) on the drain plug. **NOTE:** The sealing surfaces on the drain plug and oil tank should be clean and free of burrs, nicks or scratches.
5. Reinstall the drain plug and torque to 14 ft. lbs. (19 Nm).
6. Loosen the clamp (D) and remove the oil hose from the screen fitting (C) on the bottom of the oil tank.
7. Remove the screen fitting and clean the screen thoroughly.
8. Apply Loctite™ 565 Thread Sealant to the clean and oil-free threads of the fitting. **NOTE:** See page 96 for the part numbers of Polaris-recommended products.
9. Reinstall the screen fitting and tighten to 14 ft. lbs. (19 Nm).
10. Reinstall the oil hose on the fitting and reinstall the clamp.
11. Place shop towels beneath the oil filter. Using an oil filter wrench, turn the filter counterclockwise to remove.
12. Using a clean dry cloth, clean the filter sealing surface on the crankcase.
13. Check to make sure the o-ring is in good condition. Lubricate the o-ring on the new filter with a film of engine oil.



MAINTENANCE AND LUBRICATION

Engine Oil

Oil and Filter Change

14. Install the new filter and turn by hand until the filter gasket contacts the sealing surface, then turn an additional 1/2 turn.
15. Approximately one cup of engine oil will remain in the crankcase. To drain, remove the drain plug on the lower right side of the crankcase.

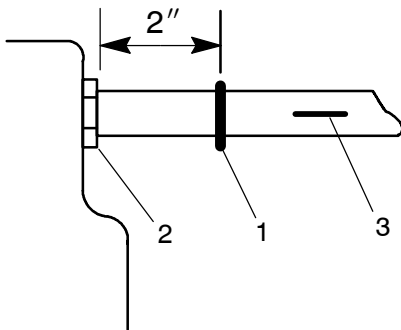
NOTE: The sealing surfaces on the drain plug and crankcase should be clean and free of burrs, nicks or scratches.

16. Reinstall the drain plug and torque to 14 ft. lbs. (19 Nm).
17. Remove the dipstick and fill the tank with two quarts (1.9 l) of Polaris Premium 4 Synthetic Oil.
18. Place the gear selector in neutral and set the parking brake.
19. **Prime the oil pump using the procedure below.** Then stop the engine and inspect for leaks.
20. Re-check the oil level on the dipstick and add oil as necessary to bring the level to the upper mark on the dipstick.
21. Dispose of used filter and oil properly.

Oil Pump Priming Procedure

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

1. Clamp or pinch off the vent line (1) approximately 2" from the oil tank (2), between the end of the oil tank vent fitting and the vent line's pressure relief slit (3).
2. Run the engine for 45-60 seconds.
3. Remove the vent line clamp. The oil pump will now be properly primed and ready for operation.



MAINTENANCE AND LUBRICATION

Gearcases

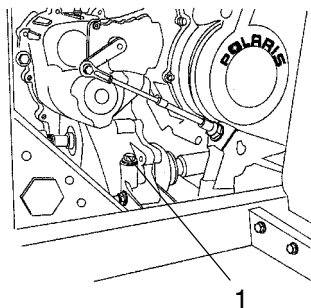
Transmission (Main Gearcase)

The transmission lubricant level should be checked at 25 hours or monthly, whichever comes first. Transmission oil should be changed annually.

NOTE: Refer to the Gearcase Specifications Chart on page 67. Always use Polaris Premium Synthetic Gearcase Lube. See page 96 for the part numbers of Polaris-recommended products.

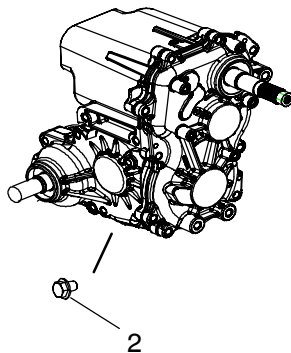
Oil Check

1. Position the vehicle on a level surface.
2. Remove the fill plug (1), which is located on the right-hand side of the vehicle.
3. Check the lubricant level. Lubricant should be even with the bottom thread of the fill plug hole. Add Polaris Premium Synthetic Gearcase Lube if necessary. See page 96 for the part numbers of Polaris-recommended products.
4. Reinstall the fill plug and torque to specification.



Oil Change

1. Remove the skid plate (if necessary).
2. Remove the fill plug.
3. Remove the drain plug and drain the oil into a drain pan. Dispose of used oil properly.
4. Wipe the magnetic end of the drain plug clean to remove accumulated metallic filings.
5. After the oil has drained completely, install a new sealing washer and reinstall the drain plug. Torque to specification.
6. Add Polaris Premium Synthetic Gearcase Lube until the oil level is even with the bottom thread of the fill plug hole. Do not overfill.
7. Reinstall the fill plug and torque to specification.
8. Check for leaks.
9. Reinstall skid plate if removed.



MAINTENANCE AND LUBRICATION

Gearcases

Front Gearcase

The front gearcase lubricant level should be checked every six months or 100 hours, whichever comes first. The oil should be changed annually. If the vehicle is used in wet conditions, the oil should be checked more frequently. If the oil has a milky appearance, it should be changed as soon as possible.

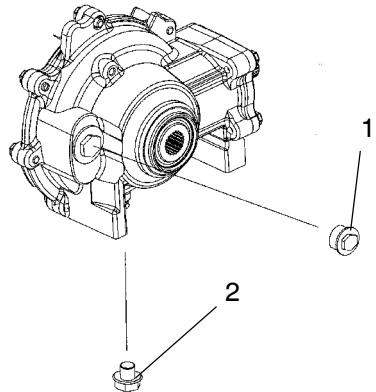
Failure to properly maintain this important area can result in premature wear or possible failure of the front grease components.

NOTE: Refer to the Gearcase Specifications Chart on page 67. Always use Polaris Premium Drive Hub Fluid. See page 96 for the part numbers of Polaris-recommended products.

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

Oil Check

1. With the *RANGER* on a level surface, remove the fill plug and check the lubricant level. Lubricant should be 3/4" (19 mm) below the bottom thread of the fill plug hole.
2. Replace the fill plug and torque to specification.



Oil Change

1. Support the vehicle securely with a jack stand.
2. Remove the front tire on the driver's side.
3. Remove the fill plug.
4. Remove the gearcase drain plug (2) located on the bottom right-hand side and drain the oil into a drain pan. Discard used oil properly.
5. Clean and reinstall the drain plug. Torque to specification.
6. Add hub fluid to 3/4" (19 mm) below the bottom thread of the fill plug hole.
7. Reinstall the fill plug and torque to specification. Check for leaks.

MAINTENANCE AND LUBRICATION

Gearcases

Middle Gearcase

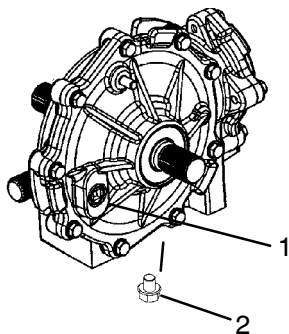
The middle gearcase lubricant level should be checked at 25 hours or monthly, whichever comes first. Middle gearcase oil should be changed annually.

NOTE: Refer to the Gearcase Specifications Chart on page 67. Always use Polaris Premium Gearcase Lube. See page 96 for the part numbers of Polaris-recommended products.

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

Oil Check

1. With the *RANGER* on a level surface, remove the middle gearcase fill plug and check the lubricant level. Lubricant should be even with the bottom thread of the fill plug hole.
2. Reinstall the fill plug and torque to specification.



Oil Change

1. Remove the fill plug.
2. Remove the drain plug (2) from the bottom of the gearcase and drain the oil into a drain pan. Discard used oil properly.
3. Clean and reinstall the drain plug. Torque to specification.
4. Add Polaris Premium Gearcase Lube until it reaches the bottom thread of the fill plug hole.
5. Reinstall the fill plug and torque to specification. Check for leaks.

MAINTENANCE AND LUBRICATION

Gearcases

Rear Gearcase

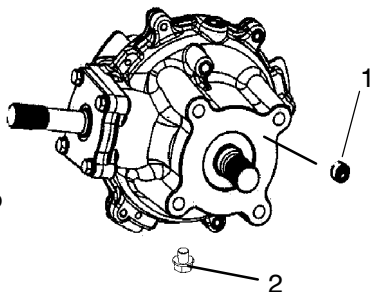
The rear gearcase lubricant level should be checked at 25 hours or monthly, whichever comes first. Oil should be changed annually.

NOTE: Refer to the Gearcase Specifications Chart on page 67. Always use Polaris Premium Gearcase Lube. See page 96 for the part numbers of Polaris-recommended products.

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

Oil Check

1. With the *RANGER* on a level surface, remove the rear gearcase fill plug and check the lubricant level. Lubricant should be even with the bottom thread of the fill plug hole.
2. Reinstall the fill plug and torque to specification.



Oil Change

1. Remove the fill plug.
2. Remove the drain plug (2) from the bottom of the gearcase and drain the oil into a drain pan. Discard used oil properly.
3. Clean and reinstall the drain plug. Torque to specification.
4. Add Polaris Premium Gearcase Lube until it reaches the bottom thread of the fill plug hole.
5. Reinstall the fill plug and torque to specification. Check for leaks.

Gearcase Specification Chart

| Gearcase | Lubricant | Capacity | Drain/Fill Plug Torque |
|---------------------------------|------------------------------------|----------------------|--------------------------|
| Main Gearcase (Transmission) | Premium Synthetic Gearcase Lube | 13.5 oz. (400 ml) | 14 ft. lbs. (19.4 Nm) |
| Rear Gearcase | Premium Gearcase Lube | 10 oz. (300 ml) | 14 ft. lbs. (19.4 Nm) |
| Front Gearcase (4x4, 6x6) | Premium Drive Hub Fluid | 5 oz. (150 ml) | 14 ft. lbs. (19.4 Nm) |
| Middle Gearcase (6x6) | Premium Gearcase Lube | 6.75 oz. (200 ml) | 14 ft. lbs. (19.4 Nm) |

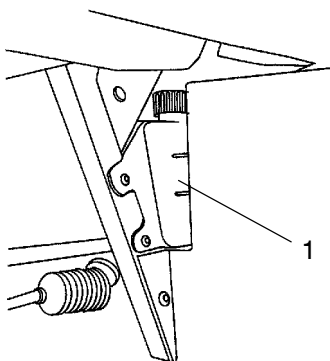
MAINTENANCE AND LUBRICATION

Cooling System

Operation

The overflow bottle (1) is located in front of the right front tire of the vehicle. The coolant level must be maintained between the minimum and maximum marks on the overflow bottle.

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



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

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

Adding or Changing Coolant

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

Polaris recommends the use of Polaris Premium 60/40 anti-freeze/coolant or a 50/50 mixture of high quality aluminum compatible anti-freeze/coolant and distilled water. See page 96 for the part numbers of Polaris-recommended products.

NOTE: Polaris Premium 60/40 is already premixed and ready to use. Do not dilute with water.

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

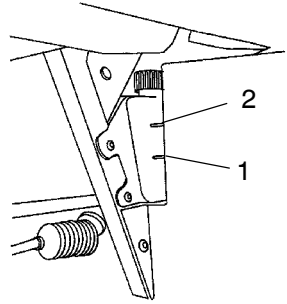
MAINTENANCE AND LUBRICATION

Cooling System

Coolant Level Inspection

NOTE: Check the coolant level when the engine is cold (room or atmospheric temperature).

1. Position the vehicle on level ground.
2. Check the coolant level by looking at the overflow bottle located in front of the right front wheel. The coolant level should be between the minimum mark (1) and the maximum mark (2).
3. If the coolant level is below the safe operating range, lift the hood and locate the overflow bottle lid. Remove the lid and use a funnel to add coolant through the filler opening until the fluid level has reached the maximum mark. Reinstall the cap.



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

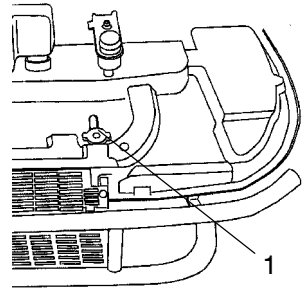
Radiator Coolant Level

⚠WARNING

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

1. Lift the hood and slowly remove the radiator cap (1).
2. View the coolant level through the
3. Using a funnel, slowly add coolant if necessary.

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



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

MAINTENANCE AND LUBRICATION

Cooling System

Radiator and Cooling Fan

Check and clean the screen and radiator fins for obstructions caused by insects or mud. Refer to the Periodic Maintenance Schedule beginning on page 54.

CAUTION

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

Do not obstruct or deflect air flow through the radiator by installing unauthorized accessories in front of the radiator or behind the cooling fan. Interference with the radiator air flow can lead to overheating and consequent engine damage.

Coolant absorbs excessive heat from the engine and transfers it to the air at the radiator. If the coolant level becomes low, the engine overheats and may suffer damage. Check the coolant level each day before operating the vehicle, and replenish coolant if the level is low. Change the coolant as outlined in the Periodic Maintenance Schedule.

MAINTENANCE AND LUBRICATION

Polaris Variable Transmission (PVT) System

WARNING

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

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

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

Always follow all recommended maintenance procedures. See your dealer as outlined in the owner's manual.

This PVT system is intended for use on Polaris products only. Do not install it in any other product.

Always make sure the PVT housing is securely in place during operation.

PVT Drying

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

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

MAINTENANCE AND LUBRICATION

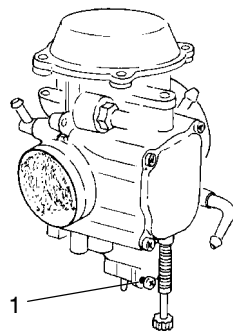
Vehicle Immersion

CAUTION

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

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

1. Move the vehicle to dry land, or at the very least, to a water level below the floor.
2. Disconnect the fuel pump wires.
3. Remove the spark plug.
4. Loosen the carburetor drain screw (1).
5. Turn the engine over several times with electric start.
6. Dry the spark plug and reinstall, or install a new plug.
7. Tighten the carburetor drain screw.
8. Reconnect the fuel pump wires.
9. Attempt to start the engine. If necessary, repeat the drying procedure.
10. Take the vehicle to your dealer for service as soon as possible whether you succeed in starting it or not.



NOTE: If water has been ingested into the PVT follow the procedure on page 71 for drying.

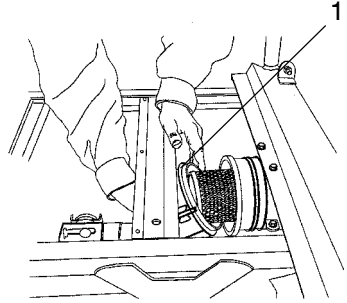
MAINTENANCE AND LUBRICATION

Filter Systems

Air Filter Service

We recommended that the air filter be replaced annually. When operating in extremely dusty conditions, it should be replaced more often.

1. Lift the cargo box to access the airbox.
2. Remove the airbox cover and inspect the gasket. It should adhere tightly to the cover and seal all the way around.
3. Remove the air filter (1).
4. Do not attempt to clean the main element. Install a new air filter.
NOTE: Apply a small amount of general purpose grease to the sealing edges of the filter before installing.



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

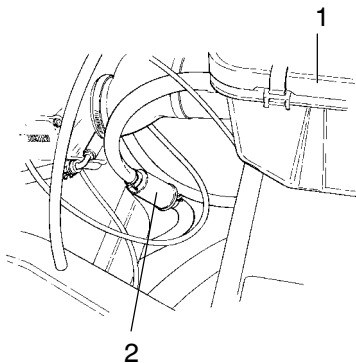
NOTE: Service the air filter more frequently if the vehicle is operated in wet conditions or at high throttle openings for extended periods.

MAINTENANCE AND LUBRICATION

Filter Systems

Breather Filter and Hoses

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



CAUTION

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

Fuel Filter

Your Polaris *RANGER* is equipped with an in-line fuel filter that should be replaced by your dealer after every 100 hours of operation. Do not attempt to clean the fuel filter.

MAINTENANCE AND LUBRICATION

Spark Plugs

CAUTION

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

- Use NGK BKR5ES spark plugs.
- Proper electrode gap is .025" (.06 cm).
- Spark plug torque is 14 ft. lbs.(19 Nm).

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

WARNING

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

1. Normal

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

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

2. Wet Fouled

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

Spark Plug Removal and Replacement

1. Remove the seat to access the engine compartment.
2. Remove the spark plug cap. Using the spark plug wrench provided in the tool kit, remove the plug by rotating it counterclockwise.
3. Reverse the procedure for spark plug installation. Torque to 14 ft. lbs. (19 Nm).

MAINTENANCE AND LUBRICATION

Spark Arrestor

WARNING

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

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

Remove any combustible materials from the area.

Wear eye protection.

Do not stand behind or in front of the vehicle while purging.

Never run the engine in an enclosed area. Exhaust contains poisonous carbon monoxide gas that can cause loss of consciousness or death in a very short time.

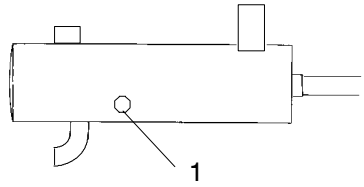
Never go under the vehicle while it's inclined.

MAINTENANCE AND LUBRICATION

Spark Arrestor

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

1. Remove the arrestor clean-out plugs (1) located on the bottom of the muffler.
2. Place the transmission in neutral and start the engine. Purge accumulated carbon from the system by momentarily revving the engine several times.
3. If some carbon is expelled, cover the exhaust outlet and rap on the pipe around the clean-out plugs while revving the engine several more times.
4. If particles are still suspected to be in the muffler, back the vehicle onto an incline so the rear of the vehicle is one foot higher than the front. Set the parking brake and block the wheels. Make sure the vehicle is in neutral and repeat steps 2 and 3.
5. If particles are still suspected to be in the muffler, drive the vehicle onto the incline so the front of the vehicle is one foot higher than the rear. Set the parking brake and block the wheels. Make sure the vehicle is in neutral and repeat steps 2 and 3.



NOTE: See WARNING above.

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

MAINTENANCE AND LUBRICATION

Throttle System

⚠️WARNING

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

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

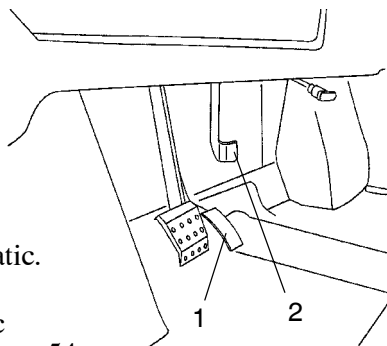
Immediately contact your dealer for service if throttle problems arise.

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

Throttle Freeplay

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

Check the throttle pedal freeplay periodically as outlined in the Periodic Maintenance Schedule beginning on page 54. Adjust the freeplay if necessary.



Throttle Freeplay Inspection

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

MAINTENANCE AND LUBRICATION

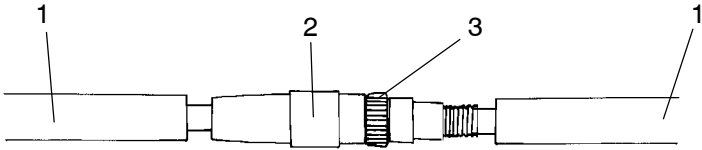
Throttle System

Throttle Freeplay Adjustment

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

NOTE: While adjusting freeplay, you must flip the throttle lever back and forth.

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



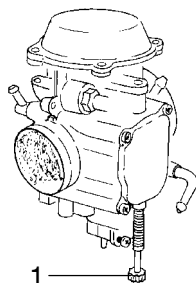
MAINTENANCE AND LUBRICATION

Carburetor/Engine Idle RPM Adjustment

The idle speed adjustment should be performed as outlined in the Periodic Maintenance Schedule, or whenever the idle speed is changed.

Recommended engine idle RPM is 1200 +/- 200. If the engine idle speed is not satisfactory, and all other conditions are favorable, the carburetor can be adjusted with the following procedure.

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



Cylinder Head/Cylinder Base Fastener Torque

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

MAINTENANCE AND LUBRICATION

Brakes

Brake Inspection

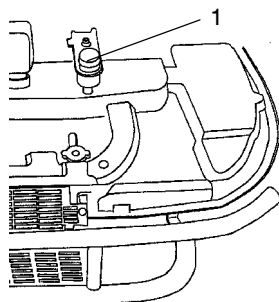
The front and rear brakes are hydraulic disc type brakes and are activated by the brake pedal. See page 33.

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

Change the brake fluid at the intervals outlined in the Periodic Maintenance Schedule beginning on page 54. The brake fluid should also be changed if it becomes contaminated, if the fluid level is below the minimum, or if the type and brand of the fluid in the reservoir are unknown.

Inspection Procedure

1. Position the vehicle on level ground.
2. Inspect the brake fluid by looking at the reservoir (1) under the hood. The level should be between the upper (MAX) and lower (MIN) level lines.
3. If the fluid level is lower than the lower level line, add brake fluid to the upper (MAX) line.
4. Apply the brake forcefully for a few seconds and check for fluid leakage around the fittings.



⚠️ WARNING

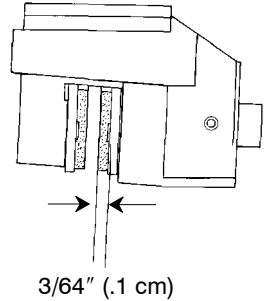
After opening a bottle of brake fluid, always discard any unused portion. Never store or use a partial bottle. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the air. The moisture causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the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

MAINTENANCE AND LUBRICATION

Brakes

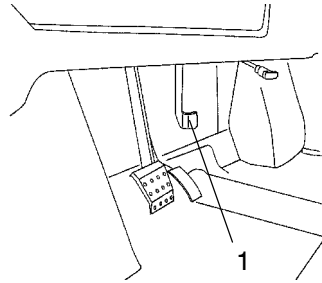
Brake Inspection

5. Check the brake system for fluid leaks.
6. Check the brake pedal for excessive travel or a spongy feel.
7. Check the friction pads for wear, damage and looseness.
8. Inspect the brake disc spline and pad wear surface for excessive wear.
9. Change pads when worn to $3/64''$ (.1 cm), about the thickness of a dime.



Parking Brake Inspection

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



Parking Brake Adjustment

1. Place the vehicle in neutral on a flat level surface.
2. Carefully lift the rear of the vehicle off the ground and stabilize on jack stands.
3. Loosen the locknut on the rear caliper adjustment bolt.
4. Tighten the adjustment bolt until the rear tire will not rotate.
5. Back the adjustment bolt out $1/4$ turn.
6. Tighten the jam nut while holding the adjustment nut in place.
7. Repeat this procedure on the other rear tire.

MAINTENANCE AND LUBRICATION

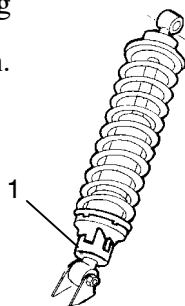
Steering Wheel Inspection

Check the steering wheel for specified freeplay and smooth operation as outlined in the Periodic Maintenance Schedule.

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

Rear Spring Adjustment

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



MAINTENANCE AND LUBRICATION

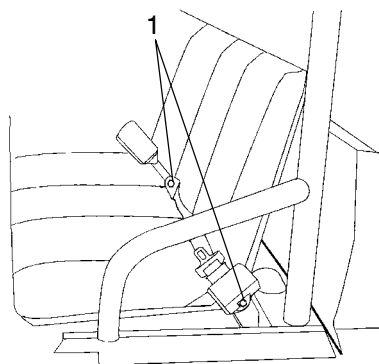
Seat Belts

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

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

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

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



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

⚠WARNING

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

MAINTENANCE AND LUBRICATION

Tires

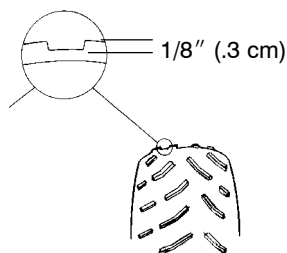
⚠️WARNING

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

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

Tire Tread Depth

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



Axle and Wheel Nut Torque Specifications

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

| Front Spindle Nut(s) | Dealer Performed Service |
|--------------------------------------|--------------------------|
| Front Wheel Nuts | 35 ft. lbs. |
| Center and Rear Hub Retaining Nut(s) | 120 ft. lbs. |
| Rear Wheel Nuts | 35 ft. lbs. |

MAINTENANCE AND LUBRICATION

Tires

⚠ WARNING

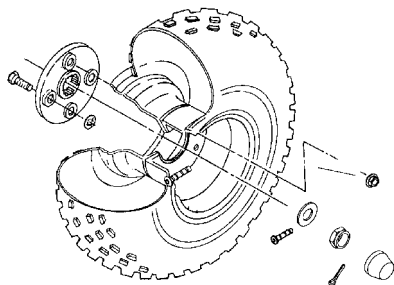
Operating your *RANGER* with improperly installed wheels will affect vehicle handling and could cause an accident resulting in serious injury or death. Make sure the wheels are installed properly.

Wheel Removal

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

Wheel Installation

1. With the transmission in gear and the parking brake locked, place the wheel in the correct position on the wheel hub. Be sure the valve stem is toward the outside and rotation arrows on the tire point toward forward rotation.
2. Attach the wheel nuts and washers and finger tighten.
3. Carefully lower the vehicle to the ground.
4. Torque the wheel nuts according to the specifications on page 85.



MAINTENANCE AND LUBRICATION

Lights

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

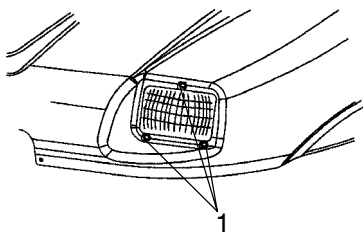
⚠️WARNING

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

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

Headlight Beam Adjustment

1. Place the vehicle on a level surface with the headlight approximately 25 ft. (7.6 m) from a wall.
2. Measure the distance from the floor to the center of the headlight and make a mark on the wall at the same height.
3. Start the engine and switch on the headlight.
4. Observe the headlight aim. The most intense part of the headlight beam should be aimed 8" (20.3 cm) below the mark placed on the wall in step 2. **NOTE:** Include the weight of a rider on the seat while performing this step.
5. Adjust beam to desired position by turning adjustment screws (1) in headlight cover as follows:
 - Turn the right screw clockwise to adjust to the left.
 - Turn the left screw clockwise to adjust to the right.
 - Turn the bottom screw clockwise to adjust upward.



Brake Lights

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

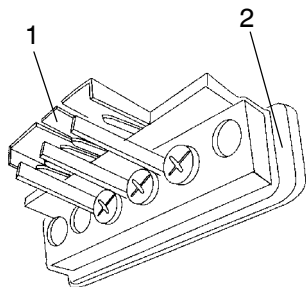
1. Turn the ignition switch to the ON position.
2. Depress the brake pedal. The brake light should come on after about 10mm (0.4 in.) of pedal travel. If the light doesn't come on, check the bulb.

MAINTENANCE AND LUBRICATION

Lights

Indicator Lamp Replacement

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



Tool Kit

To help you perform routine maintenance, a tool kit is provided with your vehicle. Items included in the kit are:

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

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

MAINTENANCE AND LUBRICATION

Cleaning Your *RANGER*

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

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

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

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

Storage

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

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

MAINTENANCE AND LUBRICATION

Removal from Storage

1. Check the battery electrolyte level and charge the battery if necessary. Install it in the vehicle. Make sure the battery vent hose is routed properly and that it's not pinched or restricted in any way.
2. Make sure the spark plug is tight.
3. Fill the fuel tank with fuel.
4. Check all the points listed in the Daily Pre-Ride Inspection section on page 35.

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

5. Lubricate as outlined in the Periodic Maintenance Schedule.

WARNING

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

MAINTENANCE AND LUBRICATION

Battery

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

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

⚠WARNING

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

Antidote:

External: Flush with water.

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

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

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

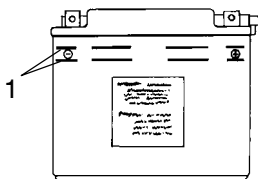
MAINTENANCE AND LUBRICATION

Battery

Replenishing Battery Fluid (Conventional Battery)

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

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



⚠WARNING

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

Battery Removal

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



⚠CAUTION

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

MAINTENANCE AND LUBRICATION

Battery

Battery Installation

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

NOTE: When installing a new battery, make sure it's fully charged prior to its initial use. Using a new battery that has not been fully charged can damage the battery and result in a shorter life. It can also hinder vehicle performance.

Battery Storage

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

SPECIFICATIONS

| | RANGER 2x4 | RANGER 4x4 | RANGER 6x6 |
|--------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| Gross Vehicle Weight | 2500 lbs. (1135 kg) | 2700 lbs. (1226 kg) | 2900 lbs. (1317 kg) |
| Fuel Capacity | 8.0 gal. (30 l) | 8.0 gal. (30 l) | 8.0 gal. (30 l) |
| Towing Capacity | 1400 lbs. (636 kg) | 1500 lbs. (681 kgs) | 1500 lbs. (681 kgs) |
| Max. Cargo Box Load | 850 lbs. (386 kg) | 1000 lbs. (454 kg) | 1000 lbs. (454 kgs) |
| Overall Length | 113 in. (282 cm) | 113 in. (282 cm) | 120 in. (304.8 cm) |
| Overall Width (box) | 60 in. (152.4 cm) | 60 in. (152.4 cm) | 60 in. (152.4 cm) |
| Overall Width (tires) | 58 in. (147.3 cm) | 58 in. (147.3 cm) | 58 in. (147.3 cm) |
| Overall Height | 74 in. (187.9 cm) | 75 in. (190.5 cm) | 75 in. (190.5 cm) |
| Wheelbase | 76 in. (193 cm) | 76 in. (193 cm) | 90 in. (228.6 cm) |
| Ground Clearance | 7.2 in. (183 mm) | 7.2 in. (183 mm) | 7.2 in. (183 mm) |
| Dry Weight | 1196 lbs. (543 kg) | 1263 lbs. (573 kg) | 1410 lbs. (640 kg) |
| Cargo Box (L x W x H) | 58 x 46 x 10 in. (147 x 117 x 25.4 cm) | 58 x 46 x 10 in. (147 x 117 x 25.4 cm) | 58 x 46 x 10 in. (147 x 117 x 25.4 cm) |
| Min. Turning Radius | 132 in. (335.3 cm) | 132 in. (335.3 cm) | 186 in. (472.4 cm) |
| Engine Oil Capacity | 2 qts. (2.1 l) | 2 qts. (2.1 l) | 2 qts. (2.1 l) |
| Coolant Capacity | 2.25 qts. (2.4 l) | 2.25 qts. (2.4 l) | 2.25 qts. (2.4 l) |
| Engine | 4 valve 4 stroke single cylinder with counter balance | 4 valve 4 stroke single cylinder with counter balance | 4 valve 4 stroke single cylinder with counter balance |
| Displacement | 425 cc | 499 cc | 499 cc |
| Bore x Stroke | 87.9 x 70 | 92 x 75 | 92 x 75 |
| Pilot Jet | 42.5 | 42.5 | 42.5 |
| Main Jet | 135 | 142.5 | 142.5 |
| Needle Jet | P-6 (829) | P-6 (829) | P-6 (829) |
| Jet Needle | 4LC38-3 | 4MB32-3 | 4MB32-3 |
| Air Screw | 2 1/4 | 2 1/2 | 2 1/2 |
| Alternator Output | 250 W | 250 W | 250 W |
| Compression Ratio | 9.2 | 10.2:1 | 10.2:1 |
| Starting System | Electric | Electric | Electric |
| Carburetor | 34 mm CV Mikuni | 34 mm CV Mikuni | 34 mm CV Mikuni |
| Ignition System | CDI | CDI | CDI |
| Ignition Timing | 30° @ 5000 rpm | 30° @ 5000 rpm | 30° @ 5000 rpm |
| Spark Plug | NGK BKR5E | NGK BKR5E | NGK BKR5E |

SPECIFICATIONS

| | <i>RANGER 2x4</i> | <i>RANGER 4x4</i> | <i>RANGER 6x6</i> |
|--------------------------|----------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|
| Lubrication System | Dry Sump | Dry Sump | Dry Sump |
| Engine Oil | 0W/40 | 0W/40 | 0W/40 |
| Driving System Type | PVT | PVT | PVT |
| Shift Type | Single Lever on console | Single Lever on console | Single Lever on console |
| Gear Reduction - Low | 8.6:1 | 8.6:1 | 8.6:1 |
| Gear Reduction - Reverse | 5.9:1 | 5.9:1 | 5.9:1 |
| Gear Reduction - High | 4.6:1 | 4.6:1 | 4.6:1 |
| Drive Ratio - Front: | NA | 3.83:1 | 3.83:1 |
| Drive Ratio - Final | 3.70:1 | 3.70:1 | 3.70:1 |
| Tire Size - Front | 25 x 10 - 12 | 25 x 10 - 12 | 25 x 10 - 12 |
| Tire Size - Rear | 25 x 11 - 12 | 25 x 11 - 12 | 25 x 11 - 12 |
| Tire Pressure - Front | 10 psi | 10 psi | 10 psi |
| Tire Pressure - Rear | 10 psi | 10 psi | 10 psi |
| Brake | Foot Activated, 4 wheel hydraulic disc | Foot Activated, 4 wheel hydraulic disc | Foot Activated, 4 wheel hydraulic disc |
| Front | Hydraulic disk, floating caliper | Hydraulic disk, floating caliper | Hydraulic disk, floating caliper |
| Rear | Hydraulic disk, floating caliper with mechanical parking brake | Hydraulic disk, floating caliper with mechanical parking brake | Hydraulic disk, floating caliper with mechanical parking brake |
| Parking Brake | Foot activated mechanical | Foot activated mechanical | Foot activated mechanical |
| Hood Headlight (watts) | 2 dual beam - 35W - quartz / halogen | 2 dual beam - 35W - quartz / halogen | 2 dual beam - 35W - quartz / halogen |
| Taillights (watts) | 2 single beam, 5W | 2 single beam, 5W | 2 single beam, 5W |
| Brake Light (watts) | 2 single beam, 5W | 2 single beam, 5W | 2 single beam, 5W |
| Indicator Light (watts) | 1.0 | 1.0 | 1.0 |

POLARIS RECOMMENDED PRODUCTS

| Part No. | Description |
|-------------------------------------------|------------------------------------------------------------|
| Engine Lubricant | |
| 2870791 | Fogging Oil (12 oz. Aerosol) |
| 2871098 | Premium 2 Cycle Engine Oil (Quart) |
| 2871281 | Engine Oil (Quart) Premium 4 Synthetic 0W-40 (4-Cycle) |
| 2871844 | Engine Oil (Gallon) Premium 4 Synthetic 0W-40 (4-Cycle) |
| 2871567 | Engine Oil (16 Gallon) Premium 4 Synthetic 0W-40 (4-Cycle) |
| Gearcase / Transmission Lubricants | |
| 2871477 | Premium Synthetic Gearcase Lubricant (1 Gal.) |
| 2871478 | Premium Synthetic Gearcase Lubricant (12 oz. bottle) |
| 2871653 | Premium Gearcase Lubricant (12 oz.) |
| 2870465 | Oil Pump for Gearcase Oil |
| 2871654 | Premium Drive Hub Fluid (8 oz.) |
| 2872277 | Premium Drive Hub Fluid (2.5 gal.) |
| 2871653 | Angle Drive Fluid (8 oz.) |
| Grease / Specialized Lubricants | |
| 2871322 | Premium All Season Grease (3 oz. cartridge) |
| 2871423 | Premium All Season Grease (14 oz. cartridge) |
| 2871460 | Starter Drive Grease |
| 2871515 | Premium U-Joint Lube (3 oz.) |
| 2871551 | Premium U-Joint Lube (14 oz.) |
| 2871312 | Grease Gun Kit |
| 2871329 | Dielectric Grease (Nyogel™) |
| Coolant | |
| 2871323 | 60/40 Coolant (Gallon) |
| 2871534 | 60/40 Coolant (Quart) |
| Additives / Miscellaneous | |
| 2872113 | Disk Brake Quiet (12 oz.) |
| 2871326 | Premium Carbon Clean (12 oz.) |
| 2870652 | Fuel Stabilizer (16 oz.) |
| 2870990 | DOT3 Brake Fluid |
| 2872113 | Disc Brake Quiet, Aerosol (9 oz.) |
| 2872893 | Engine Degreaser |
| 2871956 | Loctite™ 565 Thread Sealant |

TROUBLESHOOTING

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

Engine Doesn't Turn Over

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

Engine Turns Over, Fails to Start

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

Engine Pings or Knocks

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

TROUBLESHOOTING

Engine Backfires

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

Engine Runs Irregularly, Stalls or Misfires

| Possible Weak Spark Cause | Solution |
|-----------------------------------------|-------------------------------------------|
| Fouled or defective spark plugs | Inspect, clean and/or replace spark plugs |
| Worn or defective spark plug wires | See your Polaris dealer |
| Incorrect spark plug gap or heat range | Set gap to specs or replace plugs |
| Loose ignition connections | Check all connections and tighten |
| Water present in fuel | Replace with new fuel |
| Low battery voltage | Recharge battery to 12.5 VDC |
| Kinked or plugged fuel vent line | Inspect and replace |
| Incorrect fuel | Replace with recommended fuel |
| Clogged air filter | Inspect and clean or replace |
| Reverse speed limiter malfunction | See your Polaris dealer |
| Electronic throttle control malfunction | See your Polaris dealer |
| Other mechanical failure | See your Polaris dealer |
| Possible Lean Fuel Mixture Cause | Solution |
| Low or contaminated fuel | Add or change fuel, clean the fuel system |
| Low octane fuel | Replace with recommended fuel |
| Clogged fuel filter | Replace filter |
| Incorrect jetting | See your Polaris dealer |
| Possible Rich Fuel Mixture Cause | Solution |
| Overuse of choke | Inspect, clean and/or replace spark plugs |
| Fuel is very high octane | Replace with lower octane fuel |
| Incorrect jetting | See your Polaris dealer |

TROUBLESHOOTING

Engine Stops or Loses Power

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

WARRANTY

LIMITED WARRANTY

Polaris Industries Inc., 2100 Highway 55, Medina, MN 55340, gives a SIX MONTH LIMITED WARRANTY on all components of the Polaris *RANGER* against defects in material or workmanship. This warranty covers the parts and labor charges for repair or replacement of defective parts which are covered by this warranty. This warranty begins on the date of purchase. This warranty is transferrable to another consumer during the warranty period through a Polaris dealer.

REGISTRATION

At the time of sale, the Warranty Registration Form must be completed by your dealer and submitted to Polaris within ten days. Upon receipt of this registration, Polaris will record the registration for warranty. No verification of registration will be sent to the purchaser as the copy of the Warranty Registration Form will be the warranty entitlement. If you have not signed the original registration and received the customer copy, please contact your dealer immediately. **NO WARRANTY COVERAGE WILL BE ALLOWED UNLESS YOUR VEHICLE IS REGISTERED WITH POLARIS.**

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

WARRANTY COVERAGE AND EXCLUSIONS:

LIMITATIONS OF WARRANTIES AND REMEDIES

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

WARRANTY

This warranty does not cover the use of unauthorized lubricants, chemicals, or fuels that are not compatible with the vehicle. The exclusive remedy for breach of this warranty shall be, at Polaris' exclusive option, repair or replacement of any defective materials, or components or products. THE REMEDIES SET FORTH IN THIS WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. POLARIS SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE, OR OTHER TORT OR OTHERWISE. Some states do not permit the exclusion or limitation of incidental or consequential damages or implied warranties, so the above limitations or exclusions may not apply to you if inconsistent with controlling state law.

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

HOW TO OBTAIN WARRANTY SERVICE

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

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

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

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

Lubricants

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

INDEX

A

| | |
|----------------------------|----|
| Adding or Changing Coolant | 68 |
| Age Restrictions | 7 |
| Air Filter | 73 |
| All Wheel Drive (AWD) | 51 |
| Auxiliary Outlet | 28 |
| AWD Switch | 32 |

B

| | |
|------------------------------|-------|
| Battery | 91-93 |
| Battery Fluid (Conventional) | 92 |
| Battery Installation | 93 |
| Battery Removal | 92 |
| Battery Storage | 93 |
| Brake Inspection | 81-82 |
| Brake Lights | 87 |
| Brake Pedal | 33 |
| Brakes | 81-82 |
| Braking | 38 |
| Breather Filter and Hoses | 74 |

C

| | |
|--------------------------|--------------|
| Carburetor Adjustment | 80 |
| Changing Coolant | 68 |
| Cleaning Your RANGER | 89 |
| Component Locations | 25-27 |
| Console | 30 |
| CONTROLS | 31-33 |
| Coolant Level Inspection | 69 |
| Cooling System | 68-70 |
| Cooling System Operation | 68 |
| Cylinder Head Torque | 80 |

D

| | |
|------------------------------|-------|
| Decals and Locations | 20-23 |
| Differential Lock | 33 |
| Disengaging AWD | 51 |
| Driving Downhill | 42 |
| Driving in Reverse | 45 |
| Driving On Slippery Surfaces | 40 |
| Driving Over Obstacles | 44 |
| Driving Procedures | 39 |
| Driving Safely | 39-50 |
| Driving Through Water | 43 |
| Driving Uphill | 41 |
| Dumping the Cargo Box | 48 |

E

| | |
|----------------------------|-------|
| Engine Idle RPM Adjustment | 80 |
| Engine Oil | 60-63 |
| Equipment Modifications | 12 |

F

| | |
|------------------------------|--------------|
| FEATURES | 25-29 |
| FEATURES AND CONTROLS | 30 |

F

| | |
|----------------|-------|
| Filter Systems | 73-74 |
| Front Gearcase | 65 |
| Fuel Cap | 28 |
| Fuel Filter | 74 |
| Fuel Gauge | 28 |
| Fuel Safety | 24 |

G

| | |
|------------------------------|-------|
| Gear Selector | 31 |
| Gearcase Specification Chart | 67 |
| Gearcases | 64-67 |

H

| | |
|---------------------------|-------|
| Hauling Cargo | 47-49 |
| Headlight Beam Adjustment | 87 |

I

| | |
|----------------------------|----|
| Ignition Switch | 32 |
| Indicator Lamp Replacement | 88 |
| Indicator Lights | 28 |

L

| | |
|-----------------------------|-------|
| Light Switch | 32 |
| Lights | 87-88 |
| Lubrication Recommendations | 58-59 |

M

| | |
|------------------------------------|--------------|
| Main Gearcase | 64 |
| MAINTENANCE and LUBRICATION | 54-93 |
| MAINTENANCE SCHEDULE | 54-57 |
| Middle Gearcase | 66 |

N

| | |
|-------------------------------|-----------|
| NOISE EMISSION CONTROL | 53 |
|-------------------------------|-----------|

O

| | |
|-----------------------|--------------|
| Oil and Filter Change | 62-63 |
| Oil Pump Priming | 63 |
| OPERATION | 34-51 |
| Operator Safety | 7-19 |

P

| | |
|-------------------------------------|-----------|
| Parking Brake Adjustment | 82 |
| Parking Brake Inspection | 82 |
| Parking Brake Lever | 33 |
| Parking on an Incline | 46 |
| Parking the RANGER | 50 |
| POLARIS RECOMMENDED PRODUCTS | 96 |
| Pre Ride Inspection | 35 |
| Premium 4 Synthetic Lubricant | 60 |

INDEX

P

| | |
|-------------------------|-----------|
| PVT Drying | 71 |
| PVT SYSTEM | 71 |

R

| | |
|--------------------------------|----|
| Radiator and Cooling Fan | 70 |
| Radiator Coolant Level | 69 |
| Rear Gearcase | 67 |
| Rear Spring Adjustment | 83 |
| Removal from Storage | 90 |

S

| | |
|---------------------------------|--------------|
| SAFETY | 7-40 |
| Seat Belts | 29, 84 |
| Seat Removal | 29 |
| Sidehilling | 42 |
| Spark Arrestor | 53, 76 |
| Spark Arrestor | 77 |
| Spark Plug Removal | 75 |
| Spark Plugs | 75 |
| SPECIFICATIONS | 94-95 |
| Starting a Cold Engine | 36 |
| Starting a Warm Engine | 37 |
| Starting the Engine | 36-37 |
| Steering Wheel Inspection | 83 |
| Stopping the Engine | 37 |
| Storage | 89 |
| Switches | 32 |

T

| | |
|--------------------------------|--------------|
| TABLE OF CONTENTS | 5 |
| Throttle Freeplay | 78 |
| Throttle Pedal | 33 |
| Throttle System | 78-79 |
| Tire Tread Depth | 85 |
| Tires | 85-86 |
| Tool Kit | 88 |
| Torque Specifications | 85 |
| Towing Capacities | 49 |
| Towing Loads | 49 |
| Trailer Hitch Bracket | 28 |
| Transmission | 64 |
| TROUBLESHOOTING | 97-99 |

V

| | |
|-------------------------------|----------|
| Vehicle Break-In Period | 34 |
| VEHICLE IDENTIFICATION | |
| NUMBERS | 4 |
| Vehicle Immersion | 72 |

W

| | |
|--------------------------|----------------|
| WARRANTY | 100-101 |
| WELCOME | 3 |
| Wheel Installation | 86 |
| Wheel Removal | 86 |

WARNING

Improper vehicle use can result in SEVERE INJURY or DEATH.

NEVER:

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

ALWAYS:

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

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

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

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



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