



POLARIS®

RANGER

**Owner's Safety and
Maintenance Manual**



WARNING

READ AND UNDERSTAND WARNINGS AND OWNER'S MANUAL BEFORE OPERATION. SEVERE INJURY OR DEATH CAN RESULT FROM IGNORING WARNINGS OR IMPROPER USE.

THIS VEHICLE SHOULD BE OPERATED ONLY BY PERSONS WITH A VALID DRIVER'S LICENSE.

MINIMUM AGE RECOMMENDATION FOR PASSENGERS IS FIVE YEARS OLD.

THIS VEHICLE CAN BE HAZARDOUS TO OPERATE. A collision or rollover can occur quickly, even during routine maneuvers such as turning or driving on hills or over obstacles, if you fail to take proper precautions.

TO REDUCE TIPOVER RISK, BE ESPECIALLY CAREFUL WHEN ENCOUNTERING OBSTACLES AND SLOPES, WHEN BRAKING ON HILLS OR DURING TURNS.

KEEP FEET ON FLOORBOARDS AT ALL TIMES.

ALWAYS FASTEN YOUR SEAT BELTS SECURELY AROUND YOU.

OPERATING ON HILLS IS DANGEROUS, especially when loaded. Vehicle stability is greatly reduced during operation on hills.

REDUCE SPEED when operating this vehicle on rough or hilly terrain, or when carrying cargo.

OFF-ROAD USE ONLY. This vehicle is not built for legal operation on public roads.

NEVER OPERATE THIS VEHICLE AT EXCESSIVE SPEEDS.

HELMETS ARE RECOMMENDED WHENEVER DRIVING THIS VEHICLE IN AN AGGRESSIVE MANNER. Eye protection is recommended at all times.

High speeds, jumps and stunts are dangerous and could result in loss of control and other accidents.

NEVER PERMIT A GUEST TO OPERATE THIS VEHICLE unless the guest has read the Owner's Manual and all labels.

NEVER USE ALCOHOL OR DRUGS before or while operating the vehicle.

 **WARNING**

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

FOREWORD

Congratulations and thank you from Polaris Industries Inc. for purchasing one of our products. Built with American engineering and manufacturing know-how, it is designed to provide superior comfort, utility, enjoyment and safety.

This manual is furnished to ensure that the operator is aware of safe operating procedures. It also includes information about the general care and maintenance of your vehicle.

Carefully read the following pages. If you have any questions regarding this vehicle contact a Polaris dealer for assistance. Remember, Polaris dealers have the knowledge and facilities to provide you with the best service possible.

PROTECT YOUR SPORT

Know all local, state/province off-road vehicle laws;

Respect your vehicle;

Respect the environment; and

You will gain the respect of others.

We also advise you to strictly follow the recommended maintenance program as outlined. This preventive maintenance program is designed to ensure that all critical components on this vehicle are thoroughly inspected at various intervals.

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

No part of this manual shall be reproduced or used without the written permission of Polaris Industries Inc.

 **THIS VEHICLE IS NOT A TOY AND CAN BE HAZARDOUS TO OPERATE.** This vehicle handles differently from other vehicles including motorcycles and cars. A collision or rollover can occur quickly, even during routine maneuvers such as turning and driving on hills or over obstacles, if you fail to take proper precautions.

SEVERE INJURY OR DEATH can result if you do not follow these instructions:

- Read this manual and all labels carefully and 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 seatbelts 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, when braking on hills or during turns.
- Always fasten your seatbelts securely around you.
- This vehicle is for off road use only. Never operate on public roads as severe injury or death may occur. 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 which is 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 is 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 go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating this vehicle.
- Never operate on excessively rough, slippery or loose terrain.
- Always follow proper procedures for turning as described in this manual. Practice turning at low speeds before attempting to turn at faster speeds. Do not turn at excessive speed.
- 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 you start up any hill. Never climb hills with excessively slippery or loose surfaces. Shift your weight forward. Never open the throttle suddenly or make sudden gear changes. Never go over the top of any hill at high speed.

- Always follow proper procedures for going down hills and for braking on hills as described in this manual. Check the terrain carefully before you start down any hill. Never go down a hill at high speed. Avoid going down a hill at an angle which would cause the vehicle to lean sharply to one side. Go straight down the hill where possible.
- Always follow proper procedures for crossing the side of a hill as described in this manual. Avoid hills with excessively slippery or loose surfaces. Never attempt to turn the vehicle around on any hill until you have mastered the turning technique described in this manual on level ground. Avoid crossing the side of a steep hill if possible.
- Always use proper procedures if you stall or roll backwards when climbing a hill. To avoid stalling, maintain a steady speed when climbing a hill. If you stall or roll backwards, follow the special procedure for braking described in this manual. Dismount on the uphill side or to either side if pointed straight uphill. Turn the vehicle around and remount, following the procedure described in this manual.
- Always check for obstacles before operating in a new area. Never attempt to operate over large obstacles, such as large rocks or fallen trees. Always follow proper procedures when operating over obstacles as described in this manual.
- Always be careful of skidding or sliding. On slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chance of skidding or sliding out of control.
- Never operate vehicle in fast flowing water or in water deeper than that specified in this manual. Remember that 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 you when you operate in reverse. When it is safe to proceed in reverse, go slowly. Avoid turning at sharp angles in reverse.
- Always use the size and type tires specified in this manual. Always maintain proper tire pressure as described on page 83.
- 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 instructions in this manual for carrying cargo or pulling a trailer. Allow greater distance for braking.
- Always wear the seat belts whenever the vehicle is operated. This will reduce the severity of injury in case of a sudden stop or collision.
- Always keep arms and legs inside of cab frame while the vehicle is in motion.
- Always apply the parking brake before getting out of the vehicle. The parking brake is located on the left side of the center console. Activate by pulling up on the lever. Release by pressing the button on the end of the handle and lowering the lever.
- Always activate the foot pedal brake before releasing the park brake.
- Always shut off the engine before refueling. Make sure the area is well ventilated and free of any source of flame or sparks. Gasoline is very flammable. See page 24 for refueling instructions.

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

WARNING

indicates a potential hazard which could result in serious injury or death.

Additional Important Information...

Due to our concern for the safety of our customers and the general public, Polaris hereby strongly recommends and requests that consumers not have installed on a Polaris *RANGER* any equipment which is intended to 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 *RANGER* substantially increase the risk of bodily injury. Please be aware that these modifications may create a substantial safety hazard.

Polaris hereby informs you that the warranty on your *RANGER* is terminated if any such equipment has been added to the vehicle or any modifications have been made to the vehicle which increase its speed or power.

We also advise you to strictly follow the recommended maintenance program outlined in this manual. This preventive maintenance program is designed to ensure that all critical components on the vehicle are thoroughly inspected by your dealer at various mileage intervals.

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.

Be certain any accessories added to this vehicle have been approved by Polaris.

Familiarize yourself with their function and affect on the vehicle.



The Polaris Preferred Registered Owners (PRO) Family Your Owners Program

As the owner of a new Polaris vehicle, you are entitled to a FREE two- year membership in the Polaris PRO Family--the Preferred Registered Owners Family. It's an owners program for Polaris owners like you, people who have chosen the finest recreational vehicle available, people who share an interest in Polaris and its products.

Once your new vehicle's warranty is registered, you will receive a PRO Family membership packet that will include:

- ✦ A letter of welcome to the PRO Family
- ✦ A PRO Family card with your name and membership number
- ✦ A colorful sticker of the PRO logo
- ✦ A PRO merchandise brochure and order form.

As a PRO Family member, you're entitled to opportunities such as:

- ✦ A free subscription to PRO *Spirit*, the official magazine of the PRO Family
- ✦ The chance to buy insurance for you Polaris vehicle. The toll-free insurance telephone number is: 1-800-473-0111
- ✦ The chance to arrange travel through the Polaris Travel Center. The toll-free travel telephone number is: 1-800-267-1915
- ✦ The chance to apply to serve on PRO Consumer Councils that provide input into the Polaris vehicles of the future
- ✦ The chance to serve as a PRO Field Evaluator and provide feedback on your new vehicle
- ✦ The chance to purchase exclusive PRO Family merchandise
- ✦ And more!

To order PRO merchandise, you'll complete the order form you receive with your membership packet, take the form to your Polaris dealer and pay for the merchandise. The merchandise will be shipped directly to your home from the PRO merchandise fulfillment center.

Watch for your PRO membership packet and the next issue of PRO *Spirit* magazine. This quarterly magazine will keep you informed about Polaris news and events, and special PRO merchandise, travel, and ride opportunities.

Enjoy your new Polaris vehicle, and welcome to the family--The Polaris PRO Family.

CONTENTS

UNDERSTANDING WARNINGS	1
SAFETY WARNING AND OPERATION DECALS	2-7
LABEL LOCATIONS	8
DAILY PRE-RIDE INSPECTION	9
OPERATION WARNINGS	10-19
VEHICLE IDENTIFICATION NUMBERS	20
CONTROL AND PARTS FUNCTIONS	21-39
STARTING THE ENGINE	40-43
VEHICLE BREAK IN PERIOD	44
CARRYING LOADS	45
OPERATION SAFETY	46-55
NOISE EMISSION CONTROL SYSTEM REGULATION	56
BATTERY	57-58
MAINTENANCE	59-88
TROUBLE SHOOTING	89
SPECIFICATIONS	90-91
WARRANTY	92-93
INDEX	94

UNDERSTANDING WARNINGS

SAFETY ALERT

The following precautionary signal words are used throughout this manual to convey the following messages:



This is the safety alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury. Your safety is involved!



WARNING

Indicates a potential hazard which could result in serious injury or death.



CAUTION

Indicates a potential hazard which may result in minor personal injury or damage to the vehicle.

NOTE

The word "NOTE:" in this manual will alert you to key information or instructions.

! WARNING

HAZARD

Failure to heed WARNINGS.

WHAT CAN HAPPEN

WARNINGS identify special instructions or procedures which, if not correctly followed, could result in personal injury, or loss of life.

HOW TO AVOID THE HAZARD

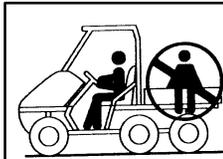
Read all WARNINGS in this manual carefully and for your safety be sure to follow their instructions.

SAFETY WARNING AND OPERATION DECALS

WARNING

VEHICLE ROLLOVER COULD CAUSE SEVERE INJURY OR DEATH
This cab frame is not designed or intended to provide rollover protection
in the event of vehicle overturning. See Owner's Manual.

7077478



WARNING

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

7077681

**TRAILER MAX.
WEIGHT 1500 LBS.
HITCH MAX. VERTICAL
WEIGHT 150 LBS.**

7077682

WARNING

IMPROPER TIRE PRESSURE OR OVER-
LOADING CAN CAUSE LOSS OF CONTROL.
LOSS OF CONTROL CAN RESULT IN
SEVERE INJURY OR DEATH.

TIRE PRESSURE (PSI):

FRONT MIN. 5 MAX. 12
CENTER & REAR MIN. 5 MAX. 10

MAXIMUM WEIGHT CAPACITY

(Gross Vehicle Weight)

INCLUDING MACHINE, PASSENGER
AND CARGO IS 2920 LBS.

SEE OWNER'S MANUAL FOR PROPER
TIRE INFLATION FOR DIFFERENT VEHICLE
APPLICATIONS.

7077475

SAFETY WARNING AND OPERATION DECALS

HEADLAMPS ARE NOT SEALED.
DO NOT SUBMERGE OR APPLY
WATER PRESSURE DIRECTLY ONTO
SERVICE OPENING.

Recoil handle must be firmly seated to
prevent water entry. Drain starter motor
if water enters. See owner's manual.

7075741

WARNING/AVERTISSEMENT

This vehicle is designed for operator and
"ONE" passenger only

Ce Vehicule est conçu pour ne transporter
que le conducteur et "UN SEUL" passager.

7075439

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

 NEVER USE ON PUBLIC ROADS	 FOR MAXIMUM SAFETY PROTECTION, ALWAYS WEAR YOUR SAFETY BELT. 7077646	 NEVER USE WITH DRUGS OR ALCOHOL
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WARNING

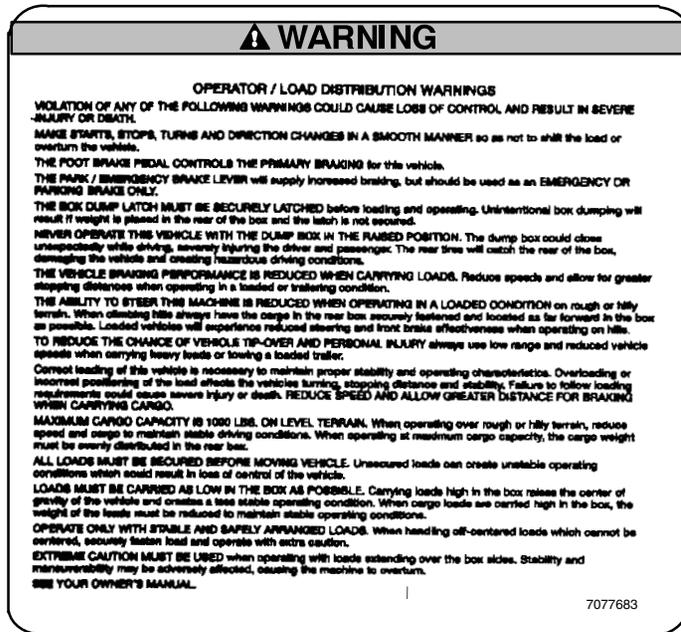
DO NOT ATTEMPT ENGINE OR
CLUTCH MODIFICATION. DOING SO
CAN CAUSE IMBALANCE AND/OR
EXCESSIVE ENGINE RPM.

EXCESSIVE ENGINE RPM CAN CAUSE
PART FAILURE RESULTING IN
POSSIBLE SEVERE INJURY OR
DEATH.

DO NOT MODIFY ENGINE OR CLUTCH.

7077377

SAFETY WARNING AND OPERATION DECALS



Text found below

OPERATOR/LOAD DISTRIBUTION WARNINGS

VIOLATION OF ANY OF THE FOLLOWING WARNINGS COULD CAUSE LOSS OF CONTROL AND RESULT IN SEVERE INJURY OR DEATH.

MAKE STARTS, STOPS, TURNS AND DIRECTIONS CHANGES IN A SMOOTH MANNER so as not to shift the load or overturn the vehicle.

THE FOOT BRAKE PEDAL CONTROLS THE PRIMARY BRAKING for this vehicle.

THE PARK/EMERGENCY BRAKE LEVER will supply increased braking, but should be used as an EMERGENCY OR PARKING BRAKE ONLY.

THE BOX DUMP LATCH MUST BE SECURELY LATCHED before loading and operating. Unintentional box dumping will result if weight is placed in the rear of the box and the latch is not secured.

NEVER OPERATE THIS VEHICLE WITH THE DUMP BOX IN THE RAISED POSITION. The dump box could close unexpectedly while driving, severely injuring the driver and passenger. The rear tires will catch the rear of the box, damaging the vehicle and creating hazardous driving conditions.

THE VEHICLE BRAKING PERFORMANCE IS REDUCED WHEN CARRYING LOADS. Reduce speeds and allow for greater stopping distances when operating in a loaded or trailing condition.

SAFETY WARNING AND OPERATION DECALS

THE ABILITY TO STEER THIS MACHINE IS REDUCED WHEN OPERATING IN A LOADED CONDITION on rough or hilly terrain. When climbing hills always having the cargo in the rear box securely fastened and located as far forward in the box as possible. Loaded vehicles will experience reduced steering and front brake effectiveness when operating on hills.

TO REDUCE THE CHANCE OF VEHICLE TIP-OVER AND PERSONAL INJURY always use D-1 Gear and reduced vehicle speeds when carrying heavy loads or towing a loaded trailer.

Correct loading of this vehicle is necessary to maintain proper stability and operating characteristics. Overloading or incorrect positioning of the load effects the vehicles turning, stopping distance and stability. Failure to follow loading requirements could cause severe injury or death. **REDUCE SPEED AND ALLOW GREATER DISTANCE FOR BRAKING WHEN CARRYING CARGO.**

MAXIMUM CARGO CAPACITY IS 1000 LBS. ON LEVEL TERRAIN. When operating over rough or hilly terrain, reduce speed and cargo to maintain stable driving conditions. When operating at maximum cargo capacity, the cargo weight must be evenly distributed in the rear box.

ALL LOADS MUST BE SECURED BEFORE MOVING VEHICLE. Unsecured loads can create unstable operating conditions which could result in loss of control of the vehicle.

LOADS MUST BE CARRIED AS LOW IN THE BOX AS POSSIBLE. Carrying loads high in the box raises the center of gravity of the vehicle and creates a less stable operating condition. When cargo loads are carried high in the box, the weight of the loads must be reduced to maintain stable operating conditions.

OPERATE ONLY WITH STABLE AND SAFELY ARRANGED LOADS. When handling off-centered loads which cannot be centered, securely fasten load and operate with extra caution.

EXTREME CAUTION MUST BE USED when operating with loads extending over the box sides. Stability and maneuverability may be adversely affected, causing the machine to overturn.

SEE YOUR OWNER'S MANUAL.

SAFETY WARNING AND OPERATION DECALS

⚠ WARNING	
<p>READ AND UNDERSTAND WARNINGS AND OWNER'S MANUAL BEFORE OPERATION. SEVERE INJURY OR DEATH CAN RESULT FROM IGNORING WARNINGS OR IMPROPER USE.</p> <ul style="list-style-type: none">• This vehicle REQUIRES SPECIAL DRIVING SKILLS due to its handling. Drive within your skill.• THIS VEHICLE SHOULD BE OPERATED ONLY BY PERSONS WITH A VALID DRIVER'S LICENSE. Operation by unlicensed operators increases the risk of severe injury or death.• 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. All occupants should wear their seat belts at all times.• THIS VEHICLE CAN BE HAZARDOUS TO OPERATE. A collision or rollover can occur quickly, even during routine maneuvers such as turning, driving on hills or over obstacles, if you fail to take proper precautions.• TO REDUCE TIPOVER RISK, BE ESPECIALLY CAREFUL WHEN ENCOUNTERING OBSTACLES AND SLOPES, WHEN BRAKING ON HILLS OR DURING TURNS.• KEEP FEET ON FLOORBOARDS AT ALL TIMES.• ALWAYS FASTEN YOUR SEATBELTS SECURELY AROUND YOU.• OPERATION ON HILLS IS DANGEROUS, especially when loaded. This vehicle is designed for utility usage on moderate terrain. Turning, braking and uneven terrain can induce rollovers especially if a maneuver is abrupt. Riders strongly discourage operation on any hills. Under no circumstances should you climb, descend or traverse hills greater than 15°. Vehicle stability is greatly reduced during operation on hills, creating the possibility of vehicle rollover and serious injury, including death or paralysis. Extreme caution should be used when operating this vehicle on any side hill conditions. Effectiveness of brakes is significantly reduced on hills. Some hills are too steep to safely stop or recover from an unsuccessful climbing attempt. If vehicle slides backwards down hill, apply brakes with gradual, even pressure and do not apply the throttle. Sudden or aggressive application of brakes may cause loss of control.• REDUCE SPEED when operating this vehicle on rough or hilly terrain, or when carrying cargo.• OFF-ROAD USE ONLY. Never operate on public roads - this vehicle is not built for legal operation on public roads. Always avoid paved surfaces.• NEVER OPERATE THIS VEHICLE AT EXCESSIVE SPEEDS. You increase your risk of losing control if you operate this vehicle at speeds too fast for the terrain, visibility conditions, or your experience.• HELMETS ARE RECOMMENDED WHENEVER DRIVING THIS VEHICLE IN AN AGGRESSIVE MANNER. Special safety equipment is required whenever driving aggressively or at high speeds with this vehicle.• REVERSE OPERATION CAN BE DANGEROUS even at low speeds. Steering control becomes difficult. When backing up, proceed slowly and apply brakes carefully; aggressive braking may result in loss of control. Avoid backing downhill. Avoid turning at sharp angles in reverse.• STOPPING DISTANCE MAY INCREASE WITH WET BRAKES OR ON WET SURFACES.• VEHICLE DESIGNED MAINLY FOR WARM WEATHER USE. Throttle linkage and brakes may stick if operated in freezing weather, causing loss of control. Dirt, mud, water, or other contaminants can also affect operation of controls. Check both frequently.• High speeds, jumps and trick maneuvers are dangerous and could result in loss of control and other accidents.• NEVER PERMIT A GUEST TO OPERATE THIS VEHICLE unless the guest has read the Owner's Manual and all labels.• NEVER USE ALCOHOL OR DRUGS before or while operating the vehicle. They slow reaction time and impair judgement.• SEVERE INJURY OR DEATH can result if you do not follow these instructions.	
<p>⚠ CAUTION: Do not shift transmission while vehicle is moving.</p>	<p>7077680</p>

Text found below

READ AND UNDERSTANDING WARNINGS AND OWNER'S MANUAL BEFORE OPERATION. SEVERE INJURY OR DEATH CAN RESULT FROM IGNORING WARNINGS OR IMPROPER USE. If you do not have the Owner's Manual for this vehicle, call 1-800-324-3674 to have one provided at no extra charge.

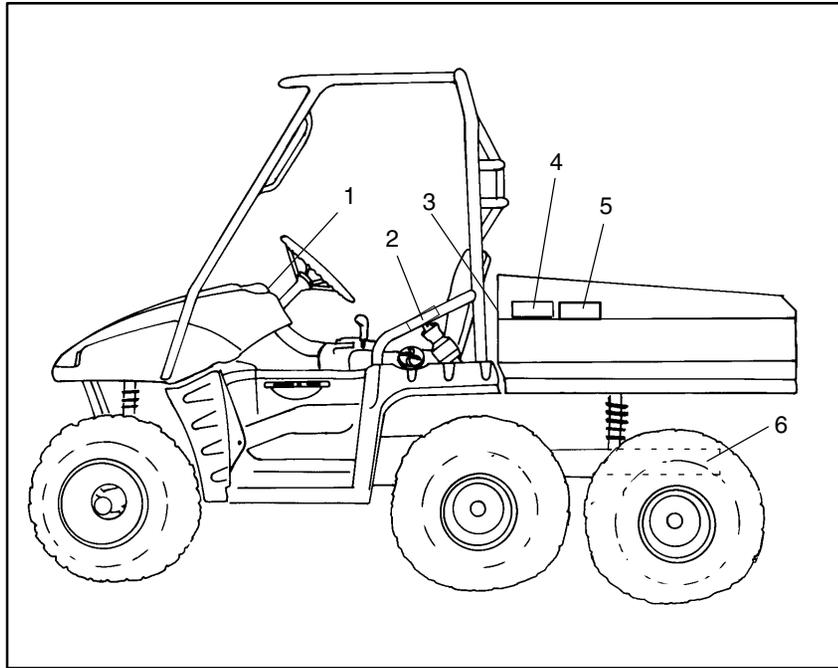
- This vehicle **REQUIRES SPECIAL RIDING SKILLS** due to its handling. Ride within your skill.
- **THIS VEHICLE SHOULD BE OPERATED ONLY BY PERSONS WITH A VALID DRIVER'S LICENSE.** Operation by unlicensed operators increases the risk of severe injury or death.
- **MINIMUM AGE RECOMMENDATION FOR PASSENGERS IF 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.
- **THIS VEHICLE CAN BE HAZARDOUS TO OPERATE.** A collision or rollover can occur quickly, even during routine maneuvers such as turning, driving on hills or over obstacles, if you fail to take proper precautions.
- **TO REDUCE TIPOVER RISK, BE ESPECIALLY CAREFUL WHEN ENCOUNTERING OBSTACLES AND SLOPES, WHEN BRAKING ON HILLS OR DURING TURNS.**
- **KEEP FEET ON FLOORBOARDS AT ALL TIMES.**
- **ALWAYS FASTEN YOUR SEATBELTS SECURELY AROUND YOU.**

SAFETY WARNING AND OPERATION DECALS

- OPERATION ON HILLS IS DANGEROUS, especially when loaded. This vehicle is designed for utility usage on moderate terrains. Turning, braking and uneven terrain can induce rollovers especially if a maneuver is abrupt. Under no circumstances should you climb, descend or traverse hills greater than 15°. Vehicle stability is greatly reduced during operating on hills, creating the possibility of vehicle rollover and serious injury, including death or paralysis. Extreme caution should be used when operating this vehicle on any side hill conditions. Effectiveness of brakes is significantly reduced on hills. Some hills are too steep to safely stop or recover from an unsuccessful climbing attempt. If vehicle slides backwards down hill, apply brakes with gradual, even pressure and do not apply the throttle. Sudden or aggressive application of brakes may cause loss of control.
- REDUCE SPEED when operating this vehicle on rough or hilly terrain, or when carrying cargo.
- OFF-ROAD USE ONLY. Never operate on public roads as severe injury or death may occur - this vehicle is not built for legal operation of public roads. Always avoid paved surfaces.
- NEVER OPERATE THIS VEHICLE AT EXCESSIVE SPEEDS. You increase your risk of losing control if you operate this vehicle at speeds too fast for the terrain, visibility conditions, or your experience.
- HELMETS ARE RECOMMENDED WHENEVER DRIVING THIS VEHICLE IN AN AGGRESSIVE MANNER. Eye protection is recommended at all times. (See Owner's Manual)
- REVERSE OPERATION CAN BE DANGEROUS. Steering control becomes difficult. When backing up, proceed slowly and apply brakes carefully; aggressive braking may result in loss of control. Avoid backing downhill. avoid turning at sharp angles in reverse.
- STOPPING DISTANCE MAY INCREASE WITH WET BRAKES OR ON WET SURFACES.
- VEHICLE DESIGNED MAINLY FOR WARM WEATHER USE. Throttle linkage and brakes may stick if operated in freezing weather, causing loss of control. Dirt mud, water or other contaminants can also affect operation of controls. Check both frequently.
- High speeds, jumps and stunts are dangerous and could result in loss of control and other accidents.
- NEVER PERMIT A GUEST TO OPERATE THIS VEHICLE unless the guest has read the Owner's Manual and all labels.
- NEVER USE ALCOHOL OR DRUGS before or while operating the vehicle. They slow reaction time and impair judgement.
- SEVERE INJURY OR DEATH can result if you do not follow these instructions.

CAUTION: Do not shift while vehicle is moving.

LABEL LOCATION



1. Warning (General)
2. Warning (Vehicle roll-over)
3. Warning (Load Distribution)
4. Warning (Cargo Bed)
5. Tire Pressure
6. Towing Information

DAILY PRE-RIDE INSPECTION

Inspect your vehicle each time before riding to ensure it is in proper working order. If proper inspection is not done, severe injury or death could result.

WARNING

If a proper inspection is not performed serious injury or death can result. Always inspect your *RANGER* before riding following the checklist carefully.

Before riding 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 at the recovery bottle.
13. Check condition and operation of the dump box/bed latch mechanism.

OPERATION WARNINGS

WARNING

POTENTIAL HAZARD

Operating this vehicle without proper instruction.

WHAT CAN HAPPEN

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.

HOW TO AVOID THE HAZARD

Read and understand the Owner's Manual and all warning and instruction labels on the vehicle.

WARNING

POTENTIAL HAZARD

Failure to follow the age recommendations for this vehicle.

WHAT CAN HAPPEN

Use of this vehicle by a child can lead to severe injury or death of the child or others.

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.

HOW TO AVOID THE HAZARD

No one without a valid driver's license should operate a Polaris *RANGER*.

WARNING

POTENTIAL HAZARD

Operating this vehicle on paved surfaces.

WHAT CAN HAPPEN

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.

HOW TO AVOID THE HAZARD

Always avoid operating the vehicle on any paved surfaces, including sidewalks, driveways, parking lots and streets.

WARNING

Safe operation of this vehicle requires good judgement and physical skills. Persons with cognitive or physical disabilities who operate this vehicle have an increased risk of overturns and loss of control which could result in serious injury or death.

WARNING

POTENTIAL HAZARD

Operating this vehicle on public streets, roads or highways.

WHAT CAN HAPPEN

You can collide 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 is illegal to operate vehicles of this type on public streets, roads and highways.

OPERATION WARNINGS

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

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

WARNING

POTENTIAL HAZARD

Operating this vehicle at excessive speeds.

WHAT CAN HAPPEN

Increases your chances of losing control of the vehicle, which can result in an accident.

HOW TO AVOID THE HAZARD

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

⚠ WARNING

POTENTIAL HAZARD

Failure to inspect the vehicle before operating.
Failure to properly maintain the vehicle.

WHAT CAN HAPPEN

Increases the possibility of an accident or equipment damage.

HOW TO AVOID THE HAZARD

Always inspect your *RANGER* each time you use it to make sure it is in safe operating condition.
Always follow the inspection and maintenance procedures and schedules described in the Owner's Manual.

⚠ WARNING

POTENTIAL HAZARD

Attempting jumps and other stunts.

WHAT CAN HAPPEN

Increases the chance of an accident, including an overturn.

HOW TO AVOID THE HAZARD

Never attempt stunts such as jumps. Don't try to show off.

⚠ WARNING

POTENTIAL HAZARD

Failure to use extra care when operating this vehicle on unfamiliar terrain.

WHAT CAN HAPPEN

You can come upon hidden rocks, bumps, or holes, without enough time to react.
Could result in the vehicle overturning or going out of control.

HOW TO AVOID THE HAZARD

Go slowly and be extra careful when operating on unfamiliar terrain.
Always be alert to changing terrain conditions when operating the vehicle.

OPERATION WARNINGS

WARNING

POTENTIAL HAZARD

Failure to use extra care when operating on excessively rough, slippery or loose terrain.

WHAT CAN HAPPEN

Could cause loss of traction or vehicle control, which could result in an accident, including an overturn.

HOW TO AVOID THE HAZARD

Do not operate on excessively rough, slippery or loose terrain until you have learned and practiced the skills necessary to control the vehicle on such terrain.

Always be especially cautious on these kinds of terrain.

WARNING

POTENTIAL HAZARD

Operating on excessively steep hills.

WHAT CAN HAPPEN

The vehicle can overturn more easily on extremely steep hills than on level surfaces or small hills.

HOW TO AVOID THE HAZARD

Never operate the *RANGER* on hills too steep for the vehicle or for your abilities.

Practice on smaller hills before attempting large hills.

Never operate vehicle on hills steeper than 15°.

WARNING

POTENTIAL HAZARD

Climbing hills improperly.

WHAT CAN HAPPEN

Could cause loss of control or cause vehicle to overturn.

HOW TO AVOID THE HAZARD

Always check the terrain carefully before you start up any hill.

Never climb hills with excessively slippery or loose surfaces.

Never open the throttle suddenly. The vehicle could go out of control.

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

WARNING

POTENTIAL HAZARD

Going down a hill improperly.

WHAT CAN HAPPEN

Could cause loss of control or cause vehicle to overturn.

HOW TO AVOID THE HAZARD

Always check the terrain carefully before you start down any hill.

Never go down a hill at high speed.

Avoid going down a hill at an angle which would cause the vehicle to lean sharply to one side. Go straight down the hill where possible.

WARNING

POTENTIAL HAZARD

Improperly crossing hills or turning on hills.

WHAT CAN HAPPEN

Could cause loss of control or cause vehicle to overturn.

HOW TO AVOID THE HAZARD

Be very careful when turning on any hill.

Avoid crossing the side of a steep hill if possible.

When crossing the side of a hill:

Avoid hills with excessively slippery or loose surfaces.

OPERATION WARNINGS

WARNING

POTENTIAL HAZARD

Improperly operating over obstacles.

WHAT CAN HAPPEN

Could cause loss of control or a collision. Could cause vehicle to overturn.

HOW TO AVOID THE HAZARD

Before operating in a new area, check for obstacles.

Use extreme caution when riding over large obstacles, such as large rocks or fallen trees.

WARNING

POTENTIAL HAZARD

Skidding or sliding.

WHAT CAN HAPPEN

You may lose control of the vehicle.

You may also regain traction unexpectedly, which may cause the vehicle to overturn.

HOW TO AVOID THE HAZARD

On slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chance of skidding or sliding out of control.

WARNING

POTENTIAL HAZARD

Riding on frozen lakes and rivers.

WHAT CAN HAPPEN

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

HOW TO AVOID THE HAZARD

Never ride your *RANGER* on a frozen body of water before you are sure the ice is thick enough and sound enough to support the machine and its operator, as well as the force that is created by a moving vehicle.

WARNING

POTENTIAL HAZARD

Operating this vehicle through deep or fast flowing water.

WHAT CAN HAPPEN

Tires may float, causing loss of traction and loss of control, which could lead to an accident.

HOW TO AVOID THE HAZARD

Never operate this vehicle in fast flowing water or in water deeper than that specified in your Owner's Manual. See page 52.

Remember that wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them several times to let friction dry out the pads.

WARNING

POTENTIAL HAZARD

Improperly operating in reverse.

WHAT CAN HAPPEN

You could hit an obstacle or person behind you, resulting in serious injury.

HOW TO AVOID THE HAZARD

Before you select reverse gear, make sure there are no obstacles or people behind you. When it is safe to proceed, go slowly. Always avoid backing down hill.

WARNING

POTENTIAL HAZARD

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

WHAT CAN HAPPEN

Use of improper tires on this vehicle, or operation of this vehicle with improper or uneven tire pressure, may cause loss of control, and increases the risk of an accident.

HOW TO AVOID THE HAZARD

Always use the size and type tires specified in the Owner's Manual for this vehicle. See page 91.

Always maintain proper tire pressure as described in the Owner's Manual. See page 2.

OPERATION WARNINGS

WARNING

POTENTIAL HAZARD

Operating this vehicle with improper modifications.

WHAT CAN HAPPEN

Improper installation of accessories or modification of this vehicle may cause changes in handling which in some situations could lead to an accident.

HOW TO AVOID THE HAZARD

Never modify this vehicle through improper installation or use of accessories. All parts and accessories added to this vehicle should be genuine Polaris Industries Inc. or equivalent components designed for use on this vehicle; and should be installed and used according to instructions. If you have questions, consult an authorized Polaris dealer.

WARNING

POTENTIAL HAZARD

Stalling, rolling backwards while climbing a hill.

WHAT CAN HAPPEN

Could result in vehicle overturning.

HOW TO AVOID THE HAZARD

Maintain steady speed when climbing a hill.

If you lose all forward speed:

Apply the brakes.

Lock parking brake after you are 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 machine including, but not limited to brakes, throttle and steering for possible damage.

⚠ WARNING

POTENTIAL HAZARD

Overloading this vehicle or carrying or towing cargo improperly.

WHAT CAN HAPPEN

Could cause changes in vehicle handling which could lead to an accident.

HOW TO AVOID THE HAZARD

Never exceed the stated load capacity for this vehicle.

Cargo should be properly distributed and securely attached.

Reduce speed when carrying cargo or pulling a trailer. Allow greater distance for braking.

Always follow the instructions in the Owner's Manual for carrying cargo or pulling a trailer. See page 45.

⚠ WARNING

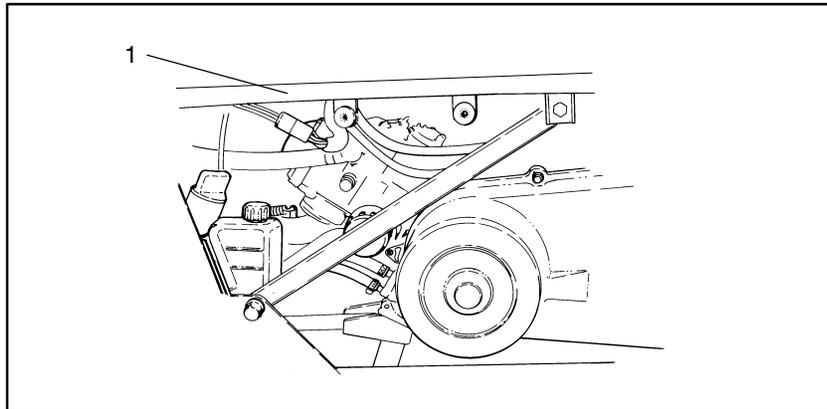
Never carry passengers in the box.

If the weight distribution on the box is located toward the rear of the box and the release lever is pulled forward, the box will want to dump on its own. Never operate the dump lever without checking the position of the load. This will prevent unexpected dumping of the cargo box.

⚠ WARNING

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

VEHICLE IDENTIFICATION NUMBERS



Important: Record these numbers from your vehicle in the spaces provided.

1. Frame VIN:

2. Vehicle Model Number:

3. Engine Serial Number (Right front side of engine crankcase)

Remove the spare key and store in a safe place. Record your ignition key number here. It is a four digit number found stamped on the key. In the event the key is lost, replacement can be made by supplying your dealer with this number.

Ignition Key Number

The vehicle frame and engine serial numbers are important for model identification when registering your vehicle, obtaining insurance or whenever replacement parts are required. In the event your vehicle were stolen these numbers are essential to the recovery and identification of your vehicle.

Dealer Imprint

CONTROL PARTS AND FUNCTIONS

Fuel Gauge

The fuel gauge on the instrument panel shows the amount of fuel in the fuel tank. When the red indicator needle comes near the E (empty) mark, refuel at the earliest opportunity.

Ignition Switch

This 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 off except Acc. 12V.
ON	All 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.



Do not operate the starter continuously for more than 5 seconds, or the starter will overheat and the battery power will drop temporarily. Wait at least 5 seconds between each operation of the starter to let it cool and the battery power recover.

Do not turn the ignition switch key to the START position with the engine running, or damage to the starter can result.

Light Switch Lever

Turn on headlights and taillights by flipping the light switch lever up, with the ignition switch key in the ON position.

The lights go off when the lever is pushed down.

4WD - AWD Rocker Switch

This vehicle can be operated in either 4WD or AWD. The 4WD-AWD is operated by a rocker switch located on the console. Flipping the lever up will engage the AWD.

CONTROL PARTS AND FUNCTIONS

Parking Brake Lever

The parking brake lever is located at the right side of the driver's seat. Pull the lever up and to the rear to apply the parking brake.

To release, push in and hold the knob on the end of the lever and push the lever all the way down. Spring pressure helps return the lever to the released position.

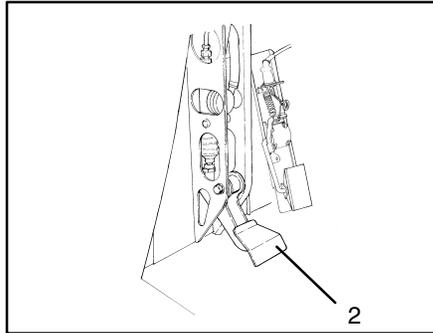
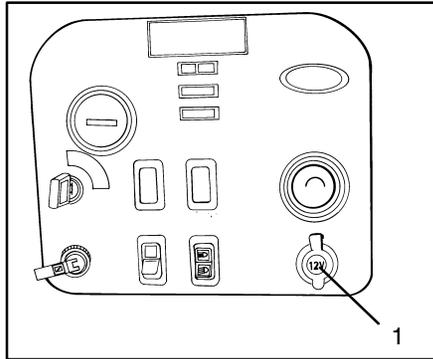
Auxiliary Lighting/Electrical Accessory Terminals

The auxiliary lighting/electrical accessory 12 volt terminals (1) are located under the instrument panel.

An auxiliary light or other optional light, or an accessory may be connected to these terminals.

Brake Pedal

The brake pedal (2) is the left pedal on the foot board. Depress the brake pedal to slow or stop the vehicle.



WARNING: Once a bottle of brake fluid is opened, use what is necessary and discard the rest. Do not store or use a partial bottle of brake fluid. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the air. This causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the possibility of serious injury.

Braking

NOTE: Practice starting and stopping (using the brakes) until you are 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.

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

! WARNING

Be sure to apply the parking brake before leaving the vehicle. If the vehicle moves, it might be damaged or cause injury.

CONTROL PARTS AND FUNCTIONS

Seat Belts

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

⚠ WARNING

Seat belts reduce injury. Always wear your seat belt. 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.

To wear the seat belt properly, follow this procedure:

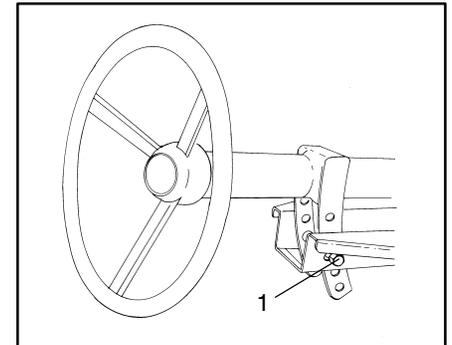
1. Place the belt across your lap as low on your hips as possible taking care that the belt is not twisted.
2. Push the latch plate into the buckle until it clicks.
3. Release the strap, it will self tighten.

To unfasten the belt, press on the squared red button in the center of the buckle.

Steering Wheel

The steering wheel position can be adjusted to suit the operator.

1. Loosen the bolt and nut (1) on the steering column bracket and move the steering wheel up or down to desired height.
2. Tighten the bolts and nuts.



Throttle Pedal

The throttle pedal 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 play. Refer to page 76 for throttle pedal adjustment procedure.

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 45.

CONTROL PARTS AND FUNCTIONS

Engine Fuel and Oil System

The fuel tank filler cap (1) is located on the left side by the driver's seat. Use either leaded or unleaded gasoline with a minimum pump octane number of 87 R+M/2 octane.

The fuel supply valve (2), located in the center console storage compartment (A) has three positions:

OFF: For vehicle storage and whenever transporting.

ON: For normal operation.

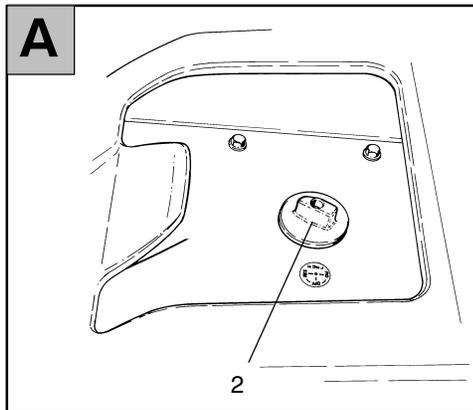
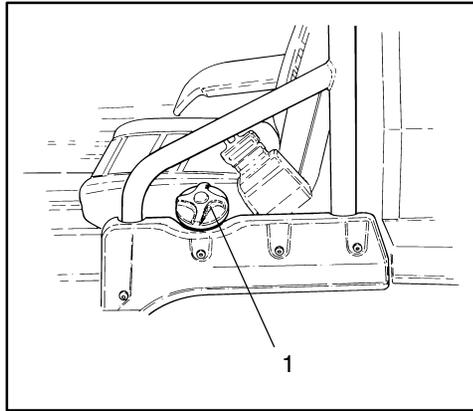
RES: For reserve supply in the event of main supply exhaustion.

NOTE: There is about a 7 to 10 mile (11.2 to 16 km) range on reserve gas. Always refill the gas tank as soon as possible after having used the reserve supply.

Always return valve to "on" position after refueling machine.

Gasoline and Alcohol Blends

Blends of gasoline and alcohol called "gasohol" can be used on an occasional basis, however continued use is not recommended. Switch back immediately to gasoline which does not contain alcohol if you experience any operating irregularities. Any deterioration of fuel system components or degradation of performance resulting from the use of gasohol will not be covered by Polaris' Warranty.



WARNING

Gasoline is highly flammable and explosive under certain conditions.

- Always exercise extreme caution whenever handling gasoline.
- Always refuel with the engine stopped and outdoors or in a well ventilated area.
- Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored.
- Do not over fill the tank. Do not fill the tank neck.
- If you should get gasoline 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.
- Shut off fuel valve whenever the vehicle is stored or parked.

CONTROL PARTS AND FUNCTIONS

WARNING

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

 Never use gasohol with an octane rating lower than the minimum octane rating specified for this product.

 Never use gasohol containing more than 10% ethanol (grain alcohol).

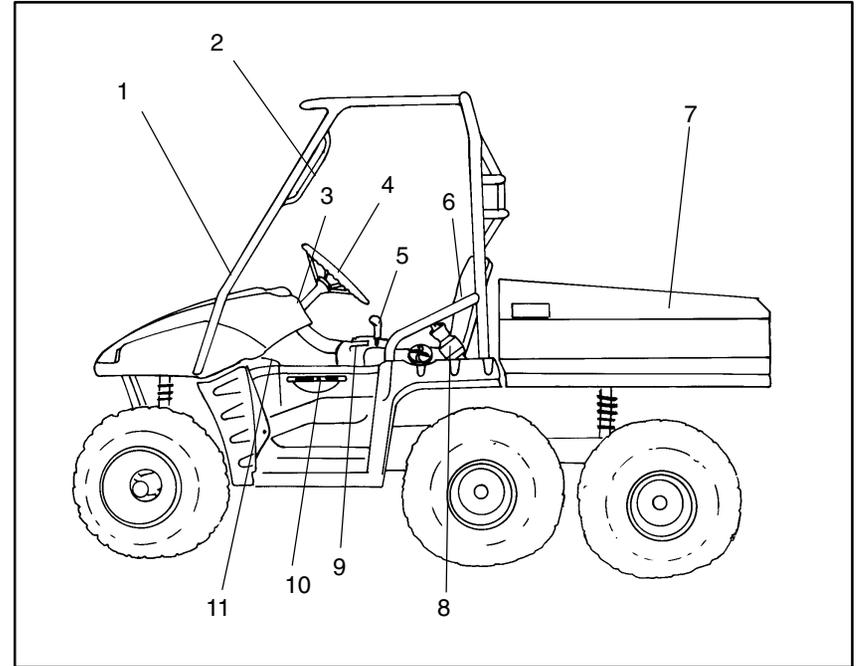
 Never use gasohol containing more than 5% methanol (wood alcohol). Gasoline containing methanol must also be blended with cosolvents and corrosion inhibitors.

 Never use gasohol for extended periods and never store this vehicle with gasohol in the fuel system.

 Gasoline containing alcohol can cause paint damage. Be extra careful not to spill gasohol during refueling.

CONTROL AND PARTS FUNCTIONS

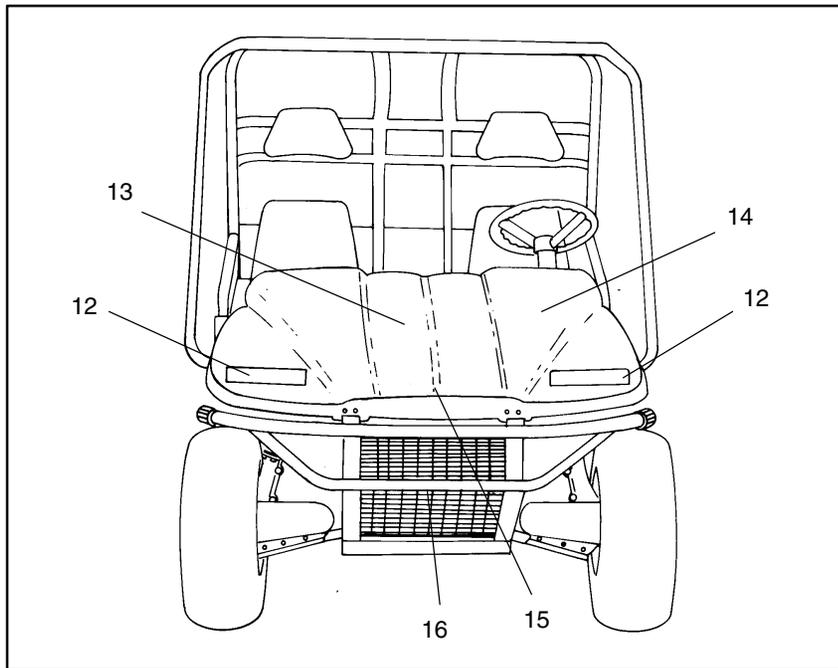
VEHICLE NOMENCLATURE - Left View



1. Cab Frame
2. Cab Frame Hand Hold
3. Dashboard
4. Steering Wheel
5. Gear Shift Lever
6. Seat
7. Cargo Box
8. Seat Belts
9. Parking Brake
10. Engine Compartment Access Panel
11. Hood Latches (attached to hood; left and right sides under dash)

CONTROL AND PARTS FUNCTIONS

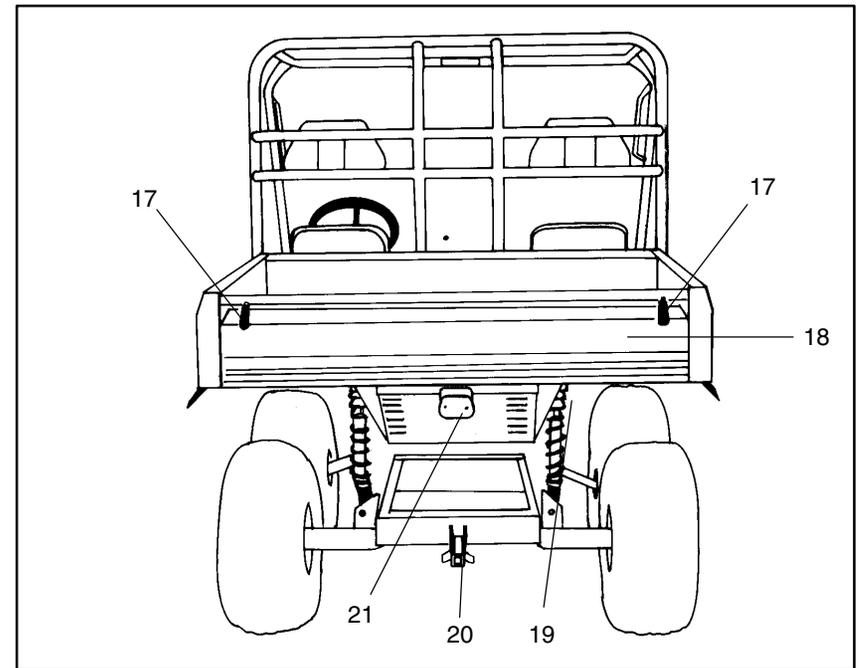
VEHICLE NOMENCLATURE - Front View



- 12. Headlights
- 13. Air Box (under hood)
- 14. Battery (under hood)
- 15. Radiator (under hood)
- 16. Front Bumper/Brush Guard

CONTROL AND PARTS FUNCTIONS

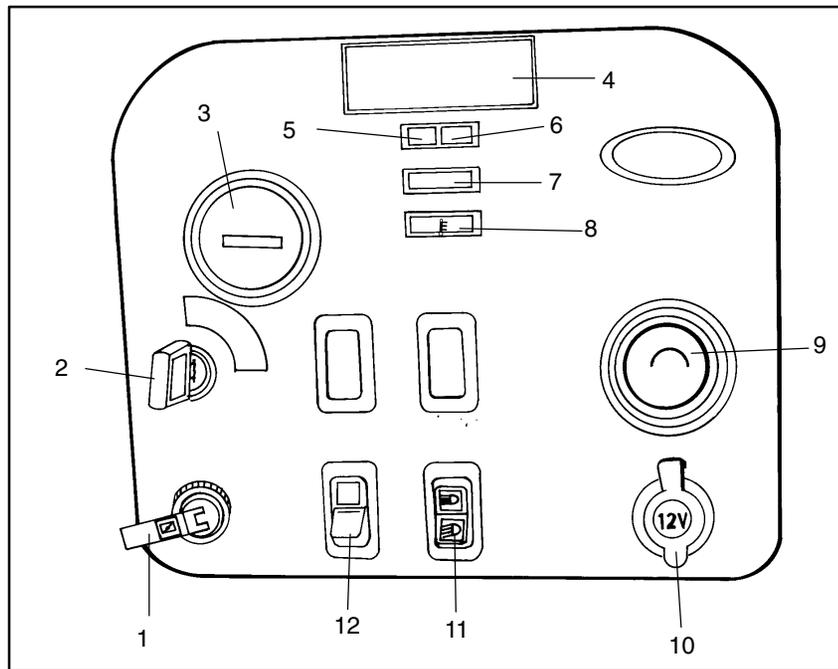
VEHICLE NOMENCLATURE - Rear View



- 17. Tail Gate Latches (Top and Bottom)
- 18. Tail Gate
- 19. Muffler (Spark Arrester)
- 20. Trailer Hitch Receiver
- 21. Taillight

CONTROL AND PARTS FUNCTIONS

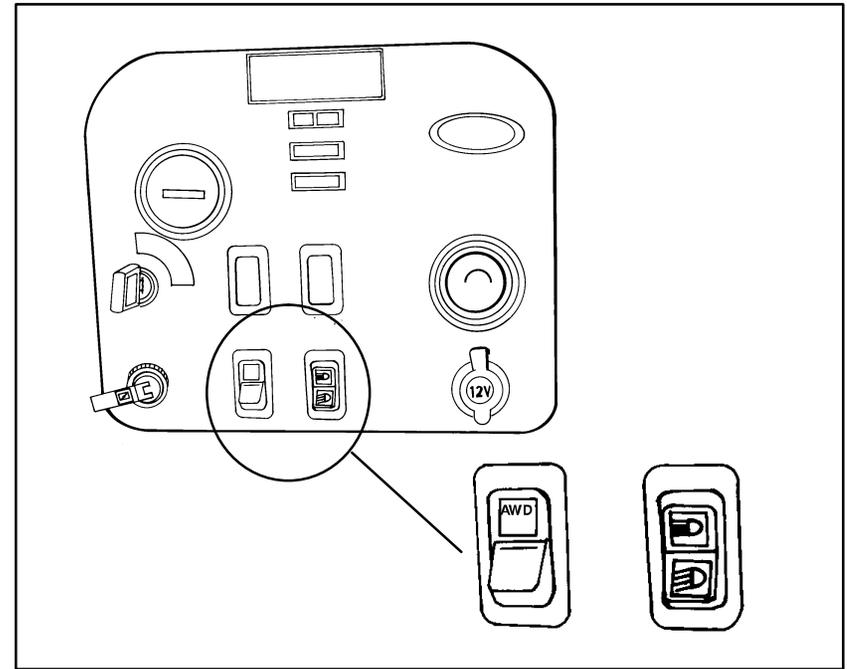
VEHICLE NOMENCLATURE - Instrument Panel



1. Choke Knob
2. Ignition Switch
3. Hour Meter
4. Passenger Warning Decal
5. Neutral Indicator Light
6. Reverse Indicator Light
7. Brake Light
8. Coolant Temperature Warning Light
9. Fuel Gauge
10. 12V Accessory Plug
11. Fog/High Beam Light Switch
12. AWD (All Wheel Drive) Switch

CONTROL AND PARTS FUNCTIONS

Demand 6 Drive



Exclusive Demand 6 Drive System (All Wheel Drive)

This Polaris AWD is equipped with a unique, Polaris exclusive, Demand 6 Drive (AWD) system which is activated by a switch on the dash. When the switch is “off” the *RANGER* is in 4 wheel drive at all times. When the switch is “on” the *RANGER* is in Demand 6 Drive 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 button position and a red AWD light indicates when the vehicle is in Demand 6 Drive. There is no limit to the length of time the vehicle may remain in Demand 6 Drive.

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

CAUTION: Do not switch on Demand 6 Drive if the rear wheels are spinning. This may cause severe drive shaft and clutch damage. Engage the Demand 6 Drive switch before getting into conditions where front wheel drive may be needed. If the rear wheels are spinning, release the throttle before turning the Demand 6 Drive switch on.

CONTROL AND PARTS FUNCTIONS

Transmission Gear Selector Operation

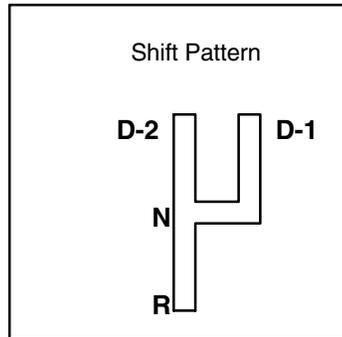
The transmission gear selector is located to the right of the vehicle driver's seat. The transmission selector lever has four positions: high forward (D2); reverse; neutral; and low forward (D1).

Use of (low forward gear - D1) is recommended in heavy pulling situations to extend belt life.

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. Should you experience any shifting problem see your dealer.



WARNING

1. Do not attempt to shift the transmission while the vehicle is moving or while operating on hilly terrain.
2. Always place the transmission in gear with the parking brake applied and turn the vehicle off whenever the vehicle is left unattended.

CONTROL AND PARTS FUNCTIONS

Disengaging Wheel Hubs

When backing uphill while in Demand 6 Drive and then going forward downhill, one or both hubs may remain engaged. If one or both hubs remain engaged they can be disengaged by stopping, shifting to and moving in reverse. Then proceed in forward again.

You can tell if only one front hub is engaged if the steering pulls to one side. If both front wheel hubs are engaged, steering effort increases but remains balanced from left to right, and vehicle speed is somewhat restricted.

 **WARNING:** If both hubs were engaged and only one released during operation, loss of control could result. If you experience hub engaging symptoms, use the above disengaging technique before proceeding. Failure to disengage front hubs as directed above could result in severe injury or death.

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

PVT System

WARNING

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

- Do not modify any component of the PVT system. Doing so may reduce its strength so that a failure may occur at high speeds. This system has been precision balanced. Any modification will cause the system to be out of balance, creating vibration and additional loads on components.
- Routine maintenance is the responsibility of the owner. Always follow recommended maintenance procedures. See your dealer!
- This PVT system is intended for use on Polaris products only.
- The PVT housing must be securely in place during operation.

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

CONTROL AND PARTS FUNCTIONS

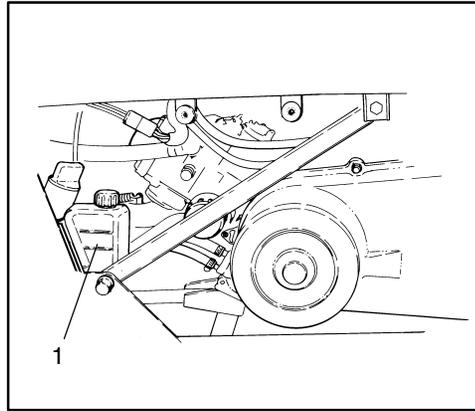
Engine Cooling System

Coolant Level

The recovery bottle (1), located on the left side of the machine must be maintained between the minimum and maximum levels indicated on the recovery bottle.

The engine coolant level is controlled or maintained by the recovery system. The recovery system components are the recovery 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 recovery 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 machines is normal as the system is purging itself of trapped air. Observe coolant levels and maintain as recommended by adding coolant to the recovery bottle. 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. **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.

CONTROL AND PARTS FUNCTIONS

Engine Cooling System

Radiator Coolant Level Inspection

NOTE: This procedure is only required if the cooling system has been drained for maintenance and/or repair. However, if the recovery bottle has run dry, the level in the radiator should be inspected and coolant added if necessary.

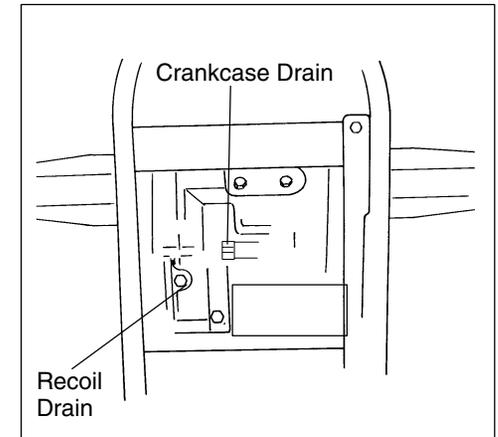
! **WARNING** Never remove the pressure cap when the engine is warm or hot. Escaping steam can cause severe burns. The engine must be cool before removing the pressure cap.

Lift the hood and locate the radiator cap.

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

Drain Plug Locations

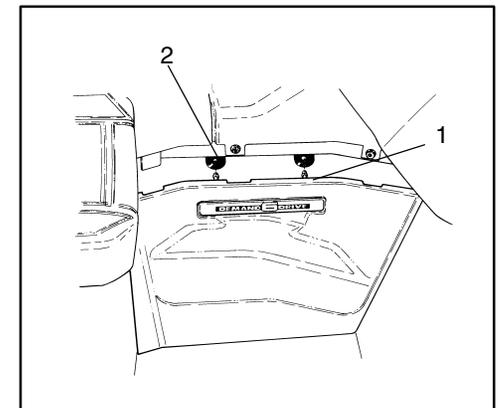
The oil should be changed annually, especially before off season storage. If the machine is used in wet conditions the oil should be checked more frequently. If the oil has a milky appearance it should be changed as soon as possible. Failure to properly maintain this important area can result in premature wear or possible failure of the engine components. Always use Polaris 0W-40 oil.



Engine Access Panel Removal and Installation

Engine access panels are removed by pulling handle out and then up (no tools are required).

Install by firmly placing the bottom pins in the grommets and pushing the top pins (1) into the grommets (2).



CONTROL AND PARTS FUNCTIONS

Engine Cooling System

To insure that the coolant maintains its ability to protect the engine, it is recommended that the system be completely drained every two years and a fresh mixture of antifreeze and water 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. **NOTE:** Polaris Premium 60/40 is already premixed and ready to use. Do not dilute with water. **IMPORTANT:** Always follow the manufacturer's mixing recommendations for the freeze protection required in your area.

Using a funnel, slowly add coolant as necessary.

CONTROL AND PARTS FUNCTIONS

4 Cycle Premium 4 Synthetic Lubricant

Polaris Premium 4 All Season Synthetic engine oil has been specially formulated for use in Polaris 4 cycle engines. It is a fully synthetic, high performance, multi-viscosity oil designed to provide the ultimate in lubrication performance and protection.

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.

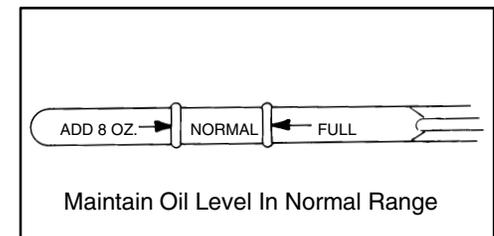
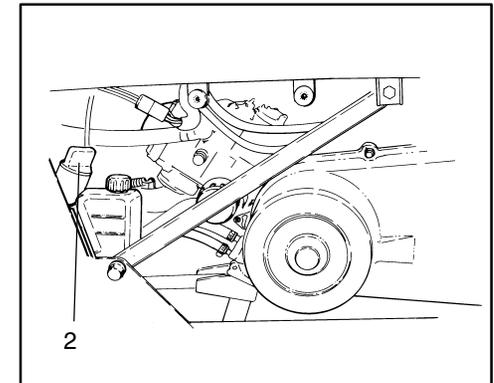
Although Polaris Premium 4 is the only oil recommended for use in this engine, use of any API certified "SH" oil is allowable. Oil may need to be changed more frequently if Polaris Premium 4 is not used. You will also need to follow the manufacturers recommendations for ambient temperature operation.

Oil System

The oil tank is located on the left side of the vehicle. To check the oil:

1. Set machine on a level surface.
2. Start the engine and let it idle for 20-30 seconds.
3. Stop the engine, remove dipstick (1) and wipe dry with a clean cloth.
4. Screw in the dipstick completely, remove it and read the oil level. **NOTE:** The dipstick must be screwed in to keep the angle and depth of stick consistent.
5. Remove dipstick and check to see that the oil level is between the full and add marks. Add oil as indicated by the level on the dipstick. Do not overfill.

CAUTION: Use only Polaris Premium 4 All Season synthetic oil (PN 2871271), or API certified "SH" oil. Never substitute or mix oil brands. Serious engine damage and voiding of warranty can result.

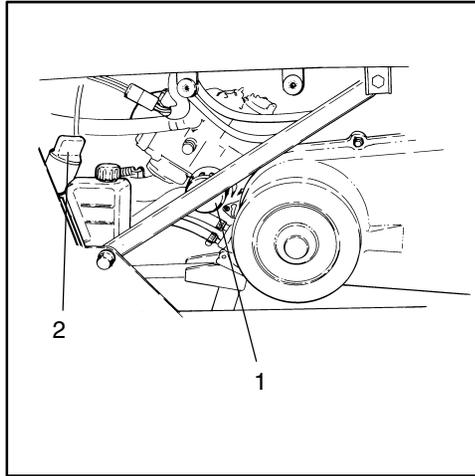


CONTROL AND PARTS FUNCTIONS

Oil and Filter Change

The recommended oil change interval is 100 hours, 1000 miles, or every six months, whichever comes first. Suggested break in oil change is at 20 hours, 500 miles, 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 riding. **NOTE:** Severe use cold weather riding is all riding below 10° F, and riding between 10° F and 30°F when most trips are slow speed and less than 5 miles. Be sure to change the oil filter whenever changing oil (Polaris PN 3084963).

1. Place vehicle on a level surface.
2. Remove rear wheel well panel by cutting dart clips and removing screws.
3. Clean area around drain plug at the bottom of the oil tank.
4. Run engine for two to three minutes until warm. Shut engine off.
5. Place a drain pan beneath the oil tank and remove the drain plug. **CAUTION:** Oil may be hot. Do not allow hot oil to come into contact with skin as serious burns may result.
6. Allow oil to drain completely.
7. Install a new sealing washer (PN 5850135) on oil drain plug. **NOTE:** The sealing surfaces on the drain plug and the oil tank should be clean and free of burrs, nicks or scratches.
8. Reinstall drain plug and torque to 14-17 ft. lbs. (1.93-2.35 kg/m)
9. Place shop towels beneath oil filter. Using an oil filter wrench, turn filter (1) counterclockwise to remove.
10. Using a clean dry cloth, clean filter sealing surface on crankcase.
11. Lubricate O-Ring on new filter with a film of new engine oil. Check to make sure the O-Ring is in good condition. Also make sure the O-ring from the old filter is not still on the engine.
12. Install new filter and tighten by hand 1/2 to 3/4 turn after gasket contact.
13. Approximately 1 cup of engine oil will remain in the crankcase. To drain, remove drain plug found on lower right side of crankcase. **NOTE:** The sealing surfaces on the drain plug and crankcase should be clean and free of burrs, nicks or scratches.



CONTROL AND PARTS FUNCTIONS

Oil and Filter Change (Cont.)

14. Reinstall drain plug.
15. Remove dipstick (2) and add 2 quarts (1.9 l) of Polaris Premium 4 synthetic oil. Reinstall dipstick. **NOTE:** If sump is not drained, add about 1 3/4 quarts initially.
16. Place gear selector in neutral and set parking brake.
17. Start engine and let it idle for one to two minutes. Stop engine and inspect for leaks.
18. Re-check oil level on the dipstick and add oil as necessary to bring the level to the upper mark on the dipstick.
19. Dispose of used filter and oil properly.

Fuel Filter and Oil Filter

Your Polaris *RANGER* is equipped with a unique in-line fuel filter.

These filters should be replaced by your dealer after every 100 hours of operation or annually. Do not attempt to clean these filters.

STARTING THE ENGINE

Stopping the Engine

1. Release the throttle pedal completely.
2. Put the gear shift lever into (N) Neutral.
3. Apply the parking brake to help prevent the vehicle from rolling.
4. Turn the ignition switch key to the OFF position.

Procedure for Starting a Cold Engine

⚠ WARNING

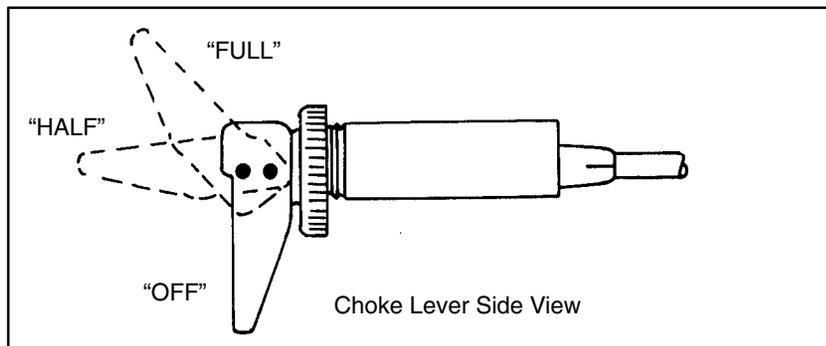
Do not start or operate this vehicle with sticking or improperly operating throttle pedal. A stuck or improperly operating throttle could cause an accident resulting in severe injury or death.

Always contact your dealer for service repairs whenever throttle problems arise.

Failure to check or maintain proper operation of the throttle system can result in the throttle pedal sticking during driving and cause an accident.

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

1. Place the transmission in neutral and move the vehicle to a level surface.
2. Lock the parking brake.
3. Turn the fuel tank valve to ON.
4. Sit in the vehicle in the driver's seat.



5. Move the choke lever to the FULL position.
6. Turn the ignition key to START.

STARTING THE ENGINE

7. If engine does not start, release ignition switch and wait five seconds; then 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.

After the Engine Starts

1. If the engine slows or stops, use of the choke lever at its HALF position will allow proper engine warm up.
2. Vary the engine RPM slightly with the throttle to aid in warm up until the engine idles smoothly. Then move the choke to OFF.

CAUTION: Proper engine warm up is essential each time before driving to avoid engine damage.

WARNING

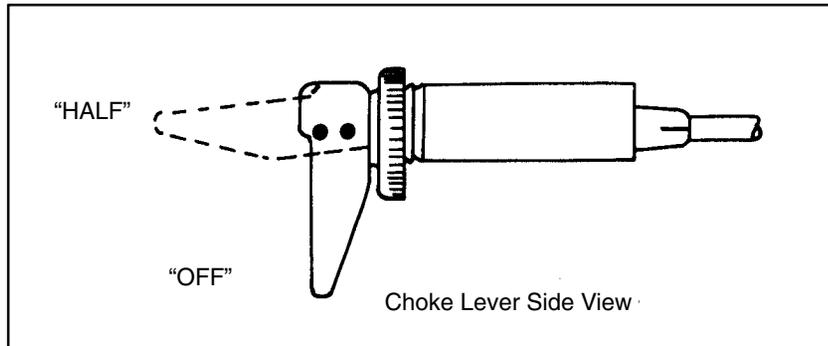
Carbon monoxide exhaust gas is poisonous!
Always start the vehicle outdoors.
Never run the engine in an enclosed area.

STARTING THE ENGINE

Procedure for Starting a Warm Engine

Warm engines do not normally require the use of the choke since the spark plug can easily become wet fouled.

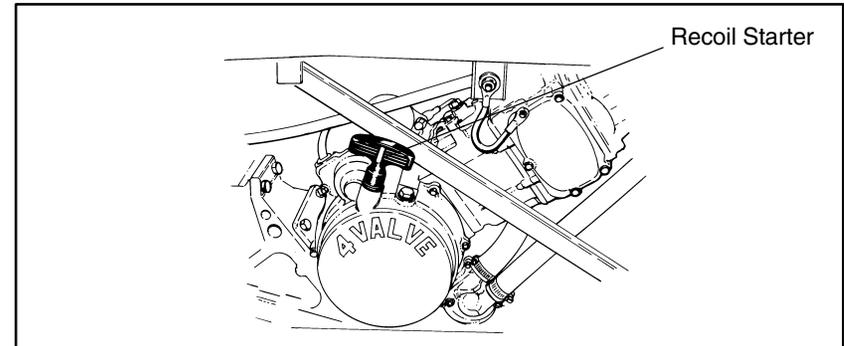
1. Place the transmission in neutral and move the vehicle to a level surface.
2. Lock the parking brake
3. Turn the fuel tank valve to ON.
4. Sit in the vehicle in the driver's seat.
5. Turn the ignition key to START.



6. If the engine has cooled to a point where it does not readily start, intermittent use of the choke lever in its HALF position is permitted.
7. If the engine is over-choked by mistake when warm, depress the throttle lever fully while cranking to aid in starting.
8. Release the throttle lever immediately after the engine starts. If the engine does not start and all conditions are favorable, change the spark plug.

STARTING THE ENGINE

Recoil Starter



If the battery is weak and cannot start the engine, use of the recoil starter located on the right side of the machine will allow vehicle operation until repairs can be made.

1. Be certain the parking brake is set. See page 27.
2. Remove right side engine access panel. See page 35.
3. Grasp the recoil starter tightly and pull slightly until the starter mechanism engages.
4. Pull the rope abruptly to start the engine. **CAUTION:** Take care not to extend the starter rope so far that it stops, causing damage to the recoil assembly.

CAUTION: Never start the engine with the battery disconnected. Damage to the electrical system and lamps may result.

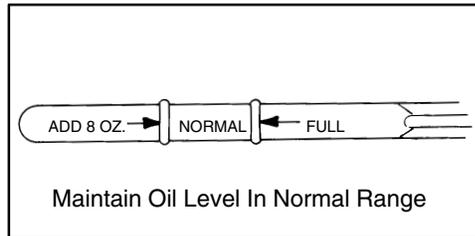
VEHICLE BREAK-IN PERIOD

The break in period for your new Polaris *RANGER* is defined as 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: Use only Polaris Premium 4 All Season synthetic oil, or API certified "SH" oil. Never substitute or mix oil brands. Serious engine damage and voiding of warranty can result.

1. Fill fuel tank with either unleaded or leaded fuel which has a minimum pump octane number of $87 = (R + M) / 2$.

2. Check oil reservoir level indicated on dipstick. Add oil if necessary.



3. Drive slowly at first. Select an area which is open and will give you room to familiarize yourself with vehicle operation and handling.

4. Vary the throttle positions. Do not operate at sustained idle. **CAUTION:** Do not operate at full throttle or high speeds for extended periods during the first three hours of use. Excessive heat can build up and cause damage to close fitted engine parts.

5. Perform regular checks on fluid levels, controls and all important areas on the vehicle as outlined earlier on the daily pre-ride inspection checklist found on page 9.

6. Pull only light loads.

7. Break in oil and filter. Change at 20 hours or 500 miles.

CARRYING LOADS

The *RANGER* has been designed to carry or tow a certain amount of load. Always read and understand the load distribution warnings listed on the warning labels. Never exceed the following weights.

Maximum Capacities (Level Ground)	Cargo Box
<i>RANGER</i> - 1500 lbs. (681 kg)	1000 lbs. (454 kg)

Dumping the Cargo Box

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. Stand clear and pull the cargo box release mechanism lever forward. Lift the front of the cargo box to dump.

Maximum Towing Capacities (Level Ground)

Maximum towed load weight - 1500 lbs. (681 kg) on level ground only; 850 lbs. (386 kg) up to 15° grade. Maximum vertical hitch weight - 150 lbs (68.1 kg).

Use of low forward is recommended in heavy pulling situations to extend belt life.

Maximum grade while trailer towing - 15°; do not tow any trailer on a grade steeper than 15°.

Total Towed Load Weight (level ground)	Total Towed Load Weight (15° grade)	Total Hitch Vertical Weight	Towing Speed
1500 lbs. (681 kg)	850 lbs. (386 kg)	150 lbs (68.1 kg)	10 mph (16 kph) or less

 Do not carry more than 1000 Lbs. (454 kg) in the cargo box.

WARNING

Never carry a passenger in a trailer

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. Remember that towing a trailer increases braking distance.

Do not tow more than 1500 lb (681 kg) trailer weight(trailer plus cargo weight).

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 and have an accident.

OPERATING SAFETY

Load Distribution

1. Always load the cargo box placing the load as far forward as possible.
2. Always operate the vehicle with extreme care whenever hauling or towing loads.
3. Slow down and *drive in D-1* only.
4. The cargo box dump latch must be securely latched before loading and operating. Unintentional box tilting will result if weight is placed in the rear of the box and the latch is not secured.

WARNING: Never operate this vehicle with the cargo box in the raised position. The cargo box could close unexpectedly while driving, severely injuring the driver. The rear tires will catch the rear of the box, damaging the vehicle and creating hazardous driving conditions.



Do not carry more than 1000 Lbs. in the cargo box.

Parking the *RANGER*

1. Stop the vehicle on a level surface.

CAUTION: Avoid parking on steeply inclined surfaces.

2. When the engine has stopped, apply the parking brake to help prevent the vehicle from rolling

WARNING

Be sure to apply the parking brake before leaving the vehicle. If the vehicle should move, it might be damaged or cause injury.

3. Remove the ignition switch key to prevent unauthorized use.

NOTE: When parking inside a garage or other structure, be sure the structure is well ventilated and the vehicle is not close to any source of flame or sparks. This includes any appliance with a pilot light.

WARNING

Gasoline is extremely flammable and can be explosive under certain conditions.

OPERATING SAFETY

1. Sit in the driver's seat with the seatbelt 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 PVT shifting is done automatically.
6. Drive slowly, practice maneuvering and using the throttle and brakes on level surfaces.

WARNING

indicates a potential hazard which could result in serious injury or death.

Load Distribution

WARNING

When carrying cargo or towing a trailer, remember that load weight will increase braking distances. Failure to allow for increased braking distance may result in accident and injury.

1. Always load the cargo bed placing the load as far forward as possible.
2. Always operate the vehicle with extreme care, especially when hauling or towing loads.
3. Slow down and *drive in D-1 Gear* only.
4. The cargo box dump latch must be securely latched before loading and operating. Unintentional box tilting can result if weight is placed in the rear of the box and the latch is not secured.
5. Do not place loads on the cab frame

WARNING: Never operate this vehicle with the cargo box in the raised position. The cargo box could close unexpectedly while driving, severely injuring the driver or passenger. The rear tires can catch the rear of the box, damaging the vehicle and creating hazardous driving conditions.

OPERATING SAFETY

Riding On Slippery Surfaces

Whenever driving on slippery surfaces such as wet trails or loose gravel, or during cold freezing weather, special attention must be paid to prevent vehicle turnover. Always:

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. Driving with Demand 6 Drive (All Wheel Drive) engaged can assist in controlling the vehicle in slippery areas. **CAUTION:** Never engage Demand Drive while wheels are spinning as severe damage to drive train may occur.

Before operating your vehicle on a frozen body of water be sure that the ice is thick enough to support the machine and its operator, as well as the force that is created by a moving vehicle. Severe injury or death can result if the vehicle and/or its operator break through the ice.

WARNING

Failure to exercise care when operating on slippery surfaces can be dangerous.

Loss of tire traction and vehicle control can result in an accident, including an overturn.

- Never apply brakes during a skid. Complete loss of control can result.
- Do not operate on excessively slippery surfaces if possible.
- Always reduce speed and use additional caution.

Operating on Hills

 **WARNING**

Improperly crossing hills or turning on hills can be dangerous!
Loss of vehicle control or overturning of the vehicle could occur.

- Avoid crossing the side of a steep hill if possible.
- Use extreme care when operating your *RANGER* in hilly terrain.

Whenever descending a hill always:

1. Drive directly downhill.
2. Slow down.
3. Apply the brakes lightly to aid in slowing.

 **WARNING**

Loss of vehicle control due to excessive speed can occur. Loss of control may result in serious injury or death.

Whenever traveling uphill always travel straight uphill and:

1. Avoid steep hills.
2. Keep both feet on the footrests.
3. Proceed at a steady rate of speed and throttle opening.

OPERATING SAFETY

WARNING

indicates a potential hazard which could result in serious injury or death.

WARNING

Braking and handling are greatly affected whenever operating in hilly terrain.

Loss of vehicle control or overturning of the vehicle could occur.

- Avoid climbing steep hills (15° maximum).
- Use extreme care when operating your vehicle in hilly terrain.

WARNING

Avoid climbing steep hills.

Loss of vehicle control or overturning of vehicle could occur.

- Use extreme care when operating your *RANGER* in hilly terrain.

WARNING

Improperly crossing hills or turning on hills could cause loss of control or cause the vehicle to overturn.

If at all possible, avoid crossing the side of a steep hill. Avoid hills with excessively slippery or loose surfaces.

⚠ WARNING

Going down a hill improperly could cause loss of control or cause the vehicle to overturn.

Always check the terrain carefully before you start down any hill.

Never go down a hill at high speed.

Avoid going down a hill at an angle which would cause the vehicle to lean sharply to one side. Go straight down the hill where possible.

⚠ WARNING

Climbing hills improperly can cause loss of control or cause vehicle to overturn.

Always check the terrain carefully before you start up any hill.

Never climb hills with excessively slippery or loose surfaces.

Never open the throttle suddenly. The vehicle could go out of control.

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

OPERATING SAFETY

Crossing Streams

Your Polaris *RANGER* can operate through water up to depths reaching the floorboards. Before fording streams always:

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

Should your vehicle become immersed, it will be necessary to take it to your dealer as soon as possible. **Do not start the engine!** Immersion of the vehicle can cause major damage if not correctly repaired.

WARNING

Never try to cross any deep or fast flowing streams.

The large tires can cause the vehicle to float resulting in loss of control.

- Determine stream depth and speed before crossing.

Trail Obstacles

Keep Alert!

Look ahead and learn to read the trail as you ride. Stay on the right side of the trail, if possible, and be constantly alert for hazards such as logs, rocks and low hanging branches.

⚠ WARNING

Hidden or unseen hazards on the trail can be dangerous.

Personal injury or the vehicle overturning can occur from unseen obstacles.

- Keep alert and constantly look for obstacles on the trail.

⚠ WARNING

indicates a potential hazard which could result in serious injury or death.

OPERATING SAFETY

Backing Up

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

WARNING

Backing your *RANGER* can be dangerous! You could hit an obstacle or person behind you; or the vehicle could tip over on a steep incline.

- Always back slowly, avoiding excessive speed.
- Avoid backing on steep inclines.

Parking On An Incline

Whenever the Vehicle is Parked

1. Place the transmission in gear.
2. Set the parking brake.
3. Avoid parking on an incline. If it is necessary to park on an incline, always block the rear wheels on the down hill side.
4. Shut off fuel supply.

WARNING

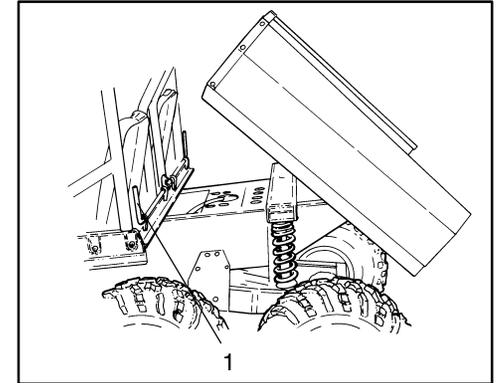
Always check to be sure that the parking brake has been disengaged before operating the vehicle. An accident could result if the parking brake is left on while the vehicle is operated.

Always block the downhill side of the wheels if leaving the vehicle on a hill or park the vehicle in a side hill position.

OPERATING SAFETY

Dumping the Cargo Box

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. Stand clear and pull the cargo box release mechanism lever (1) forward. Lift the front of the cargo box to dump.



! WARNING

If the weight distribution on the box is located toward the rear of the box and the release lever is pulled forward, the box will want to dump on its own. Never operate the dump lever without checking the position of the load. This will prevent unexpected dumping of the cargo box.

! WARNING

Never carry passengers in the box.

! WARNING

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

NOISE EMISSION CONTROL SYSTEM REGULATION

TAMPERING WITH NOISE CONTROL SYSTEM 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: Remember, exhaust system components are very hot during and after use of the vehicle.

- Do not touch hot exhaust system components. Serious burns can result.
- Be especially careful when traveling through tall grass. The potential for fire exists.

USFS Approved Spark Arrestor

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

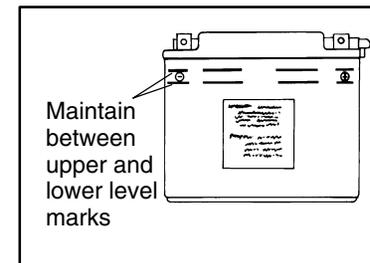
Battery

CAUTION

Whenever removing the battery, disconnect the negative (black) cable first. When reinstalling the battery, connect the negative (black) cable last.

Replenishing the Battery Fluid

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.



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

Battery Connections

Battery terminals and connections should be kept 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 rags. Coat the terminals with dielectric grease or petroleum jelly.

 Do not allow cleaning solution or tap water to enter the battery. It will shorten the life of the battery.

 Vehicle lamps may burn out if battery is disconnected during vehicle operation. Also, the reverse speed limiter can be damaged.

WARNING

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

External: Flush with water.

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

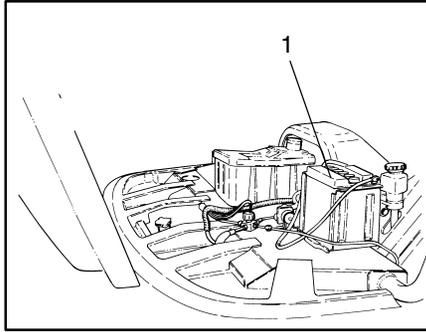
Eyes: Flush with water for 15 minutes and get prompt medical attention.

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

BATTERY

Battery Removal

1. Disconnect hold down straps holding the battery (1) in position and remove battery retainer.
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 *RANGER*.

Battery Installation

WARNING: To avoid the possibility of explosion, always connect battery cables in the order specified. Red (positive) cable first; black (negative) cable last.

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, 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.
6. Reinstall battery cover and attach the hold down strap.

NOTE:

- When your *RANGER* is placed in storage for three months or more, the battery should be removed, charged to proper level, and stored in a cool dry place.
- Before reusing, take the battery to your dealer for testing and recharging.

MAINTENANCE

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 chart:

Maintenance intervals are based upon average riding conditions and a vehicle speed of approximately 10 miles per hour. Vehicles subjected to severe use, such as operation in wet or dusty areas, should be inspected and serviced more frequently. If you are not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

Inspect, clean, lubricate, adjust or replace parts as necessary.

■ **CAUTION:** Due to the nature of these adjustments, it is recommended that service be performed by an authorized Polaris dealer. Do not attempt to perform this work unless you are familiar with mechanical repair.

► More often under severe use, such as dirty or wet conditions

★ Emission Control System Service (California)

NOTE: Inspection may reveal the need for replacement parts. Always use genuine Polaris parts available from your Polaris dealer.

	Item	Hours or Odometer	Frequency	Remarks
►★	Engine Oil - Level/Change (4-Cycle)	100 hrs/1000 miles	6 months	Check Level Daily; Break in Service at 1 month. Change oil more often in cold weather use.
►★	Oil Filter	100 hrs/1000 miles	6 months	Replace with oil change
►★	Engine breather filter	20 hrs	Monthly	Inspect—replace annually and as needed
★	Engine breather hose	100 hrs	6 months	Inspect
	Engine Mounts	100 hrs	12 months	Inspect
	Engine Cylinder Head and Cylinder Base Fasteners	25 hrs	3 months	Inspect (re-torque required at first service only)
►★	Air Filter - Main Element	Weekly	Weekly	Inspect-Replace if necessary
■★	Valve Clearance	100 hrs	12 months	Inspect/Adjust
★	Spark Plug	100 hrs	12 months	Inspect—replace if necessary
■★	Ignition Timing	100 hrs	12 months	Inspect and adjust as needed

MAINTENANCE

Periodic Maintenance Schedule (Cont.)

	Item	Hours or Odometer	Frequency	Remarks
■★	Fuel System	100 hours	12 months	Check for leaks at fuel cap, lines, fuel valve, filter, pump and carburetor. Replace lines every two years.
■	Fuel Filter	100 hrs	12 months	Replace annually
■	Carburetor Float Bowl	50 hrs	6 months	Drain bowl periodically and prior to storage
★	Idle Speed	As Required	As Required	Adjust
■	Throttle Cable	50 hrs	6 months	Inspect—adjust, lubricate, replace if necessary; pre-ride inspection item
★	Choke (Enricher) Cable	50 hrs	6 months	Inspect—adjust, lubricate, replace if necessary
	Coolant/Level Inspection	Daily	Daily	Replace engine coolant every two years
	Coolant strength/pressure test system	100 hrs	6 months	Inspect strength seasonally; pressure test system annually
	Radiator	50 hrs	12 months	Inspect/clean external surface
	Cooling System hoses	100 hrs	12 months	Inspect
	Spark arrestor	100 hrs	12 months	Clean out
	Recoil housing	As required	As required	Drain moisture out after driving in water
▶	General Lubrication	30 hrs	3 months	Lubricate all fittings, pivots, cables, etc.
▶	Front hubs/fluid check (AWD)	50 hrs	6 months	Check monthly
▶	Front hubs/fluid change (AWD)	100 hrs	12 months	
▶	Front Gearcase Oil	100 hrs	12 months	Check monthly and change annually
▶	Transmission Oil Level	25 hrs	Monthly	Inspect monthly; change annually
	Shift linkage	50 hrs	6 months	Inspect, adjust
■	Shift selector box	200 hrs	24 months	Change lubricant every two years
■	Drive belt	50 hrs	6 months	Inspect—adjust, replace if necessary
■	Clutches (drive and driven)	100 hrs	12 months	Inspect, clean
■	Steering	50 hrs	6 months	Inspect daily, lubricate
■	Toe adjustment	As required	As required	Periodic inspection, adjust when parts are replaced
▶	Front Suspension	50 hrs	6 months	Inspect—lubricate, tighten fasteners
▶	Rear Suspension	50 hrs	6 months	Inspect, tighten fasteners
■	Front wheel bearings	300 hrs	36 months	Replace
	Battery	20 hrs	monthly	Check Terminals/clean/check fluid level
	Headlight Aim	As required	As required	Adjust if necessary

MAINTENANCE

Periodic Maintenance Schedule (Cont.)

	Item	Hours or Odometer	Frequency	Remarks
	Headlamp Inspection	Daily	Daily	Check operation daily; apply Polaris dielectric grease to connector when replaced
	Tail lamp inspection	Daily	Daily	Check operation daily; apply Polaris dielectric grease to socket when replaced
	Brake System	Pre-ride	Pre-ride	Pre-ride inspection item
■	Brake fluid	200 hrs	24 months	Change every two years
■	Brake pad wear	10 hrs/100 miles	Monthly	Inspect periodically
	Parking Brake	Pre-Ride	Pre-Ride	Check lever adjustment daily; adjust
	Tires	Pre-ride	Pre-ride	Inspect daily, pre-ride inspection item
	Wheels	Pre-ride	Pre-ride	Pre-ride inspection item
	Frame nuts, bolts, fasteners	Pre-ride	Pre-ride	Pre-ride inspection item

■ **CAUTION:** Due to the nature of these adjustments, it is recommended that service be performed by an authorized Polaris dealer. Do not attempt to perform this work unless you are familiar with mechanical repair.

► More often under severe use, such as dirty or wet conditions

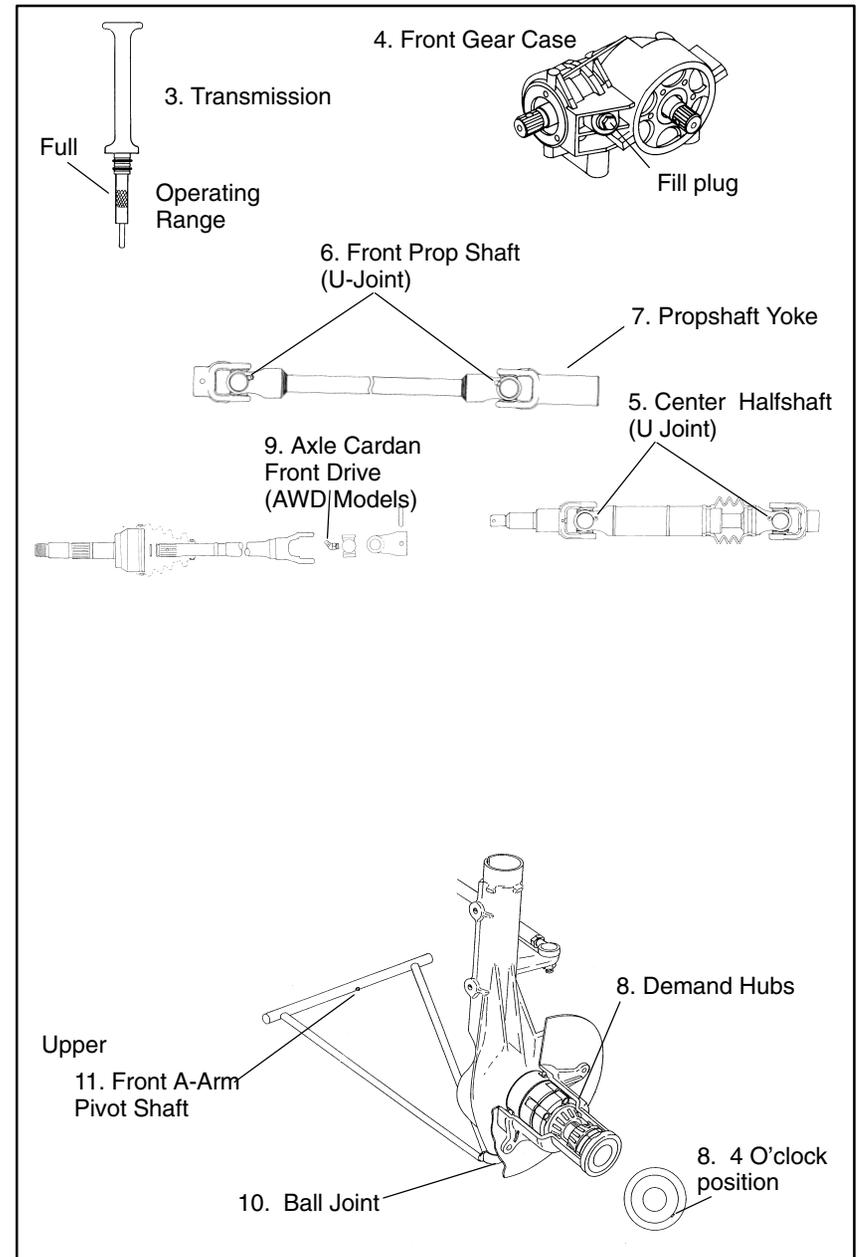
★ Emission Control System Service (California - 4-Cycle)

MAINTENANCE

Lubrication Recommendations

Item	Lube Rec.	Method	Frequency*
1. Engine Oil	Polaris Premium 4 Synthetic 0W40	Add to proper level on dipstick. See page 37.	Check level daily.
2. Brake Fluid	DOT 3 Only	Maintain level between fill lines. See page 78.	As required; change every two years or 200 hours
3. Transmission Oil	Polaris Premium Synthetic chain case lube	Add to FULL level on dipstick. See page 66.	Change annually or at 100 hours
4. Front Gearcase Oil	GL5 80-90 Weight Gear Lube	Fill to bottom thread of filler hole. Make certain machine is on level surface.	Change annually
5. Center Halfshafts	Grease+	Locate Fittings and Grease	Every 3 months or 50 hours
6. Front Prop Shaft U-joints	Grease+	Locate Fittings and Grease	Every 3 months or 50 hours
7. Front Propshaft Yoke	Grease+	Locate fittings and grease – 3 pumps maximum	Every 3 months or 50 hours
8. Demand 6 Hubs - All Wheel Drive	Premium Hub Lube	Remove set screw in hubs. Rotate wheels to 4 O'clock position. If lubricant is not visible add more. Reinstall set screw.	Annually or at 100 hrs
9. Front Drive Axle (U Joint)	Grease+	Locate grease fitting and grease with grease gun.	Every 3 months or 50 hours
10. Ball Joint	Grease**	Locate fitting on back side of struts and grease with grease gun.	Every 3 months or 50 hours

Lubrication Recommendations



MAINTENANCE

Lubrication Recommendations

11. Front A Arm Pivot Shaft	Grease**Δ	Locate fitting on pivot shaft and grease with grease gun.	Every 3 months or 50 hours
12. Swing Arm Bushings	Grease**	Locate fittings on swing arm and grease with grease gun.	Monthly or at 20 hours
13. Upper Control Arms	Grease**Δ	Locate fittings and grease	Semi-annually
14. Lower Control Arms	Grease**Δ	Locate fittings and grease	Semi-annually
15. Center Wheel Hub Bearing Carrier	Grease**Δ	Locate fitting and grease	Semi-annually
16. Tail Shaft Coupler	Grease**Δ	Locate Fitting and grease	Monthly or at 20 hours
17. Center and rear angle drives	GL5 80-90 weight gear lube	Fill to bottom thread of filler hole. Make certain machine is on a level surface.	Monthly or at 20 hours

* More often under severe use, such as wet or dusty conditions.

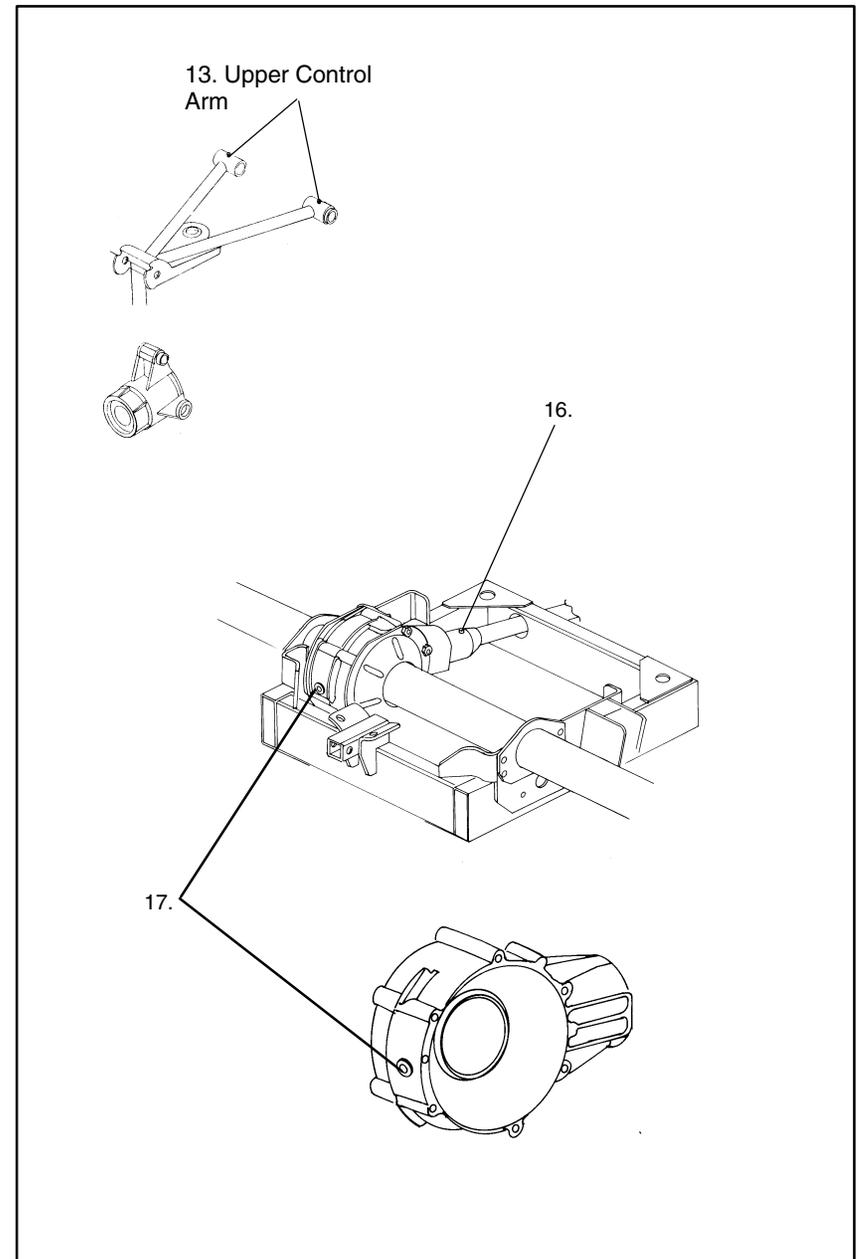
**Polaris Premium all Season Grease or grease conforming to NLGI No. 2, such as Conoco Superlube M or Mobilegrease Special.

+ Grease every 500 miles, or after submerging in water or before long periods of storage or after pressure washing. Always use Polaris Premium U-Joint Lube for maximum service of these driveline components (PN 2871515 3 oz.)(PN 2871551 14 oz.).

Δ When suspension action becomes stiff or after washing.

NOTE: Hours are based on 10 mph average.

Lubrication Recommendations



MAINTENANCE

WARNING

Vehicle operation with insufficient, deteriorated, or contaminated engine oil will cause accelerated wear and may result in engine seizure, accident, and injury.

Engine Oil

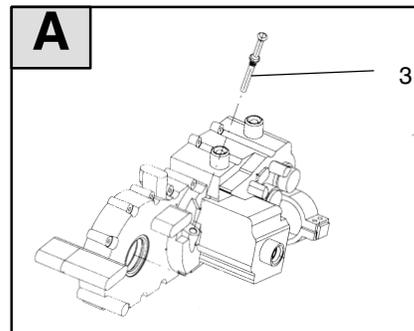
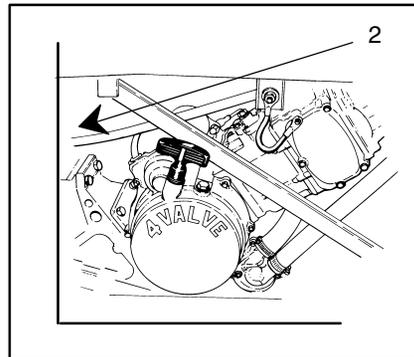
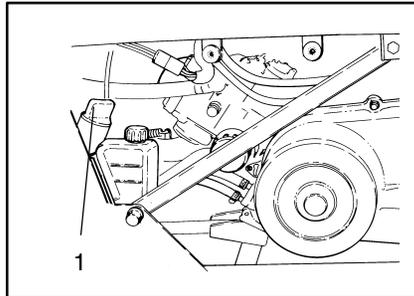
In order for the engine to function properly, maintain the engine oil at the proper level, and change the oil and oil filter in accordance with the Periodic Maintenance Schedule. Not only do dirt and metal particles collect in the oil, but the oil itself loses its lubricative quality if used too long.

The transmission cover/dipstick (1) is located on the right side of the machine inside the chassis.

Transmission Oil

The transmission lubricant level should be checked monthly (or 1000 miles (1600 km), whichever comes first. Transmission oil should be changed annually.

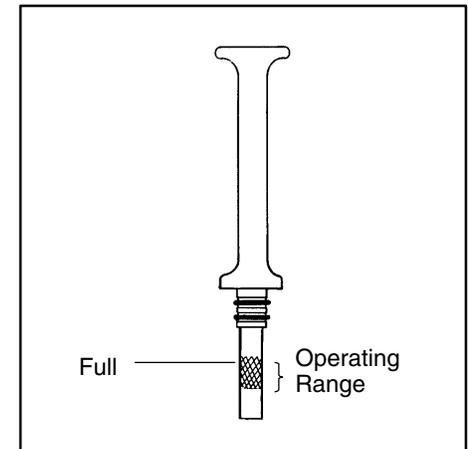
To check the transmission lubricant level you must first position the vehicle on a level surface. Remove the right engine access panel as described on page 35. Reach inside the engine compartment in the direction indicated by the arrow (2). Remove fill plug dipstick (3) by pulling upward and check the lubricant level. Lubricant should be kept at the full mark on the dipstick. The correct transmission lubricant to use is Polaris Premium Synthetic Gearcase Lubricant (PN 2871478).



MAINTENANCE

Transmission Oil Changing Procedure

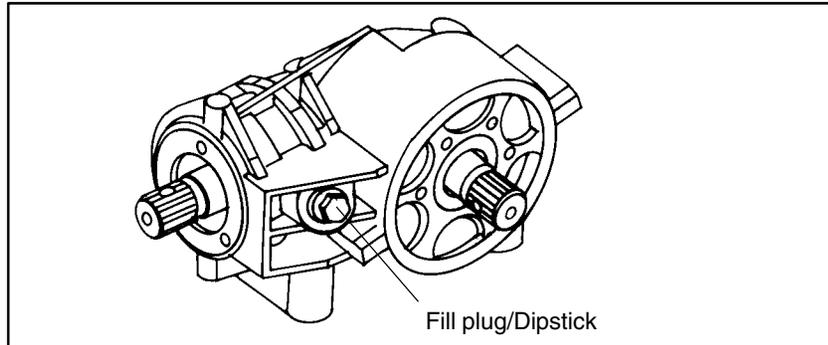
1. Locate and remove fill plug/dipstick.
2. Remove transmission drain plug located on the bottom right hand side and drain the oil. Catch and discard used oil properly.
3. Clean and reinstall the drain plug.
4. Add Polaris Premium Synthetic Gearcase Lubricant (PN 2871478) to full mark on the fill plug/dipstick.
5. Check for leaks.



CAUTION: Be careful not to allow any dirt or foreign materials to enter the transmission case.

MAINTENANCE

Front Gearcase Lubrication



Front Gearcase Lubrication

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

The front gearcase lubricant level should be checked every six months or 1000 miles (1600 km), whichever comes first. Front gearcase oil should be changed annually. With the *RANGER* on a level surface, remove fill plug and check the lubricant level. Lubricant should be kept at the bottom thread of the fill plug hole. The correct gearcase lubricant to use is GL5 80-90 Weight Gear Lube.

Gearcase Oil Changing Procedure

1. Remove fender panel.
2. Remove fill plug/dipstick.
3. Remove gearcase drain plug located on the bottom right hand side and drain the oil. Catch and discard used oil properly.
4. Clean and reinstall the drain plug.
5. Add GL5 80-90 Weight Gear Lube to the bottom thread of the fill plug hole.
6. Check for leaks.

MAINTENANCE

The following items should be checked occasionally for tightness; or if they have been loosened for maintenance service.

Axle and Wheel Nut Torque Specifications

	Dealer Performed Service
Front Spindle Nut(s)	
Front Wheel Nuts	15 Ft. Lbs.
Center and Rear Hub Retaining Nut(s)	120 Ft. Lbs.
Rear Wheel Nuts	15 Ft. Lbs.

Front Wheel Hub Tightening

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

MAINTENANCE

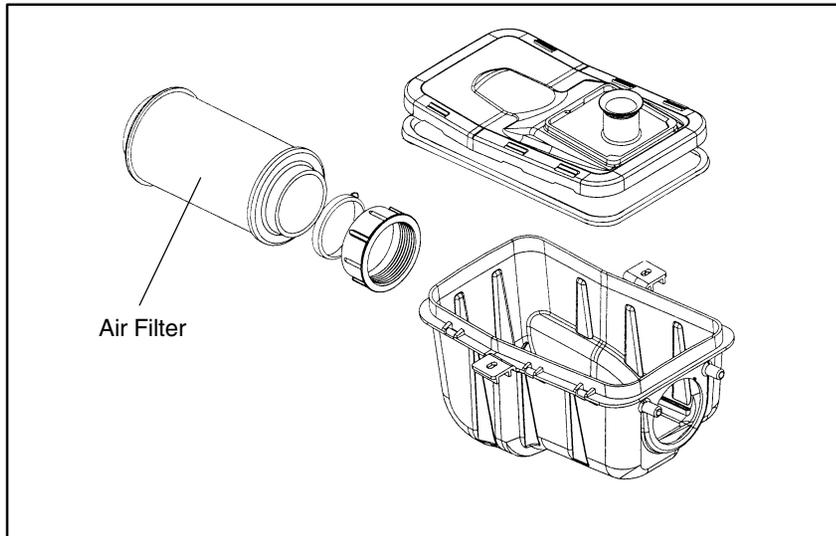
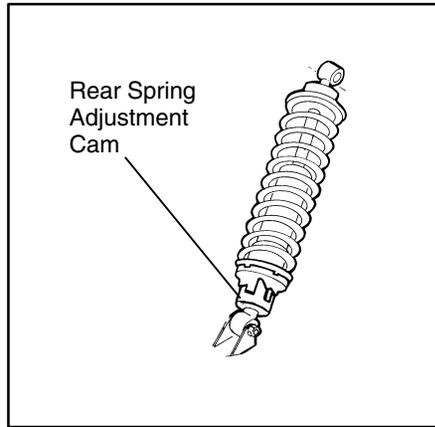
Rear Spring Adjustment

The rear shock absorber springs are adjusted by rotating the adjuster in the direction required to increase or decrease spring tension.

Air Filter Service

It is recommended that the air filter be replaced yearly. When riding in extremely dusty conditions replacement will be required more often.

1. Open the hood.
2. Remove the cover. Inspect the gasket. It should adhere tightly to the cover and seal all the way around.
3. Remove the air filter. Do not attempt to clean the main element.
4. Install new air filter. **NOTE:** Apply a small amount of general purpose grease to the sealing edges of the filter before installing.
5. Check air box. If oil or water deposits are found, drain them into a suitable container. **NOTE:** Service more frequently if vehicle is operated in wet conditions or at high throttle openings for extended periods.



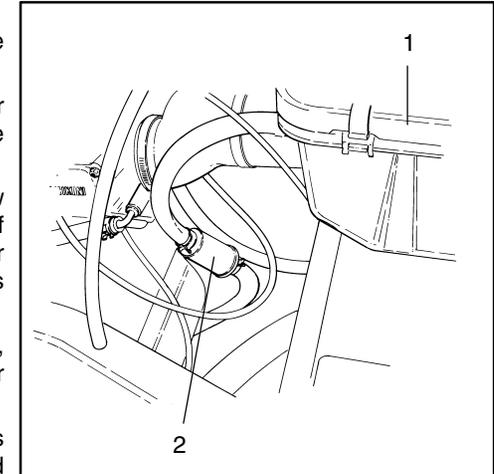
MAINTENANCE

CAUTION: Operation of your vehicle without a breather filter can cause engine damage.

Breather Filter and Hoses

⚠ WARNING Do not perform this operation immediately after the engine has been run. The exhaust system becomes very hot and can cause severe burns.

1. Open hood and locate the airbox (1).
2. Follow right hand breather line out of the back of the airbox and locate filter (2).
3. Inspect filter for debris. Blow through gently in direction of arrow on filter to check for clogging. Replace as needed.
4. Check hoses for cracks, deterioration, abrasion, or leaks. Replace as needed.
5. Reinstall filter and clamps with arrow pointing toward engine.



Radiator and Cooling Fan

Check and clean the grille, screen and radiator fins for obstruction by insects or mud in accordance with the Periodic Maintenance Chart.

CAUTION: Using high-pressure water, as from a car wash facility, could damage the radiator fins and impair the radiator's effectiveness.

Do not obstruct or deflect airflow through the radiator by installing unauthorized accessories in front of the radiator or behind the cooling fan. Interference with the radiator airflow 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 in accordance with the Periodic Maintenance Chart.

MAINTENANCE

Coolant Level Inspection

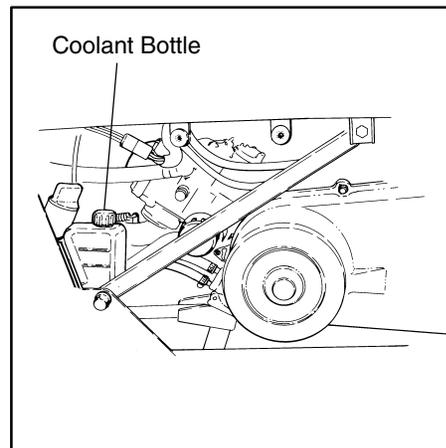
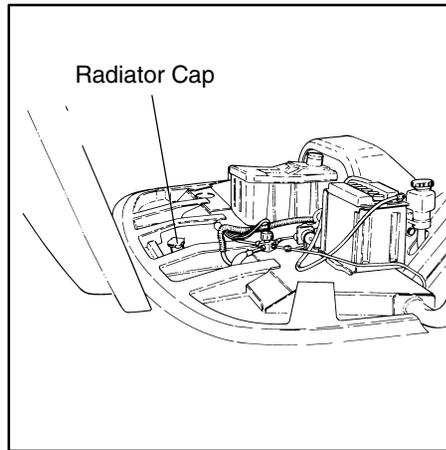
NOTE: Check the coolant level when the engine is cold (room or atmospheric temperature).

1. Situate the vehicle on level ground.
2. Check the coolant level through the coolant level gauge on the reserve tank located Behind the left hand engine compartment panel. The coolant level should be between the F (Full) and L (Low) marks.
3. If the amount of coolant is not within the operating range, unscrew the cap from the reserve tank. Using a funnel, add coolant through the filler opening to the F (Full) mark. Install the cap.

NOTE: 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. **IMPORTANT:** Polaris Premium 60/40 is already pre-mixed and ready to use. Do not dilute with water. **IMPORTANT:** Always follow the manufacturer's mixing recommendations for the freeze protection required in your area.

NOTE: In an emergency you can add water alone to the coolant reserve tank, however it must be returned to the correct mixture ratio by the addition of antifreeze concentrate as soon as possible.

CAUTION: If coolant must be added often, or the reserve tank completely runs dry, it is possible there is a leak in the system. Have the cooling system inspected by your Polaris *RANGER* dealer.



Spark Plugs

- Proper electrode gap is .028"/.7mm.
- Spark plug torque is 17 ft. lbs. (2.3 kg/m).
- Use NGK BKR5ES spark plugs.
- Proper electrode gap is .025" (.06 cm).
- Spark plug torque is 17 ft. lbs.(2.3 kg/m) for a used spark plug, 11 ft. lbs (1.52 kg/m) for a new spark plug.

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.

1. Normal

The 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 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 are excessive oil, use of non-recommended injection oil, improper use of the choke, or incorrect carburetion adjustments.

Spark Plug Removal and Replacement



WARNING: Never attempt to remove a spark plug while the engine is warm. The exhaust system or engine could burn you causing severe injury.

The spark plug is removed by using the special wrench provided in the tool pouch under the seat. Reach inside the right hand engine access panel and then back for access. Remove the spark plug cap and then the spark plug by rotating counterclockwise.

Reverse the procedure for spark plug installation. Torque to 17 ft. lbs. (2.3 kg/m). Never deviate from the recommended spark plug as engine damage can occur.

Cylinder Head/Cylinder Base Fastener Torque

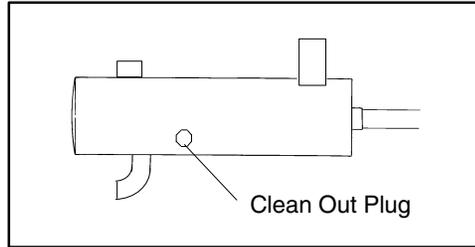
Have your dealer check the *RANGER* cylinder head and cylinder base fasteners for proper torque at the first service or after 25 hours.

MAINTENANCE

Spark Arrestor

The exhaust pipe must be periodically purged of accumulated carbon as follows:

1. Remove the clean out plugs located on the bottom of the muffler as shown above.
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 machine onto an incline so the rear of the machine is one foot higher than the front. Set the parking brake and block the wheels. Make sure the machine is in neutral and repeat steps 2 and 3. **WARNING:** SEE BELOW.
5. If particles are still suspected to be in the muffler, drive the machine onto the incline so the front of the machine is one foot higher than the rear. Set the parking brake and block the wheels. Make sure the machine is in neutral and repeat steps 2 and 3. **WARNING:** SEE BELOW.
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.



WARNING

- Because exhaust system temperatures can reach 1000°F, do not perform this operation immediately after the engine has been run because the exhaust system becomes very hot.
- Because of the increased fire hazard, make sure that there are no combustible materials in the area when purging the spark arrestor.
- Wear eye protection.
- Do not stand behind or in front of the vehicle while purging the carbon from the spark arrestor.
- Never run the engine in an enclosed area. The exhaust contains poisonous carbon monoxide gas.
- Do not go under the machine while it is inclined.

Failure to heed these warnings could result in serious personal injury or death.

MAINTENANCE

Tool Kit

To help you perform routine maintenance, a tool kit is provided in the storage compartment under the seat. Items included in the kit are:

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

NOTE: Other tools are also necessary to perform maintenance work. They are called out later in this manual.

PVT System

WARNING

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

- Do not modify any component of the PVT system. Doing so may reduce its strength so that a failure may occur at high speeds. This system has been precision balanced. Any modification will cause the system to be out of balance, creating vibration and additional loads on components.
- Routine maintenance is the responsibility of the owner. Always follow recommended maintenance procedures. See your dealer!
- This PVT system is intended for use on Polaris products only.
- The PVT housing must be securely in place during operation.

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

MAINTENANCE

Throttle Pedal

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. Also, the throttle may not open fully. If the throttle pedal has no play, the throttle may be hard to control, and the idle speed may be erratic. Check the throttle pedal play periodically in accordance with the Periodic Maintenance Chart and adjust the play if necessary.

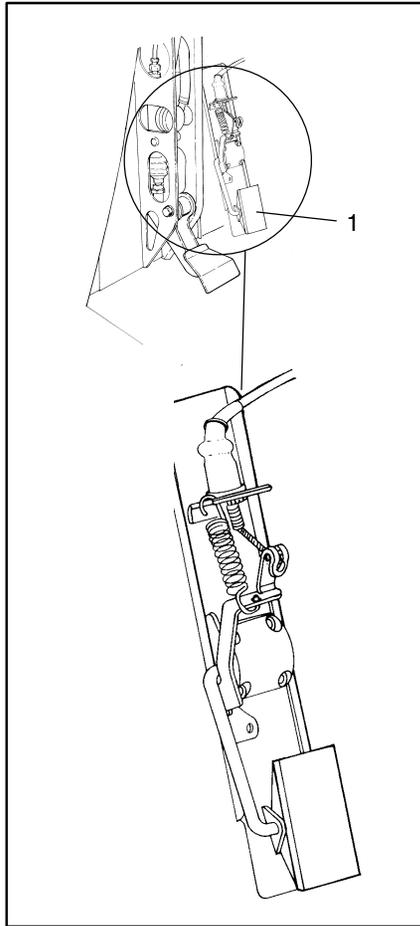
Throttle Freeplay Inspection

1. Apply the parking brake.
2. Put the gear shift lever in the N (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. Free play should be 1/16 - 1/8 inches.

Adjustment

If adjustment is necessary, adjust the throttle freeplay using the following procedure:

1. Loosen jam nut on cable where it connects to the throttle bracket.
2. Adjust cable to specified freeplay.
3. Tighten jam nuts securely.



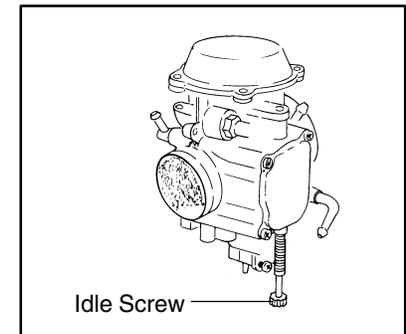
Carburetor

The idle speed adjustment should be performed in accordance with the Periodic Maintenance Chart or whenever the idle speed is changed. The following procedure covers the idle speed adjustment:

Carburetor/Engine Idle RPM Adjustment

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 as follows:

1. Apply the parking brake.
2. Put the gear shift lever in the N (Neutral) position.
3. Warm up the engine by running the vehicle approximately five minutes.
4. Remove the right hand engine compartment access panel and locate the idle screw.
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 . Turning the screw in (clockwise) will raise RPM. Turning the screw out (counterclockwise) will lower RPM.



MAINTENANCE

Front and Rear Brakes

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

The following checks are recommended to keep the brake system in good operating condition. How often they need checking depends upon the type of driving that has been done.

- Inspect the level of the brake fluid before each ride. Change the brake fluid according to the Periodic Maintenance Chart. The brake fluid should also be changed if it becomes contaminated with dirt or water.
- To check the fluid level, the vehicle must be on level ground. Inspect the brake fluid by looking at the remote reservoir (1) under the hood. The level should be between the upper (MAX) and lower (MIN) level lines.
- If the fluid level is lower than the lower level line, add brake fluid to the upper (MAX) line. Apply the brake forcefully for a few seconds and check for fluid leakage around the fittings.

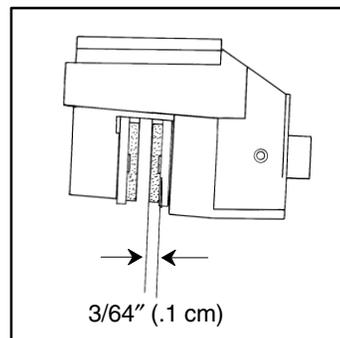
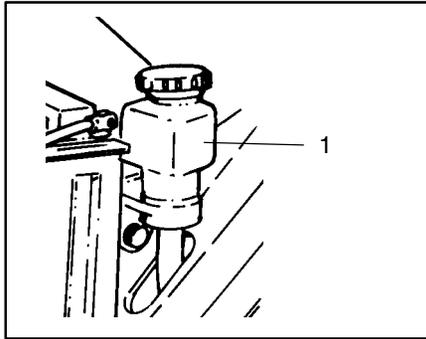
WARNING: Change the fluid in the brake system completely if the fluid level is low but the type and brand of the fluid already in the reservoir are unknown.

WARNING: Once a bottle of brake fluid is opened, use what is necessary and discard the rest. Do not store or use a partial bottle of brake fluid. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the air. This causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the possibility of serious injury.

- Check brake system for fluid leaks.
- Check brake for excessive travel or spongy feel.

WARNING: If the brake pedal has a soft “spongy” feeling when it is applied, there could be air in the brake lines or the brake may be defective. Do not operate the vehicle under these conditions. Have the brake system serviced by an authorized Polaris dealer immediately.

- Check friction pads for wear, damage and looseness.
- Check security and surface condition of the disc.
- Pads should be changed when worn to $3/64"$ (.1 cm), or about the thickness of a dime.



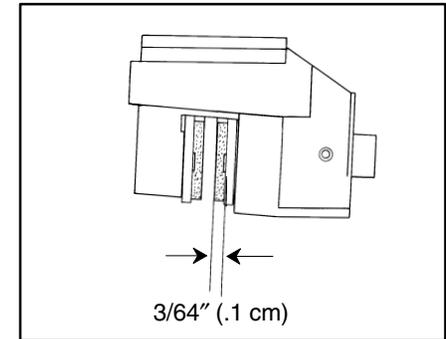
MAINTENANCE

Rear Brake

The rear brake is a hydraulic disc type brake which is activated by the same pedal which activates the front brake system. The rear brake system is self adjusting and requires no maintenance other than periodic checks of the pads for wear.

Wear Line

- Pads should be changed when worn to $3/64''$ (.1 cm) which is about the thickness of a dime.
- Inspect the brake disc spline and pad wear surface for excessive wear.



WARNING: Due to the nature of this type of vehicle and where it is operated, headlight and taillight lenses may become dirty. Frequent washing is necessary to maintain lighting quality. Poor lighting while riding can result in severe injury or death.

CAUTION: Do not service while lights are hot. Serious burns may result.

Brake Light Switch

When the brake pedal is depressed, the brake light goes on. Check the brake light switch before each ride.

To inspect the brake light, first turn the ignition switch to the ON position.

Depress the brake pedal. The brake light should go on after about 10mm (0.4 in.) of pedal travel.

If the light does not go on, check the bulb.

MAINTENANCE

Parking Brake Lever

The parking brake helps hold the vehicle from rolling while parked.

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

Inspection:

- Pull the parking brake lever up and to the rear.
- After 8 to 12 clicks of lever travel, the vehicle should not roll while parked.
- If the vehicle moves, adjustment is necessary

Adjustment:

- Loosen the locknut (1) (lower nut) on the lower end of the parking brake lever cable and turn the nut next to the locknut (2) until the brake lever will only move 8 - 12 clicks upward.
- Tighten the locknut securely

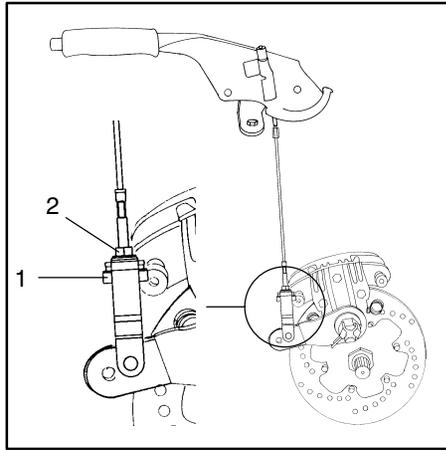
NOTE: Be sure to hold the cable end with a wrench to prevent the cable from twisting.

Steering Wheel

Check the steering wheel for specified free play and smooth operation in accordance with the periodic maintenance Chart.

Inspection:

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



MAINTENANCE

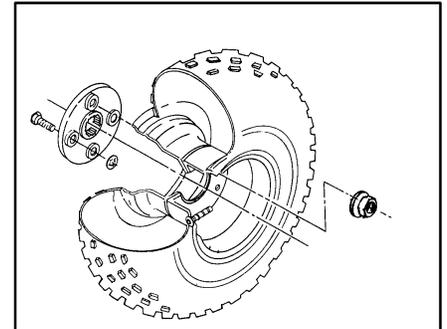
Wheel Removal Procedure

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 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 finger tighten them.
3. Lower the vehicle to the ground.
4. Securely tighten the wheel nuts according to the chart found on page 69:

CAUTION: If wheels are improperly installed it could affect vehicle handling and tire wear.



MAINTENANCE

WARNING

Operating your vehicle with worn tires will increase the possibility of the vehicle skidding easily with possible loss of control.

Worn tires can cause an accident.

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

Tire Inspection

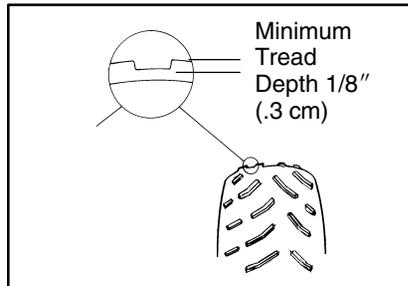
CAUTION: Maintain proper tire pressure according to charts below. Improper tire inflation may affect vehicle maneuverability.

When replacing a tire always use original equipment size and type.

CAUTION: The use of non-standard size or type tires may affect vehicle handling.

Tire Tread Depth

Always replace tires when tread depth is worn to 1/8" (.3 cm) or less. Please refer to your Owner's Manual Supplement for tire specifications.

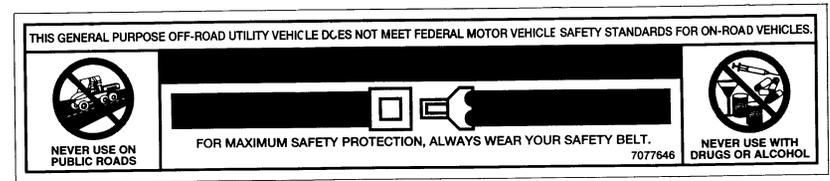


Tire Specifications <i>RANGER</i> 6x6
Front - 25 x 10.00 -12 Inflation Pressure - Min 5 - Max 12
Center - 25 x 11.00 - 10 Inflation Pressure - Min 5 - Max10
Rear - 25 x 11.00 - 10 Inflation Pressure - Min 5 - Max 10
Cargo Box Load Capacity 1000 lbs. (454 kg)
Gross Vehicle Weight 3020 lbs. (1327 kg) including vehicle, driver, passenger and cargo. Vehicle weighs 1520 lbs. (690 kg).

MAINTENANCE

Seat Belts

Make certain each seat belt functions properly before each ride. Push the latch plate into the buckle until it clicks. The latch plate must slide smoothly into the buckle. The click sound shows it is securely latched. Push the red button in the middle of the buckle to make sure it releases freely. Also check the belt webbing for wear, cuts or damage. If any irregularities are found, have the seat belt system checked or replaced by an authorized Polaris dealer



MAINTENANCE

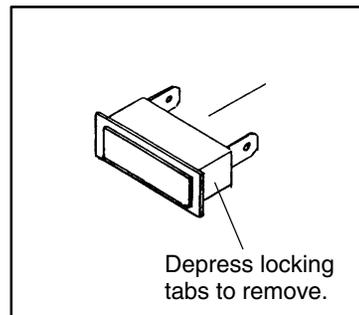
Headlight Beam

The headlight beam can be adjusted up and down.

1. Place the vehicle on a level surface with the headlight approximately 25' (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 turn the headlight switch to high beam.
4. Observe headlight aim. The most intense part of the headlight beam should be aimed 2" (5.1 cm) below the mark placed on the wall in step 2. **NOTE:** Rider weight must be included on the seat.
5. Loosen pivot bolts and adjust beam to desired position.
6. Tighten nut and bolt. Torque to 60 in. lbs.

Indicator Lamp Replacement

1. Unplug light from harness, depress locking tabs and remove from pod.
2. Install new light and reassemble pod.



⚠ WARNING

Gasoline is highly flammable and explosive under certain conditions.

- Always exercise extreme caution whenever handling gasoline.
- Always refuel with the engine stopped and outdoors or in a well ventilated area.
- Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored.
- Do not over fill the tank.
- If you should get gasoline 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.
- Shut off fuel valve whenever the vehicle is stored or parked.

⚠ WARNING

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

MAINTENANCE

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.

Washing

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 might have entered the engine or exhaust system.

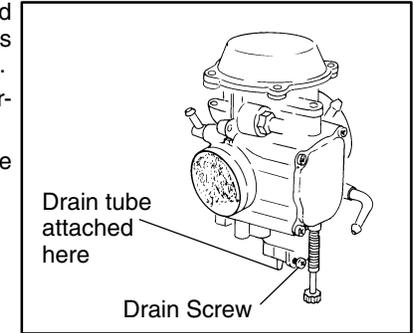
The best and safest way to clean your vehicle is with a garden hose and a pail of mild soap and water. Use a professional type washing mitten, cleaning the upper body first and the lower parts last. Rinse with water frequently and dry with a chamois to prevent water spots. **NOTE:** If warning labels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

MAINTENANCE

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. Turn the fuel valve to "off" and drain the carburetor.
3. 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.
4. Remove the battery. Store it in a cool, dry place out of the sun.
5. Lubricate suspension pivot points, lower steering post and rear axle fittings.
6. Drain the recoil housing.
7. Block the vehicle so all tires are suspended off the ground.
8. Spray oil on all unpainted metal surfaces to prevent rusting. Avoid getting oil on rubber parts or in the brakes.
9. Lubricate all cables.
10. Tie a plastic bag over the exhaust pipe and air cleaner inlet to prevent moisture or small animals from entering.
11. Cover the vehicle with a canvas cover. Do not use plastic or coated materials since they do not allow ventilation of the vehicle.



Removal from Storage:

1. Check the battery electrolyte level, charge the battery if necessary, and install it in the vehicle. Take care the battery vent hose is not pinched and routed properly.
2. Make sure the spark plug is tight.
3. Fill the fuel tank with fuel.
4. Check all the points listed in the Daily Safety Checks section.
5. Lubricate per periodic maintenance chart.

MAINTENANCE

WARNING

Do not run the engine in a closed area. Exhaust gases contain carbon monoxide; a colorless, odorless, poisonous gas. Breathing exhaust gas leads to carbon monoxide poisoning, asphyxiation and death.

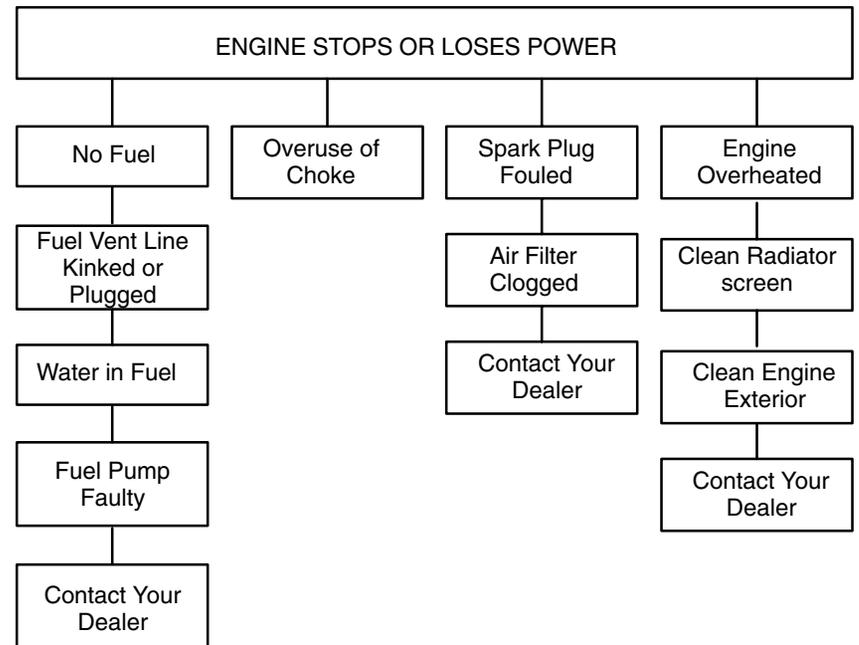
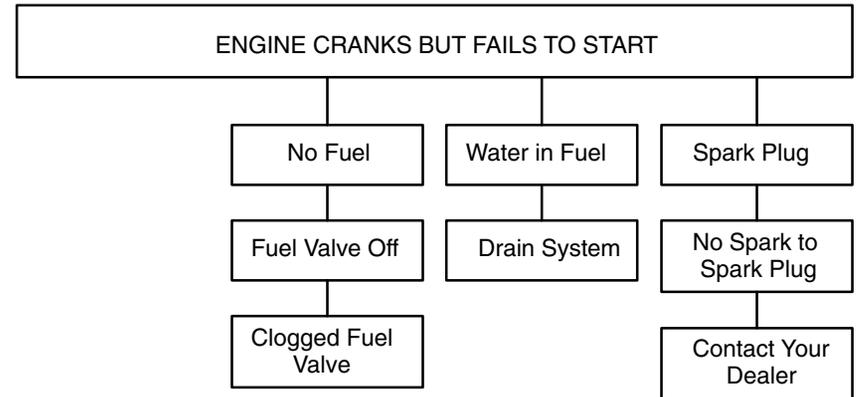
Bolt and Nut Tightening

Tightness of the bolts, nuts and other fasteners should be checked by an authorized Polaris dealer in accordance with the Periodic Maintenance Chart.

TROUBLESHOOTING

Procedures

The following information is provided to help you identify probable causes for questions you may have about the operation of your vehicle. See your Polaris dealer with any additional questions you may have.



SPECIFICATIONS

C A P A C I T I E S	Gross Vehicle Weight	3020 lbs.
	Fuel Capacity	9.5 Gallons
	Towing Capacity	1500 lbs.
	Maximum Cargo Box Load	1000 lbs.
	Overall Length	113 in.
	Overall Width	58 in. (Tires) 60" (Cargo Box)
	Overall Height	75 in.
	Wheelbase	81 in.
	Ground Clearance	8.5 in.
	Dry Weight	1520 lbs.
	Cargo Box (L x W x H)	40 x 59.75 x 9
	Minimum Turning Radius	168 in.
	Engine Oil Capacity	2 Quarts
	Coolant Capacity	2.25 Quarts
E N G I N E	Type	4 Cycle, Single Cylinder
	Displacement	498
	Bore x Stroke	90 x 75
	Pilot Jet	42.5
	Main Jet	125
	Needle Jet	Q-6
	Jet Needle	5D78-3
	Air Screw	1.25 Turns
	Alternator Output	250 W
	Compression Ratio	10.2:1 Full Stroke
	Starting System	Electric Start w/Recoil Backup
	Carburetor	1 - BST 34 (CV Type)
	Ignition System	CDI
	Ignition Timing	30° @ 3500 ± 1.5
	Spark Plug	NGK BKR5E
Lubrication System	Dry Sump	
Engine Oil	0W/40	

SPECIFICATIONS

D R I V E T R A I N	Driving System Type	PVT
	Shift Type	Single Lever/Center Console
	Gear Reduction - Low	24.16:1
	Gear Reduction - Reverse	18.67:1
	Gear Reduction - High	11.97:1
	Drive Ratio - Front:	2:1
	Drive Ratio - Final	3.5:1
	Drive Ratio - Center	1:3.5
	Front Final Gear Case Oil Capacity	32 ounces
T I R E S	Tire Size - Front	25 x 10 - 12 (12 psi MAX)
	Tire Size - Rear	25 x 11 - 10 (10 psi MAX)
	Tire Size - Center	25 x 11 - 10 (10 psi MAX)
B R A K E S	Type	Foot pedal activated hydraulic front and rear. Mechanical Parking Brake
	Front	Hydraulic disc, Floating caliper
	Rear (Center Axle)	Hydraulic Disc, floating Caliper
	Parking Brake	Hand Lever Mechanical to center Axle
L I G H T S	Hood Headlight (watts)	4 x 35W
	Taillights (watts)	2 x 8.26W
	Brake Light (watts)	26.9
	Indicator Light (watts)	1

WARRANTY

WARRANTY

LIMITED WARRANTY

Polaris Industries Inc., 1225 Highway 169 North, Minneapolis, Minnesota 55441-5078, 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. There is a charge of \$35.00 payable to Polaris Industries Inc.

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 due to fire, explosions or any other cause beyond Polaris' control.

This warranty does not cover the use of unauthorized lubricants, chemicals, or fuels that are not compatible with the 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

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.

Engine Oil

1. Always use Polaris engine oil.
2. Never substitute or mix oil brands as serious engine damage and voiding of warranty can result.

INDEX

Air Cleaner	70	Maintenance Schedule	60-61
All Wheel Drive	31	Noise Control System	56
Backing Up	54	Oil Change	38-39
Battery Installation	58	Oil Filter	39
Battery Maintenance	57	Oil System	24 and 37
Battery Removal	58	Operating Safety	46-55
Brake, Front	78	Operation Warnings	10-19
Brake, Rear	79	Parking On An Incline	54
Break In Period	44	Premium 4 Synthetic Lubricant	37
Carburetor Adjustment	77	PVT System	33 and 75
Carrying Loads	45	Rear Spring Adjustment	70
Cleaning Your <i>RANGER</i>	86	Recoil Starter	43
Control And Parts Functions	31-43	Riding On Slippery Surfaces	48
Control Parts And Functions	27-30	Spark Arrestor	74
Coolant Level	34	Spark Plugs	73
Coolant Level Inspection	35	Starting A Cold Engine	40
Crossing Streams	52	Starting A Warm Engine	42
Cylinder Head Torque	73	Starting The Engine	40-42
Daily Pre-ride Inspection	9	Tire Inspection	82
Demand 6 Drive	31	Tool Kit	75
Disengaging Wheel Hubs	33	Torque Specifications	69
Dumping Cargo Bed	45-55	Towing Capacities	45
Engine Cooling System	34-36	Trail Obstacles	53
Engine Idle Rpm Adjustment	77	Transmission Gear Selector	
Filter Change	38-39	Operation	32
Front Gearcase Lubrication	68	Transmission Oil Changing	
Front Wheel Hub Tightening	69	Procedure	67
Fuel Filter	39	Troubleshooting	89
Fuel System	24	Understanding Warnings	1
Gearcase Oil Changing Procedure	68	Vehicle Identification Numbers	20
Indicator Lamp Replacement	84	Warranty	92-93
Load Distribution	46-47	Wheel Installation	81
Lubrication Recommendations	62-65	Wheel Removal	81
Maintenance	59-88		