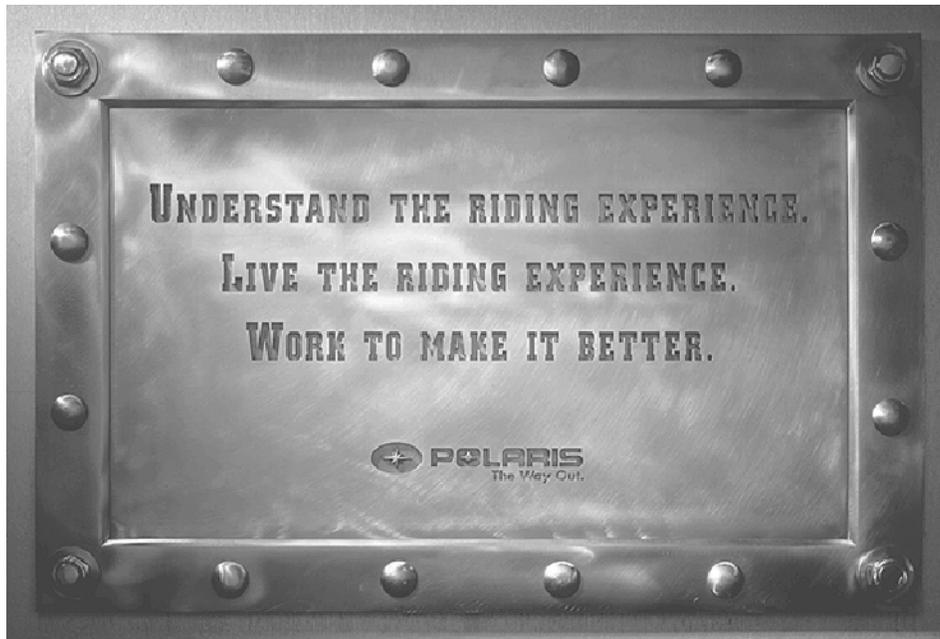




POLARIS
The Way Out.



2005 SPORTSMAN 400/500 SERVICE MANUAL

Foreword

This manual is designed primarily for use by Polaris ATV service technicians in a properly equipped shop. Persons using this manual should have a sound knowledge of mechanical theory, tool use, and shop procedures in order to perform the work safely and correctly. The technician should read the text and be familiar with service procedures before starting the work. Certain procedures require the use of special tools. Use only the proper tools, as specified. Cleanliness of parts and tools as well as the work area is of primary importance.

All references to left and right side of the vehicle are from the operator's perspective when seated in a normal riding position.

This manual includes procedures for maintenance operations, component identification and unit repair, along with service specifications for the 2005 Polaris Sportsman ATVs. A table of contents is placed at the beginning of each chapter, and an alphabetic index is provided at the end of the manual for location of specific page numbers and service information. Keep this manual available for reference in the shop area.

At the time of publication all information contained in this manual was technically correct. However, all materials and specifications are subject to change without notice.

Comments or suggestions about this manual may be directed to: Polaris Sales Inc., Service Publications Department, 2100 Hwy 55 Medina, Minnesota 55340.

2005 Sportsman 400/500 ATV Service Manual (PN 9919425)

©Copyright 2004 Polaris Sales Inc. All information contained within this publication is based on the latest product information at the time of publication. Due to constant improvements in the design and quality of production components, some minor discrepancies may result between the actual vehicle and the information presented in this publication. Depictions and/or procedures in this publication are intended for reference use only. No liability can be accepted for omissions or inaccuracies. Any reprinting or reuse of the depictions and/or procedures contained within, whether whole or in part, is expressly prohibited. Printed in U.S.A.

Sample of manual. Download All 309 pages at:

<https://www.arepairmanual.com/downloads/2005-polaris-sportsman-400-500-motocycle-service-repair-workshop-manual/>

UNDERSTANDING SAFETY LABELS AND INSTRUCTIONS

Throughout these instructions, important information is brought to your attention by the following symbols:



The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

DANGER

Failure to follow DANGER instructions will result in severe injury or death to the operator, bystander or person inspecting or servicing the ATV.

WARNING

Failure to follow WARNING instructions could result in severe injury or death to the operator, bystander or person inspecting or servicing the ATV.

CAUTION:

A CAUTION indicates special precautions that must be taken to avoid personal injury, or ATV or property damage.

NOTE:

A NOTE provides key information to clarify instructions.

Trademarks

Polaris acknowledges the following products mentioned in this manual:

FLEXLOC, Registered Trademark of SPS Technologies
Loctite, Registered Trademark of the Loctite Corporation
Nyogel, Trademark of Wm. F. Nye Co.
Fluke, Registered Trademark of John Fluke Mfg. Co.
Mity Vac, Registered Trademark of Neward Enterprises, Inc.
Torx, Registered Trademark of Textron
Hilliard, Trademark of the Hilliard Corporation
Warn, Trademark of the Warn Industries

Some Polaris factory publications can be downloaded from www.polarisindustries.com or purchased from www.purepolaris.com or contact your nearest Polaris dealer.



	GENERAL	1
---	----------------	----------

	MAINTENANCE	2
---	--------------------	----------

	ENGINE	3
---	---------------	----------

	CARBURETION	4
---	--------------------	----------

	BODY AND STEERING	5
---	--------------------------	----------

	CLUTCHING	6
---	------------------	----------

	FINAL DRIVE	7
---	--------------------	----------

	TRANSMISSION	8
---	---------------------	----------

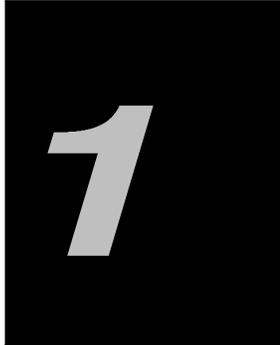
	BRAKES	9
---	---------------	----------

	ELECTRICAL	10
---	-------------------	-----------



CHAPTER 1

GENERAL

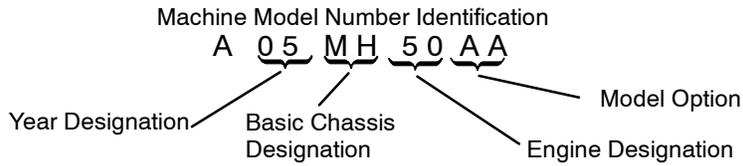


Model Identification	1.2
Serial Number Location	1.2
Publication Numbers	1.3
Paint Codes	1.3
Replacement Keys	1.3
General Specifications - Sportsman 400/500 .	1.4-1.6
Special Tools	1.7-1.12
Standard Torque Specifications	1.13
Decimal Equivalent Chart	1.14
Conversion Table	1.15
Glossary of Terms	1.16



MODEL IDENTIFICATION

The machine model number must be used with any correspondence regarding warranty or service.



ENGINE DESIGNATION NUMBERS

- 42 EH42PLE Single, L/C, SOHC 4 Stroke, Electric Start
- 50 EH50PLE Single, L/C, SOHC 4 Stroke, Electric Start

VIN IDENTIFICATION

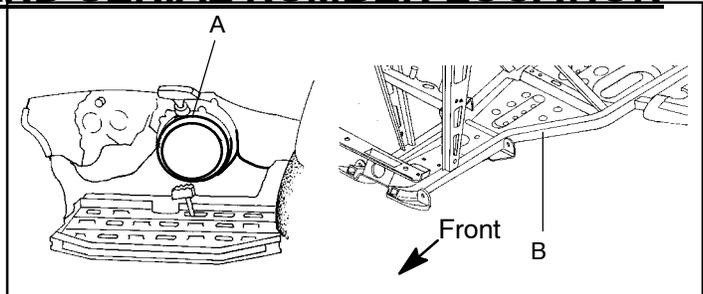
World Mfg. ID			Vehicle Descriptor						Vehicle Identifier							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
4	X	A	M	H	5	0	A	*	5	P	0	0	0	0	0	0
			Body Style	Powertrain	Engine	Emissions	Check Digit	Model Year	Plant No.	Individual Serial No.						

* This could be either a number or a letter

Whenever corresponding about an engine, be sure to refer to the engine model number and serial number. This information can be found on the sticker applied to the recoil housing on the right side of engine. (A) An additional number is stamped on the center top of crankcase beneath the cylinder coolant elbow.

MACHINE MODEL NUMBER AND SERIAL NUMBER LOCATION

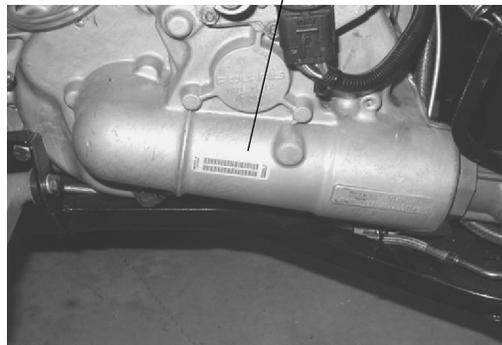
Engine model number is on recoil housing (A). The machine model number and serial number are important for vehicle identification. The machine serial number is stamped on the lower left side of the frame tube. (B)



TRANSMISSION I.D. NUMBER

LOCATION

The transmission I.D. number is located on top of the transmission snorkel, right side of machine.





PUBLICATION NUMBERS

Year	Model	Owner's Manual PN	Parts Manual PN	Parts Micro Fiche PN
2005	Sportsman 400	9919412	9919413	9919414
2005	Sportsman 500	9919412	9919416	9919417

NOTE: When ordering service parts be sure to use the correct parts manual.

NOTE: Some manuals can be found at the Polaris website: www.polarisindustries.com

ATV PAINT INFORMATION

FRAME COLOR - (All) P067 Medium Gloss Black 9440 / 8520147.

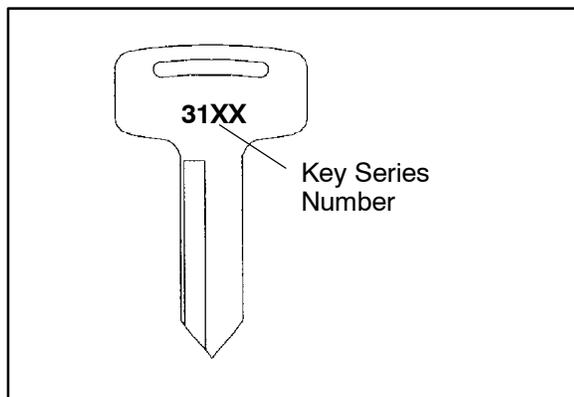
COLD WEATHER KITS FOR 4 CYCLE ATVS

Engine Heater - (PN 2871507)



REPLACEMENT KEYS

Replacement keys can be made from the original key. To identify which series the key is, take the first two digits on the original key and refer to the chart to the right for the proper part number.



Series #	Part Number
20	4010278
21	4010278
22	4010321
23	4010321
27	4010321
28	4010321
31	4110141
32	4110148
67	4010278
68	4010278

GENERAL INFORMATION



MODEL: **2005 Sportsman 400**
MODEL NUMBER: . **A05MH42**
ENGINE MODEL: .. **425**

Category	Dimension
Length	83 in./211 cm
Width	48 in./122 cm
Height	48 in./122 cm
Wheel Base	51 in./129.5 cm
Ground Clearance	11 in./27.94 cm
Dry Weight	703 lbs./319 kg
Gross Vehicle Weight	1210 lbs./549 kg
Oil Capacity	2.25 qts./2.1 ltr
Coolant Capacity	2.25 qts./2.1 ltr
Front Rack Capacity	90 lbs./40.8 kg
Rear Rack Capacity	180 lbs./81.6 kg
Towing Capacity	1225 lbs./555.6 kg
Hitch Tongue Weight	120 lbs./54.4 kg
Body Style	SPIRIT



MODEL: **2005 Sportsman 500**
MODEL NUMBER: . **A05MH50**
ENGINE MODEL: .. **500**

Category	Dimension
Length	83 in./211 cm
Width	48 in./122 cm
Height	48 in./122 cm
Wheel Base	51 in./129.5 cm
Ground Clearance	11.25 in./28.6 cm
Dry Weight	715 lbs./324 kg
Gross Vehicle Weight	1222 lbs./554 kg
Oil Capacity	2.25 qts./2.1 ltr
Coolant Capacity	2.25 qts./2.1 ltr
Front Rack Capacity	90 lbs./40.8 kg
Rear Rack Capacity	180 lbs./81.6 kg
Towing Capacity	1225 lbs./555.6 kg
Hitch Tongue Weight	120 lbs./54.4 kg
Body Style	SPIRIT





MODEL: 2005 SPORTSMAN 400
MODEL NUMBER: . A05MH42AB, AG, AH
ENGINE MODEL: .. EH42PLE

Engine	
Platform	Fuji 4 stroke, Single Cylinder
Engine Model Number	EH42PLE05
Engine Displacement	425cc
Number of Cylinders	1
Bore & Stroke (mm)	87.9 x 70 mm
Compression Ratio	9.2:1
Compression Pressure	50-90 psi
Engine Idle Speed	1100 ± 200 Rpm
Cooling System/Capacity	Liquid / 2.25 qts. (2.1 L)
Overheat Warning	HOT on Instrument Cluster
Lubrication	Pressurized Dry Sump
Oil Requirements	Polaris 0W-40
Exhaust System	Single Pipe
Carburetion	
Carburetor model	Mikuni BST 34mm
Main Jet	172.5
Pilot Jet	40
Jet Needle	4GAC33-3
Needle Jet	Q-0(829)
Pilot Screw	2.75 Turns Out
Pilot Air Jet	160
Float Height	13 ± 1 mm (0.51 ± 0.40")
Fuel Delivery	Fuel Pump
Fuel Capacity / Requirement	4.25 gal. (19.9L) 87 Octane (minimum) 89 Oxygenated
Electrical	
Alternator Output	240 w @ 3000 RPM
Voltage Regulator	3-Phase - Sure Power
Lights : High Beam	50 watts
Low Beam	37 watts
Brake	26.9 watts
Tail	8.26 watts
Worklight	12 watts
Ignition System	DC/CDI Ignition
Ignition Timing	30° ± 2° BTDC @ 5000 RPM
Circuit Protection	Solid State
Spark plug / Gap	NGK BKR5E/ .036 in./ 0.9 mm
Battery / Model / Amp Hr	Maintenance-Free - 12 Amp Hr
Starting	Electric / Recoil Backup
Instrument Cluster	LCD

Drivetrain	
Transmission Type	Drum Shift H/L/N/R/P
Transmission Capacity	32 oz.
Front Gearcase Capacity	5 oz. (147.8 ml)
Gear Ratio :	Low 23.91 / 1 High 10.49 / 1 Rev. 16.30 / 1 Final 3.82 / 1
Clutch Type	PVT Non EBS
Belt	3211077
Steering / Suspension	
Front Suspension / Shock	A-arm / MacPherson Strut
Front Travel	8.2 in. / 20.8 cm
Rear Suspension Style / Shock	Progressive Rate Independent w/ Two x 2" Coil-over shocks
Rear Travel	9.5 in. / 24.13 cm
Ground Clearance	11 in. / 27.94 cm
Shock Preload Adjustment Front / Rear	Spring tension - Std.
Turning Radius	65 in. / 165.10 cm
Toe Out	0 - 1/16 in / .0 - .159 mm
Wheels / Brakes	
Wheel/Tire Size - Front	25 x 8 - 12 / 4-156
Wheel/Tire Size - Rear	25 x 11 - 12 / 4-156
Air Press. F/R Tires	5 psi Front / 5 psi Rear
Brake - Front	Dual Hydraulic Disc
Brake - Rear	Single Hydraulic Disc
Brake Fluid	Polaris DOT 3 Brake Fluid

JETTING CHART		AMBIENT TEMPERATURE	
Altitude		Below 40°F Below 5°C	+40°F to +80°F +5°C to +28°C
Meters (Feet)	0-1800 (0-6000)	177.5	172.5
	above 1800 (above 6000)	170	165

CLUTCH CHART		Shift Weight	Drive Spring	Second Spring	Driven Helix
Altitude					
Meters (Feet)	0-1800 (0-6000)	10 WH (5630710)	Blu/Grey (7042202)	Black (7041782)	34-38° (5133920)
	1800-3700 (6000-12000)	20-40 (5631356)	Blu/Grn (7041157)	Black (7041782)	34-38° (5133920)

Driven Helix Position: 2-2

GENERAL INFORMATION



MODEL: **2005 SPORTSMAN 500**
MODEL NUMBER: . A05MH50AB, AC, AG, AH
ENGINE MODEL: .. EH50PLE

Engine	
Platform	Fuji 4 stroke, Single Cylinder
Engine Model Number	EH50PLE13
Engine Displacement	499cc
Number of Cylinders	1
Bore & Stroke (mm)	92 x 75 mm
Compression Ratio	10:2
Compression Pressure	50-90 psi
Engine Idle Speed	1100 ± 200 Rpm
Cooling System/Capacity	Liquid / 2.25 qts. (2.1 L)
Overheat Warning	HOT on Instrument Cluster
Lubrication	Pressurized Dry Sump
Oil Requirements	Polaris 0W-40
Exhaust System	Single Pipe
Carburetion	
Carburetor model	Mikuni BST 40mm
Main Jet	155
Pilot Jet	40
Jet Needle	6MGH1-94-3
Needle Jet	X-6M
Pilot Screw	2 Turns Out
Pilot Air Jet	160
Float Height	14.7 ± 1 mm (0.58 ± 0.40")
Fuel Delivery/Tank Capacity	Fuel Pump
Fuel Capacity / Requirement	4.25 gal. (19.9L) 87 Octane (minimum) 89 Oxygenated
Electrical	
Alternator Output	240 w @ 3000 RPM
Voltage Regulator	3-Phase - Sure Power
Lights : High Beam	50 watts
Low Beam	37 watts
Brake	26.9 watts
Tail	8.26 watts
Worklight	12 watts
Circuit Protection	Solid State
Ignition System	DC/CDI Ignition
Ignition Timing	30° ± 2° BTDC @ 5000 RPM
Spark plug / Gap	NGK BKR6E/ .036 in./ 0.9 mm
Battery / Model / Amp Hr	Maintenance-Free - 12 Amp Hr
Starting	Electric / Recoil Backup
Instrument Cluster	LCD

Drivetrain	
Transmission Type	Drum Shift H/L/N/R/P
Transmission Fluid Capacity	32 oz.
Front Gearcase Capacity	5 oz. (147.8 ml)
Gear Ratio :	Low 23.91 / 1 High 10.49 / 1 Rev. 16.3 / 1 Final 3.82 / 1
Clutch Type	PVT w/EBS
Belt	3211095
Steering / Suspension	
Front Suspension / Shock	A-arm / MacPherson Strut
Front Travel	8.2 in. / 20.8 cm
Rear Suspension Style / Shock	Progressive Rate Independent
Rear Travel	9.5 in. / 24.13 cm
Ground Clearance	11 in. / 27.94 cm
Shock Preload Adjustment Front / Rear	Spring tension - Std.
Turning Radius	65 in. / 165.10 cm
Toe Out	0 - 1/16 in / .0 - .159 mm
Wheels / Brakes	
Wheel Size - Front	25 x 8 - 12 / 4-156
Wheel Size - Rear	25 x 11 - 12 / 4-156
Air Press. F/R Tires	5 psi Front / 5 psi Rear
Brake - Front	Dual Hydraulic Disc
Brake - Rear	Single Hydraulic Disc
Brake Fluid	Polaris DOT 3 Brake Fluid

JETTING CHART		AMBIENT TEMPERATURE	
		Below 40°F Below 5°C	+40°F to +80°F +5°C to +28°C
Altitude			
Meters (Feet)	0-1800 (0-6000)	160	155
	above 1800 (above 6000)	152.5	147.5

CLUTCH CHART		Shift Weight	Drive Spring	Second Spring	Driven Helix
Altitude					
Meters (Feet)	0-1800 (0-6000)	10 WH (5630710)	Blu/Grn (7041157)	Wht/Yel (7041635)	EBS 41-37° (5131674)
	1800-3700 (6000-12000)	10 RH (5630709)	Blu/Grn (7041157)	Wht/Yel (7041635)	EBS 41-37° (5131674)

* EBS models require no helix / spring adjustment

**SPECIAL TOOLS**

PART NUMBER	TOOL DESCRIPTION	CHAPTER TOOL USED IN
PA-44689	Valve Clutch Adjuster	2
2872105	Water Pump Mechanical Seal Puller	2
8712100 or 8712500	Tachometer	2,10
2200634	Valve Seat Reconditioning Kit	3
2870390	Piston Support Block	3
2871043	Flywheel Puller	3
2871283	Crankshaft/Water Pump Seal Install Kit	3
5131135	Water Pump Install Kit	3
2870569	Crankshaft Truing Stand	5
2872314	Carburetor Float Adjustment Tool	4
2870975	Mity Vac™ Pressure Test Tool	3, 4, 9
2870871	Ball Joint Replacement Tool	5
2870872	Shock Spanner Wrench	2, 5
2870623	Shock Absorber Spring Compression Tool	5
2871572	Strut Rod Wrench	5
2871573	LH Strut Spring Compressor	5
2871574	RH Strut Spring Compressor	5
7052069	Charging Needle	5
2200421	Gas Shock Recharging Kit	5
2871352	Shock Rod Holding Tool	5
2871351	Fox™ Shock IFP Depth Tool	5
2870506	Clutch Puller	6
9314177	Clutch Holding Wrench	6
2871358	Clutch Holding Fixture	6
2870341	Drive Clutch Spider Removal and Install Tool	6
2870654	Clutch Offset Alignment Tool	6
2870913	Driven Clutch Puller	6
2870910	Roller Pin Tool	6
2871226	Clutch Bushing Replacement Tool Kit	6
2870386	Piston Pin Puller	6
2872292	EBS Clutch Alignment Tool	6
2201379	EBS Bushing Replacement Kit	6
8700220	Clutch Compression Tool	6
2871025	Clutch Bushing Replacement Tool Kit	6
2871199	Seal Sleeve Installation Tool Kit	5, 7
2870888	Hilliard Clutch Garter Spring Installation Tool	7
2872608	Roller Pin Removal Tool	7
8700226	CV Boot Clamp Pliers	7
2871701 (Part of 2871702 Kit)	2 1/8 inch Wrench	8
2871697 (Part of 2871702 Kit)	Center Drive Bushing Tool	8
2871695 (Part of 2871702 Kit)	Backlash Setting Tool	8
2871698 (Part of 2871702 Kit)	Rear Output Seal Driver	8
2871699 (Part of 2871702 Kit)	Rear Driveshaft Seal Guide	8
2871282	Bearing Seal Driver (50 mm)	8
PV-43568	Fluke™ 77 Digital Multimeter	10
2870630	Timing Light	10
2870836	Battery Hydrometer	10





SPECIAL TOOLS, CONT'D

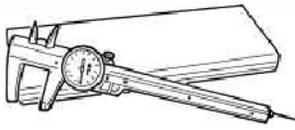
2460761	Hall Sensor Probe Harness	10
2871745	Static Timing Light Harness	10

NOTE: Polaris dealers can order the tools listed above through their Polaris Special Service Tools catalog.

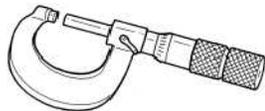
SPECIAL TOOLS

Special Tools maybe required while servicing your machine. Some of the tools listed are mandatory and other tools maybe substituted with a similar tool, if available. Polaris recommends the use of Polaris special tools when servicing any Polaris product.

Standard Tools and Engine Tools



PU-45432 - Caliper or A Basic Caliper



Basic Micrometer



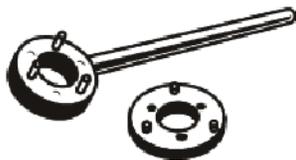
2871043 - Flywheel Puller



2870773 - C-Clip Install Tool

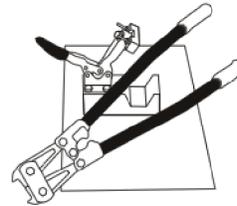


2870967 - Slotted Nut Socket



8700229 - Flywheel Holder & Adapter

Standard Tools and Engine Tools



2870569 - Crankshaft True Kit



2870386 - Piston Pin Puller



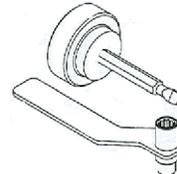
2871445 - Piston Pin Puller Adapter



2870968 - Counter Balance Puller



PV-43527 Oil Filter Wrench



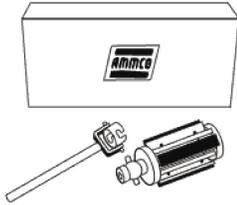
PA-44689 - Valve/Clutch Adjuster



2870390 - Piston Support Block



Standard Tools and Engine Tools



2870303 - Hone Kit



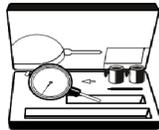
2870305 - Stone Replacement Kit



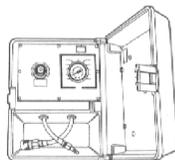
2870588 - Hone Oil (12 oz.)



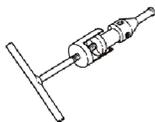
2200634 - Valve Seat Reconditioning Kit



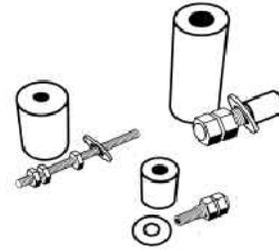
2870459 - Dial Indicator



PV-35667-A - Cylinder Leak down Tester

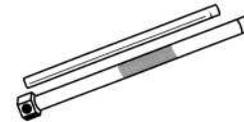


2872105 - Water Pump Seal Puller



2871283 - Crank/Water Pump Seal Install Kit

Clutch (PVT) Tools



2870506 - Drive Clutch Puller



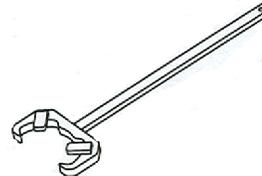
2870913 - Driven Clutch Puller



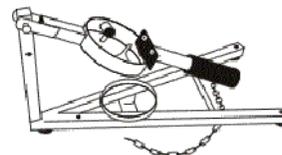
2870654 - ATV Clutch Align Tool



2872292 - EBS Clutch Align Tool



9914177-A - Drive Clutch Holding Tool



8700220 - Clutch Compression Tool



Clutch (PVT) Tools



2870341 - Drive Clutch Spider Removal Tool



2870910 - Roll Pin Tool



2871025 - Clutch Bushing Replace Tool Kit



2871226 - Clutch Bushing Replacement Kit



2201379 - EBS Bushing Replacement Kit



2870338 - Spider Nut Socket

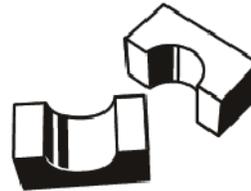


2871358 - Clutch Holding Fixture

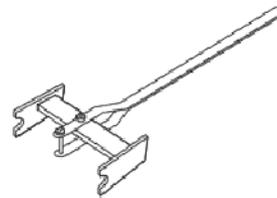
Suspension Tools



2870871 - ATV Ball Joint Tool Kit



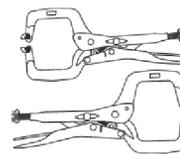
2871071 - Shock Body Holding Tool



2870623 - Shock Spring Compressor



2871572 - Strut Rod Wrench



2871573 & 2871574 - Strut Spring Compressor



8700225 & 8700226 - CV Boot Clamp Pliers



Suspension Tools



2870872 - Shock Spanner Wrench

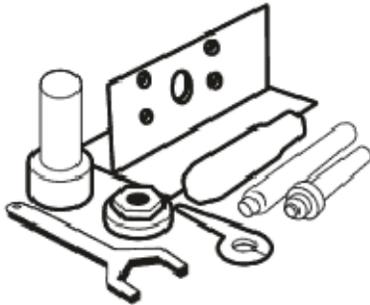


2872608 - Roll Pin Removal Tool

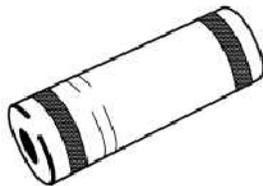


2871351 - Shock IFP Depth Tool

Transmission Tools



2871702 - Shaft Drive Transmission & Front Gearcase Tool Kit



2871282 - Bearing/Seal Driver (50 mm)

Fuel & Brake Systems

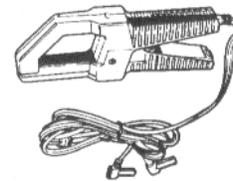


2870975 - Mity Vac

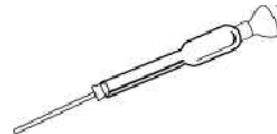
Electrical Tools



PV-43568 -Fluke 77 Multimeter



PV-39617 - Current Clamp



2870836 - Battery Hydrometer



8712500 - Tachometer



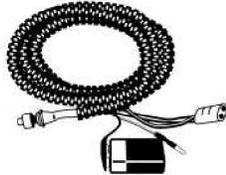
PV-39951-A - Tachometer



Electrical Tools



2870630 - Timing Light



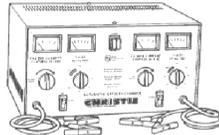
2871745 - Static Timing Light Harness



2460761 - Hall Sensor Probe Harness



PV-39991 - Peak Reading Adapter



PV-37453 - Christie Se-Sulfating
Multi-Battery Charger

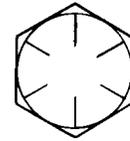
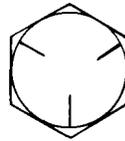
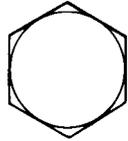


PV-63070 - Christie Multi-Battery
Charger



STANDARD TORQUE SPECIFICATIONS

The following torque specifications are to be used as a general guideline. There are exceptions in the steering, suspension, and engine areas. Always consult the exploded views in each manual section for torque values of fasteners before using standard torque.



Bolt Size	Threads/In	Grade 2	Grade 5	Grade 8
		<u>Torque in. lbs. (Nm)</u>		
#10	- 24	27 (3.1)	43 (5.0)	60 (6.9)
#10	- 32	31 (3.6)	49 (5.6)	68 (7.8)
<u>Torque ft. lbs. (Nm)*</u>				
1/4	- 20	5 (7)	8 (11)	12 (16)
1/4	- 28	6 (8)	10 (14)	14 (19)
5/16	- 18	11 (15)	17 (23)	25 (35)
5/16	- 24	12 (16)	19 (26)	29 (40)
3/8	- 16	20 (27)	30 (40)	45 (62)
3/8	- 24	23 (32)	35 (48)	50 (69)
7/16	- 14	30 (40)	50 (69)	70 (97)
7/16	- 20	35 (48)	55 (76)	80 (110)
1/2	- 13	50 (69)	75 (104)	110 (152)
1/2	- 20	55 (76)	90 (124)	120 (166)

Metric

- 6 x 1.0 72-78 In. lbs.
- 8 x 1.25 14-18 ft. lbs.
- 10 x 1.25 26-30 ft. lbs.

*To convert ft. lbs. to Nm multiply foot pounds by .1.382
 *To convert Nm to ft. lbs. multiply Nm by .7376.

SPECIFIC TORQUE VALUES OF FASTENERS

Refer to exploded views in the appropriate section Torque Conversions





SAE TAP DRILL SIZES

Thread Size/Drill Size		Thread Size/Drill Size	
#0-80	3/64	1/2-13	27/64
#1-64	53	1/2-20	29/64
#1-72	53	9/16-12	31/64
#2-56	51	9/16-18	33/64
#2-64	50	5/8-11	17/32
#3-48	5/64	5/8-18	37/64
#3-56	45	3/4-10	21/32
#4-40	43	3/4-16	11/16
#4-48	42	7/8-9	49/64
#5-40	38	7/8-14	13/16
#5-44	37	1-8	7/8
#6-32	36	1-12	59/64
#6-40	33	1 1/8-7	63/64
#8-32	29	1 1/8-12	1 3/64
#8-36	29	1 1/4-7	1 7/64
#10-24	24	1 1/4-12	1 11/64
#10-32	21	1 1/2-6	1 11/32
#12-24	17	1 1/2-12	1 27/64
#12-28	4.6mm	1 3/4-5	1 9/16
1/4-20	7	1 3/4-12	1 43/64
1/4-28	3	2-4 1/2	1 25/32
5/16-18	F	2-12	1 59/64
5/16-24	I	2 1/4-4 1/2	2 1/32
3/8-16	O	2 1/2-4	2 1/4
3/8-24	Q	2 3/4-4	2 1/2
7/16-14	U	3-4	2 3/4
7/16-20	25/64		

METRIC TAP DRILL SIZES

Tap Size	Drill Size	Decimal Equivalent	Nearest Fraction
3 x .50	#39	0.0995	3/32
3 x .60	3/32	0.0937	3/32
4 x .70	#30	0.1285	1/8
4 x .75	1/8	0.125	1/8
5 x .80	#19	0.166	11/64
5 x .90	#20	0.161	5/32
6 x 1.00	#9	0.196	13/64
7 x 1.00	16/64	0.234	15/64
8 x 1.00	J	0.277	9/32
8 x 1.25	17/64	0.265	17/64
9 x 1.00	5/16	0.3125	5/16
9 x 1.25	5/16	0.3125	5/16
10 x 1.25	11/32	0.3437	11/32
10 x 1.50	R	0.339	11/32
11 x 1.50	3/8	0.375	3/8
12 x 1.50	13/32	0.406	13/32
12 x 1.75	13/32	0.406	13/32

DECIMAL EQUIVALENTS

1/64	.....	.0156	
1/32	.....	.0312	... 1 mm = .0394"
3/64	.....	.0469	
1/16	.....	.0625	
5/64	.....	.0781	... 2 mm = .0787"
3/32	.....	.0938	
7/64	.....	.1094	... 3 mm = .1181"
1/8	.....	.1250	
9/64	.....	.1406	
5/32	.....	.1563	... 4 mm = .1575"
11/64	.....	.1719	
3/16	.....	.1875	... 5 mm = .1969"
13/64	.....	.2031	
7/32	.....	.2188	
15/64	.....	.2344	... 6 mm = .2362"
1/4	.....	.25	
17/64	.....	.2656	... 7 mm = .2756"
9/32	.....	.2813	
19/64	.....	.2969	
5/16	.....	.3125	... 8 mm = .3150"
21/64	.....	.3281	
11/32	.....	.3438	... 9 mm = .3543"
23/64	.....	.3594	
3/8	.....	.375	
25/64	.....	.3906	... 10 mm = .3937"
13/32	.....	.4063	
27/64	.....	.4219	... 11 mm = .4331"
7/16	.....	.4375	
29/64	.....	.4531	
15/32	.....	.4688	... 12 mm = .4724"
31/64	.....	.4844	
1/2	.....	.5	... 13 mm = .5118
33/64	.....	.5156	
17/32	.....	.5313	
35/64	.....	.5469	... 14 mm = .5512"
9/16	.....	.5625	
37/64	.....	.5781	... 15 mm = .5906"
19/32	.....	.5938	
39/64	.....	.6094	
5/8	.....	.625	... 16 mm = .6299"
41/64	.....	.6406	
21/32	.....	.6563	... 17 mm = .6693"
43/64	.....	.6719	
11/16	.....	.6875	
45/64	.....	.7031	... 18 mm = .7087"
23/32	.....	.7188	
47/64	.....	.7344	... 19 mm = .7480"
3/4	.....	.75	
49/64	.....	.7656	
25/32	.....	.7813	... 20 mm = .7874"
51/64	.....	.7969	
13/16	.....	.8125	... 21 mm = .8268"
53/64	.....	.8281	
27/32	.....	.8438	
55/64	.....	.8594	... 22 mm = .8661"
7/8	.....	.875	
57/64	.....	.8906	... 23 mm = .9055"
29/32	.....	.9063	
59/64	.....	.9219	
15/16	.....	.9375	... 24 mm = .9449"
61/64	.....	.9531	
31/32	.....	.9688	... 25 mm = .9843
63/64	.....	.9844	
1	.....	1.0	

**CONVERSION TABLE**

Unit of Measure	Multiplied by	Converts to
ft. lbs.	x 12	= in. lbs.
in. lbs.	x .0833	= ft. lbs.
ft. lbs.	x 1.356	= Nm
in. lbs.	x .0115	= kg-m
Nm	x .7376	= ft. lbs.
kg-m	x 7.233	= ft. lbs.
kg-m	x 86.796	= in. lbs.
kg-m	x 9.807	= Nm
in.	x 25.4	=mm
mm	x .03937	= in.
in.	x 2.54	= cm
mile (mi.)	x 1.6	= km
km	x .6214	= mile (mi.)
Ounces (oz)	x 28.35	= Grams (g)
Fluid Ounces (fl. oz.)	x 29.57	= Cubic Centimeters (cc)
Cubic Centimeters (cc)	x .03381	= Fluid Ounces (fl. oz.)
Grams (g)	x 0.035	= Ounces (oz)
lb.	x .454	= kg
kg	x 2.2046	= lb.
Cubic inches (cu in)	x 16.387	= Cubic centimeters (cc)
Cubic centimeters (cc)	x 0.061	= Cubic inches (cu in)
Imperial pints (Imp pt)	x 0.568	= Liters (l)
Liters (l)	x 1.76	= Imperial pints (Imp pt)
Imperial quarts (Imp qt)	x 1.137	= Liters (l)
Liters (l)	x 0.88	= Imperial quarts (Imp qt)
Imperial quarts (Imp qt)	x 1.201	= US quarts (US qt)
US quarts (US qt)	x 0.833	= Imperial quarts (Imp qt)
US quarts (US qt)	x 0.946	= Liters (l)
Liters (l)	x 1.057	= US quarts (US qt)
US gallons (US gal)	x 3.785	=Liters (l)
Liters (l)	x 0.264	= US gallons (US gal)
Pounds - force per square inch (psi)	x 6.895	= Kilopascals (kPa)
Kilopascals (kPa)	x 0.145	= Pounds - force per square inch (psi)
Kilopascals (kPa)	x 0.01	= Kilograms - force per square cm
Kilograms - force per square cm	x 98.1	= Kilopascals (kPa)
$\pi (3.14) \times R^2 \times H$ (height)		= Cylinder Volume

°C to °F: $9 (°C + 40) \div 5 - 40 = °F$

°F to °C: $5 (°F + 40) \div 9 - 40 = °C$





GLOSSARY OF TERMS

ABDC: After bottom dead center.

ACV: Alternating current voltage.

Alternator: Electrical generator producing voltage alternating current.

ATDC: After top dead center.

BBDC: Before bottom dead center.

BDC: Bottom dead center.

BTDC: Before top dead center.

CC: Cubic centimeters.

Center Distance: Distance between center of crankshaft and center of driven clutch shaft.

Chain Pitch: Distance between chain link pins (No. 35 = 3/8" or 1 cm). Polaris measures chain length in number of pitches.

CI: Cubic inches.

Clutch Buttons: Plastic bushings which aid rotation of the movable sheave in the drive and driven clutch.

Clutch Offset: Drive and driven clutches are offset so that drive belt will stay nearly straight as it moves along the clutch face.

Clutch Weights: Three levers in the drive clutch which relative to their weight, profile and engine RPM cause the drive clutch to close and grip the drive belt.

Crankshaft Run-Out: Run-out or "bend" of crankshaft measured with a dial indicator while crankshaft is supported between centers on V blocks or resting in crankcase. Measure at various points especially at PTO.

DCV: Direct current voltage.

Dial Bore Gauge: A cylinder measuring instrument which uses a dial indicator. Good for showing taper and out-of-round in the cylinder bore.

Electrical Open: Open circuit. An electrical circuit which isn't complete.

Electrical Short: Short circuit. An electrical circuit which is completed before the current reaches the intended load. (i.e. a bare wire touching the chassis).

End Seals: Rubber seals at each end of the crankshaft.

Engagement RPM: Engine RPM at which the drive clutch engages to make contact with the drive belt.

ft.: Foot/feet.

Foot Pound: Ft. lb. A force of one pound at the end of a lever one foot in length, applied in a rotational direction.

g: Gram. Unit of weight in the metric system.

gal.: Gallon.

ID: Inside diameter.

in.: Inch/inches.

Inch Pound: In. lb. 12 in. lbs. = 1 ft. lb.

kg/cm²: Kilograms per square centimeter.

kg-m: Kilogram meters.

Kilogram/meter: A force of one kilogram at the end of a lever one meter in length, applied in a rotational direction.

l or ltr: Liter.

lbs/in²: Pounds per square inch.

Left or Right Side: Always referred to based on normal operating position of the driver.

m: Meter/meters.

Mag: Magneto.

Magnetic Induction: As a conductor (coil) is moved through a magnetic field, a voltage will be generated in the windings. Mechanical energy is converted to electrical energy in the stator.

mi.: Mile/miles.

mm: Millimeter. Unit of length in the metric system. 1mm = approximately .040".

Nm: Newton meters.

OD: Outside diameter.

Ohm: The unit of electrical resistance opposing current flow.

oz.: Ounce/ounces.

Piston Clearance: Total distance between piston and cylinder wall.

psi.: Pounds per square inch.

PTO: Power take off.

PVT: Polaris Variable Transmission (Drive Clutch System)

qt.: Quart/quarts.

Regulator: Voltage regulator. Regulates battery charging system output at approx. 14.5 DCV as engine RPM increases.

Reservoir Tank: The fill tank in the liquid cooling system.

Resistance: In the mechanical sense, friction or load. In the electrical sense, ohms, resulting in energy conversion to heat.

RPM: Revolutions per minute.

Seized Piston: Galling of the sides of a piston. Usually there is a transfer of aluminum from the piston onto the cylinder wall. Possible causes: 1) improper lubrication; 2) excessive temperatures; 3) insufficient piston clearance; 4) stuck piston rings.

Stator Plate: The plate mounted under the flywheel supporting the battery charging coils.

TDC: Top dead center. Piston's most outward travel from crankshaft.

Volt: The unit of measure for electrical pressure of electromotive force. Measured by a voltmeter in parallel with the circuit.

Watt: Unit of electrical power. Watts = amperes x volts.

WOT: Wide open throttle.

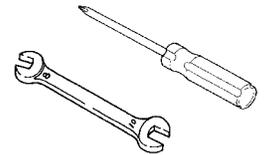




CHAPTER 2

MAINTENANCE

Periodic Maintenance Chart	2.2-2.5
Lubricant and Maintenance Product Numbers	2.6-2.7
ATV Component Locations	2.8
Lubrication Charts	2.9
Front Gearcase Lubrication	2.10-2.11
Transmission Lubrication	2.11-2.12
Lubrications Points	2.12-2.13
Transmission Linkage Adjustment	2.13
Carburetor / Throttle Adjustments	2.13-2.16
Fuel System	2.16-2.17
Compression Test	2.18
Battery Maintenance	2.19
Coolant System Maintenance	2.19-2.21
Air Filter Service	2.21-2.22
Air Box Sediment Tube Service	2.22
Breather Filter	2.23
Recoil Housing	2.23
Oil Change/Filter	2.24-2.26
Valve Clearance	2.26-2.27
Steering and Toe Alignment	2.27-2.30
Exhaust System Maintenance	2.31
Brake System Service	2.31-2.32
Suspension Service	2.33
Controls	2.33
Wheel Removal/Installation	2.34
Tire Inspection	2.34
Compartment Storage	2.35
Warn™ Winch Operation	2.36-2.37
Cleaning and Storage of ATV	2.38-2.39



2



PERIODIC MAINTENANCE CHART

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

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

NOTE: Service and adjustments are critical. If you're not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

Maintenance intervals in the following chart are based upon average riding conditions and an average vehicle speed of approximately 10 miles per hour. Vehicles subjected to severe use must be inspected and serviced more frequently.

Severe Use Definition

- Frequent immersion in mud, water or sand
- Racing or race-style high RPM use
- Prolonged low speed, heavy load operation
- Extended idle
- Short trip cold weather operation

Pay special attention to the oil level. A rise in oil level during cold weather can indicate contaminants collecting in the oil sump or crankcase. Change oil immediately if the oil level begins to rise. Monitor the oil level, and if it continues to rise, discontinue use and determine the cause or see your dealer.

Maintenance Chart Key

The following symbols denote potential items to be aware of during maintenance:

■= **CAUTION:** Due to the nature of these adjustments, it is recommended this service be performed by an authorized Polaris dealer.

▶= **SEVERE USE ITEM** --If vehicle is subjected to severe use, decrease interval by 50%
(Severe Use is defined as frequent vehicle immersion in mud, water or sand, racing or race-style high rpm use, prolonged low speed - heavy load operation or extended idle. More preventative maintenance is required under these conditions. Fluid changes, cable, chain and chassis lubrication are required more frequently. For engine oil, short trip cold weather riding also constitutes severe use. Pay special attention to oil level. A rising oil level in cold weather can indicate contaminants collecting in the oil sump or crankcase. Change oil immediately and monitor level. If oil level begins to rise, discontinue use and determine cause.)

E= **Emission Control System Service (California).**

NOTE: Inspection may reveal the need for replacement parts. Always use genuine Polaris parts.

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

**MAINTENANCE AND LUBRICATION****Periodic Maintenance Chart**

Item	Maintenance Interval (whichever comes first)			Remarks
	Hours	Calendar	Miles (Km)	
■ Steering	-	Pre-Ride	-	Make adjustments as needed. See Pre-Ride Checklist on Page 1.7.
▶ Front suspension	-	Pre-Ride	-	
▶ Rear suspension	-	Pre-Ride	-	
Tires	-	Pre-Ride	-	
▶ Brake fluid level	-	Pre-Ride	-	
▶ Brake lever travel	-	Pre-Ride	-	
Brake systems	-	Pre-Ride	-	
Wheels/fasteners	-	Pre-Ride	-	
Frame fasteners	-	Pre-Ride	-	
▶ E Engine oil level	-	Pre-Ride	-	
▶ E Air filter, pre-filter	-	Daily	-	Inspect; clean often
▶ E Air box sediment tube	-	Daily	-	Drain deposits when visible
Coolant (if applicable)	-	Daily	-	Check level daily, change coolant every 2 years
Headlamp/tail lamp	-	Daily	-	Check operation; apply dielectric grease if replacing
▶ E Air filter, main element	-	Weekly	-	Inspect; replace as needed
Recoil housing	-	Weekly	-	Drain water as needed, check often if operating in wet conditions
▶ ■ Brake pad wear	10 H	Monthly	60 (100)	Inspect periodically
Battery	20 H	Monthly	125 (200)	Check terminals; clean; test
▶ Front gearcase oil (if equipped)	25 H	Monthly	155 (250)	Inspect level; change yearly
▶ Middle gearcase oil (if equipped)	25 H	Monthly	155 (250)	Inspect level; change yearly
▶ Rear gearcase oil (if equipped)	25 H	Monthly	155 (250)	Inspect level; change yearly
▶ Transmission oil	25 H	Monthly	155 (250)	Inspect level; change yearly

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

E Emission Control System Service (California)

■ Have an authorized Polaris dealer perform these services.



MAINTENANCE AND LUBRICATION

Periodic Maintenance Chart

Item		Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Miles (Km)	
▶ E	Engine breather filter (if equipped)	25 H	Monthly	155 (250)	Inspect; replace if necessary
▶ E	Engine oil change (break-in)	25 H	1 M	155 (250)	Perform a break-in oil change at one month
▶	General lubrication	50 H	3 M	310 (500)	Lubricate all fittings, pivots, cables, etc.
	Shift Linkage	50 H	6 M	310 (500)	Inspect, lubricate, adjust
■	Steering	50 H	6 M	310 (500)	Lubricate
▶	Front suspension	50 H	6 M	310 (500)	Lubricate
▶	Rear suspension	50 H	6 M	310 (500)	Lubricate
	Carburetor float bowl	50 H	6 M	310 (500)	Drain bowl periodically and prior to storage
■ E	Throttle Cable/ ETC Switch	50 H	6 M	310 (500)	Inspect; adjust; lubricate; replace if necessary
■ E	Choke cable	50 H	6 M	310 (500)	Inspect; adjust; lubricate; replace if necessary
E	Carburetor air intake ducts/ flange	50 H	6 M	310 (500)	Inspect ducts for proper sealing/air leaks
	Drive belt	50 H	6 M	310 (500)	Inspect; adjust; replace as needed
	Cooling system (if applicable)	50 H	6 M	310 (500)	Inspect coolant strength seasonally; pressure test system yearly
▶ E	Engine oil change	100 H	6 M	620 (1000)	Perform a break-in oil change at 25 hours/one month
▶ E	Oil filter change	100 H	6 M	620 (1000)	Replace with oil change
▶ E	Oil tank vent hose	100 H	12 M	620 (1000)	Inspect routing, condition
■ E	Valve clearance	100 H	12 M	620 (1000)	Inspect; adjust

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

E Emission Control System Service (California)

■ Have an authorized Polaris dealer perform these services.

**MAINTENANCE AND LUBRICATION****Periodic Maintenance Chart**

	Item	Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Miles (Km)	
■ E	Fuel system	100 H	12 M	620 (1000)	Check for leaks at tank cap, lines, fuel valve, filter, pump, carburetor; replace lines every two years
■ E	Fuel filter	100 H	12 M	620 (1000)	Replace yearly
▶	Radiator (if applicable)	100 H	12 M	620 (1000)	Inspect; clean external surfaces
▶	Cooling hoses (if applicable)	100 H	12 M	620 (1000)	Inspect for leaks
▶	Engine mounts	100 H	12 M	620 (1000)	Inspect
	Exhaust muffler/ pipe	100 H	12 M	620 (1000)	Inspect
■ E	Spark plug	100 H	12 M	620 (1000)	Inspect; replace as needed
■ E	Ignition Timing	100 H	12 M	620 (1000)	Inspect
▶	Wiring	100 H	12 M	620 (1000)	Inspect for wear, routing, security; apply dielectric grease to connectors subjected to water, mud, etc.
■	Clutches (drive and driven)	100 H	12 M	620 (1000)	Inspect; clean; replace worn parts
■	Front wheel bearings	100 H	12 M	1000 (1600)	Inspect; replace as needed
■	Brake fluid	200 H	24 M	1240 (2000)	Change every two years
	Spark arrestor	300 H	36 M	1860 (3000)	Clean out
E	Idle speed	-			Adjust as needed
■	Toe adjustment	-			Inspect periodically; adjust when parts are replaced
▶ ■	Auxiliary brake	-			Inspect daily; adjust as needed
	Headlight aim	-			Adjust as needed

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

E Emission Control System Service (California)

■ Have an authorized Polaris dealer perform these services.



POLARIS LUBRICANTS, MAINTENANCE AND SERVICE PRODUCTS

Part No.	Description
Engine Lubricant	
2870791	Fogging Oil (12 oz. Aerosol)
2871098	Premium 2 Cycle Engine Oil (Quart) (12 Count)
2871281	Engine Oil (Quart) Premium 4 Synthetic 0W-40 (4-Cycle) (12 Count)
2871844	Engine Oil (Gallon) Premium 4 Synthetic 0W-40 (4-Cycle) (4 Count)
2871567	Engine Oil (16 Gallon) Premium 4 Synthetic 0W-40 (4-Cycle)
Gearcase / Transmission Lubricants	
2873602	Premium Synthetic AGL Gearcase Lube (12 oz. bottle) (12 Count)
2873603	Premium Synthetic AGL Gearcase Lube (1 Gal.) (4 Count)
2871653	Premium ATV Angle Drive Fluid (8 oz.) (12 Count)
2872276	Premium ATV Angle Drive Fluid (2.5 Gal) (2 Count)
2870465	Oil Pump for 1 Gallon Jug
2871654	Premium Demand Drive Hub Fluid (8 oz.) (12 Count)
2872277	Premium Demand Drive Hub Fluid (2.5 gal.) (2 Count)
Grease / Specialized Lubricants	
2871322	Premium All Season Grease (3 oz. cartridge) (24 Count)
2871423	Premium All Season Grease (14 oz. cartridge) (10 Count)
2871460	Starter Drive Grease (12 Count)
2871515	Premium U-Joint Lube (3 oz.) (24 Count)
2871551	Premium U-Joint Lube (14 oz.) (10 Count)
2871312	Grease Gun Kit
2871329	Dielectric Grease (Nyogel™)
Coolant	
2871323	60/40 Coolant (Gallon) (6 Count)
2871534	60/40 Coolant (Quart) (12 Count)

Part No.	Description
Additives / Sealants / Thread Locking Agents / Misc.	
2870585	Loctite™ Primer N, Aerosol, 25 g
2871956	Loctite™ Thread Sealant 565 (50 ml.) (6 Count)
2871949	Loctite™ Threadlock 242 (50 ml.) (10 Count)
2871950	Loctite™ Threadlock 242 (6 ml.) (12 Count)
2871951	Loctite™ Threadlock 262 (50 ml.) (10 Count)
2871952	Loctite™ Threadlock 262 (6 ml.) (12 Count)
2871953	Loctite™ Threadlock 271 (6 ml.) (12 Count)
2871954	Loctite™ Threadlock 271 (36 ml.) (6 Count)
2870584	Loctite™ 680-Retaining Compound (10 ml.)
2870587	Loctite™ 518 Gasket Eliminator / Flange Sealant (50 ml.) (10 Count)
2871326	Premium Carbon Clean (12 oz.) (12 Count)
2870652	Fuel Stabilizer (16 oz.) (12 Count)
2871957	Black RTV Silicone Sealer (3 oz. tube) (12 Count)
2871958	Black RTV Silicone Sealer (11 oz. cartridge) (12 Count)
2870990	DOT3 Brake Fluid (12 Count)
2871557	Crankcase Sealant, 3-Bond 1215 (5oz.)
2872893	Engine Degreaser (12oz.) (12 Count)

NOTE: The number count indicated by each part number in the table above indicates the number of units that are shipped with each order.

NOTE: Each item can be purchased separately at your local Polaris dealer.

POLARIS LUBRICANT SYMBOL IDENTIFICATION

 BRAKE	 AGL	 OW/40	 DHF	 ADF
Polaris DOT 3 Brake Fluid	Polaris Synthetic Gearcase Lube	Polaris Synthetic OW-40 Oil	Polaris Demand Drive Hub Fluid	Polaris ATV Angle Drive Fluid
 U-Joint		 GREASE		
Polaris U-Joint Lube		Polaris All Season Grease		



POLARIS LUBRICANTS/FLUIDS FOR SPORTSMAN MODELS

Pure Polaris Lubricants and Maintenance Kits can be purchased at your local Polaris dealer.

Premium Fuel Stabilizer



- Significantly reduces gum and varnish formation
- Formulated for 2-cycle and 4-cycle Polaris engines

2870652 16 oz.
12 per case

2872280 2.5 gallon
2 per case

Premium Antifreeze



- Formulated specifically for Polaris ATV high-performance cooling systems
- Protects against corrosion, gel formation and hard water deposits

2871534 Quart

2871323 Gallon



Demand Drive Hub Fluid

- Ensures positive engagement, release and corrosion protection of Polaris ATV Demand Drive Hubs

2871654 8 oz. Bottle
12 per case

2872277 2.5 Gallon
2 per case

Premium-4 Synthetic 4 Cycle Oil (0W-40)



- Extremely shear-stable for extended lubricant life at high RPM
- Durable additives keep engine components clean and running efficiently
- Excellent high temperature operation protection
- Protects during cold temperature start-up

2871281 Quart 12 per case

2871844 Gallon 4 per case

2871567 16 Gallon

2871818 55 Gallon



ATV Angle Drive Fluid

- Extreme pressure, anti-wear, high-viscosity film lubrication for maximum protection of Polaris ATV gear drive

2871653 8 oz. Bottle
12 per case

2872276 2.5 Gallon
2 per case



Engine Storage Kit

- This kit includes everything you need for proper off-season storage of your ATV:
 - 12 oz. of Polaris Rust Preventative Fogging Oil (aerosol)
 - 12 oz. of Polaris Fuel Stabilizer
 - 12 oz. of Polaris Multi-Purpose Lubricant (aerosol)
 - 3 oz. of All Season Grease

2859064

Carbon Clean Fuel Treatment



- Patented additive displaces moisture
- Excellent fuel stabilizer for storage
- Formulated for 2-cycle and 4-cycle Polaris engines
- 1 ounce treats 1 gallon of fuel

2871326 12 oz.
12 per case



Revival Detailing Kit

- Includes: Restore Swirl and Scuff Eliminator, Reflect Professional Final Finish Wax, Renew Vinyl and Rubber Protectant, foam applicator and buffing cloth
- Products also available separately

2872195 Revival/Detailing Kit

2872192 Restore Swirl and Scuff Eliminator **12 oz.**

2872193 Reflect Professional Final Wax System **12 oz.**

2872194 Renew Vinyl and Rubber Protectant **12 oz.**



Grease Gun K

- All steel construction
- Custom hose and fittings
- Includes 3 oz. all-season grease cartridge
- Complete with standard zerk fitting, needle zerk fitting and flush nipple fitting adapters

2871312 4 per case

ATV Maintenance Kit

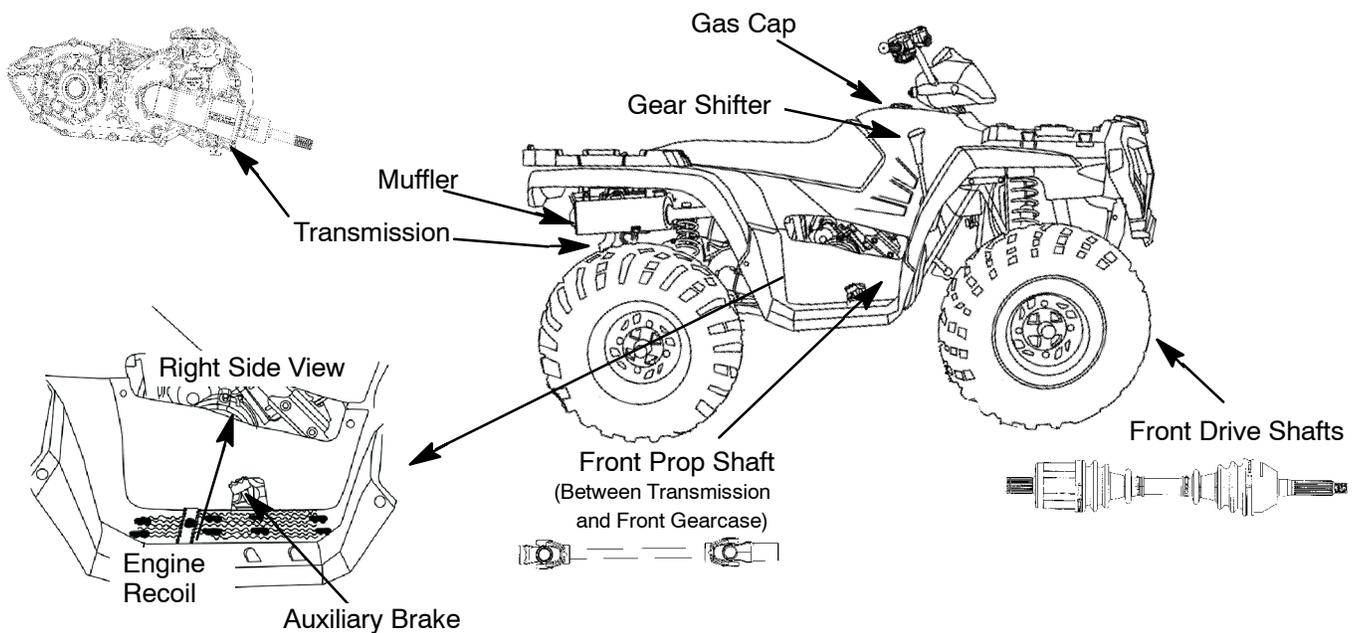
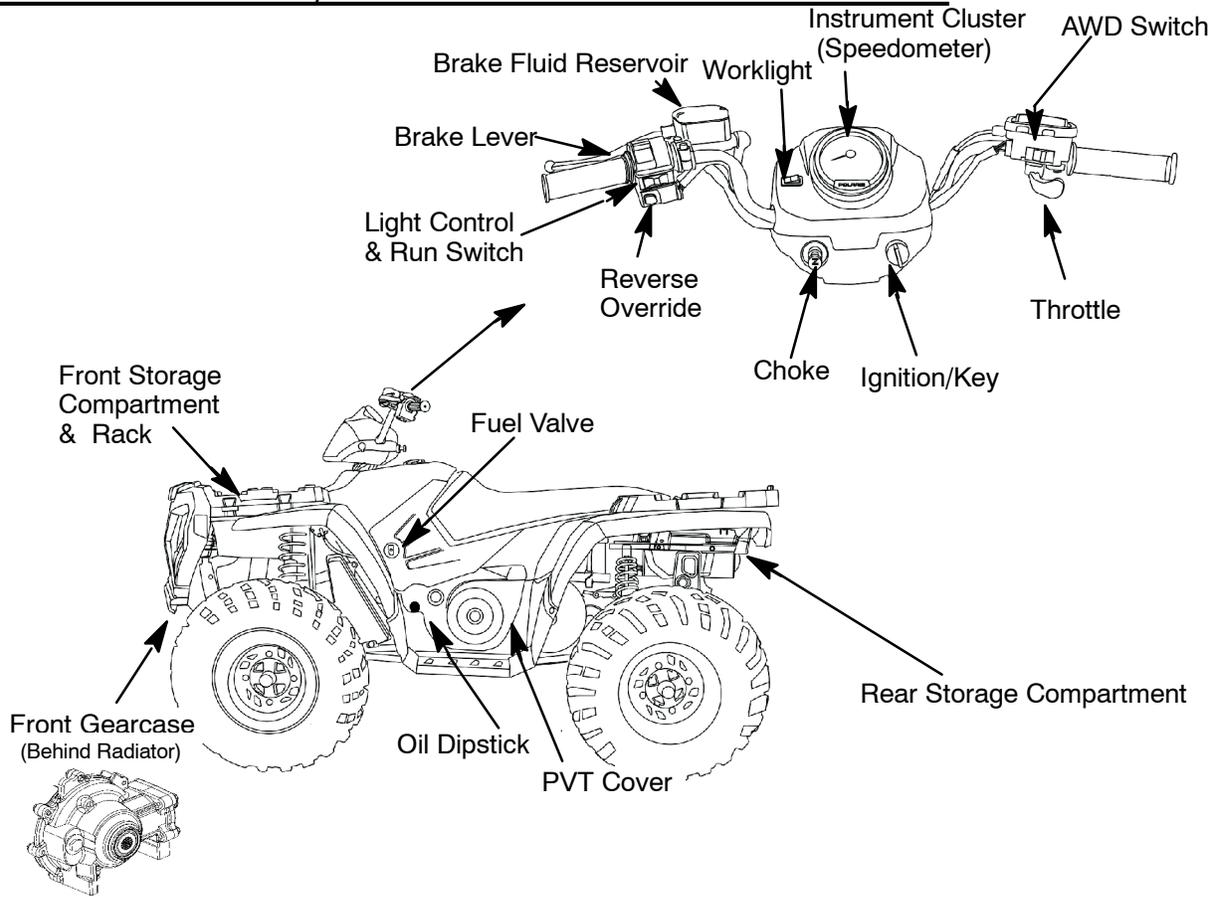
- This kit includes everything you need to change your drive train fluids and keep your fuel system clean:
 - Quart of AGL Oil
 - 12 oz. of Carbon Clean
 - 8 oz. of Angle Drive Fluid
 - 8 oz. of Demand Drive Hub Fluid
 - 3 oz. of All Season Grease

2859062





SPORTSMAN 400/500 COMPONENT LOCATIONS





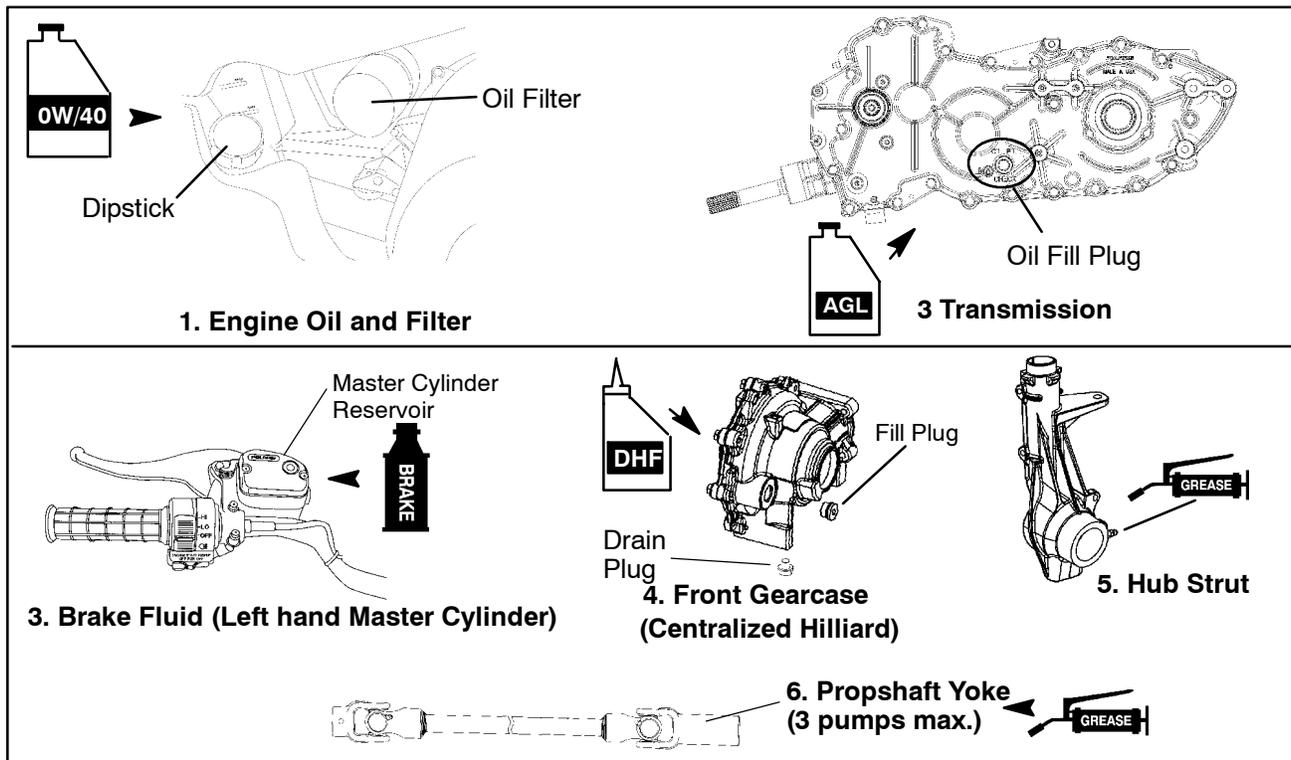
LUBRICATION

Ill. #	Item	Lube Required	Method	Frequency*
1	Engine Oil	Polaris 0W-40 Synthetic (PN 2871567)	Add oil to proper level, see procedure.	Change after 1st month, 6 months or 100 hours thereafter; Change more often (25-50 hours) in extremely dirty conditions, or short trip cold weather operation.
2	Transmission	AGL Gearcase Lubricant (PN 2873602)	Add lube to bottom of fill plug hole threads.	Change annually [2]
3	Brake Fluid	Polaris DOT 3 Brake Fluid (PN 2870990)	Fill master cylinder reservoir to indicated level inside reservoir.	As required. Change fluid every 2 years.
4	Front Gearcase	Polaris Demand Drive Hub Fluid (PN 2871654)	Add oil to proper level, see procedure.	Change annually [2]
5	Ball Joints	All Purpose Grease	Locate fittings and grease - 3 pumps maximum	Annually [2]
6	Propshaft Yoke	Premium U-Joint Grease [3] (PN 2871551)	Locate fittings and grease - 3 pumps maximum	Annually [2]

NOTE: Refer to Page 2.6 for the Polaris Lubricant Identification table.

* More often under severe use, such as operated in water or under severe loads.

- [1] Semi-annually or 50 hours of operation (refer to Maintenance Schedule for additional information)
More often under severe conditions (operating in water or hauling heavy loads)
- [2] Annually or 100 hours of operation (refer to Maintenance Schedule for additional information)
More often under severe conditions (operating in water or hauling heavy loads)
- [3] Grease conforming to NLGI No. 2, such as Polaris Premium All Season Grease, Conoco Superlube M or Mobilegrease Special





PRE-RIDE / DAILY INSPECTION

Perform the following pre-ride inspection daily, and when servicing the vehicle at each scheduled maintenance.

- Tires - check condition and pressures
- Fuel and oil tanks - fill both tanks to their proper level; Do not overfill oil tank
- All brakes - check operation and adjustment (includes auxiliary brake)
- Throttle - check for free operation
- Headlight/Taillight/Brakelight - check operation of all indicator lights and switches
- Engine stop switch - check for proper function
- Wheels - check for loose wheel nuts and axle nuts; check to be sure axle nuts are secured by cotter pins
- Air cleaner element - check for dirt or water; clean or replace
- Steering - check for free operation, noting any unusual looseness in any area
- Loose parts - visually inspect vehicle for any damaged or loose nuts, bolts or fasteners
- Engine coolant - check for proper level at the recovery bottle

FRONT GEARCASE LUBRICATION

The gearcase lubricant level should be checked and changed in accordance with the maintenance schedule.

- Be sure vehicle is level before proceeding and in PARK.
- Check vent hose to be sure it is routed properly and unobstructed.
- The correct front gearcase lubricant to use is Polaris Premium Demand Drive Hub Fluid.

FRONT GEARCASE SPECIFICATIONS

Specified Lubricant:

Premium Demand Drive Hub Fluid
(PN 2871654)

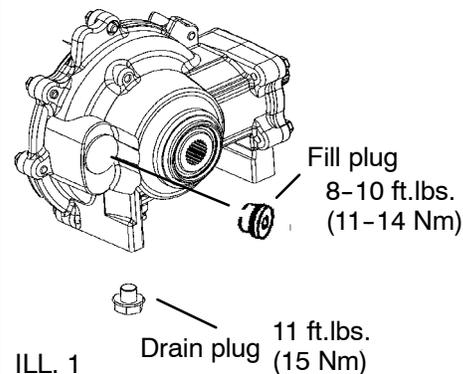
Capacity:5.0 Oz. (150 ml.)

Fill Plug Torque: 8-10 ft.lbs. (11-14 Nm)

Drain Plug Torque: 11 ft. lbs. (15 Nm)

FRONT GEARCASE

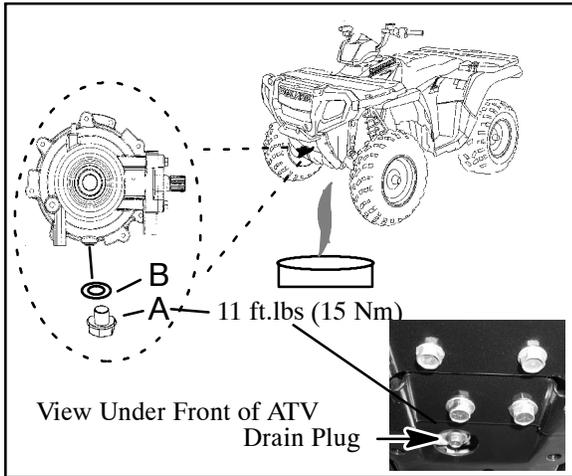
Make sure vent is unobstructed



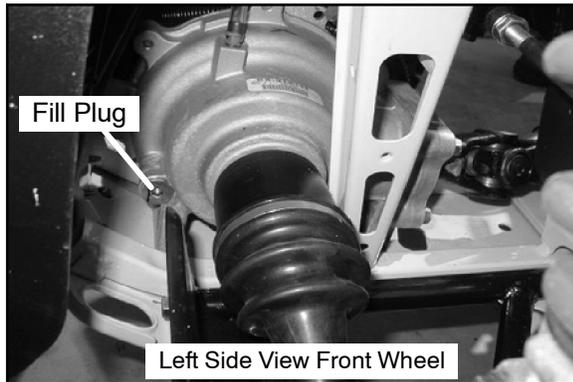
To check the lubricant level:

The front lubricant level *cannot be checked* with a dipstick. The gearcase must be drained and re-filled with the proper amount of lubricant or be filled to the bottom of the fill plug hole threads. Refer to procedures.

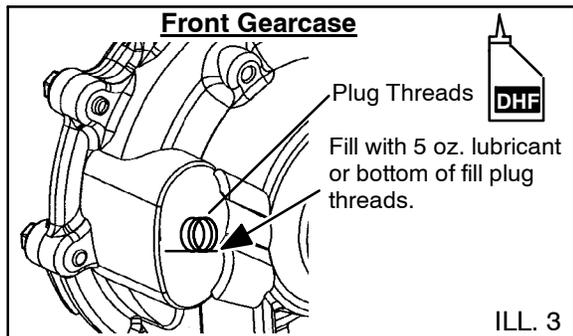
To change gearcase lubricant:



1. Remove gearcase drain plug (A) (11 mm) located on the bottom of the gearcase and drain oil. (The drain plug is accessible through the skid plate.) Catch and discard used oil properly.
2. Clean and reinstall drain plug (A) using a new sealing washer toque to 11 ft.lbs. (15 Nm).



3. Remove fill plug (8 mm hex).
4. Fill with the recommended fluid amount (5 oz.) or to the bottom of the fill plug hole threads. (See ILL. 3).



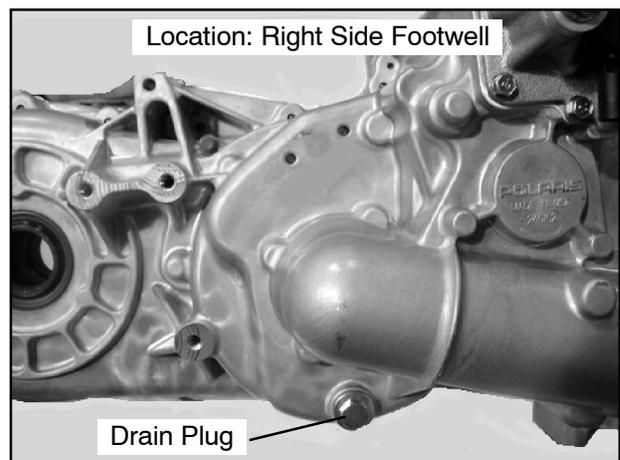
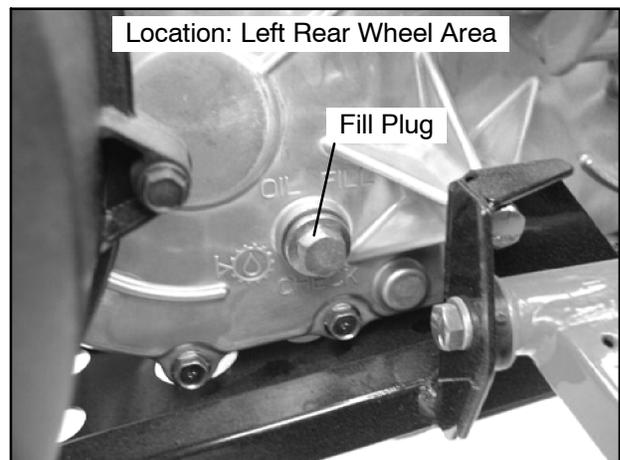
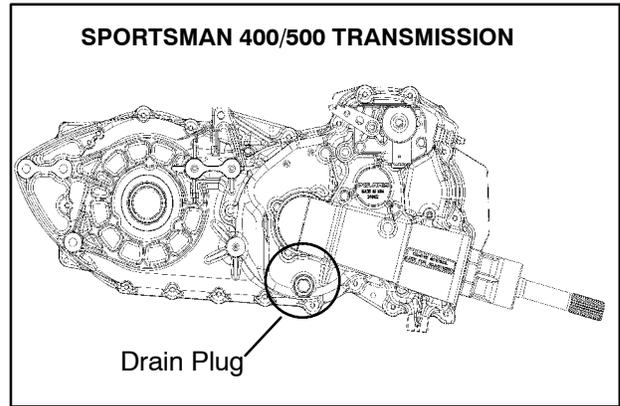
5. Install fill plug and check for leaks.

Sample of manual. Download All 309 pages at:

<https://www.arepairmanual.com/downloads/2005-polaris-sportsman-400-500-motorcycle-service-repair-workshop-manual/>

TRANSMISSION LUBRICATION

The transmission lubricant level should be checked and changed in accordance with the maintenance schedule.



- Be sure vehicle is level before proceeding.
- Check vent hose to be sure it is routed properly and unobstructed.