POLARIS
INDUSTRIES INC.

ATV AND LIGHT UTILITY VEHICLE SERVICE MANUAL

Foreword

This manual is designed primarily for use by ATV service technicians in a properly equipped shop. Since a certain knowledge of mechanical theory, tool use, and shop procedures is necessary to perform the service work safely, all operations should be performed by qualified service personnel only. In order to perform the work efficiently and prevent costly errors, the technician should read the text and be familiar with procedures before starting the work. 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 1996-1998 model Polaris ATVs and Light Utility Vehicles. The section index tabs enable the user to quickly locate the section desired. In addition, a table of contents is placed at the beginning of each section for location of specific page numbers and service information. Keep this manual available for reference in the shop area.

To keep this manual current it is important that it is updated yearly with new model information and specifications.

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

Comments or suggestions about this manual may be directed to: Polaris Industries Inc., Service Publications Supervisor, 1225 Highway 169 North, Minneapolis, Minnesota 55441-5078.

1996-1998 Service Manual Volume II Part No. 9913680
1998 Service Manual Update Part No. 9914752

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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, passenger, bystander or person inspecting or servicing the ATV.

⚠ WARNING

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

CAUTION:

A CAUTION indicates special precautions that must be taken to avoid minor 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:

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Ammco, Registered Trademark of Ammco Tools, Inc.
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CHAPTER 1
GENERAL INFORMATION

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Engine Serial Number Location

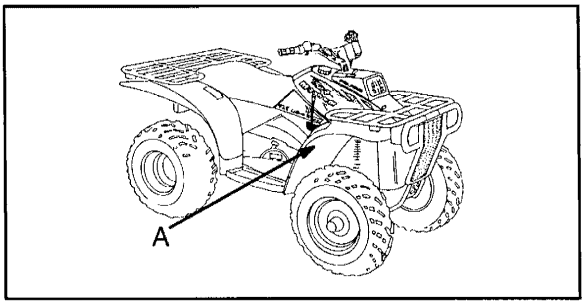
Whenever corresponding about an engine, be sure to refer to the engine model number and serial number. This information can be found on the sticker applied to the manual starter recoil housing. An additional number is stamped in one of the following locations:

- 4 stroke models - center top of crankcase beneath the cylinder coolant elbow
- 2 stroke liquid cooled models - center top of crankcase beneath the carburetor mounting flange
- 2 stroke air cooled models - top of crankcase near right side of cylinder

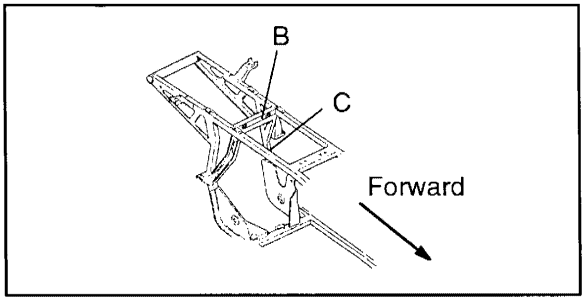
Machine Model Number and Serial Number Location

The machine model number and serial number are important for vehicle identification. The machine model number is located on the frame on the left side of the vehicle near the oil tank. Depending on model, the Serial number will be stamped into the frame in one of the following locations:

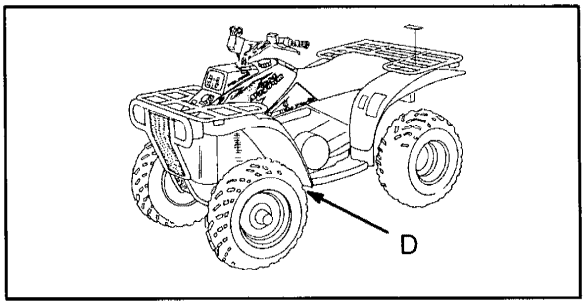
- On the right side of the vehicle in front of the shift selector box (A). (1996)
- Under the seat on the upper shock mount cross member (B) (1996)
- On the right hand frame rail (C) near the air box. (1997)
- On the left hand lower frame rail (D) near the rear A-arm mount. (1998-Current)



VIN Location - 1996



VIN Location - 1996/1997



VIN Location - 1998-Current

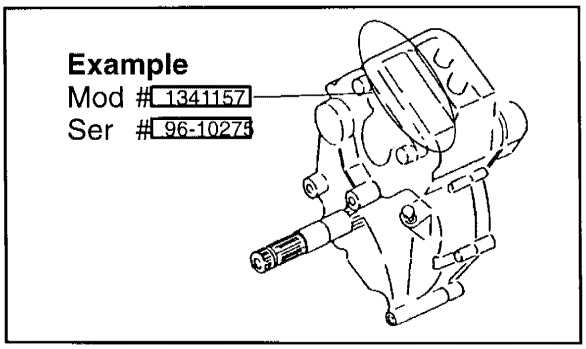
Transmission I.D. Number Location

Transmission model and serial numbers are located on top of the transmission case below the shifting bellcranks.

Carburetor I.D. Number Location

The carburetor I.D. number is in one of the following locations:

- 4 stroke models - right side center of the carburetor body
- 2 stroke models - right side of carburetor body near choke plunger boss

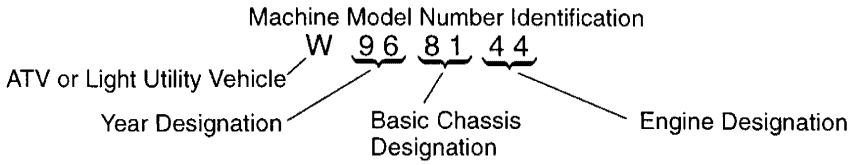


Transmission I.D. Numbers

1996 Model Identification

The machine model and serial number must be used with any correspondence regarding service or repair.

1996 MODEL NUMBERS



1996 Engine Designation Numbers

27 250
30 300
40 400
44 425
50 500

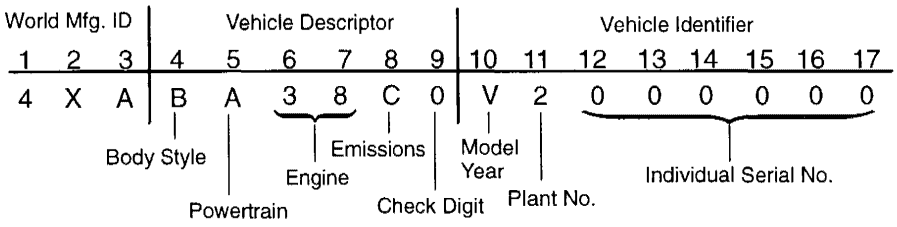
1996 Chassis Designation Numbers

75 ..... Magnum 2x4
78 ..... Trail Blazer / Scrambler
80 ..... Sportsman 4x4
81 ..... Magnum 4x4
85 ..... Trail Boss / Sport
87 ..... 400 6x6 / Magnum 6x6
91 ..... Xplorer 300 / Xplorer 400
92 ..... Sportsman 500
95 ..... Xpress 300 / Xpress 400

Vehicle Identification Number (1997 and Later Model Years)

1997 to Current ATVs and Light Utility Vehicles have a 17 digit Vehicle Identification Number (VIN). The VIN is organized as follows: Digits 1-3: World Manufacturer Identifier. For Polaris ATVs, this is 4XA. Digits 4-9: Vehicle Descriptor Section. Digits 10-17: Vehicle Indicator Section. Digits 4-8 of the VIN identify the body style, drive type, engine type, and emissions equipment. The VIN number and the model number must be used with any correspondence regarding service or repair.

1997-Current VIN Number



Vehicle Identification Number / Model Number Key

Body Style	Powertrain	Engine	Emissions	Options
A=Gen II	A=2x4 chain	25=EC25PF(250cc)	A=Approved by CARB*	A=Std
B=Gen III	C=4x4 chain	28=EC28PF(300 cc)	C=Non CARB* Approved	B=1st Color Option
C=Gen IV	D=4x4 shaft	38=EC38PL(400 cc)	D=Norway	
	E=6x6 chain	42=EH42PL (425 cc)	E=Sweden	
		50=EH50PL (500 cc)		

*CARB = California Air Resources Board

Year / Letter Identification

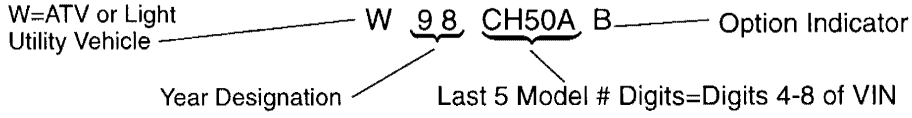
The tenth digit of a 17 digit VIN is the model year of the vehicle. Example: W = 1998; X = 1999 etc. Refer to the listing below.

V 1997
W 1998
X 1999
Y 2000

1997 to Current Model Numbers

The model year is also listed in the model number. The last 4 digits in the model number correspond to digits 4 through 8 of the Vehicle Identification Number (VIN).

Machine Model Number Identification



1996 Publication Numbers

Model	Model No.	Owner's Manual PN	Parts Manual PN	1996 Parts Micro Fiche Set PN
Trail Blazer	W967827	9913584	9913586	9913433
Trail Boss	W968527	9913506	9913588	
Xplorer 300	W969130	9913332	9913590	
Xpress 300	W969530	9913327	9913592	
Sport	W968540	9913584	9913586	
Scrambler 4x4	W967840	9913519	9913582	
Xpress 400	W969540	9913327	9913592	
Xplorer 400	W969140	9913511	9913598	
Sportsman 4x4	W968040	9913414	9913594	
400 6x6	W968740	9913516	9913596	
Magnum 2x4	W967544	9913512	9913603	
Magnum 4x4	W968144	9913512	9913605	
Magnum 6x6	W968744	9913522	9913607	
Sportsman 500	W969244	9913269	9913609	

1997 Publication Numbers

Model	Model No.	Owner's Manual	Parts Manual	1997Parts Micro Fiche Set PN
Trail Blazer	W97BA25C	9914011	9914012	9914645
Trail Boss	W97AA25C	9914056	9914057	
Xplorer 300	W97CC28C	9913980	9913981	
Xpress 300	W97CA28C	9913959	9913960	
Sport 400	W97BA38C	9914011	9914012	
Scrambler 4x4	W97BC38C	9913988	9913989	
Xpress 400	W97CA38C	9913959	9913960	
Xplorer 400	W97CC38C	9913974	9913975	
Sportsman 4x4	W97AC38C	9913966	9913967	
400 6x6	W97AE38A	9913917	9914081	
Magnum 2x4	W97AA42A	9914069	9914070	
Magnum 4x4	W97AC42A	9914069	9914083	
Magnum 6x6	W97AE42A	9914074	9914075	
Sportsman 500	W97CH50A	9913998	9913999	
Xplorer 500	W97CD50A	9914134	9914135	
Scrambler 500	W97BC50A	9913988	9914307	

1998 Publication Numbers

Model	Model No.	Owner's Manual	Owner's Manual Supplement	Parts Manual	Parts Microfiche
Trail Boss	W98AA25C	9914659	9914530	9914531	9914532
Trail Blazer	W98BA25C	9914659	9914530	9914546	9914547
Xpress 300	W98CA28C	9914659	9914525	9914536	9914537
Xplorer 300	W98CC28C	9914659	9914525	9914526	9914527
Sport 400	W98BA38C	9914659	9914545	9914723	9914724
Scrambler 400	W98BC38C	9914659	9914722	9914725	9914726
Xplorer 400	W98CC38C	9914659	9914540	9914541	9914542
Magnum 2x4	W98AA42A	9914659	9914520	9914552	9914553
Magnum 4x4	W98AC42A	9914659	9914721	9914521	9914522
Scrambler 500	W98BC50A	9914659	9914498	9914499	9914501
Sportsman 500	W98CH50A(&AB)	9914659	9914570	9914571	9914572
Big Boss 500 6x6	W98AE50A	9914720	N/A	9914639	9914640

DESCRIPTION	PART NUMBER
1995-1996 Magnum and Sportsman 500 Service Manual	9913681
1996 ATV Service Manual Volume II	9913680
1998 ATV Service Manual Vol. II Update	9914752

SERVICE TRAINING VIDEOS		
VIDEO TITLE	**PART NUMBER**	**DESCRIPTION**
Magnum 4-Stroke Introduction	9912996	Includes 4 Stroke theory of operation, engine removal, disassembly, and assembly techniques, along with and general tech-tips.
Ignition System Diagnostics	9913533	Describes all current Polaris ignition systems. Provides working knowledge of ignition system theory and diagnostics.
Charging System Diagnostics	9913278	Describes all current Polaris charging systems. Provides working knowledge of charging system theory and diagnostics.
Polaris Variable Transmissions (PVT)	9913987	Theory, disassembly, assembly and troubleshooting of the Polaris PVT system.
Fuels and Fuel Delivery	9914393	Describes fuel properties including octane and vapor pressure; fuel mixture and burn characteristics; VM and CV carburetor theory and adjustments.

Service/Information Bulletins - By Bulletin Number

ATV-94-08	1995 Scrambler - Oil line may contact exhaust head pipe
ATV-94-09	1994 400 ATVs and 1995 Xplorer, Sportsman, and 400 6X6 - Poor fuel economy and hesitation
ATV-94-10	1995 Scrambler - Some brake calipers may rub on inside of tire rim
ATV-95-01	1995 Scrambler - Loose clamp on carburetor boot
ATV-95-02	1995 Xplorer 4x4, Sportsman - Front hub oil leak
ATV-95-03	1995 Xplorer 4x4 - Incorrect speedometer angle drive
ATV-95-04	1995 Scrambler - Headlight wiring reversed
ATV-95-05	1995 Magnum 2x4, Magnum 4x4 - Engine oil in air box
ATV-95-06	1995 Scrambler 4x4 - Revised carburetor jetting
ATV-95-07	1995 Models Equipped with Auxiliary Brake - Brake inspection and adjustment procedure
ATV-95-08	1995 Scrambler 4x4 - Missing lower front bumper bolts
ATV-95-09	1995 Scrambler 4x4 - Incorrect sprocket guard spacer
ATV-95-10	1995 Scrambler 4x4 - Front brake lines may rub against CV joint boot
ATV-95-11	1995 Magnum 2x4, Magnum 4x4 - Oil tank vent fitting restricted
ATV-95-12	All 1995 Models - Transmission lubricant expelled through vent line
ATV-95-13	All 1995 Models (exc. Scrambler, Xplorer, 6x6 - Aux. brake arm may contact right footrest
ATV-95-14	All 1995 All Wheel Drive Models - Faulty Gear Selector Switches
ATV-95-15	1995 Scrambler - Headlight Bulb May Fall Out Of Socket
ATV-95-16	1995 Magnum 2x4 and 4x4 - Rich Condition/Plug Fouling Checklist
ATV-95-17	All 1996 - Synthetic Chaincase Lubricant Recommended for all 1996 Models
ATV-95-18	1996 Sport - Loose Headlight Mounting Screws
ATV-95-19	1995 Xplorer, 400 2x4, Sport, Scrambler, 6x6 - Idle Speed Adjustment on 1995 400 cc ATVs
ATV-95-20	1996 Scrambler, Sport 400L - Incorrect Carburetor Jetting Chart in Owner's Manual
ATV-95-21	1996 Scrambler - Water May Freeze in Oil Pump Housing
ATV-95-22	1996 Xplorer 400L, Xpress 300, Sportsman 500 - Plow Blade Mounting Kit Applications
ATV-96-01	1996 Trail Boss; Magnum 4x4 - Water Leaks at Inner PVT Cover
ATV-96-02	1996 Sportsman 500 - Oil Tank Vent Hose Routing
ATV-96-03	1996 Sportsman 500 - Loose Rear Drive Shaft Retaining Bolts
ATV-96-04	1996 Sportsman 500; Magnum 2x4; 4x4; 6x6 - Improved Seat Fit For 1996 ATVs
ATV-96-05	1996 Gen IV models with rear rack extender kit. Flag mount not functional w/ rack extender.
ATV-96-06	1996 Sport, Scrambler - Brake Line Retention Strap May Be Missing
ATV-96-07	1996 Sport, Scrambler - Exhaust Muffler Restricted
ATV-96-08	1996 All Except Tr. Blazer, Tr. Boss - Cooling Fan Motors May Be Damaged By Water.
ATV-96-09	1996 Sportsman 500 Hose Clamp On Coolant Line May Contact Fuel Filter
ATV-96-10	1996 Sportsman 500 - Engine Overheating due to fan placement and debris in the shroud
ATV-96-11	1995 / 1996 4 Stroke Models - Moisture May Freeze In Oil Tank Vent Line
ATV-96-12	1996 / 1997 Xlorer and Xpress 300s - Revised Oil Pump Bleeding Procedure
ATV-96-13	1996 Sportsman 500; 1997 Sportsman and Xplorer 500 - Rear Brake Noise / Floating Disc Kit
ATV-96-14	1997 Magnum 6x6 - Fuel Tank Vent Line Routed Incorrectly
ATV-96-15	1997 Sportsman 500 - Pressure Relief Slit Missing Form Oil Tank Vent Line
ATV-96-16	1997 Scrambler 400 / 1997 Scrambler 500 - Brake Lines May Contact CV Boot or Clamp
ATV-97-01	1995 and 1996 4 Stroke Models - Oil Tank Breather Modification For Cold Temperatures
ATV-97-02	1997 Sportsman and Xplorer 500 - Rear Brake Disc Hub Bolt Torque Procedure
ATV-97-03	1997 Sportsman and Xplorer 500 - Revised Serial Number Range For ATV-97-02

Bulletin Index - 1996 By Model

1996 Model	Bulletin #	Type	Notes
ALL 1996 MODELS	ATV-96-11	Information	Moisture May Freeze In Oil Tank Vent Line
1996 Sportsman 500	ATV-96-13	Information	Rear Brake Noise / Floating Disc Kit
	ATV-96-10	Service	Engine Overheating
	ATV-96-09	Information	Hose Clamp May Contact Fuel Filter
	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-96-05	Service	Flag Mount Not Functional
	ATV-96-04	Information	Poor Seat Fit
	ATV-96-03	Information	Loose Rear Drive Shaft Retaining Bolts
	ATV-96-02	Service	Oil Tank Vent Hose Routing
	ATV-95-22	Information	Plow Blade Mounting Kit Applications
1996 Magnum 6x6	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-96-04	Information	Poor Seat Fit
1996 Magnum 4x4	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-96-04	Information	Poor Seat Fit
	ATV-96-01	Service	Water Leaks at Inner PVT Cover
	ATV-95-17	Information	Synthetic Chaincase Lubricant Recommended
1996 Magnum 2x4	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-96-04	Information	Poor Seat Fit
1996 400 6x6	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-95-17	Information	Synthetic Chaincase Lubricant Recommended
1996 Sportsman 4x4	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-95-17	Information	Synthetic Chaincase Lubricant Recommended
1996 Scrambler	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-96-07	Information	Exhaust Muffler Restriction
	ATV-96-06	Service	Brake Line Retention Strap May Be Missing
	ATV-95-21	Information	Water May Freeze In Oil Pump Housing
	ATV-95-20	Information	Incorrect Jetting Chart In Owners Manual
1996 400 Xplorer	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-95-22	Information	Plow Blade Mounting Kit Applications
	ATV-95-17	Information	Synthetic Chaincase Lubricant Recommended
1996 400 Xpress	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
1996 Sport	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-96-07	Information	Exhaust Muffler Restriction
	ATV-96-06	Service	Brake Line Retention Strap May Be Missing
	ATV-95-20	Information	Incorrect Jetting Chart In Owners Manual
	ATV-95-18	Service	Loose Headlight Mounting Screws
1996 300 Xplorer	ATV-96-12	Service	Revised Oil Pump Adjustment Procedure
	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-95-17	Information	Synthetic Chaincase Lubricant Recommended
1996 300 Xpress	ATV-96-12	Service	Revised Oil Pump Adjustment Procedure
	ATV-96-08	Service	Cooling Fan Motor May Be Damaged By Water
	ATV-95-22	Information	Plow Blade Mounting Kit Applications
1996 Trail Boss	ATV-96-01	Service	Water Leaks at Inner PVT Cover
1996 Trail Blazer	ATV-95-18	Service	Loose Headlight Mounting Screws

1997 Model	Bulletin #	Type	Notes
All 1997 Models			
Sportsman 500	ATV-97-03	Service	Loose Pins And Locking Hub For Rear Disc Brake Revised Serial Number Range For ATV-97-02
	ATV-97-02	Service	Rear Brake Disc Hub Bolt Torque Procedure/Hub Kit
	ATV-96-15	Service	Pressure Relief Slit Missing From Oil Tank Vent Line
	ATV-96-13	Service	Rear Brake Noise
Xplorer 500	ATV-97-03	Service	Loose Pins And Locking Hub For Rear Disc Brake Revised Serial Number Range For ATV-97-02
	ATV-97-02	Service	Rear Brake Disc Hub Bolt Torque Procedure/Hub Kit
	ATV-96-13	Service	Rear Brake Noise
Scrambler 500	ATV-96-16	Service	Brake Line May Contact CV Boot Or Clamp
Magnum 6x6	ATV-96-14	Service	Fuel Tank Vent Line Routing
Magnum 4x4			
Magnum 2x4			
Big Boss 6x6 400L			
Sportsman 400L			
Xplorer 400L			
Xpress 400L			
Scrambler 400L	ATV-96-16	Service	Brake Line May Contact CV Boot Or Clamp
Sport 400L			
Xplorer 300	ATV-96-12	Service	Revised Oil Pump Adjustment Procedure
Xpress 300	ATV-96-12	Service	Revised Oil Pump Adjustment Procedure
Trail Blazer ES			
Trail Boss 250			

1998 Model	Bulletin #	Type	Notes
No bulletins issued as of 4/24/1998			
All 1998 Models			
Big Boss 500 6x6			
Sportsman 500			
Scrambler 500			
Magnum 4x4			
Magnum 2x4			
Xplorer 400			
Scrambler 400			
Sport 400			
Xplorer 300			
Xpress 300			
Trail Blazer			
Trail Boss			

Model	Item	Color	Raw Material No.	PPG Ditzler No.
400L	Springs	Purple Velvet	8520160	51467
	Rims	Brushed Aluminum	N/A	N/A
Trail Blazer	Springs	Fire Red	8520149	72060
	Rims	Bright White	8520153	2185
Trail Boss	Springs	Aqua Marine	8520159	46975
	Rims	Bright White	8520153	2185
	Rack	Aqua Marine	8520159	46975
Scrambler	Springs	Lavender	8520157	N/A
	Rims	Bright White	8520153	2185
Xpress 300	Springs	Bonnie Blue	8520148	12908
	Rims	Brushed Aluminum	N/A	N/A
Xpress 400	Springs	Blue Green	8520202	N/A
	Rims	Brushed Aluminum	N/A	N/A
Xplorer 300	Springs	Eddie B. Green	8520150	44931
	Rims	Brushed Aluminum	N/A	N/A
Xplorer	Springs	Fire Red	8520149	72060
	Rims	Brushed Aluminum	N/A	N/A
Magnum 2x4	Springs	Eddie B. Green	8520150	44931
	Rims	Brushed Aluminum	N/A	N/A
	Racks	Steel Gray	8520151	N/A
Magnum 4x4	Springs	Bonnie Blue	8520148	12908
	Rims	Brushed Aluminum	N/A	N/A
	Racks	Bonnie Blue	8520148	12908
Sportsman 500	Springs	Black	8520147	9440
	Rims	Black	8520147	9440
	Racks	Black	8520147	9440
Magnum 6x6	Springs	Eddie B. Green	8520150	44931
	Rims	Brushed Aluminum	N/A	N/A
	Rack	Eddie B. Green	8520150	44931
	Box	Eddie B. Green	8520150	44931
400 6x6	Springs	Eddie B. Green	8520150	44931
	Rims	Brushed Aluminum	N/A	N/A
	Rack	Eddie B. Green	8520150	44931
	Box	Eddie B. Green	8520150	44931

Order direct from Midwest Industrial Coatings (612-934-8252). Mix as directed.

1997 Paint Codes

MODEL	PAINTED PART	COLOR DESCRIPTION	DITZLER NUMBER	POLARIS NUMBER
Trail Blazer	Springs	Fire Red	72060	8520149
	Rims	Bright White	2185	8520153
Trail Boss	Springs	Aqua Marine	46975	8520159
	Rims	Bright White	2185	8520153
	Rack	Aqua Marine	46975	8520159
Sport	Springs	Purple Velvet	51467	8520160
	Rims	Brushed Aluminum	N/A	N/A
Xpress 300	Springs	Bonnie Blue	12908	8520148
	Rims	Brushed Aluminum	N/A	N/A
Xpress 400	Springs	Blue-green	N/A	8520202
	Rims	Brushed Aluminum	N/A	N/A
Xplorer 300	Springs	Eddie Bauer Green	44931	8520150
	Rims	Brushed Aluminum	N/A	N/A
Xplorer 400	Springs	Eddie Bauer Green	44931	8520150
	Rims	Brushed Aluminum	N/A	N/A
Xplorer 500	Springs	Screamin' Yellow	N/A	8520241
	Rims	Brushed Aluminum	N/A	N/A
Scrambler 4x4	Springs	Lavender	N/A	8520157
	Rims	Bright White	2185	8520153
Scrambler 500	Springs	Screamin' Yellow	N/A	8520241
	Rims	Brushed Aluminum	N/A	N/A
Sportsman 4x4	Springs	Black	9440	8520147
	Rims	Black	9440	8520147
	Rack	Black	9440	8520147
Sportsman 500	Springs	Black	9440	8520147
	Rims	Black	9440	8520147
400 6x6	Springs	Eddie Bauer Green	44931	8520150
	Rims	Brushed Aluminum	N/A	N/A
	Rack	Eddie Bauer Green	44931	8520150
	Box	Eddie Bauer Green	44931	8520150
Magnum 2x4	Springs	Fire Red	72060	8520149
	Rims	Brushed Aluminum	N/A	N/A
	Rack	Black	9440	8520147
Magnum 4x4	Springs	Eddie Bauer Green	44931	8520150
	Rims	Brushed Aluminum	N/A	N/A
	Rack	Eddie Bauer Green	44931	8520150
Magnum 6x6	Springs	Eddie Bauer Green	44931	8520150
	Rims	Brushed Aluminum	N/A	N/A
	Rack	Eddie Bauer Green	44931	8520150
	Box	Eddie Bauer Green	44931	8520150
Big Boss 6x6	Springs	Eddie Bauer Green	44931	8520150
	Rims	Brushed Aluminum	N/A	N/A
	Rack	Eddie Bauer Green	44931	8520150
	Box	Eddie Bauer Green	44931	8520150

1998 Paint Codes

Model	Item	Color	Raw Material No.	PPG Ditzler No.
Big Boss 500 6X6	Springs	Eddie B Green	8520150 (P195)	44931
	Rims	Aluminum	(P117)	
Sportsman 500 (Opt. 1)	Springs	Black	8520147 (P067)	9440
	Rims	Black	8520147 (P067)	9440
Sportsman 500 (Opt. 2)	Springs	Bonnie Blue	8520148 (P157)	12908
	Rims	Aluminum	(P117)	
Scrambler 500	Springs	Black	8520147 (P067)	9440
	Rims	Aluminum	(P117)	
Magnum 4X4	Springs	Fire Red	8520149 (P093)	72060
	Rims	Aluminum	(P117)	
	Racks	Eddie B. Green	8520150 (P195)	44931
Magnum 2X4	Springs	Black	8520147 (P067)	9440
	Rims	Aluminum	(P117)	
	Racks	Black	8520147 (P067)	9440
Xplorer 400L	Springs	Burnished Brown	P218	
	Rims	Aluminum	(P117)	
Scrambler 400	Springs	Fire Red	8520149 (P093)	72060
	Rims	Bright White	8520153 (P133)	2185
Sport 400L	Springs	Purple Velvet	8520160 (P194)	51467
	Rims	Bright White	8520153 (P133)	2185
Xplorer 300	Springs	Fire Red	8520149 (P093)	72060
	Rims	Aluminum	(P117)	
Xpress 300	Springs	Bonnie Blue	8520148 (P157)	12908
	Rims	Aluminum	(P117)	
Trail Blazer	Springs	Fire Red	8520149	72060
	Rims	Bright White	8520153 (P133)	2185
Trail Boss	Springs	Fire Red	8520149 (P093)	72060
	Rims	Bright White	8520153 (P133)	2185
	Rack(s)	Fire Red	8520149 (P093)	72060

Order direct from Midwest Industrial Coatings (612-934-8252). Mix as directed.

Frames (Medium Black) P067 / 8520147 / Ditzler 9440

1997 Model (Gen II, III, or IV)	Trail Boss (II)	Trail Blazer ES (III)	Xpress 300 (IV)	Xplorer 300 (IV)
Model Number	W97AA25C	W97BA25C	W97CA28C	W97CC28C
Height	44″	46″	45.5″	45.5″
Width	44″	46.5″	46″	46″
Length	73.2″	74.5″	78.5″	81″
Wheel Base	49.75″	49.75″	49.75″	49.75″
Seat Height	33″	34″	33″	34″
Ground Clearance	5.5″	6″	6.75″	6″
Weight	425 lbs.	420 lbs.	512 lbs.	567 lbs.
Turning Radius (Unloaded)	60″	60″	60″	57″
Front Suspension Travel (McPherson Strut)	6.25″	6.25″	6.25″	6.25″
Rear Suspension	8.5″	8.5″	8.5″	8.5″
Front Tires	23x7x10	23x7x10	23x7x10	23x7x10
Rear Tires	22x11x10	22x11x10	24x11x10	24x11x10
Center Tires	N/A	N/A	N/A	N/A
Front/Rear/Center Tire PSI	4/3	4/3	4/3	4/3
Front Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Rear Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Auxiliary Brake	Mechanical	Mechanical	Mechanical	Mechanical
Fuel Capacity (U.S. Gallons)	4	4	4	4
Oil Capacity (U.S. Quarts)	2	2	2	2
Gearcase Oil Capacity (oz)	16	16	20	20
Main Head Light	12V 60/60W	12V 55W	N/A	N/A
Grill Mounted Lights	N/A	N/A	2, 12V 30/30W	2, 12V 30/30W
Tail Light	12V/8.26W	12V/8.26W	12V/8.26W	12V/8.26W
Gear Box	F/R/N	F/R/N	HI/LO/R/N	HI/LO/R/N
Gear Reduction Low	N/A	N/A	6.64/1	6.64/1
Drive Type	520 O-ring	520 O-ring	520 O-ring	520 O-ring
FInal Drive	12/42 88P	12/42 88P	13/38 86P	13/40 88P
Center Drive	N/A	N/A	N/A	11/22 70P
Front Drive	N/A	N/A	N/A	12/22 64P
Axle to Axle	N/A	N/A	N/A	N/A
Displacement	244cc	244cc	283cc	283cc
Engine Model Number	EC25PFE08	EC25PFE09	EC28PFE01	EC28PFE01
Compression Ratio (Effective)	6.1/1	6.1/1	6.1/1	6.1/1
Bore and Stroke	72x60	72x60	74.5x65	74.5x65
Spark Plug	BR8ES (NGK)	BR8ES (NGK)	BR8ES (NGK)	BR8ES (NGK)
Alternator Output	150W	150W	150W	150W
Timing Degrees	25@3000	25@3000	25@3000	25@3000
Carburetion	(1) VM30SS	(1) VM30SS	(1) VM30SS	(1) VM30SS
Main Jet	145	130	155	155
Pilot Jet	40	40	40	40
Jet Needle	5DP7-3	5DP7-3	5DP7-3	5DP7-3
Needle Jet	0-4 (169)	0-4 (169)	0-4 (169)	0-4 (169)
Cutaway	2.0	2.0	2.0	2.0
Air Screw/Pilot Screw	1 Turn	1 Turn	1.5 Turn	1.5 Turn
* See Owner's Manual for rack load recommendations and restrictions.				

Specifications 1997

1997 Model (Gen II, III, or IV)	Xpress 400 (IV)	Xplorer 400 (IV)	Sport 400 (III)	Sportsman 4x4 (II)
Model Number	W97CA38C	W972238C	W97BA38C	W97AC38C
Height	47.5″	47.5″	47″	46″
Width	46″	46″	46.5″	46″
Length	78.5″	81″	74.5″	77″
Wheel Base	49.75″	49.75″	49.75″	49.75″
Seat Height	33″	34″	33″	34″
Ground Clearance	6.75″	7.375″	5.5″	6″
Weight	543 lbs.	570 lbs.	479 lbs.	585 lbs.
Turning Radius (Unloaded)	60″	65″	60″	65″
Front Suspension Travel (McPherson Strut)	6.25″	6.25″	6.25″	6.25″
Rear Suspension	8.5″	8.5″	8.5″	8.5″
Front Tires	23x7x10	25x8x12	23x7x10	25x8x12
Rear Tires	24x11x10	25x12x10	22x11x10	25x12x10
Center Tires	N/A	N/A	N/A	N/A
Front/Rear/Center Tire PSI	4/3	4/3	4/3	4/3
Front Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Rear Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Auxiliary Brake	Mechanical	Mechanical	Mechanical	Mechanical
Fuel Capacity (U.S. Gallons)	4	4	4	4
Oil Capacity (U.S. Quarts)	2	2	2	2
Coolant Capacity (Quarts / Liters)	2.25 / 2.16	2.25 / 2.16	2.25 / 2.16	2.25 / 2.16
Gearcase Oil Capacity (oz)	20	20	16	20
Engine Counter Balancer Oil Capacity (10W/30)	100cc	100cc	100cc	100cc
Main Head Light	12V 60/55W	12V 60W	12V 55W	12V 60W
Grill Mounted Lights	Accessory	2, 12V 35W	N/A	2, 12V 35W
Tail Light	12V/8.26W	12V/8.26W	12V/8.26W	12V/8.26W
Gear Box	HI/LO/R/N	HI/LO/R/N	F/R/N	HI/LO/R/N
Gear Reduction Low	6.64/1	6.64/1	N/A	6.64/1
Drive Type	520 O-ring	520 O-ring	520 O-ring	520 O-ring
Final Drive	13/34 84P	13/34 84P	13/34 84P	13/34 84P
Center Drive	N/A	11/22 70P	N/A	11/22 70P
Front Drive	N/A	13/22 64P	N/A	13/22 64P
Axle to Axle	N/A	N/A	N/A	N/A
Displacement	378.7cc	378.7cc	378.7cc	378.7cc
Engine Model Number	EC38PLE06	EC38PLE06	EC38PLE07	EC38PLE06
Compression Ratio (Effective)	6.9/1	6.9/1	6.9/1	6.9/1
Bore and Stroke	83x70	83X70	83x70	83x70
Spark Plug	BR8ES (NGK)	BR8ES (NGK)	BR8ES (NGK)	BR8ES (NGK)
Alternator Output	200W	200W	150W	200W
Timing Degrees	23.5@3000	23.5@3000	23.5@3000	23.5@3000
Carburetion	(1) VM34SS	(1) VM34SS	(1) VM34SS	(1) VM34SS
Main Jet	200	200	230	200
Pilot Jet	30	30	35	30
Jet Needle	6CEY6-3	6CEY6-3	6CEY6-3	6CEY6-3
Needle Jet	0-6 (480)	0-6 (480)	0-6 (480)	0-6 (480)
Cutaway	1.5	1.5	1.5	1.5
Air Screw/Pilot Screw	1.5 Turn	1.5 Turn	1.5 Turn	1.5 Turn
* See Owner's Manual for rack load recommendations and restrictions.				

1997 Model (Gen II, III, or IV)	Scrambler 4x4 (III)	Magnum 2x4 (II)	Magnum 4x4 (II)	Sportsman 500(IV)
Model Number	W97BC38C	W97AA42A	W97AC42A	W97CH50A
Height	47″	47″	46″	47″
Width	45.5″	46.5″	46″	46″
Length	74.5″	77″	77″	7″
Wheel Base	48.5″	49.75″	49.75″	50.5″
Seat Height	33″	33″	34″	34″
Ground Clearance	6″	5.5″	6″	10″
Weight	490 lbs.	534 lbs.	595 lbs.	649 lbs.
Turning Radius (Unloaded)	60″	60″	65″	65″
Front Suspension Travel (McPherson Strut)	8.5″	6.25″	6.25″	6.25″
Rear Suspension	8.5″	8.5″	8.5″	9.5″
Front Tires	23x7x10	23x7x10	25x8x12	25x8x12
Rear Tires	22x11x10	24x11x10	25x12x10	25x12x10
Front/Rear/Center Tire PSI	4/3	4/3	4/3	5/5
Front Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Rear Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Auxiliary Brake	Mechanical	Mechanical	Mechanical	Mech.
Fuel Capacity (U.S. Gallons)	4	3.5	3.5	5.25
Oil Capacity (U.S. Quarts)	2	2- 0W40 Engine Oil	2- 0W40 Engine Oil	3
Coolant Capacity (Quarts / Liters)	2.25 / 2.16	2.25 / 2.16	2.25 / 2.16	2.25 / 2.16
Gearcase Oil Capacity (oz)	16	20	20	32
Engine Counter Balancer Oil Capacity (10W/30)	100cc	N/A	N/A	N/A
Main Head Light	12V 35/35W	12V 60/60W	12V 60W	12V 60W
Grill Mounted Lights	N/A	Acc.	2,12V 35W	2,12V 35W
Tail Light	12V/8.26W	12V/8.26W	12V/8.26W	12V 8.26W
Gear Box	F/R/N	HI/LO/R/N	HI/LO/R/N	HI/LO/R/N
Gear Reduction Low	N/A	6.64/1	6.64/1	6.64/1
Drive Type	520 O-ring	520 O-ring	520 O-ring	Shaft
FInal Drive	13/38 84P	12/38 86P	12/38 86P	3.16:1
Center Drive	11/22 70P	N/A	11/22 70P	N/A
Front Drive	12/22 64P	N/A	11/22 68P	2:1
Axle to Axle	N/A	N/A	N/A	N/A
Displacement	378.7cc	425cc	425cc	498
Engine Model Number	EC38PLE07	EH42PLE01	EH42PLE01	EH50PLE01
Compression Ratio (Effective)	6.9/1	9.2/1	9.2/1	N/A
Bore and Stroke	83x70	87.9x70	87.9x70	92x75
Spark Plug	BR8ES (NGK)	BKR5ES (NGK)	BKR5ES (NGK)	BKR5ES (NGK)
Alternator Output	150W	200W	200W	200W
Timing Degrees	23.5@3000	30@3500	30@3500	30@3500
Carburetion	(1) VM34SS	(1) BST34-CV type	(1) BST34-CV type	(1) BST34 CV type
Main Jet	230	140	140	142.5
Pilot Jet	35	40	40	42.5
Pilot Air Jet	N/A	#160	#160	#160
Jet Needle	6CEY6-3	5F81-3	5F81-3	5D78-3
Needle Jet	0-6 (480)	P-8	P-8	P-1
Cutaway	1.5	N/A	N/A	N/A
Air Screw or Fuel Screw (Turns Out)	1.5	2.5	2.5	2
* See Owner's Manual for rack load recommendations and restrictions.				

Specifications 1997

1997 Model (Gen II, III, or IV)	Scrambler 500 (III)	Xplorer 500(IV)	Magnum 6x6 (II)	400 6x6 (II)
Model Number	W97BC50A	W97CD50A	W97AE42A	W97AE38A
Height	47″	47″	47″	47″
Width	45.5″	46″	46″	46″
Length	74.5″	7″	103″	103″
Wheel Base	48.5″	50.5″	75″	75″
Seat Height	33″	34″	34″	34″
Ground Clearance	6″	10″	5.5″	5.5″
Weight	547 lbs.	649 lbs.	852 lbs.	830 lbs.
Turning Radius (Unloaded)	60″	65″	98″	98″
Front Suspension Travel (McPherson Strut)	8.5″	6.25″	6.25″	6.25″
Rear Suspension	9.5″	9.5″	8.5″	8.5″
Front Tires	23x7X10	25x8x12	25x8x12	25x8x12
Rear Tires	24x11x10	25x12x10	25x12x10	25x12x10
Center Tires	N/A	N/A	25x12x10	25x12x10
Front/Rear/Center Tire PSI	4/3	5/5	5/5/5	5/5/5
Front Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Rear Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Auxiliary Brake	Mech.	Mech.	Hydr. Disc	Hydr. Disc
Fuel Capacity (U.S. Gallons)	3.5	5.25	3.5	4
Oil Capacity (U.S. Quarts)	2	3	2- 0W40 Engine Oil	2
Coolant Capacity (Quarts / Liters)	2.25 / 2.16	2.25 / 2.16	2.25 / 2.16	2.25 / 2.16
Gearcase Oil Capacity (oz)	16	32	20	20
Counter Balancer Oil Capacity	N/A	N/A	N/A	100cc (10W30)
Main Head Light	12V 35/35W	N/A	12V 60W	12V 60W
Grill Mounted Lights	N/A	2,12V 35W	2,12V 35W	2, 12V 35W
Tail Light	12V 8.26W	12V 8.26W	12V/8.26W	12V/8.26W
Gear Box	HI/R/N	HI/LO/R/N	HI/LO/R/N	HI/LO/R/N
Gear Reduction Low	N/A	6.64/1	6.64/1	6.64/1
Drive Type	520 O-ring	Shaft	520 O-ring	520 O-ring
Final Drive	12/38/86P	3.16:1	12/42 88P	13/42 88P
Center Drive	11/22/70P	N/A	11/24 72P	11/22 70P
Front Drive	11/22/68P	2:1	11/22 68P	12/22 64P
Axle to Axle	N/A	N/A	30/30 116P	30/30 116P
Displacement	498	498	425cc	378.7cc
Engine Model Number	EH50PLE02	EH50PLE01	EH42PLE01	EC38PLE06
Compression Ratio (Effective)	N/A	N/A	9.2/1	6.9/1
Bore and Stroke	92x75	92x75	87.9x70	83x70
Spark Plug	BKR5ES (NGK)	BKR5ES (NGK)	BKR5ES (NGK)	BR8ES (NGK)
Alternator Output	200W	200W	200W	200W
Timing Degrees	30@3500	30@3500	30@3500	23.5@3000
Carburetion	(1) BST34 CV type	(1) BST34 CV type	(1) BST34-CV type	(1) VM34SS
Main Jet	125	142.5	140	210
Pilot Jet	42.5	42.5	40	30
Pilot Air Jet	160	#160	#160	
Jet Needle	5D78-3	5D78-3	5F81-3	6DH29-3
Needle Jet	P-3	P-1	P-8	0-6 (480)
Cutaway	N/A	N/A	N/A	1.5
Air Screw	2.0	2 Turns	2.5 Turn	1 Turn
* See Owner's Manual for rack load recommendations and restrictions.				

1998 Model (Gen II, III, or IV)	Trail Boss (II)	Trail Blazer (III)	Xpress 300 (IV)	Xplorer 300 (IV)
Model Number	W98AA25C	W98BA25C	W98CA28C	W98CC28C
Height, inches (cm)	44″ (111.8)	46″ (116.8)	45.5″ (115.6)	45.5″ (115.6)
Width, inches (cm)	44″ (111.8)	46.5″ (118.1)	46″ (116.8)	46″ (116.8)
Length, inches (cm)	73.2″ (185.9)	74.5″ (189.2)	79.5″ (201.9)	81″ (205.7)
Wheel Base, inches (cm)	49.75″ (126.4)	49.75″ (126.4)	49.75″ (126.4)	49.75″ (126.4)
Seat Height, inches (cm)	33″ (83.8)	34″ (86.4)	34″ (86.4)	34″ (86.4)
Ground Clearance, inches (cm)	5.5″ (14.0)	6″ (15.2)	6.75″ (16.5)	6″ (15.2)
Weight, Dry - Lbs. (Kg)	425 (203.4)	420 lbs. (199.8)	512 lbs. (224.7)	567 lbs. (252.4)
Turning Radius-Unloaded, in. (cm)	60″ (152.4)	60″ (152.4)	60″ (152.4)	57″ (144.8)
Front Suspension Travel, in. (cm) (McPherson Strut)	6.25″ (15.9)	6.25″ (15.9)	6.25″ (15.9)	6.25″ (15.9)
Rear Suspension, inches (cm)	8.5″ (21.6)	8.5″ (21.6)	8.5″ (21.6)	8.5″ (21.6)
Front Tires	23x7x10	23x7x10	23x7x10	23x7x10
Rear Tires	22x11x10	22x11x10	24x11x10	24x11x10
Center Tires	N/A	N/A	N/A	N/A
Front/Rear/Center Tire PSI	4/3	4/3	4/3	4/3
Front Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Rear Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Auxiliary Brake	Mechanical	Mechanical	Mechanical	Mechanical
Fuel Capacity (U.S. Gallons)	4	4	4	4
Oil Capacity (U.S. Quarts)	2	2	2	2
Cooling System Capacity (Qt./Liter)	N/A	N/A	N/A	2.25 / 2.16
Gearcase Oil Capacity (oz)	16	16	20	20
Engine Counter Balancer Oil Capacity (10W/30)	N/A	N/A	N/A	N/A
Main Head Light	12V 60/60W	12V 55W	N/A	N/A
Grill Mounted Lights	N/A	N/A	2, 12V 30/30W	2, 12V 30/30W
Tail Light / Brake Light (Watts)	12V - 8.26 / 26.9	12V - 8.26 / 26.9	12V - 8.26 / 26.9	12V - 8.26 / 26.9
Gear Box	F/R/N	F/R/N	HI/LO/R/N	HI/LO/R/N
Gear Reduction Low	N/A	N/A	6.64/1	6.64/1
Drive Type	520 O-ring	520 O-ring	520 O-ring	520 O-ring
Flnal Drive	12/42 88P	12/42 88P	13/38 86P	13/40 88P
Center Drive	N/A	N/A	N/A	11/22 70P
Front Drive	N/A	N/A	N/A	12/22 64P
Displacement	244cc	244cc	283cc	283cc
Engine Model Number	EC25PFE10	EC25PFE11	EC28PFE02	EC28PFE02
Compression Ratio (Effective)	6.1/1	6.1/1	6.1/1	6.1/1
Bore and Stroke (mm)	72x60	72x60	74.5x65	74.5x65
Spark Plug / Gap, in.	BR8ES (NGK) .028	BR8ES (NGK) .028	BR8ES (NGK) .028	BR8ES (NGK) .028
Alternator Output	150W	150W	150W	150W
Timing Degrees	25@3000	25@3000	25@3000	25@3000
Carburetion	(1) VM30SS	(1) VM30SS	(1) VM30SS	(1) VM30SS
Main Jet	145	130	155	155
Pilot Jet	40	40	40	40
Jet Needle	5DP7-3	5DP7-3	5DP7-3	5DP7-3
Needle Jet	0-4 (169)	0-4 (169)	0-4 (169)	0-4 (169)
Cutaway	2.0	2.0	2.0	2.0
Air Screw/Pilot Screw	1 Turn	1 Turn	1.5 Turn	1.5 Turn
* See Owner's Manual for rack load recommendations and restrictions.				

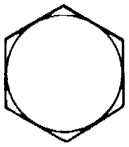
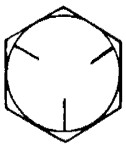
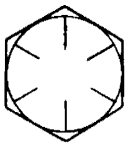
GENERAL INFORMATION
Specifications 1998

1998 Model (Gen II, III, or IV)	Sport 400 (III)	Scrambler 400 (III)	Xplorer 400 (IV)	Magnum 2x4 (II)
Model Number	W98BA38C	W98BC38C	W98CC38C	W98AA42A
Height, inches (cm)	47″ (119.4)	47″ (119.4)	47.5″ (120.7)	47″ (119.4)
Width, inches (cm)	46.5″ (118.1)	45.5″ (115.6)	46″ (116.8)	46.5″ (118.1)
Length, inches (cm)	74.5″ (189.2)	74.5″ (189.2)	81″ (205.7)	77″ (195.6)
Wheel Base, inches (cm)	49.75″ (126.4)	48.5″ (123.2)	49.75″ (126.4)	49.75″ (126.4)
Seat Height, inches (cm)	33″ (83.8)	33″ (83.8)	34″ (86.4)	33″ (83.8)
Ground Clearance, inches (cm)	5.5″ (15.2)	6.5″ (15.2)	7.375″ (19.0)	5.5″ (14.0)
Weight - Lbs. (Kg)	479 lbs. (215)	519 lbs. (236)	570 lbs. (267)	534 lbs. (244)
Turning Radius (Unloaded), in.(cm)	60″ (152.4)	60″ (152.4)	65″ (165)	60″ (152.4)
Front Suspension Travel (McPherson Strut)	6.25″ (15.9)	8.2″ (21.6)	6.25″ (15.9)	6.25″ (15.9)
Rear Suspension	8.5″ (21.6)	8.5″ (21.6)	8.5″ (21.6)	8.5″ (21.6)
Front Tires	23x7x10	23x7x10	25x8x12	23x7x10
Rear Tires	22x11x10	22x11x10	25x11x10	24x11x10
Front/Rear/Center Tire PSI	4/3	4/3	4/3	4/3
Front Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Rear Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Auxiliary Brake	Mechanical	Mechanical	Mechanical	Mechanical
Fuel Capacity (U.S. Gallons)	4	4	4	3.5
Oil Capacity (U.S. Quarts)	2	2	2	2- 0W40 Engine oil
Cooling System Capacity-qt (liter)	2.25 (2.13)	2.25 (2.13)	2.25 (2.13)	2.25 (2.13)
Gearcase Oil Capacity (oz)	16	32	20	20
Engine Counter Balancer Oil Capacity (10W/30)	100cc	100cc	100cc	N/A
Main Head Light	12V 55W	(2) 12V 30/30W	12V 60W	12V 60/60W
Grill Mounted Lights	N/A	N/A	2, 12V 27W	Acc.
Tail Light / Brake Light (Watts)	12V - 8.26 / 26.9	12V - 8.26 / 26.9	12V - 8.26 / 26.9	12V - 8.26 / 26.9
Gear Box	F/R/N	F/R/N	HI/LO/R/N	HI/LO/R/N
Gear Reduction Low	N/A	N/A	6.64/1	6.64/1
Drive Type	520 O-ring	520 O-ring	520 O-ring	520 O-ring
Final Drive	13/34 84P	13/36 76P	13/34 84P	12/38 86P
Center Drive	N/A	11/22 70P	11/22 70P	N/A
Front Drive	N/A	12/22 64P	13/22 64P	N/A
Axle to Axle	N/A	N/A	N/A	N/A
Displacement	378cc	378cc	378cc	425cc
Engine Model Number	EC38PLE07	EC38PLE09	EC38PLE06	EH42PLE02
Compression Ratio (Effective)	6.9/1	6.9/1	6.9/1	9.2/1
Bore and Stroke	83x70	83x70	83X70	87.9x70
Spark Plug	BR8ES (NGK)	BR8ES (NGK)	BR8ES (NGK)	BKR5ES (NGK)
Alternator Output	150W	150W	200W	200W
Timing Degrees	23.5@3000	23.5@3000	23.5@3000	30@3500
Carburetion	(1) VM34SS	(1) VM34SS	(1) VM34SS	(1) BST34-CV type
Main Jet	230	230	200	140
Pilot Jet	35	35	30	40
Jet Needle	6CEY6-3	6CEY6-3	6CEY6-3	5F14-3
Needle Jet	0-6 (480)	0-6 (480)	0-6 (480)	P-9
Cutaway	1.5	1.5	1.5	Pilot Air Jet #160
Air Screw/Pilot Screw	1.5 Turn	1.5	1.5 Turn	2.5
* See Owner's Manual for rack load recommendations and restrictions.				

1998 Model (Gen II, III, or IV)	Magnum 4x4 (II)	Scrambler 500 (III)	Sportsman 500 (IV)	Big Boss 500 6x6 (II)
Model Number	W98AC42A	W98BC50A	W98CH50A	W98AE42A
Height, inches (cm)	46″ (119.4)	47″ (119.4)	47″ (119.4)	47″ (119.4)
Width, inches (cm)	46″ (116.8)	45.5″ (115.6)	46″ (116.8)	46″ (116.8)
Length, inches (cm)	77″ (195.6)	74.5″ (189.2)	81″ (205.7)	103″ (261.6)
Wheel Base, inches (cm)	49.75″ (126.4)	48.5″ (123.2)	50.5″ (128.3)	75″ (190.5)
Seat Height, inches (cm)	34″ (86.4)	33″ (83.8)	34″ (86.4)	34″ (91.4)
Ground Clearance, inches (cm)	6″ (15.2)	6.5″ (15.2)	11″ (27.9)	5.5″ (14.0)
Weight - Lbs. (Kg)	595 lbs. (274)	542 lbs. (246)	660 lbs. (316)	870 lbs. (395)
Turning Radius (Unloaded), in. (cm)	65″ (165)	60″ (152.4)	65″ (165)	98″ (249)
Front Suspension Travel, in. (cm) (McPherson Strut)	6.25″ (15.9)	8.2″ (21.6)	6.25″ (15.9)	6.25″ (15.9)
Rear Suspension, inches (cm)	8.5″ (21.6)	8.5″ (24.1)	9.5″ (24.1)	7.5″ (21.6)
Front Tires	25x8x12	23x7X10	25x8x12	25x8x12
Rear Tires	25x11x10	24x11x10	25x11x10	25x11x10
Center Tires	N/A	N/A	N/A	25x11x10
Front/Rear/Center Tire PSI	4/3	4/3	5/5	5/5/5
Front Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Rear Brake	Hydr. Disc	Hydr. Disc	Hydr. Disc	Hydr. Disc
Auxiliary Brake	Mechanical	Mech.	Hydr. Disc	Hydr. Disc
Fuel Capacity (U.S. Gallons)	3.5	3.5	5.25	3.5
Oil Capacity (U.S. Quarts)	(2) 0W40 Engine Oil	(2) 0W40 Engine Oil	(2) 0W40 Engine Oil	(2) 0W40 Engine Oil
Cooling System Capacity (Qt./Liter)	2.25 / 2.16	2.25 / 2.16	2.25 / 2.16	2.25 / 2.16
Gearcase Oil Capacity (oz)	20	32	32	20
Main Head Light	12V 60W	(2)12V 30/30W	12V 60W	12V 60W
Grill Mounted Lights	2,12V 27W	N/A	2,12V 27W	2,12V 27W
Tail Light / Brake Light (Watts)	12V - 8.26 / 26.9	12V - 8.26 / 26.9	12V - 8.26 / 26.9	12V - 8.26 / 26.9
Gear Box	HI/LO/R/N	HI/R/N	HI/LO/R/N	HI/LO/R/N
Gear Reduction Low	6.64/1	N/A	6.69/1	6.64/1
Drive Type	520 O-ring	520 O-ring	Shaft	520 O-ring
FInal Drive	12/38 86P	13/36-76P	3.16:1	12/42 88P
Center Drive	11/22 70P	N/A	N/A	11/24 72P
Front Drive	11/22 68P	N/A	2:1	11/22 68P
Axle to Axle	N/A	N/A	N/A	30/30 116P
Displacement	425cc	499	498	498cc
Engine Model Number	EH42PLE02	EH50PLE04	EH50PLE07	EH50PLE06
Compression Ratio (Full Stroke)	9.2/1	10.2/1	10.2/1	10.2/1
Bore and Stroke	87.9x70	92x75	92x75	92x75
Spark Plug	BKR5ES (NGK)	BKR5E (NGK)	BKR5E (NGK)	BKR5E (NGK)
Alternator Output	200W	250W	250W	250W
Timing Degrees	30@3500	30@3500	30@3500	30@3500
Carburetion	(1) BST34-CV type	(1) BST40 CV type	(1) BST34 CV type	(1) BST34-CV type
Main Jet	140	155	142.5	140
Pilot Jet	40	40	42.5	40
Pilot Air Jet				
Jet Needle	5F14-3	6H25-94-3	5D78-3	5D78-3
Needle Jet	P-9	Y-0	P-1	Q-6
Cutaway	N/A	N/A	N/A	N/A
Air Screw or Fuel Screw (Turns Out)	2.5	2.0	2.0	2.0
* See Owner's Manual for rack load recommendations and restrictions.				

Standard Torque Specifications

The following torque specifications are to be used as a general guideline. Some fasteners require a special torque procedure during installation. In addition, some fastener torque values may be different than the standard torque value listed below. Critical fastener torques are listed (where applicable) at the beginning of each section. Always refer to the appropriate chapter for specific torque specifications and procedures before using standard torque.

Bolt Size	Threads/In	Grade 2	Grade 5	Grade 8
		Torque in. lbs. (kg-m)		
#10 -	24	27 (.31)	43 (.50)	60 (.69)
#10 -	32	31 (.36)	49 (.56)	68 (.78)
		Torque ft. lbs. (kg-m)*		
1/4 -	20	5 (.7)	8 (1.1)	12 (1.6)
1/4 -	28	6 (.8)	10 (1.4)	14 (1.9)
5/16 -	18	11 (1.5)	17 (2.3)	25 (3.5)
5/16 -	24	12 (1.6)	19 (2.6)	29 (4.0)
3/8 -	16	20 (2.7)	30 (4.0)	45 (6.2)
3/8 -	24	23 (3.2)	35 (4.8)	50 (6.9)
7/16 -	14	30 (4.0)	50 (6.9)	70 (9.7)
7/16 -	20	35 (4.8)	55 (7.6)	80 (11.0)
1/2 -	13	50 (6.9)	75 (10.4)	110 (15.2)
1/2 -	20	55 (7.6)	90 (12.4)	120 (16.6)

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 kg-m multiply foot pounds by .1383.
*To convert kg-m to N-m move the decimal to the right one position.

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	

Unit of Measure	Multiplied by	Converts to
ft. lbs.	x 12	= in. lbs.
in. lbs.	x .0833	= ft. lbs.
ft. lbs.	x .1383	= kg-m
in. lbs.	x .0115	= kg-m
kg-m	x 7.233	= ft. lbs.
kg-m	x 86.796	= in. lbs.
kg-m	x 10	= 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)
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)
Cubic centimeters (cc)	x .03381	= Fluid Ounces (fl.oz.)
Fluid Ounces (fl.oz.)	x 29.57	= Cubic centimeters (cc)
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)

°C to °F: 9 (°C + 40) ÷ 5 - 40 = °F
°F to °C: 5 (°F + 40) ÷ 9 - 40 = °C

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

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 All Terrain Vehicle (ATV) 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. THE PURCHASER MUST COMPLETE AN ATV SAFETY TRAINING COURSE PROVIDED BY THE DEALER IN ORDER TO HAVE VALID WARRANTY ON THE ATV. 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 ATV IS REGISTERED WITH POLARIS.

Initial dealer preparation and set-up of your ATV 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 ATV that has been altered structurally, modified, 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 ATV 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 ATV. The exclusive remedy for breach of this warranty shall be, at Polaris' exclusive option, repair or replacement of any defective materials, or components or products. THE REMEDIES SET FORTH IN THIS WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. POLARIS SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED

WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE, OR OTHER TORT OR OTHERWISE. Some states do not permit the exclusion or limitation of incidental or consequential damages or implied warranties, so the above limitations or exclusions may not apply to you if inconsistent with controlling state law.

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

HOW TO OBTAIN WARRANTY SERVICE

If your ATV 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.

Service Tips

In order to perform service work efficiently and to prevent costly errors, the technician should read the text in this manual, thoroughly familiarizing him/herself with procedures before beginning. Pictures and illustrations have been included with the text as an aid. Notes, cautions and warnings have also been included for clarification of text and safety concerns. However, a knowledge of mechanical theory, tool use and shop procedures is necessary to perform the service work safely and satisfactorily. Use only genuine Polaris service parts.

⚠ Cleanliness of parts and tools as well as the work area is of primary importance. Dirt and foreign matter will act as an abrasive and cause damage to precision parts. Clean the vehicle before beginning service. Clean new parts before installing.

⚠ Watch for sharp edges which can cause personal injury. Protect hands with gloves when working with sharp components.

⚠ If difficulty is encountered in removing or installing a component, look to see if a cause for the difficulty can be found. If it is necessary to tap the part into place, use a soft face hammer and tap lightly.

⚠ Some of the fasteners were installed with locking agents. Use of impact drivers or wrenches will help avoid damage to fasteners.

⚠ Always follow torque specifications as outlined throughout this manual. Incorrect torquing may lead to serious machine damage or, as in the case of steering components, can result in injury or death for the rider(s).

⚠ If a torquing sequence is indicated for nuts, bolts or screws, start all fasteners in their holes and hand tighten. Then, following the method and sequence indicated in this manual, tighten evenly to the specified torque value. When removing nuts, bolts or screws from a part with several fasteners, loosen them all about 1/4 turn before removing them.

⚠ If the condition of any gasket or O-Ring is in question, replace it with a new one. Be sure the mating surfaces around the gasket are clean and smooth in order to avoid leaks.

⚠ Some procedures will require removal of retaining rings or clips. Because removal weakens and deforms these parts, they should always be replaced with new parts. When installing new retaining rings and clips use care not to expand or compress them beyond what is required for installation.

⚠ Because removal damages seals, replace any oil or grease seals removed with new parts.

⚠ Polaris recommends the use of Polaris lubricants and greases, which have been specially formulated for the top performance and best protection of our machines. In some applications, such as the engine, warranty coverage may become void if other brands are substituted.

⚠ Grease should be cleaned from parts and fresh grease applied before reassembly of components. Deteriorating grease loses lubricity and may contain abrasive foreign matter.

⚠ Whenever removing or reinstalling batteries, care should be taken to avoid the possibility of explosion resulting in serious burns. Always disconnect the negative (black) cable first and reconnect it last. Battery electrolyte contains sulfuric acid and is poisonous! Serious burns can result from contact with the skin, eyes or clothing. **ANTIDOTE:** External - Flush with water. Internal - Drink large quantities or 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.

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.

CDI: Capacitor discharge ignition. Ignition system which stores voltage generated by the stator plate exciter coil in a capacitor or condenser (in CDI box). At the proper moment a voltage generated by the stator plate pulser coil closes an electronic switch (thyristor) in the CDI box and allows the voltage in the capacitor to discharge into the primary windings of the ignition coil.

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

Chain Pitch: Distance between chain link pins (520 = 5/8″ or 1.6 cm). Chain length is measured in number of pitches (pins). A 520 x 86 has 86 total pins, including the master link pins.

CI: Cubic inches.

Clutch Buttons: Plastic bushings which transmit rotation of the clutch to 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.

Condenser/Capacitor: A storage reservoir for electricity, used in both E.T. and CDI systems.

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 lower half of crankcase. Measure at various points especially at PTO. Maximum allowable run-out is .006″ (.02 cm).

DCV: Direct current voltage.

Detonation: The spontaneous ignition of the unburned fuel/air mixture after normal spark ignition. Piston looks "hammered" through, rough appearance around hole. Possible causes: 1) too high a compression ratio for the fuel octane; 2) low octane fuel; 3) over-advanced ignition timing.

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

Driven Clutch: (Also-Secondary Clutch). The torque sensitive clutch in a CVT system which is located on the transmission input shaft.

Electrical Open: Open circuit. An electrical circuit which isn't complete. (i.e. poor connections or broken wire at hi-lo beam switch resulting in loss of headlights.

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

EBS: Engine Braking System

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.

Head Volume: Cylinder head capacity in cc, head removed from engine with spark plug installed.

High Tension Lead: The heavy insulated wire which carries the high secondary voltage from the coil to the spark plug.

Holed Piston: Piston in which a hole has formed on the dome. Possible causes: 1) detonation; 2) pre-ignition.

HP: Horsepower.

ID: Inside diameter.

Ignition Coil: A type of transformer which increases voltage in the primary windings (approx. 200V) to a higher voltage in the secondary windings (approx. 14KV - 32KV) through induction. Secondary voltage is high enough to ionize (jump) the air gap at the spark plug.

Ignition Generating Coil: Exciter coil, primary charge coil. Stator plate coil which generates primary ignition voltage.

in.: Inch/inches.

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

kg/cm ^{2} : 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/in ^{2} : Pounds per square inch.

Left 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. The common method used to convert mechanical enery to electrical energy in the lighting coil, ignition generating coils and trigger coil.

mi.: Mile/miles.

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

N-m: Newton meters.

OD: Outside diameter.

Ohm: The unit of electrical resistance opposing current flow.

oz.: Ounce/ounces.

Piston Clearance: Total difference between piston outside diameter and cylinder inside diameter.

Piston Erosion: Piston dome melts. Usually occurs at the exhaust port area. Possible causes: 1) Detonation due to lean fuel/air mixture, improper spark plug heat range, excess heat buildup, poor fuel quality / octane rating.

Pre-Ignition: A problem in combustion where the fuel/air mixture is ignited before normal spark ignition. Piston looks melted at area of damage. Possible causes: 1) too hot a spark plug; 2) spark plug not properly torqued; 3) "glowing" piece of head gasket, metal burr or carbon in the combustion chamber; 4) lean fuel/air mixture.

Primary Circuit: This circuit is responsible for the voltage build up in the CDI capacitor. In the CDI system the parts include the exciter coil, the trigger coil, the wires from stator plate to CDI box and to the low resistance primary windings in the ignition coil.

Primary Clutch: Drive clutch on engine. Mainly RPM sensitive.

psi.: Pounds per square inch.

PTO: Power take off.

PVT: Polaris Variable Transmission (Drive Clutch System)

qt.: Quart/quarts.

RPM: Revolutions per minute.

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

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

RPM: Revolutions per minute.

Running Time: Ignition timing when fully advanced or at specified RPM.

Secondary Circuit: This circuit consists of the large secondary coil windings, high tension wire and ground through the spark plug air gap.

Secondary Clutch: (Also-Driven Clutch) The torque sensitive clutch in a CVT system which is located on the transmission input shaft.

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.

Spark Plug Reach: Length of threaded portion of spark plug. Polaris uses 3/4″ (2 cm) reach plugs.

Static Timing: Ignition timing when engine is at zero RPM.

Stator Plate: The plate mounted under the flywheel supporting the primary ignition components and lighting coil.

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

Trigger Coil: Pulser coil. Generates the voltage for triggering (closing) the thyristor and timing the spark in CDI systems. Small coil mounted at the top of the stator plate next to the ignition generating coil.

Voltage Regulator: Maintains Prevents over-charging of battery or damage to electrical components as engine RPM increases.

Venturi: An area of air constriction. A venturi is used in carburetors to speed up air flow which lowers pressure in venturi to below atmospheric pressure, causing fuel to be pushed through jets, etc., and into the venturi to be mixed with air and form a combustible air/fuel mixture.

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.

Special tool part numbers and usage are listed in each section of this manual as required for a specific service procedure. For complete tool information refer to the Service Tool Catalog (PN 9914681). U.S. dealers can obtain a current price list or get tool information by contacting Victor Specialty Tool Company at the address, phone or FAX number listed below. Canadian dealers can obtain this information by contacting the Winnipeg parts department at (204)-925-7125. Dealers serviced by a distributor should follow tool ordering procedures established by their respective distributor parts department.

POLARIS

SPECIAL TOOLS

VICTOR SPECIALTY TOOL CO.

66 School Street

Victor, New York 14564

TO PLACE AN ORDER

Toll Free Tool Order **FAX** Numbers

(U.S.)1–800–716–3938

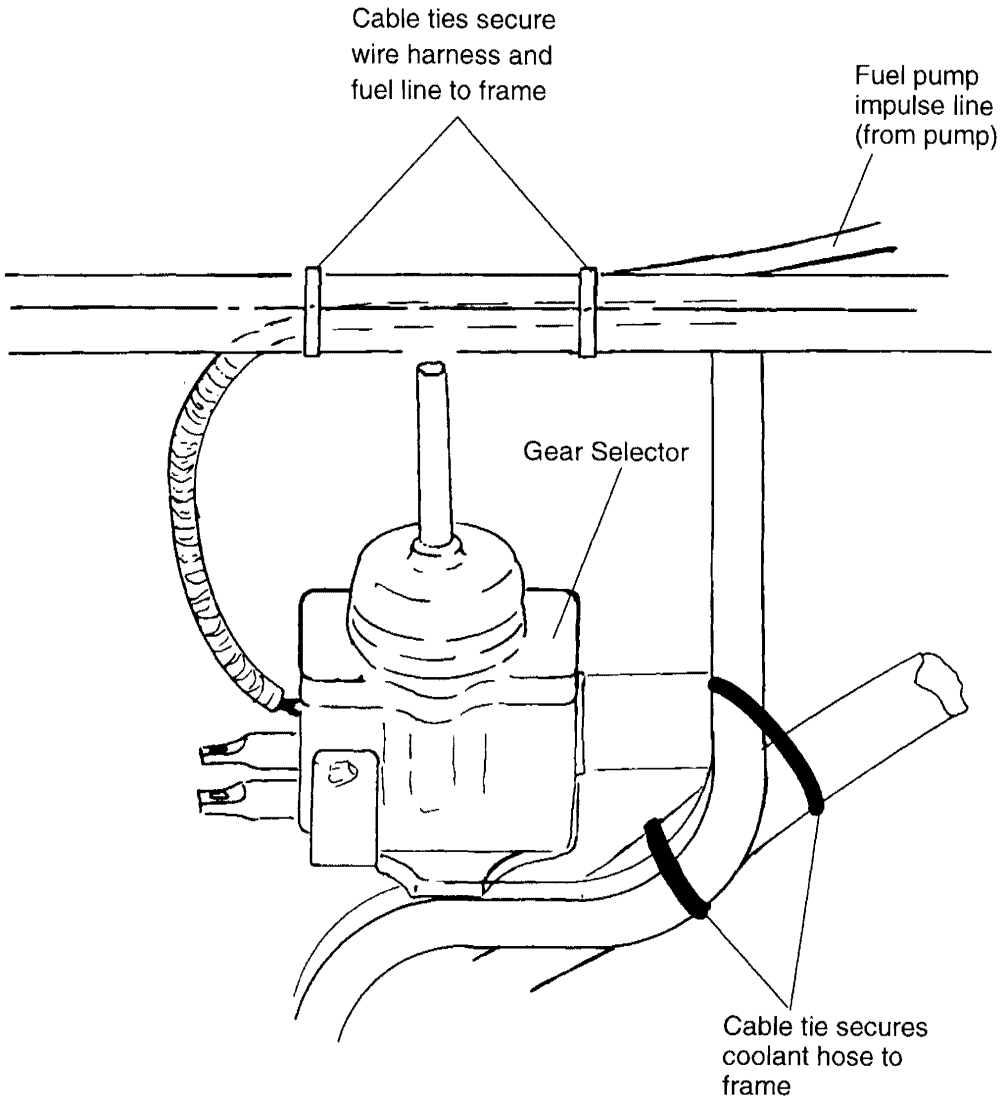
(Canadian Dealers) 1-800-413-4441

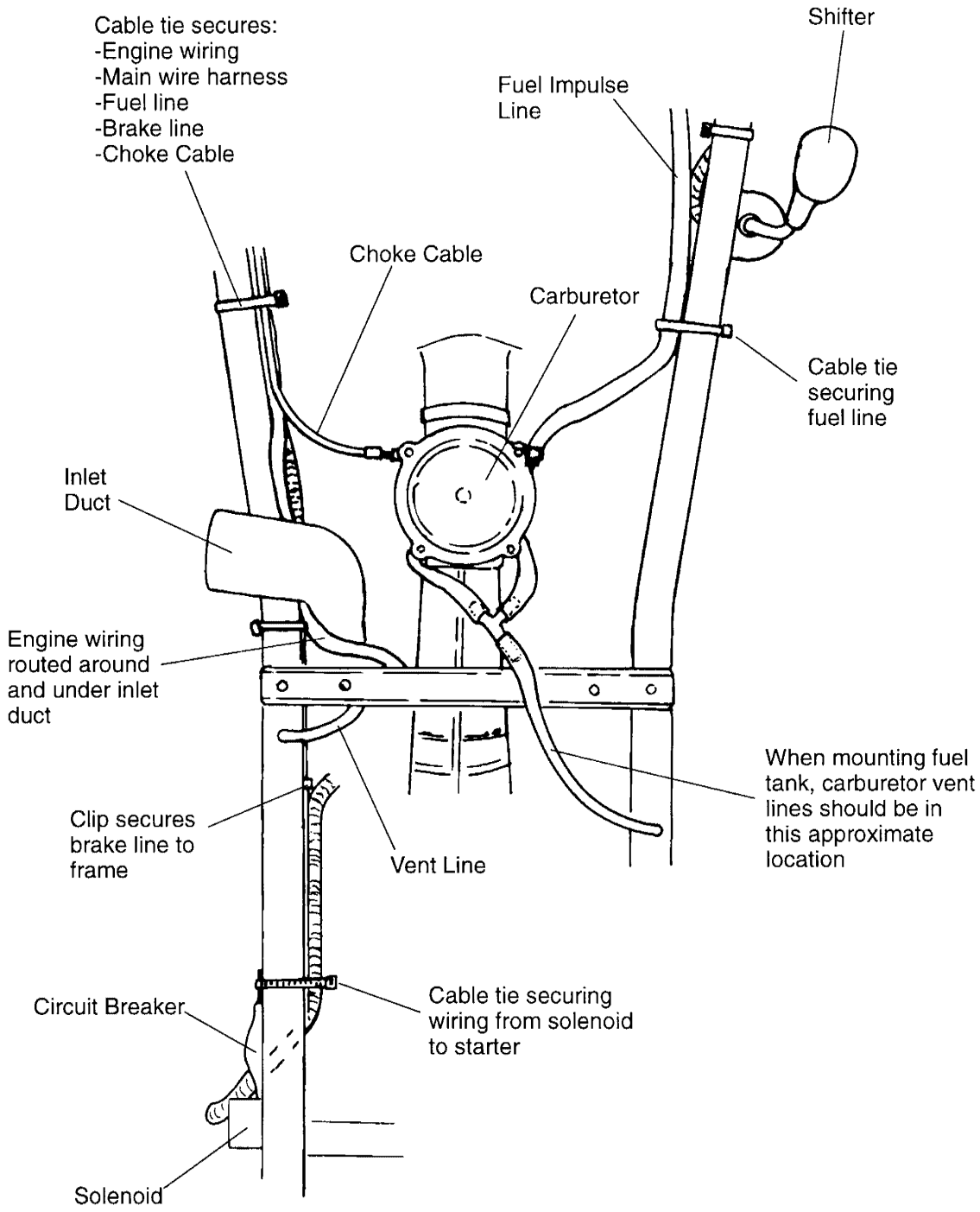
Phone Orders or Information

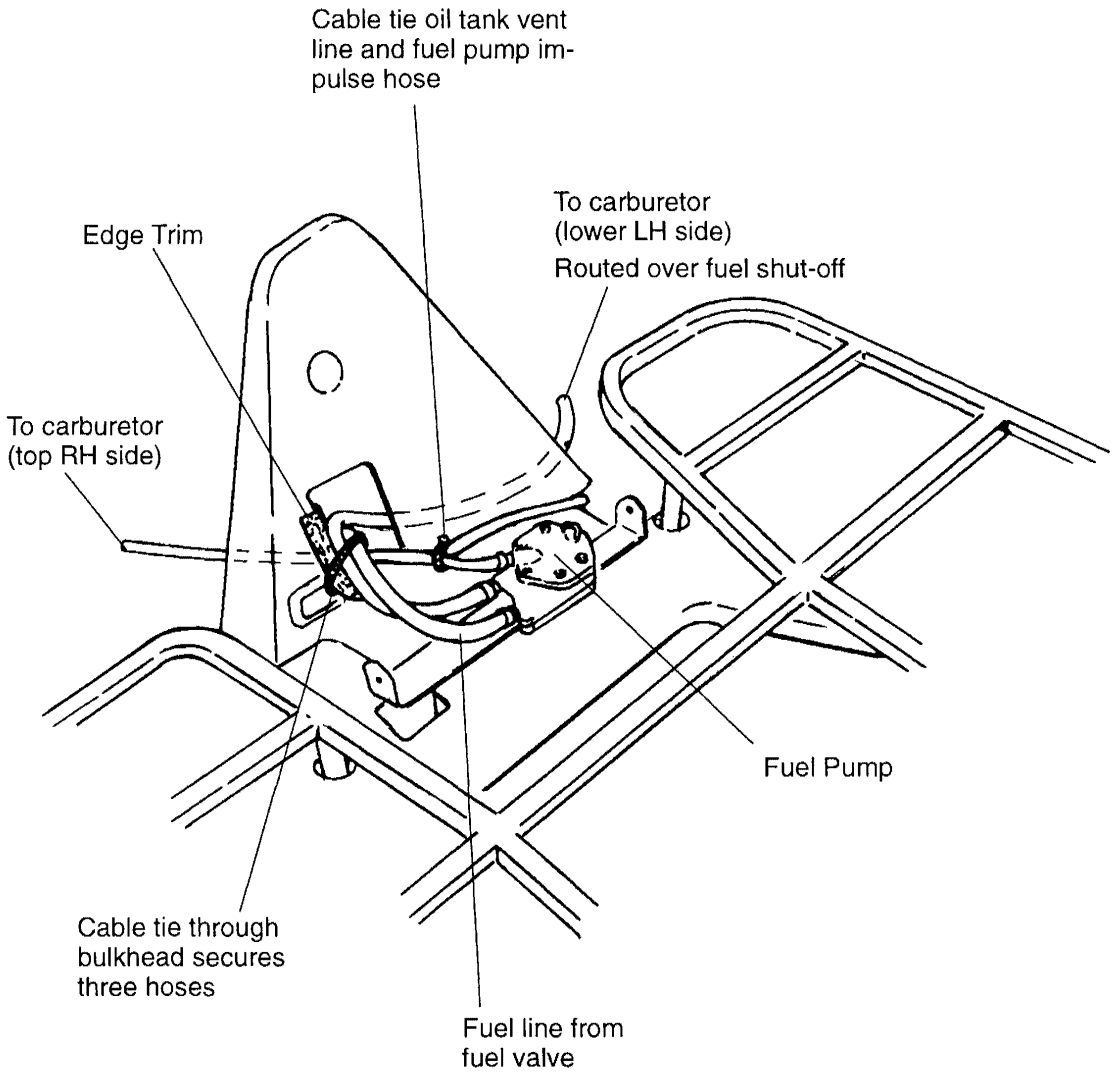
(U.S.) 1–716–742–1790

(Canadian Dealers) 1-204-925-7125

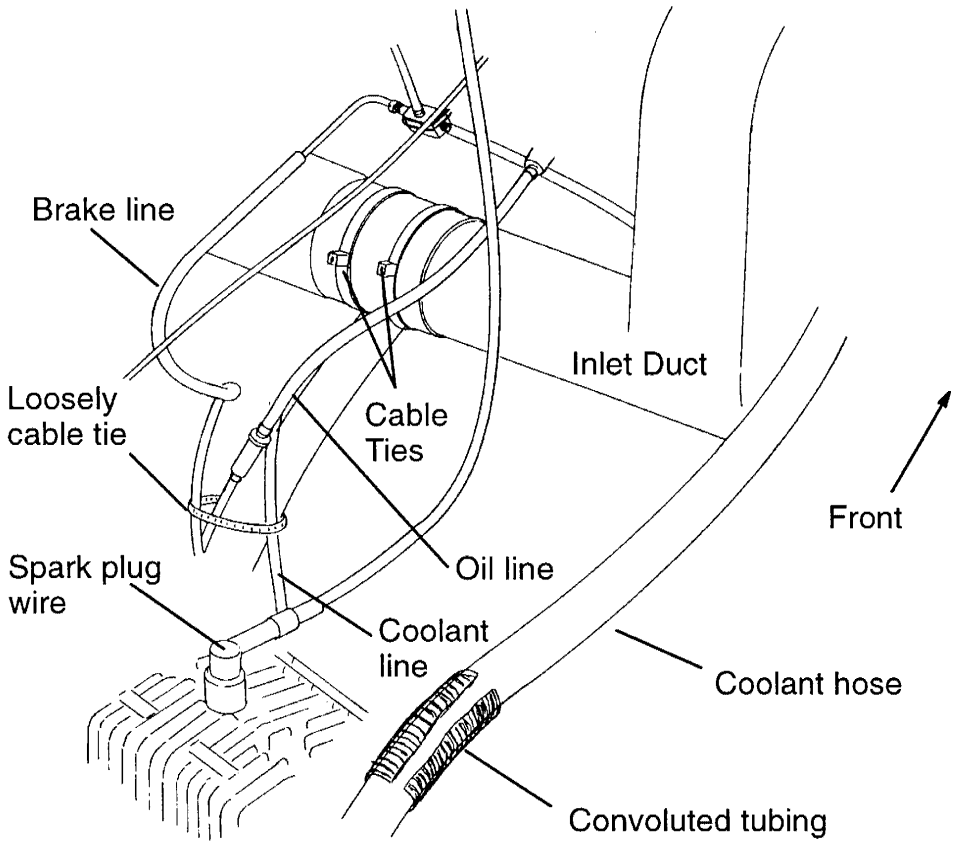
Magnum

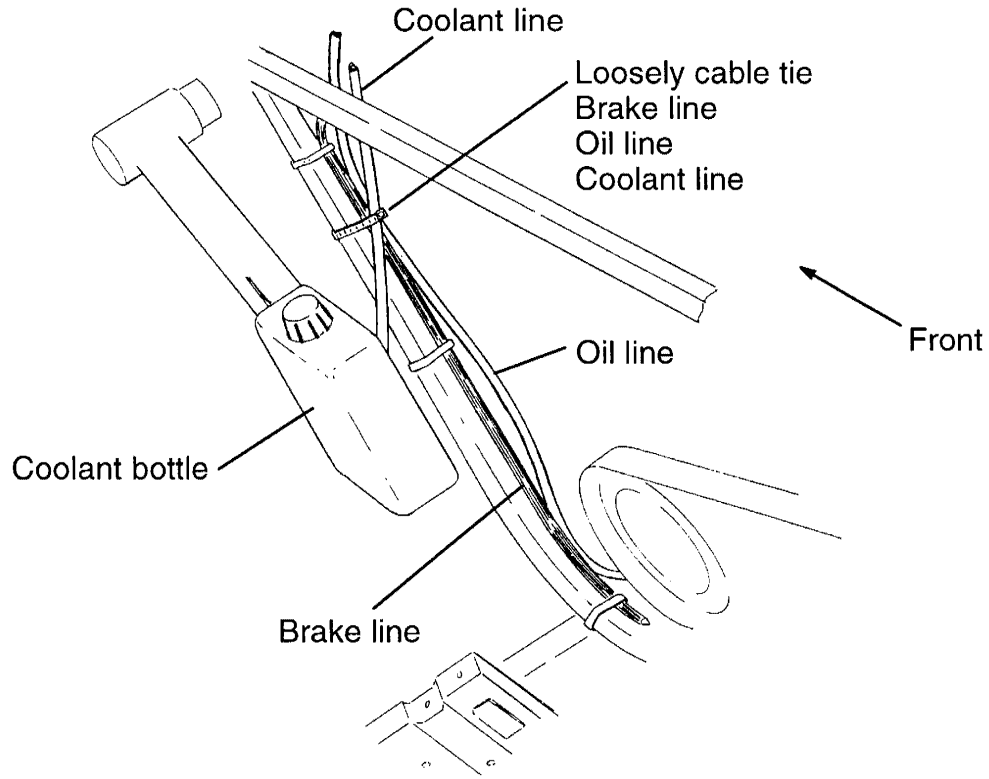

Cable ties secure wire harness and fuel line to frame
Fuel pump impulse line (from pump)
Gear Selector
Cable tie secures coolant hose to frame

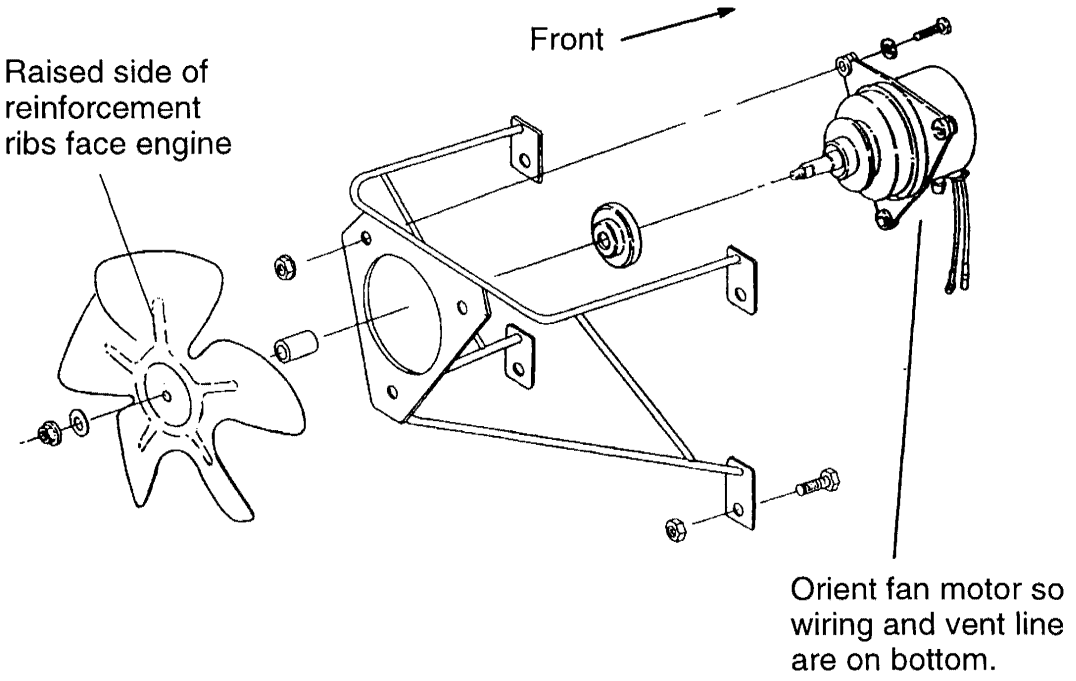

Cable tie secures:
-Engine wiring
-Main wire harness
-Fuel line
-Brake line
-Choke Cable
Shifter
Fuel Impulse Line
Choke Cable
Carburetor
Cable tie securing fuel line
Inlet Duct
Engine wiring routed around and under inlet duct
When mounting fuel tank, carburetor vent lines should be in this approximate location
Clip secures brake line to frame
Vent Line
Circuit Breaker
Cable tie securing wiring from solenoid to starter
Solenoid


Cable tie oil tank vent line and fuel pump impulse hose
Edge Trim
To carburetor (lower LH side)
Routed over fuel shut-off
To carburetor (top RH side)
Fuel Pump
Cable tie through bulkhead secures three hoses
Fuel line from fuel valve

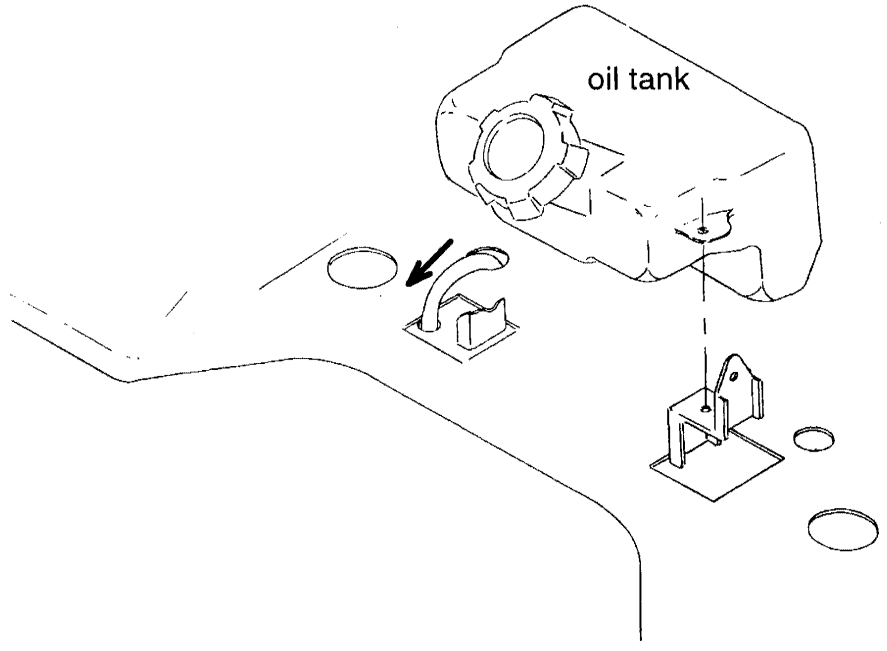
400s


Brake line
Loosely cable tie
Cable Ties
Inlet Duct
Front
Spark plug wire
Oil line
Coolant line
Coolant hose
Convoluted tubing

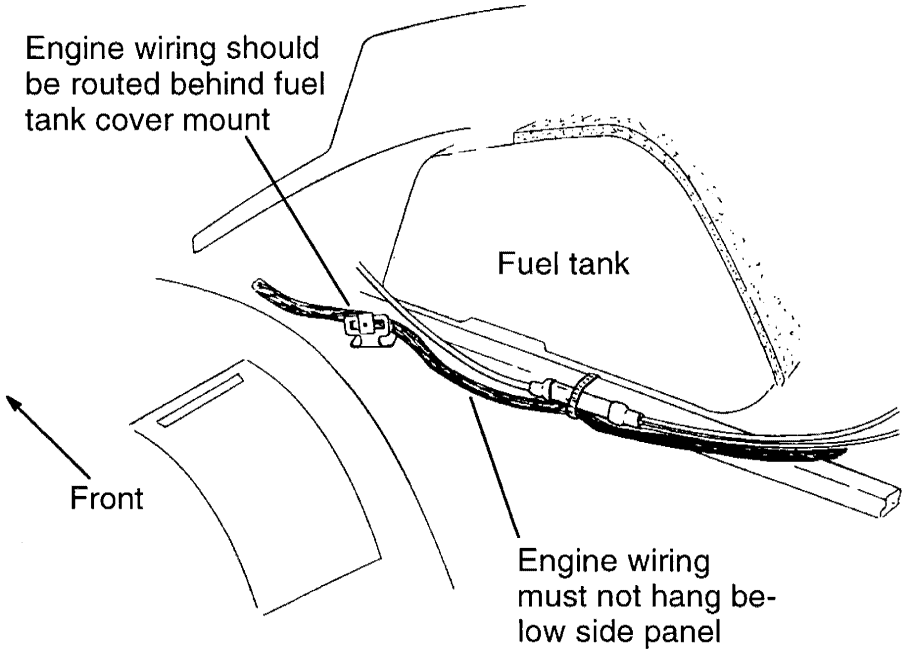

Coolant line
Loosely cable tie
Brake line
Oil line
Coolant line
Front
Oil line
Coolant bottle
Brake line

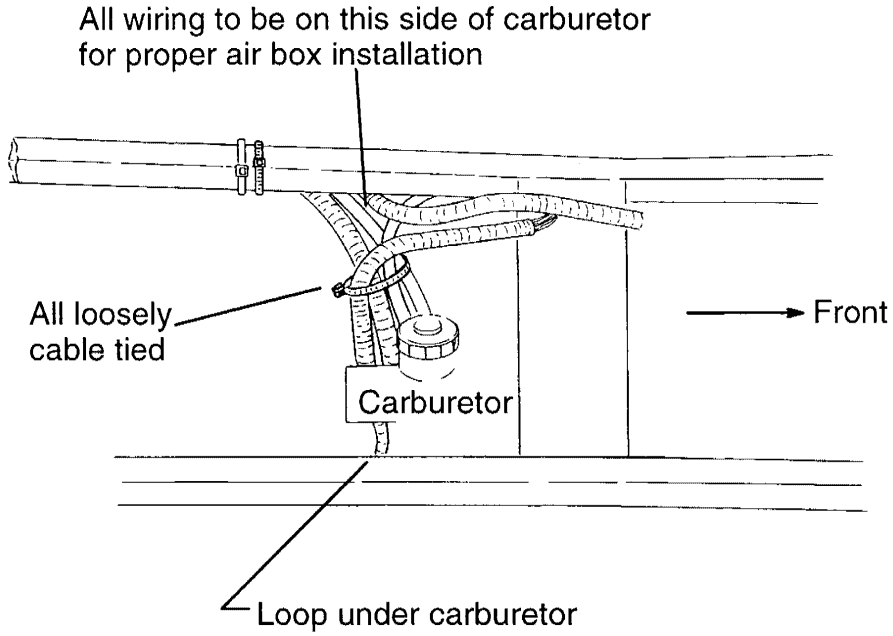


Fan motor vent line should come straight up from motor between the two large coolant lines, through cab assembly and back down into frame as shown.



ALL MODELS


Engine wiring should be routed behind fuel tank cover mount
Fuel tank
Front
Engine wiring must not hang below side panel


All wiring to be on this side of carburetor for proper air box installation
All loosely cable tied
Front
Carburetor
Loop under carburetor

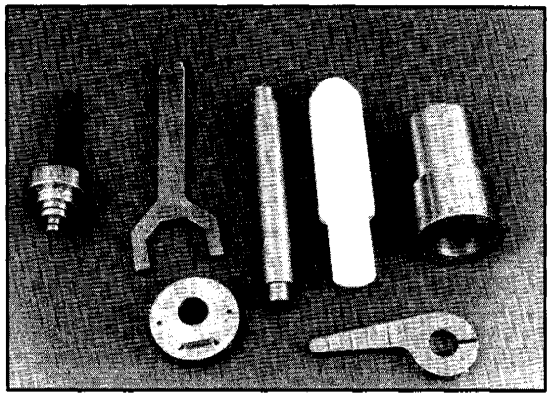
CHASSIS/SUSPENSION

TRANSMISSION

Transmission Tool Kit - Shaft Drive

Used to disassembly and assembly transmission and front gearcase on 500 models.

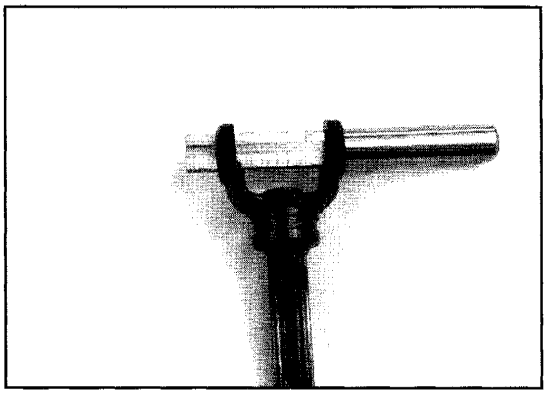
PN 2871702



Yoke Gauge Tool- Shaft Drive

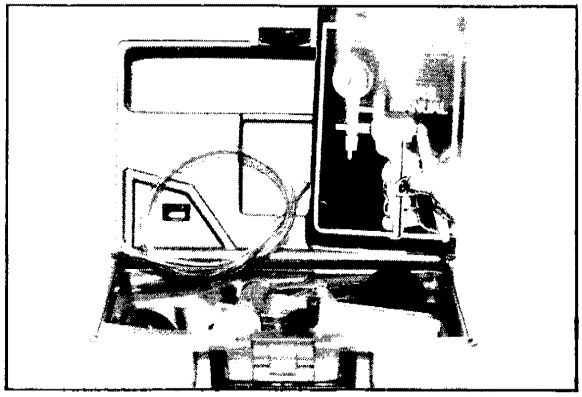
Used to check yoke alignment

PN 2871813 - Large Yoke
PN 2871814 - Small Yoke



GENERAL

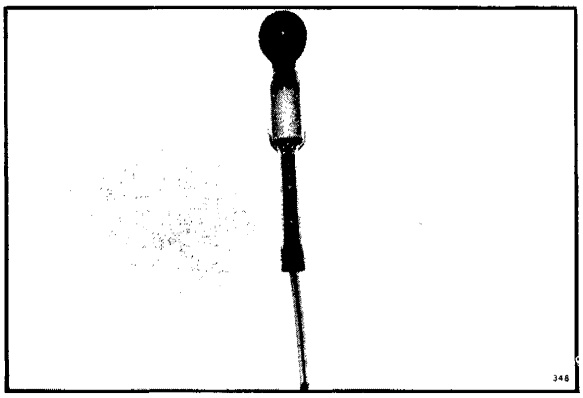
Mity Vac™ Pump Kit



This tool is used for many service functions on Polaris ATVs including testing of cooling systems, carburetor needle and seat, oil system check valves, etc.

PN 2870975

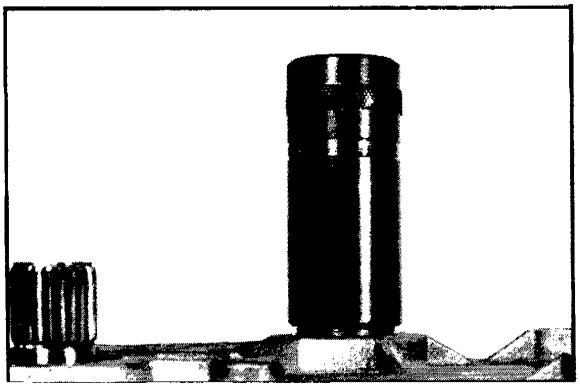
Small Battery Hydrometer



Measures the strength of battery electrolyte in terms of specific gravity. Specially designed for small batteries.

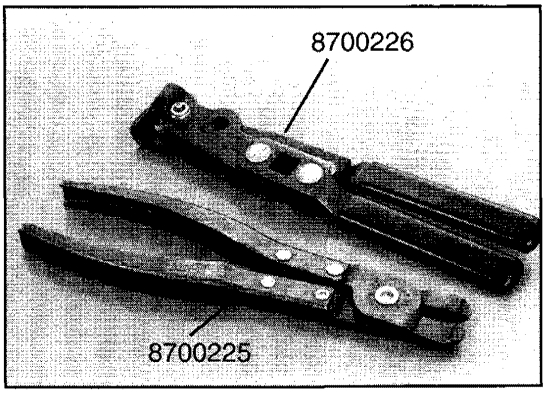
PN 2870836

Transmission Seal/Bearing Driver - 50mm



For installing bearings and case seals during transmission gearcase overhaul.
PN 2871282

CV Boot Clamp Pliers



The ear and earless driveshaft CV boots require a special pliers to secure the clamps properly without distortion.

PN 8700225 For Earless (Flush) Style Clamps
PN 8700226 For Ear Style Clamps

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 All Terrain Vehicle (ATV) 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 $25.00 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. THE PURCHASER MUST COMPLETE AN ATV SAFETY TRAINING COURSE PROVIDED BY THE DEALER IN ORDER TO HAVE VALID WARRANTY ON THE ATV. 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 ATV IS REGISTERED WITH POLARIS.

Initial dealer preparation and set-up of your ATV 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 ATV that has been altered structurally, modified, 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 ATV 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 ATV. The exclusive remedy for breach of this warranty shall be, at Polaris' exclusive option, repair or replacement of any defective materials, or components or products. THE REMEDIES SET FORTH IN THIS WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. POLARIS SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED

WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE, OR OTHER TORT OR OTHERWISE. Some states do not permit the exclusion or limitation of incidental or consequential damages or implied warranties, so the above limitations or exclusions may not apply to you if inconsistent with controlling state law.

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

HOW TO OBTAIN WARRANTY SERVICE

If your ATV 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.

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.

CDI: Capacitor discharge ignition. Ignition system which stores voltage generated by the stator plate exciter coil in a capacitor or condenser (in CDI box). At the proper moment a voltage generated by the stator plate pulser coil closes an electronic switch (thyristor) in the CDI box and allows the voltage in the capacitor to discharge into the primary windings of the ignition coil.

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 transmit rotation of the clutch to 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.

Condenser/Capacitor: A storage reservoir for electricity, used in both E.T. and CDI systems.

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 lower half of crankcase. Measure at various points especially at PTO. Maximum allowable run-out is .006″ (.02 cm).

DCV: Direct current voltage.

Detonation: The spontaneous ignition of the unburned fuel/air mixture after normal spark ignition. Piston looks "hammered" through, rough appearance around hole. Possible causes: 1) too high a compression ratio for the fuel octane; 2) low octane fuel; 3) over-advanced ignition timing.

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. (i.e. poor connections or broken wire at hi-lo beam switch resulting in loss of headlights.

Electrical Short: Short circuit. An electrical circuit which is completed before the current reaches the intended component. (i.e. a bare wire touching the snowmobile chassis under the seat resulting in loss of taillights and brake lights).

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.

Head Volume: Cylinder head capacity in cc, head removed from engine with spark plug installed.

High Tension Lead: The heavy insulated wire which carries the high secondary voltage from the coil to the spark plug.

Holed Piston: Piston in which a hole has formed on the dome. Possible causes: 1) detonation; 2) pre-ignition.

HP: Horsepower.

ID: Inside diameter.

Ignition Coil: A type of transformer which increases voltage in the primary windings (approx. 200V) to a higher voltage in the secondary windings (approx. 14KV - 32KV) through inductions. Secondary voltage is high enough to arc the air gap at the spark plug.

Ignition Generating Coil: Exciter coil, primary charge coil. Stator plate coil which generates primary ignition voltage.

in.: Inch/inches.

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

kg/cm ^{2} : 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/in ^{2} : Pounds per square inch.

Left 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. This is how mechanical energy in our engines is converted to electrical energy in the lighting coil, ignition generating coils and trigger coil.

mi.: Mile/miles.

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

N-m: 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.

Piston Erosion: Piston dome melts. Usually occurs at the exhaust port area. Possible causes: 1) lean fuel/air mixture; 2) improper spark plug heat range.

Pre-Ignition: A problem in combustion where the fuel/air mixture is ignited before normal spark ignition. Piston looks melted at area of damage. Possible causes: 1) too hot a spark plug; 2) spark plug not properly torqued; 3) "glowing" piece of head gasket, metal burr or carbon in the combustion chamber; 4) lean fuel/air mixture.

Primary Circuit: This circuit is responsible for the voltage build up in the CDI capacitor. In the CDI system the parts include the exciter coil, the trigger coil, the wires from stator plate to CDI box and to the low resistance primary windings in the ignition coil.

Primary Clutch: Drive clutch on engine.

psi.: Pounds per square inch.

PTO: Power take off.

PVT: Polaris Variable Transmission (Drive Clutch System)

qt.: Quart/quarts.

RPM: Revolutions per minute.

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

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

RPM: Revolutions per minute.

Running Time: Ignition timing when fully advanced or at specified RPM.

Secondary Circuit: This circuit consists of the large secondary coil windings, high tension wire and ground through the spark plug air gap.

Secondary Clutch: Driven clutch on chaincase or jackshaft.

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.

Select Monitor: Diagnostic tool which provides static and dynamic displays of the function of critical components in an EFI system. It also has the capability to display the contents of the ECU memory.

Spark Plug Reach: Length of threaded portion of spark plug. Polaris uses 3/4″ (2 cm) reach plugs.

Static Timing: Ignition timing when engine is at zero RPM.

Stator Plate: The plate mounted under the flywheel supporting the primary ignition components and lighting coil.

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

Glossary Of Terms

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

Trigger Coil: Pulser coil. Generates the voltage for triggering (closing) the thyristor and timing the spark in CDI systems. Small coil mounted at the top of the stator plate next to the ignition generating coil.

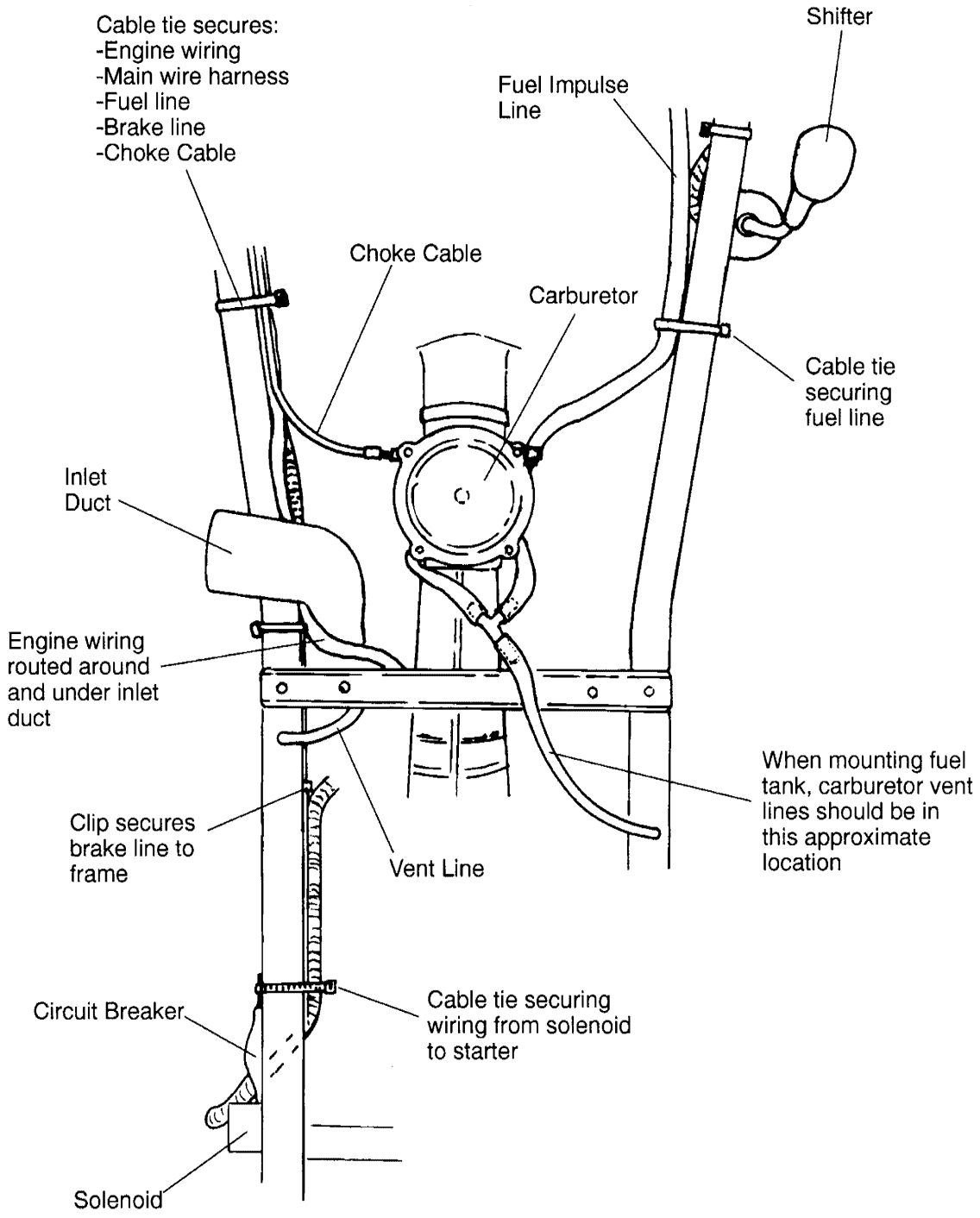
V Regulator: Voltage regulator. Maintains maximum lighting coil output at approx. 14.5 ACV as engine RPM increases.

Venturi: An area of air constriction. A venturi is used in carburetors to speed up air flow which lowers pressure in venturi to below atmospheric pressure, causing fuel to be pushed through jets, etc., and into the venturi to be mixed with air and form a combustible air/fuel mixture.

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.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-Main wire harness
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-Choke Cable
Shifter
Fuel Impulse Line
Choke Cable
Carburetor
Cable tie securing fuel line
Inlet Duct
Engine wiring routed around and under inlet duct
When mounting fuel tank, carburetor vent lines should be in this approximate location
Clip secures brake line to frame
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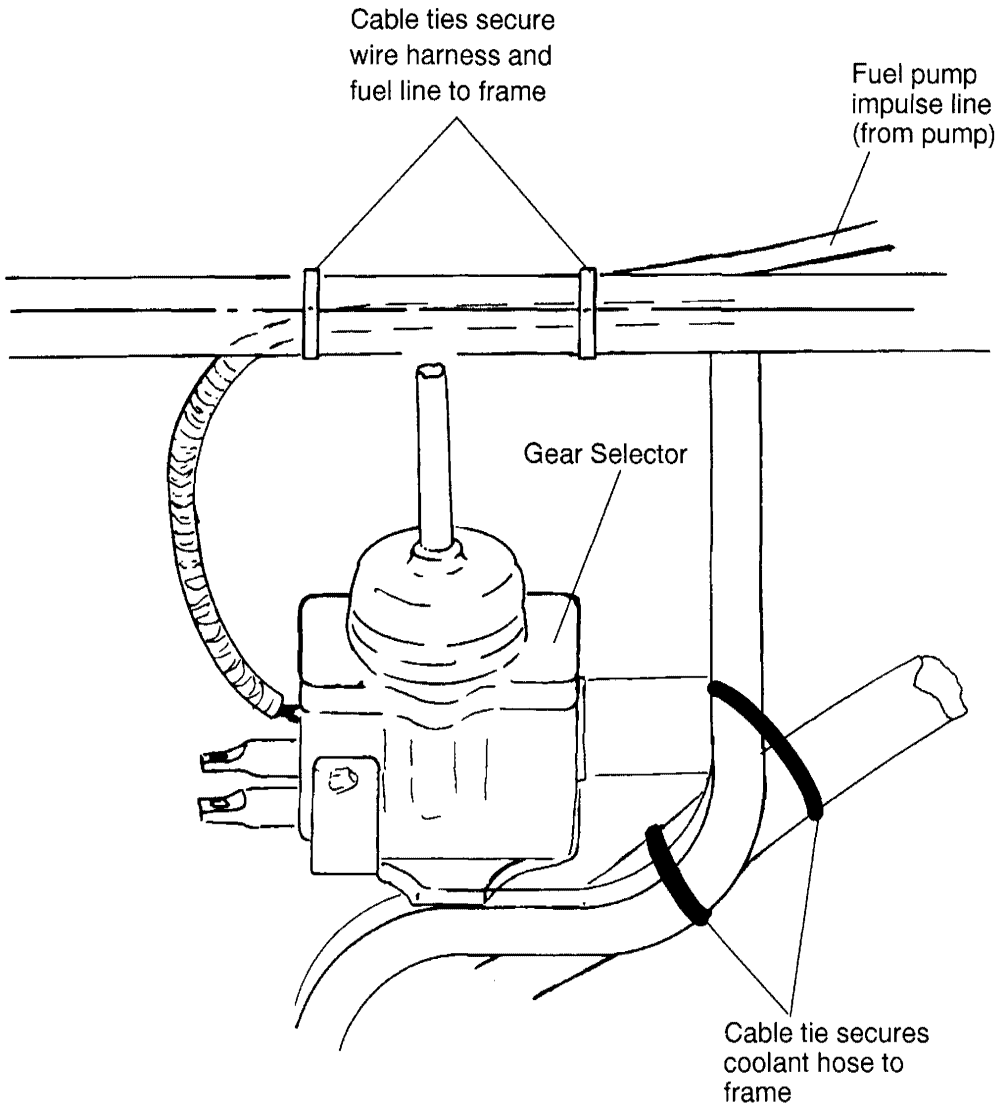
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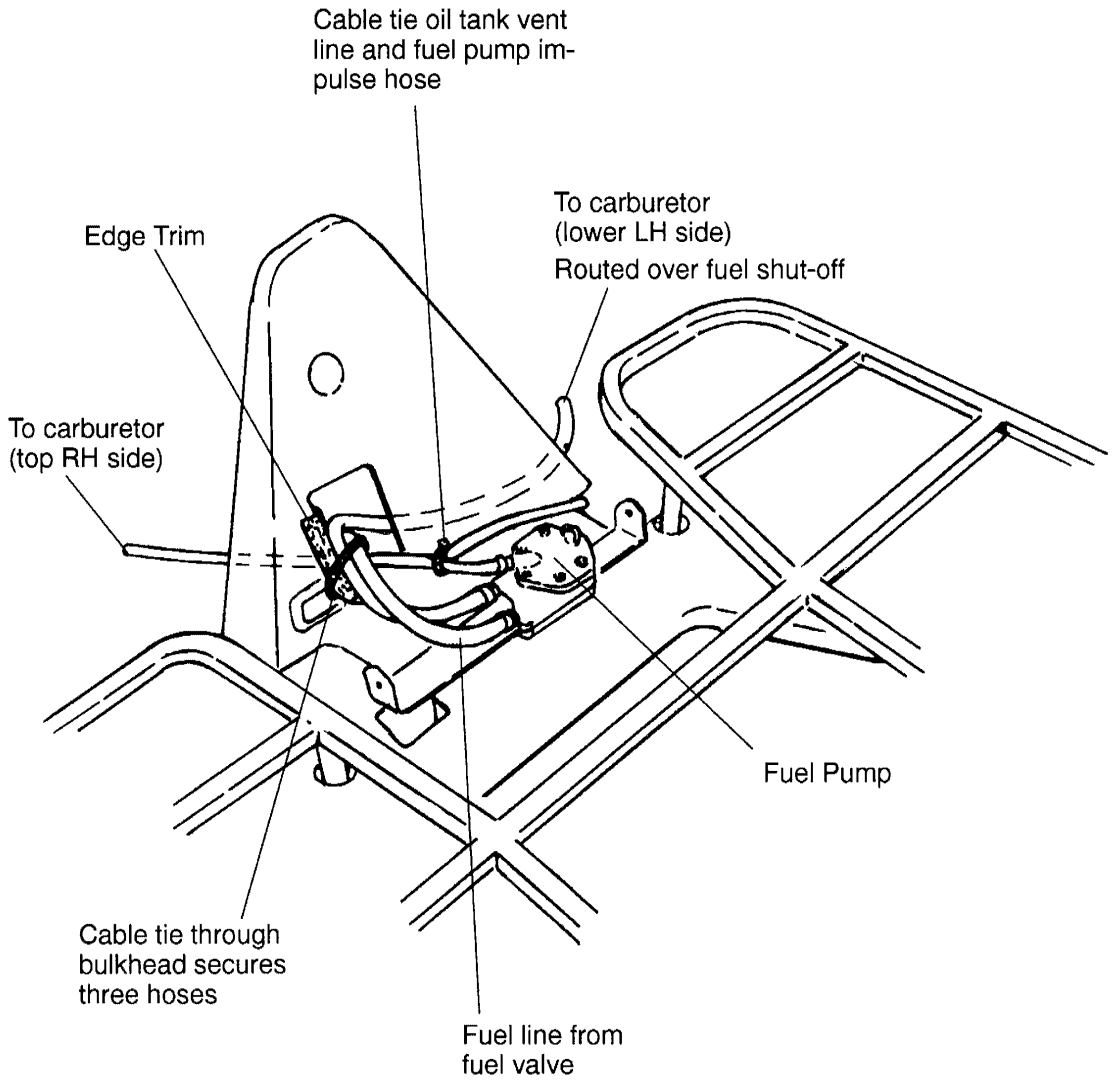
Fuel pump impulse line (from pump)
Gear Selector
Cable tie secures coolant hose to frame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Cable tie through bulkhead secures three hoses
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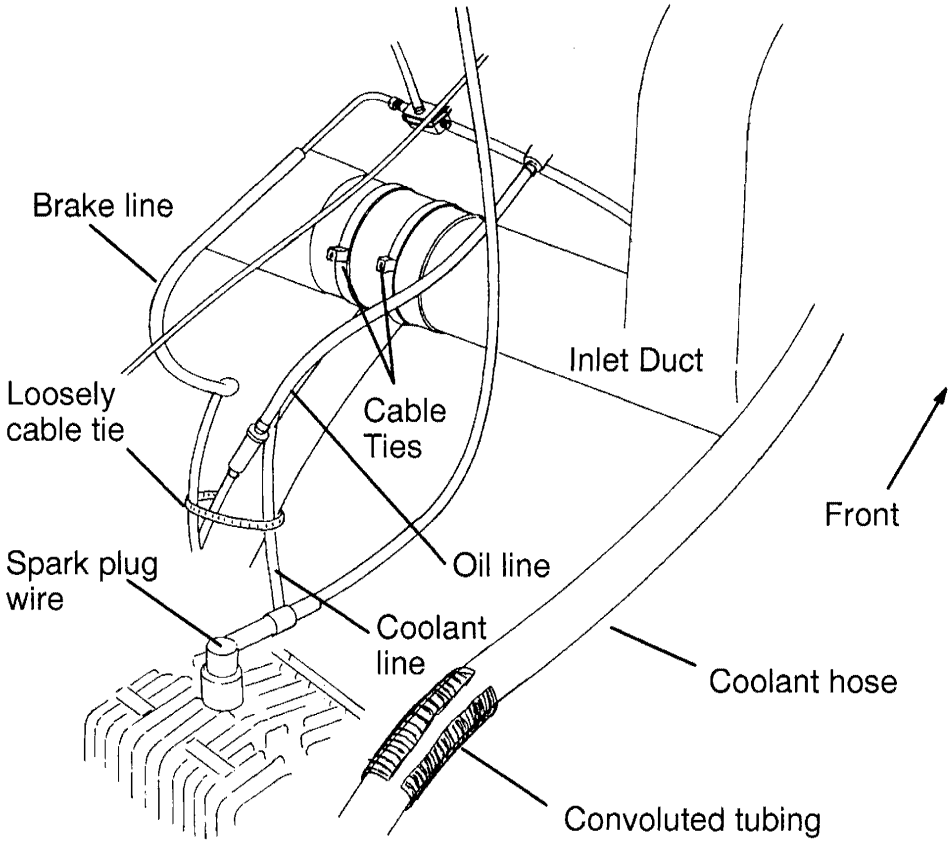
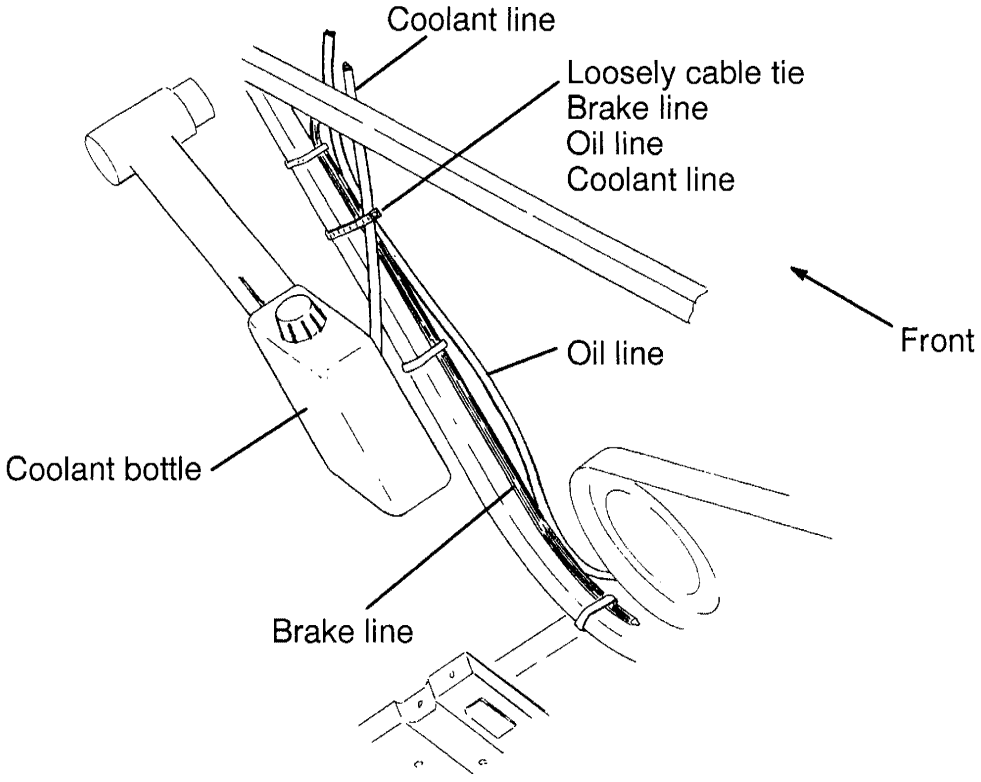
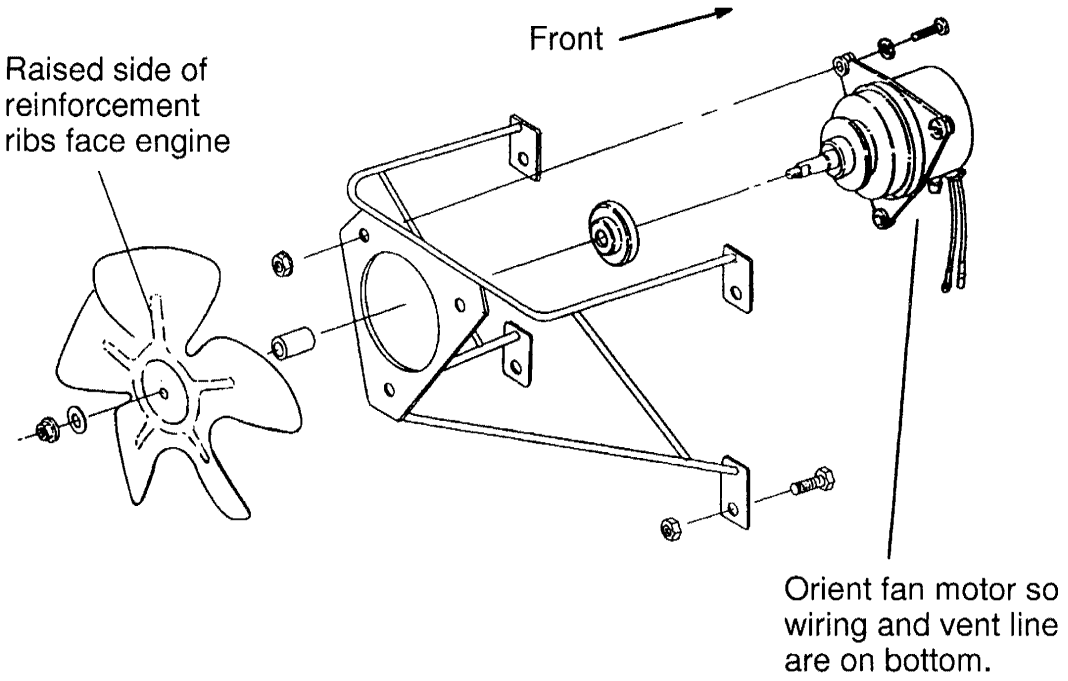
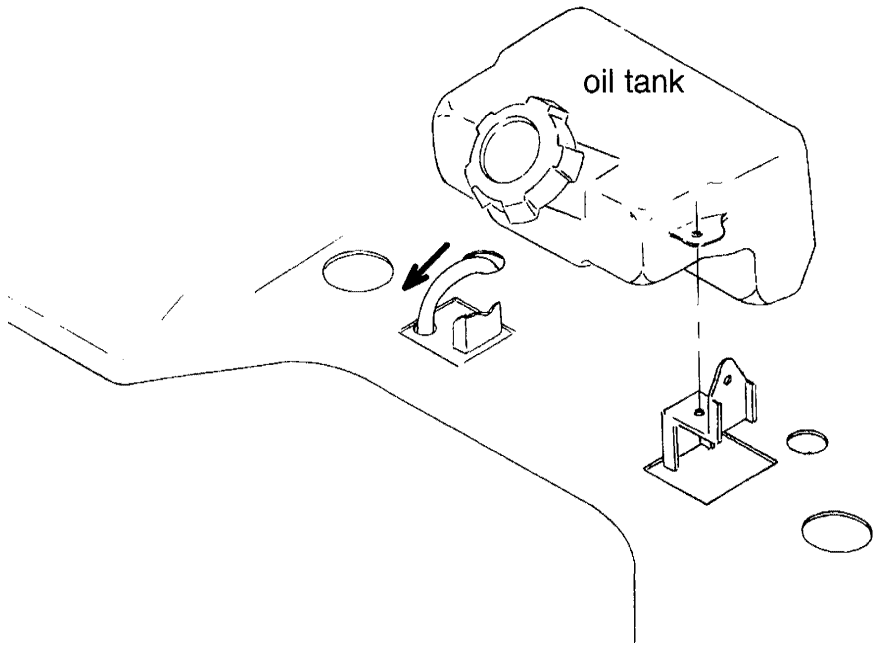

Brake line
Loosely cable tie
Cable Ties
Inlet Duct
Front
Spark plug wire
Oil line
Coolant line
Coolant hose
Convoluted tubing

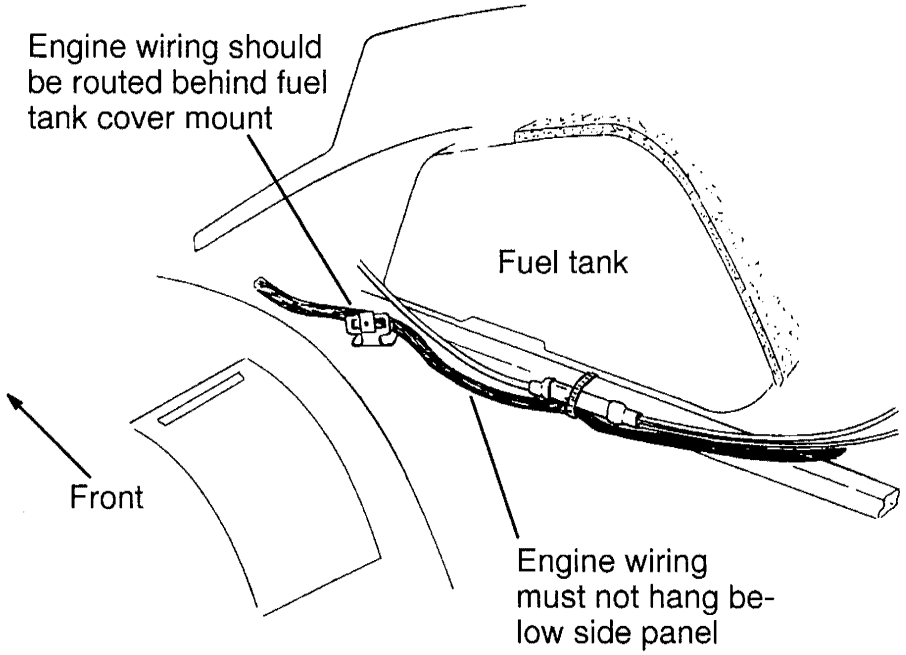

Coolant line
Loosely cable tie
Brake line
Oil line
Coolant line
Front
Oil line
Coolant bottle
Brake line

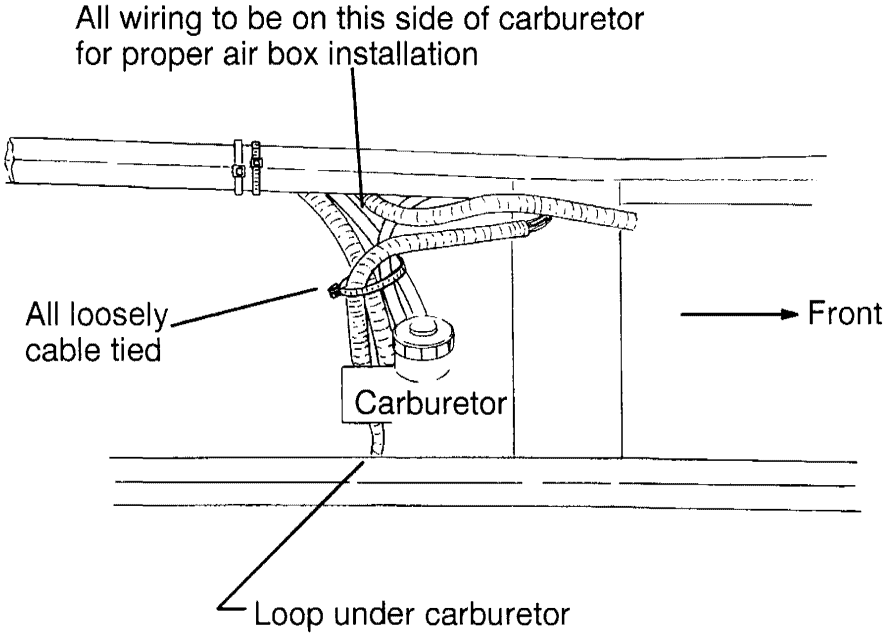


Fan motor vent line should come straight up from motor between the two large coolant lines, through cab assembly and back down into frame as shown.

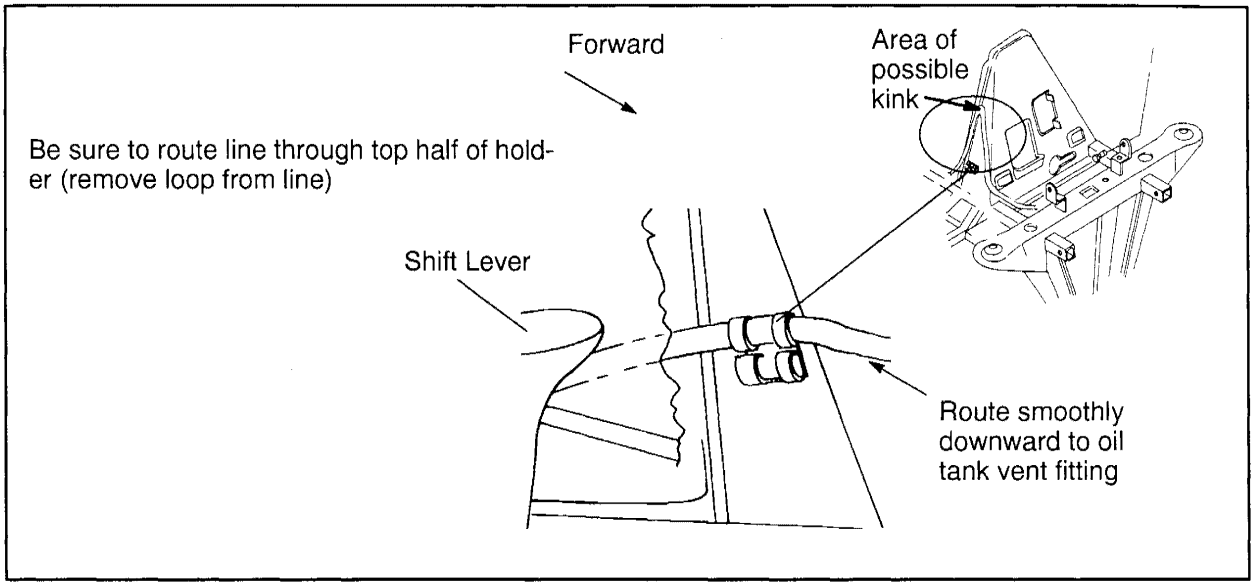


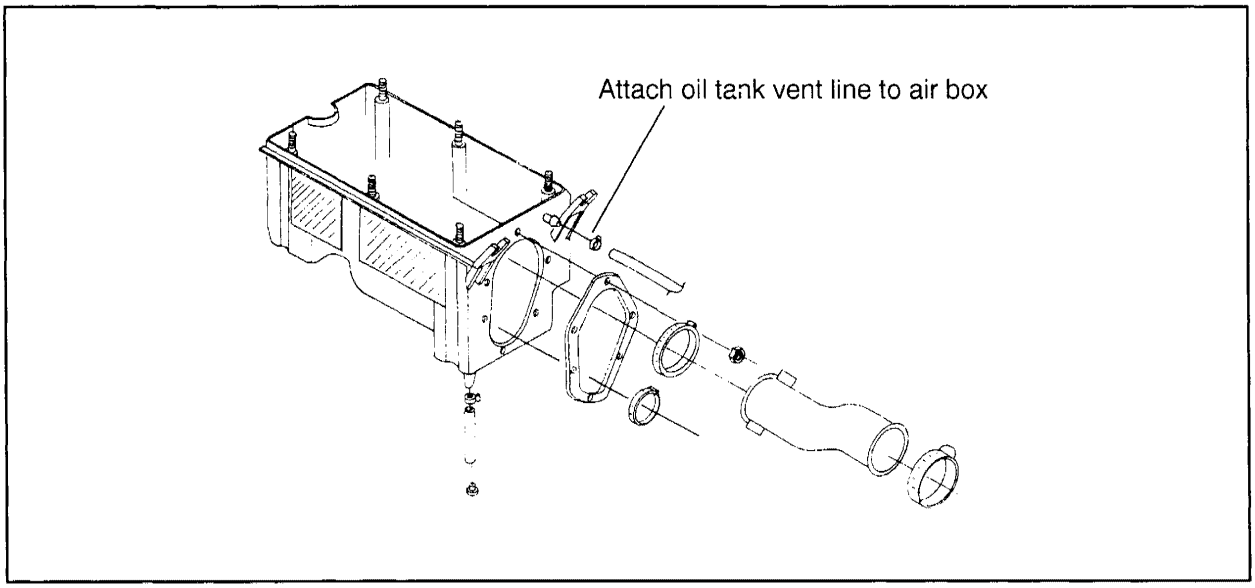
ALL MODELS

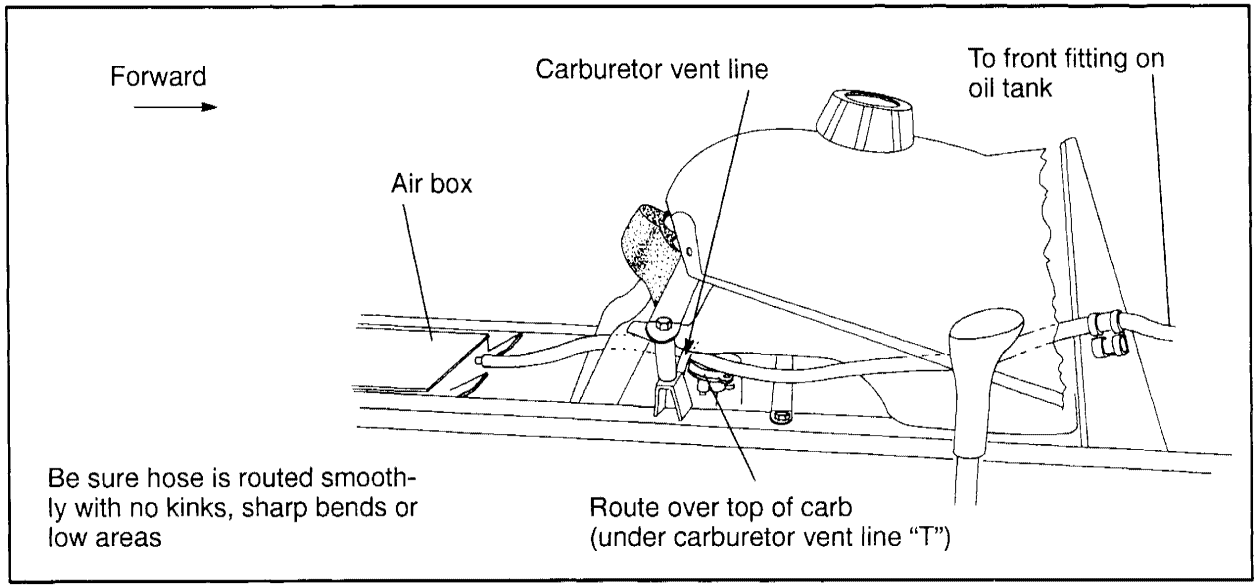

Engine wiring should be routed behind fuel tank cover mount
Fuel tank
Front
Engine wiring must not hang below side panel


All wiring to be on this side of carburetor for proper air box installation
All loosely cable tied
Front
Carburetor
Loop under carburetor

Oil Tank Vent Line Routing (1996 Sportsman 500)







CHAPTER 2
MAINTENANCE

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Inspection, adjustment and lubrication intervals of important components is listed in the following chart. Maintenance intervals are based upon average riding conditions and a vehicle speed of approximately 10 miles per hour.

Inspect, clean, lubricate, adjust or replace parts as necessary. **NOTE:** Inspection may reveal the need for replacement parts. Always use genuine Polaris parts.

■**CAUTION:** Due to the nature of these adjustments, it is recommended that service be performed by an authorized Polaris dealer. For engine oil, short trip cold weather riding also constitutes severe use. Pay special attention to oil level. A rise in oil level in cold weather can indicate moisture collecting in the oil tank.

▶Vehicles subjected to severe use, such as operation in wet or dusty areas, should be inspected and serviced more frequently.

E Emission Control System Service (California). For 4-cycle models built after January 1, 1997.

ENGINE					
	Item	**Hours**	**Frequency**	**See Page**	**Remarks**
E▶	Engine Oil - Level/Change	100 hrs	6 months	2.23	Check Level Daily; Break In service at 1 month
E	Oil Filter (4-strokes)	100 hrs	6 months	2.23	Replace with oil change
	Oil Filter (2-strokes)	100 hrs	12 months	2.22	Replace
	Oil Pump Cable (2-strokes)	50 hrs	6 months	2.19	Inspect, Adjust, Lubricate, Replace if Required
E▶	Air Filter - Foam Pre-Cleaner	Daily	Daily	2.22 / 2.25	Inspect - Clean & oil more often in dirty cond.
E▶	Air Filter - Main Element	Weekly	Weekly	2.22 / 2.25	Inspect - Replace if necessary
▶	Air Box Sediment Tube	-	Daily	2.26	Drain deposits whenever visible
▶	Engine Breather Filter	20 hrs	Monthly		Inspect and replace if necessary
▶	Oil Tank Vent Hose	100 hrs	12 months		Inspect hose routing /hose condition
E■	Valve Clearance (4-strokes)	100 hrs	12 months	2.27	Inspect/Adjust
▶	Counter Balancer Fluid (400s)	100 hrs	12 months	2.21	Check Monthly / Change Annually
E	Idle Speed	As required	As required	2.11	Adjust
■	Throttle Cable / ETC Switch	50 hrs	6 months	2.11	Inspect -Adjust, Lubricate, Replace if necessary
	Choke (Enricher) Cable	50 hrs	6 months	2.12	Inspect -Adjust, Lubricate, Replace if necessary
	Carburetor Float Bowl	50 hrs	6 months	2.13	Drain bowl periodically and prior to storage
	Carburetor Air Intake Ducts/Flange	50 hrs	6 months	-	Inspect all ducts for proper sealing/air leaks
E■	Fuel System	100 hrs	12 months	2.13	Check for leaks at tank cap, lines, fuel valve, filter, pump & carburetor. Replace lines every 2 years.
E■	Fuel Filter	100 hrs	12 months	2.13	Replace filter annually
	Coolant/Level Inspection	Daily	Daily	2.18	Replace engine coolant every 2 years
	Coolant Strength / Pressure Test System	100 hrs	6 months	2.18	Inspect strength seasonally; Pressure test system annually
	Radiator	100 hrs	12 months	2.18	Inspect / Clean external surface
	Cooling System Hoses	100 hrs	12 months	2.18	Inspect
	Engine Mounts	100 hrs	12 months	2.17	Inspect
	Drain Recoil Housing	Weekly	Weekly	2.21	More often if operating in wet environment
	Exhaust Muffler / Pipe	100 hrs	12 months		
ELECTRICAL					
E	Spark Plug	100 hrs	12 months	2.17	Inspect - Replace if necessary
	Ignition Timing	100 hrs	12 months	10.10	Inspect
	Battery	20 hrs	Monthly	2.16	Check terminals; Clean; Check fluid level
	Headlight Aim	As required	As required	10.4	Adjust if Necessary
	Headlamp Inspection	Daily	Daily	10.4	Check operation daily; Apply Polaris Dielectric Grease to connector when lamp is replaced
	Tail Lamp Inspection	Daily	Daily	10.9	Check Operation Daily; Apply Polaris Dielectric Grease to socket when lamp is replaced

Periodic Maintenance Chart, Cont.

CHASSIS					
■ ▶	Item	Hours or Odometer	Frequency	See Page	Remarks
▶	General Lubrication	50 hrs	3 months	2.5 - 2.9	Lubricate All Fittings, Pivots, Cables, Etc.
▶	Front Hubs/Fluid Check	50 hrs	6 months	2.32	Check monthly
▶	Front Hubs/Fluid Change	100 hrs	12 months	2.32	Check monthly
■	Front Wheel Bearings (2x4)	Annually	Annually	7.21	Inspect and replace if necessary
■	Front Hub Spindle Nut Torque (AWD Models)	Annually	Annually	7.21	Inspect Torque and Locking Fastenerand replace if necessary
	Drive Belt	50 hrs	6 months	6.12	Inspect - Adjust, Replace if Necessary
	Clutches (Drive And Driven)	100 hrs	12 months	6.7	Inspect, Clean
▶	Transmission Oil Level	25 hrs	Monthly	2.41	Inspect Monthly; Change Annually
	Shift Linkage	50 hrs	6 months	2.41	Inspect,Lubricate, Adjust
	Shift Selector Box	200 hrs	24 months	8.9	Change Lubricant Every Two Years
■	Steering	50 hrs	6 months	2.31	Inspect Daily, Lubricate
■	Toe Adjustment	As required	As required	2.31	Periodic Inspection, Adjust When Parts are Replaced
▶	Rear Axle	50 hrs	6 months	7.24	Inspect Bearings, Grease Fitting
▶	Front Suspension	50 hrs	6 months	2.40	Inspect - Lubricate
▶	Rear Suspension	50 hrs	6 months	2.40	Inspect - Lubricate
	Drive Chain	50 hrs	6 months	2.37	Inspect Daily, Adjust and Lubricate if Needed
	Tires	Pre-ride	Pre-ride	2.43	Inspect Daily, Pre-Ride Inspection Item
■	Brake Fluid	200 hrs	24 months	2.34	Change Every Two Years
▶	Brake Fluid Level	Pre-ride	Pre-ride	2.34	Inspect Daily, Pre-Ride Inspection Item
▶	Brake Lever Travel	Pre-ride	Pre-ride	2.34	Inspect Daily, Pre-Ride Inspection Item
■	Brake Pad Wear	10 hrs/100 miles	Monthly	2.34	Inspect Periodically
	Auxiliary Brake Adjustment	As required	As required	2.35	Inspect Deflection Daily; Adjust
	Output Shaft Bearing	Monthly	Monthly	2.7	Grease Monthly
	Brake System	Pre-ride	Pre-ride	2.34	Pre-Ride Inspection Item
	Wheels	Pre-ride	Pre-ride	2.42	Pre-Ride Inspection Item
	Frame Nuts, Bolts, Fasteners	Pre-ride	Pre-ride	2.43	Pre-Ride Inspection Item

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 4-stroke oil tank
- All brakes - check operation and adjustment (includes auxiliary brake)
- Throttle - check for free operation and closing
- Headlight/Taillight/Brakelight - check operation of all indicator lights and switches
- Engine stop switch - check for proper function
- Wheels - check for tightness of wheel nuts and axle nuts; check to be sure axle nuts are secured by cotter pins
- Drive chain - condition and slack; refer to drive chain adjustment
- Air cleaner element - check for dirt; 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

Recommended Lubricants - Quick Reference

Lubricants and maintenance product part numbers are listed on page 2.4.

Item	Type	Capacity	Notes	See Page
Engine Oil 4-Strokes	Polaris Premium 4 Synthetic, 0W/40	2 Quarts	Add to proper level on dipstick. See oil change.	2.23
Engine Injector Oil (2-Strokes)	Polaris Premium TC-W3 2-Stroke oil	2 Quarts	Add to top of oil reservoir as required.	2.22
Counter Balancer Oil (400L Engines)	SAE 10W30 Motor Oil (SG/SH Rated)	3.2 oz.	Add to proper level on dipstick.	2.21
Transmission (Gearcase) Type III HLR Type III HR Type IV	Polaris Synthetic Gear Case Oil	 20 oz. 16 oz. 32 oz.	Add to proper level on dipstick. See transmission oil change. Capacity after draining is approx. 20 ounces	2.41
Front Gear Case (Shaft Drive)	Premium Front Gearcase Fluid or GL5 80-90 Gear Lube	3.25 oz. (100 cc)	Add to bottom of fill plug threads.	2.10
Shift Selector Box	Polaris 0W/40 Synthetic Engine Lubricant or 10W Motor Oil	1 oz. 30cc	Oil in selector box should be at the center line of the shift selector plungers. Do not overfill or the selector may hydro-lock.	8.9
Coolant Level	Polaris Premium 60/40 pre-mixed Antifreeze/Coolant or 50/50 mixture antifreeze/coolant and distilled water	Approx. 2 Quarts	Fill reservoir tank to full line. Check after short period of operation when system is cold. Add if necessary. Refer to 2.18 for more information.	2.18
Front Hubs (AWD Models)	Premium Demand Drive Hub Fluid	2.5 oz. (75cc)	Fill hub at 4:00 or 8:00 position until fluid trickles out. Do not force fluid into hub.	2.32
Brake Fluid	Polaris DOT 3 Brake Fluid	-	-Fill reservoir to 1/4″ (6.4 mm) below cover gasket surface for aluminum reservoir. -Fill between "Min" & "Max" indicators on plastic reservoir.	2.34