CHAPTER 1
GENERAL INFORMATION

1

2001 Publication Part Numbers / Service Manuals 1.1
Model Number Identification 1.2
Vehicle Identification Number (VIN) 1.3
Standard Bolt Torque Specifications 1.4
Decimal Equivalents 1.5
Tap Drill Size Charts 1.6
Units of Measure Chart 1.7
Recommended Shop Supplies 1.8
Glossary of Terms . . . . . 1.9 - 1.11
General Precautions 1.12
Note Page 1.13
2001 Indy 500 XC EDGE Specifications . . . . . 1.14 - 1.15
2001 Indy 500 XC SP EDGE Specifications . . . . . 1.16 - 1.17
2001 Indy 600 XC SP / EDGE X Specifications . . . . . 1.18 - 1.19
2001 Indy 700 XC EDGE Specifications . . . . . 1.20 – 1.21
2001 Indy 800 XC SP EDGE Specifications . . . . . 1.22 – 1.23
2001 Indy 800 XCR Specifications . . . . . 1.24 – 1.25

2001 Publication Numbers

Model	Model No.	Owner's Manual Supplement	Parts Manual	Parts Microfiche
500 XC EDGE	S01NP5AS	9915967	9916074	9916075
500 XC, SP EDGE (Opt. A,B)	S01NP5CS	9915889	9916040	9916041
600 XC SP EDGE (Opt. A,B,X)	S01NP6ES	9915623	9916153	9916154
700 XC EDGE (Opt. A,B)	S01NP7AS	9915929	9916090	9916091
800 XC EDGE (Opt. A,B)	S01NP8BS	9915925	9916110	9916111
800 XCR	S01SB8AS	9916067	9916068	9916069

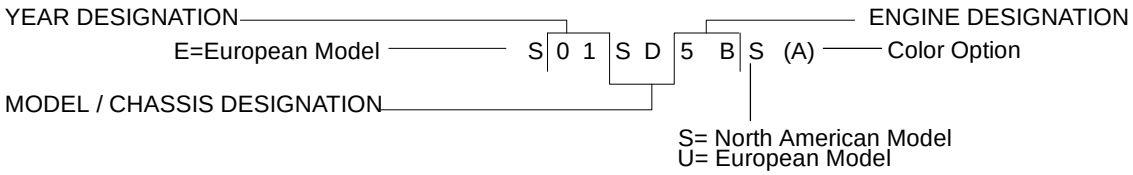
* European Model Only
2000 Snowmobile Owner's Manual (All) - PN 9915622
Snowmobile Assembly Manual - PN 9916508

Service Manuals

Snowmobile MRM Volume II	Through 1995	9912121
Snowmobile MRM Volume III	1996-1998	9913263
Snowmobile MRM Volume IV	1999	9915081
2000 Snow Complete Set w/wallcharts (all models except race)	2000	9915986
Fan Cooled Models	2000	9915980
Mid Range Liquid Cooled (500s, 600 triple)	2000	9915981
Performance Liquids (600 twins,700s, 800s)	2000	9915982
120 XCR	2000	9915983
High Performance (Race)	2000	9915985
Wall Chart Packet only	2000	9915984
120 XC SP	**2001**	**9916684**
Trail Sport 340 DLX, XCF SP, 500, SuperSport	**2001**	**9916685**
Two-Up / Touring Wide Trak, 340 Touring, Sport Touring, Sport Touring ES, 500 Classic Touring, 600 Classic Touring	**2001**	**9916686**
Trail Luxury 500 Classic, 600 Classic, 700 Classic, 800 LE	**2001**	**9916687**
Deep Snow 700 SKS, Trail RMK, 500/600/700/800 RMK, 800 RMK S.C. Special	**2001**	**9916688**
Performance 500 XC, 500/600/700/800 XC SP, 600 EDGE X, 800 XCR	**2001**	**9916689**
High Performance 440 XCF SP, 440 XC SP, 500/600/700/800 XC SP, 600/700/800 RMK, 800 XCR	**2001**	**9916690**
Suspension Systems	**2001**	**9916691**
Wallcharts	**2001**	**9916692**

MODEL NUMBER IDENTIFICATION

2001 MODEL DESIGNATION



MODEL LINE (4TH DIGIT)	MODEL TYPE (5TH DIGIT)
S= Standard Indy	B= Basic
L= Lite	U= Utility
N=EDGE	D= Deluxe
	P= Performance
	R= RMK
	X= Racer
	T= Touring
	S= SKS

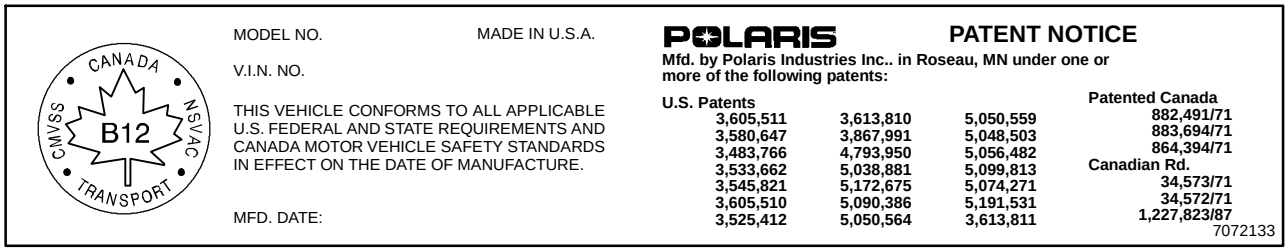
2001
MODEL DESIGNATION
NUMBERS (Chassis)

SU - WideTrak LX
SD - 500 Classic/700 Classic
SB - 800 XCR
ST - Sport Touring/Sport Touring ES/500-600 Classic Touring
SS - 700 SKS
SR - Trail RMK/500,600,700 RMK (136″)
SM - 700, 800 RMK (144″)/800 RMK S.C. Special
LD - 340 Deluxe
LT - 340 Touring
WB - 120 XC SP
ND - 600 Classic/800 LE
NB - SuperSport/Indy 500
NX - XCF SP
NP - 500 XC/500 XC SP/600 XC SP/600 EDGE X
700 XC SP/800 XC SP

2001
ENGINE DESIGNATION
NUMBERS

1A - 121 F/C OHV 4 cycle Fuji
2A - 250 F/C Piston Port Fuji
3A - 340 F/C Piston Port Fuji
4A - 440 F/C Cylinder Reed Fuji
4B - 488 L/C Piston Port Fuji
4C - 440 L/C Case Reed (domestic)
4E - 488 F/C Piston Port Fuji
4F - 440 F/C Cylinder Reed/Nicasil Fuji
5A - 500/440 L/C Fuji
5B - 544 F/C Cylinder Reed Fuji
5C - 500/440 VES L/C Case Reed 2 Cylinder (domestic)
6A - 597 L/C 3 Cylinder Fuji
6D - 600/700 L/C Case Reed 2 Cylinder (domestic)
6E - 600/440 VES L/C Case Reed 2 Cylinder (domestic)
7A - 700 L/C Case Reed 2 Cylinder (domestic)
8A - 800 VES L/C Case Reed 3 Cylinder Fuji
8B - 800 L/C Case Reed 2 Cylinder (domestic)

TUNNEL DECAL



These numbers should be referred to in any correspondence regarding warranty, service or replacement parts.

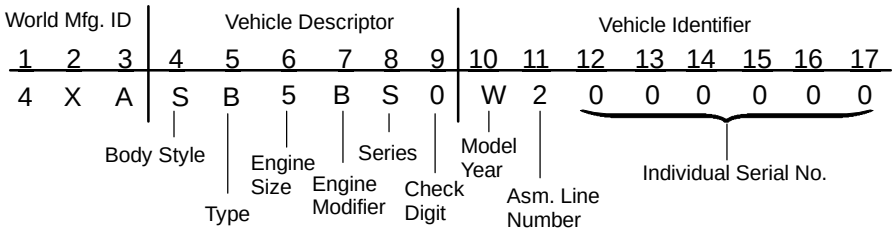
The machine model and serial number identification decal is located on the right front side of the tunnel. The serial number is permanently stamped into the tunnel. The model number is embossed on the decal.

Whenever corresponding about an engine it is important that the engine model and serial numbers be called out. Laser engraved model and serial numbers are located on the crankcase (intake side).

Vehicle Identification Number

Current snowmobiles have a 17 digit Vehicle Identification Number (VIN). The VIN is organized as follows: Digits 1-3: World Manufacturer Identifier. For Polaris, 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, type, engine type, and series. The VIN and the model number must be used with any correspondence regarding service or repair.

Example of Current VIN Number



Vehicle Identification Number / Model Number Key

Body Style	Type	Engine Size	Engine Modifier	Series
A=Aggressive	B=Base Model	1=100-199 cc	A=Fan	S=Domestic
S=Std Indy	D=Deluxe	2=200-299 cc	B=Liquid Twin	U=Europe
E=Evolved	P=Performance	3=300-399 cc	C=Case Reed Twin	
L=Lite	R=RMK	4=400-499 cc	D=Liquid Triple	
N=Edge	S=SKS	5=500-599 cc	E=Case Reed Triple	
W=Mini	T=Touring	6=600-699 cc		
	U=Utility	7=700-799 cc		
	X=Racer	8=800-899 cc		

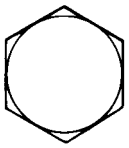
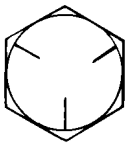
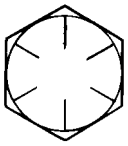
Year / Letter Identification

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.

1= 2001
2= 2002
3= 2003

Standard Torque Specifications

The following torque specifications are to be used as a general guideline when torque value is not specified. There are exceptions in the steering, suspension, and engine areas. Always consult the torque chart and the specific manual section for torque values of fasteners.

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

*****To convert ft. lbs. to Nm multiply foot pounds by 1.356.
*****To convert Nm to ft. lbs. multiply Nm by .7376.

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	

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

Unit of Measure	Multiplied by	Converts to
ft. lbs.	x 12	= in. lbs.
in. lbs.	x .0833	= ft. lbs.
ft. lbs.	x 1.356	= Nm
in. lbs.	x .0115	= kg-m
Nm	x .7376	= ft. lbs.
kg-m	x 7.233	= ft. lbs.
kg-m	x 86.796	= in. lbs.
kg-m	x 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.)
cc	x .03381	= Fluid Ounces (oz.)
lb.	x .454	= kg
kg	x 2.2046	= lb.
Cubic inches (cu in)	x 16.387	= Cubic centimeters (cc)
Cubic centimeters (cc)	x 0.061	= Cubic inches (cu in)
Imperial pints (Imp pt)	x 0.568	= Liters (l)
Liters (l)	x 1.76	= Imperial pints (Imp pt)
Imperial quarts (Imp qt)	x 1.137	= Liters (l)
Liters (l)	x 0.88	= Imperial quarts (Imp qt)
Imperial quarts (Imp qt)	x 1.201	= US quarts (US qt)
US quarts (US qt)	x 0.833	= Imperial quarts (Imp qt)
US quarts (US qt)	x 0.946	= Liters (l)
Liters (l)	x 1.057	= US quarts (US qt)
US gallons (US gal)	x 3.785	=Liters (l)
Liters (l)	x 0.264	= US gallons (US gal)
Pounds - force per square inch (psi)	x 6.895	= Kilopascals (kPa)
Kilopascals (kPa)	x 0.145	= Pounds - force per square inch (psi)
Kilopascals (kPa)	x 0.01	= Kilograms - force per square cm.
Kilograms - force per square cm.	x 98.1	= Kilopascals (kPa)

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

Description	Part Number
Chaincase Lubricant - Quart	2871280
Chaincase Lubricant - Gallon	2870464
Chaincase Lubricant - 2.5 Gallon	2872281
Fuel System Deicer (Isopropyl)	2870505
Loctite Primer T - 6 Oz. Aerosol	2870585
Loctite RC 680 - 10cc Retaining Compound	2870584
Loctite/Chisel – Gasket Remover - 18 Oz.	2870601
Metal Polish - 8 Oz.	2870632
DOT 3 Brake Fluid	2870990
Fogging Oil	2870791
Nyogel t Grease	2871329
Fox Shock Oil	2870995
Premium All Season Grease (14 oz.)	2871423
Premium All Season Grease (3 oz.)	2871322
Premium 60/40 Anti-Freeze/Coolant	2871323
Premium Carbon Clean Fuel System Additive	2871326
Polaris Battery Tender	2871076
Carbon Clean Fuel System Additive	2871326
T-9 Metal Protectant	2871064
Crankcase Sealant 3 Bond 1215	2871557

ACS: Alternator control switch.

ACV: Alternating current voltage.

Air Gap Spark Test: A good check for ignition voltage and general ignition system condition. Spark should arc 3/8" (1 cm.) minimum from end of high tension lead to ground. Several testers are available commercially.

Alternator: Electrical generator producing alternating current voltage.

Bore: Diameter of cylinder.

BTDC: Before Top Dead Center.

Bump Steer: When skis toe in and toe out through suspension travel.

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 Cylinder: On three cylinder engines, the cylinder between Mag and PTO ends.

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.

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 as the engine torques back.

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

Coil: A winding of wire around an iron core which has the ability to generate an electrical current when a magnetic field passes through it.

Combustion Chamber: Space between cylinder head and piston dome at TDC.

Compression: Reduction in volume or squeezing of a gas.

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) lean fuel/air mixture; 2) low octane fuel; 3) over-advanced ignition timing; 4)compression ratio too high for the fuel octane.

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

Displacement: The volume of the cylinder displaced by the piston as it travels from BDC to TDC. The formula is:

$$\frac{\text{Bore}^2 \times \text{Stroke} \times 3.1416}{4} = \text{Displacement in CCs}$$

Effective Compression Ratio: Compression ratio measured from after the piston closes the exhaust port.

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.

Flat Head Bolt: To be used where finished surfaces require a flush fastening unit. Countersunk.

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.

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

Heat Exchanger: A device used to transfer heat. They dissipate engine heat to the atmosphere.

Hex Head Bolt: Standard type of wrench-applied hexagon head, characterized by clean, sharp corners trimmed to close tolerances. Recommended for general commercial applications.

Hi-Fax: Trademark of Himont Advanced Materials. The special slide material which fits onto the bottom of the suspension rails.

High Side: Sled pushes or tips up toward outside of turn.

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

Hole Shot: A term used when machine starts a race from a dead stop.

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

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 or primary charge coil. Stator plate coil which generates primary ignition voltage. CDI system uses one ignition generating coil.

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

Kg/cm.2: Kilograms per square centimeter. Metric equivalent of PSI.

Keystone Ring: A piston ring with bevel on upper surface.

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

L Ring: A wide face piston ring with an ”L” shaped cross section. Leg of ”L” goes up when installing on piston.

Labyrinth Seal: A pressure type center seal identified by series of grooves and lands. Polaris engines us this type of seal to separate the cylinders in the crankcase halves.

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

Lighting Coil: Generates voltage for lights, battery charging, etc by electromagnetic induction.

Loose: When the rear of the vehicle slides outward in a turn. The track does not grab sufficiently.

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

Mag End: Flywheel side of engine.

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.

Ohm: The measurement of electrical resistance opposing current flow.

Oval Head Screw: Fully specified as ”oval countersunk”, this head is identical to the standard flat head, but possesses a rounded upper surface for attractiveness of design.

PTO End: Power Take Off drive (clutch side).

Pan Head Screw: Provides a low, large diameter head, but with characteristically high outer edges along the outer edge of the head where driving action is most effective. Slightly different head contour when supplied with Phillips Recess. See dotted line.

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; 3) Poor fuel.

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)incorrect spark plug heat range; 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; 5) Incorrect ignition timing.

Primary Circuit: This circuit is responsible for the voltage build up in the primary windings of the coil. 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.

Primary Compression: Pressure built up in the crankcase of a two stroke engine.

psi.: Pounds per square inch.

Pushing: When the front of the vehicle does not steer as much as the driver desires. The skis do not grab sufficiently.

R & R: Remove and replace.

RFI: Radio Frequency Interference. Caused by high voltage from the ignition system. There are special plug caps and spark plugs to help eliminate this problem. Mandated in Canada.

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.

Round Head Screw: The familiar head most universally used for general application. Good slot depth, ample underhead bearing surface and finished appearance are characteristic of this head.

Running Time: Ignition timing 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.

Self Steer: Pulling the machine to the inside of the track.

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 coils.

Stroke: The maximum movement of the piston from bottom dead center to top dead center. It is characterized by 180° of crankshaft rotation.

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

TDC: Top Dead Center. Piston's most outward travel from crankshaft.

Transfer: The movement of fuel/air from the crankcase to the combustion chamber in a two stroke engine.

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, or on the outside of the flywheel.

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.

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. Photographs 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 snowmobile before beginning service. Clean new parts before installing.

⚠ Watch for sharp edges which can cause personal injury, particularly in the area of the tunnel. 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 in the snowmobile 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.

Notes

MODEL: . . . . . INDY 500 XC EDGE
MODEL NUMBER: . S01NP5AS
ENGINE MODEL: . . S5044POA1-1947

CARBURETION

Type . . . . . (2) TM 38 Mikuni
Main Jet 390
Pilot Jet 40
Jet Needle 9EFHI-60-2
Needle Jet P-6
Cutaway 1.5
Fuel Screw . . . . . 1.5 Turns
Valve Seat . . . . . 1.5 Viton
Fuel Octane (R+M/2) . 87 Non-Oxygenated or 89 Oxygenated
Throttle Gap
Under Cutaway . . . . . 0.098″ (2.5mm)
Starter Jet 145
Pilot Air Jet . . . . . 0.7 Long

CLUTCH

Type P-85
Belt 3211080
Belt Width (Projected) . 1.438″ (36.52mm)
Side Angle (Overall) . . 28°
Outside Circumference 46.625″
Center Distance 11.50
Shift Weights 10-54
Primary Spring . . . . . Dark Blue / White
Secondary Spring . . . . Silver
Driven Helix . . . . . R-32 #2

JETTING CHART

Altitude		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20_ to +10_F -29_to -12_C	+10_to +40_F -12_ to +5_C	Above +40_F Above 5_C
Meters (Feet)	0-900 (0-3000)	410 #2	390 #2	370 #2	340 #2
	900-1800 (3000-6000)	380 #2	350 #2	330 #2	310 #1
	1800-2700 (6000-9000)	340 #2	320 #2	300 #1	280 #1
	2700-3700 (9000-12000)	300 #2	280 #1	270 #1	250 #1

XXX
#X - # refers to the clip position from top of jet needle.

- Production Setting

CLUTCH CHART

Altitude		DRIVE		DRIVEN		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-54	Dark Blue / White	Silver	R-32 #2	22-40-74P HYVO
	900-1800 (3000-6000)	10-54	Dark Blue / White	Silver	R-32 #3	21-40-74P HYVO
	1800-2700 (6000-9000)	10 AL	Dark Blue / White	Silver / Blue	R-32 #1	20-40-74P HYVO
	2700-3700 (9000-12000)	10	Dark Blue / White	Silver / Blue	R-32 #1	20-40-74P HYVO

ENGINE

Type . . . . . Liquid Cooled Case Reed
Displacement 500cc
Bore . . . . . 2.776″ (70.5mm)
Stroke . . . . . 2.520″ (64mm)
Piston / Cylinder Clearance . . . 0.0045″ - 0.0063″ (0.11 - 0.16mm)
Service Limit . . . . . N/A
Piston Marking . . . . . EK 2205
Piston Ring Marking . . . . . N/A
Piston Ring End Gap . . . . . 0.012″ - 0.018″ (0.30 - 0.46mm)
Head ccs (Uninstalled) . . . . . 27.5±0.5cc
Head ccs (Installed) 24.4cc
Operating RPM±200 . . . . . 8000 RPM
Idle RPM±200 . . . . . 1500 RPM
Engagement RPM±300 . . . . . 3900 RPM
Cylinder Head Torque . . . . . 20-24 ft.lbs. (28-33 Nm)
Cylinder Base Nut Torque . . . . 30-34 ft.lbs. (41-47 Nm)
Crankcase Torque (8mm) . . . . . 20-24 ft.lbs. (28-33 Nm)
Crankcase Torque (10mm) . . . N/A
Flywheel Torque . . . . . 90 ft.lbs. (124 Nm)
Engine Compression . . . 125 psi
Fuel Pump Manuf. . . . . Walbro
Fuel Pump Mark FPA-3
Oil Pump Manuf. . . . . Mikuni
Oil Pump Mark 01B
Cylinder Head Mark 3021048

MODEL: . . . . . INDY 500 XC EDGE
MODEL NUMBER: . S01NP5AS
ENGINE MODEL: . . S5044POA1-1947

ELECTRICAL

Flywheel I.D. . . . . Kokusan 4060223
CDI Marking 4010438
Alternator Output . . . 280 Watts
Ignition Timing . . . . . 12° BTDC@3000RPM±1.5°
0.343″ BTDC (±0.008″)
0.872mm BTDC (±0.208mm)
Spark Plug / Gap . . . Champion RN57YCC / 0.025″ (0.64mm)
Lights: Head . . . . . PN 2870448 (x2)
Tail . . . . . PN 4030024 (x2)
Brake . . . . . PN 4030045 (x1)
Voltage Regulator . . T1
Electric Start . . . . . Option
Magneto Pulses 6

CAPACITIES

Fuel Tank . . . . . 11.8 gallons (44.7 liters)
Oil Tank . . . . . 4 quarts (3.8 liters)
Coolant . . . . . 4 quarts (3.8 liters)
Chaincase Oil . . . . . 11 fl. oz..(325cc)

SUSPENSION / CHASSIS

Body Style . . . . . EDGE
Front Suspension . . EDGE
Front Shocks . . . . . Indy Select
IFS Spring Rate . . . . 100#/in.
Front Spring Preload 1/4″ Thread Adjust
Front Vertical Travel 10″ (25.4cm.)
Rear Suspension . . . Improved Travel EDGE
Rear Axle Travel . . . 13.9″ (35.3cm.)
Front Track Shock . . FOX IFP
Spring Rate . . . . . 200#/in. variable
Rear Track Shock . . Position Sensitive
Rear Springs . . . . . .375″ (sq.) / 77°
Track Type . . . . . 15″x121″x.82″ (38.1x307.34x2.08cm.)
Track Tension . . . . . 3/8″ - 1/2″ (1-1.3 cm.) slack with 10# (4.54kg) weight 16″ (40.64cm.) ahead of rear idler shaft.
Overall Snowmobile Length . . . . . 113″ (287cm.)
Overall Snowmobile Height . . . . . 45″ (114cm.)
Maximum Snowmobile Width . . . . . 48″ (122cm.)

CHAINCASE

Sprockets / Chain . . . 22-40, 74P HYVO
Reverse . . . . . Option
Brake Pads . . . . . Type 81, Large
Chaincase Center Dist. 7.92″ (20.12cm.)
Driveshaft Sprockets . 2 Drivers Wide
Brake Type . . . . . Polaris HPB, Liquid Cooled

OPTIONAL REAR TORSION SPRINGS

SOFT	MEDIUM(STD)	FIRM
.359″(Sq.) Diameter x 77°	**.375″(Sq.) Diameter x 77°**	**.405″(Sq.) Diameter x 77°**
L.H . 7041629-067	L.H. 7041942-067	L.H. 7041940-067
R.H. 7041630-067	R.H. 7041943-067	R.H. 7041941-067

MODEL: . . . . . INDY 500 XC SP EDGE
MODEL NUMBER: . S01NP5CS (A, B)
ENGINE MODEL: . . S5044POA2-1948

CARBURETION

Type . . . . . (2) TM 38 w/TPS Mikuni
Main Jet 400
Pilot Jet 40
Jet Needle 9EFH01-60-3
Needle Jet P-6
Cutaway 1.5
Fuel Screw . . . . . 1.25 Turns
Valve Seat . . . . . 1.5 Viton
Fuel Octane (R+M/2) . Key Switch Adjustable
91 Premium
89 Regular
Throttle Gap
Under Cutaway . . . . . 0.0787″ (2.0mm)
Starter Jet 145
Pilot Air Jet . . . . . 0.7 Long
Exhaust Valve Spring . Purple / White

CLUTCH

Type P-85
Belt 3211080
Belt Width (Projected) . 1.438″ (36.52mm)
Side Angle (Overall) . . 28°
Outside Circumference 46.625″
Center Distance . . . . . 11.50″
Shift Weights 10-54
Primary Spring . . . . . Dark Blue / White
Secondary Spring . . . . Silver / Blue
Driven Helix . . . . . R-8 #3

JETTING CHART

Altitude		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20_ to +10_F -29_to -12_C	+10_to +40_F -12_ to +5_C	Above +40_F Above 5_C
Meters (Feet)	0-900 (0-3000)	420 #3	400 #3	380 #3	350 #3
	900-1800 (3000-6000)	390 #3	360 #3	340 #3	320 #2
	1800-2700 (6000-9000)	350 #3	330 #3	310 #2	290 #2
	2700-3700 (9000-12000)	310 #3	290 #2	270 #2	260 #2

XXX
#X - # refers to the clip position from top of jet needle.

- Production Setting

CLUTCH CHART

Altitude		DRIVE		DRIVEN		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-54	Dark Blue / White	Silver / Blue	R-8 #2	22-40 74P HYVO
	900-1800 (3000-6000)	10 AL	Dark Blue / White	Silver / Blue	R-8 #3	22-40 74P HYVO
	1800-2700 (6000-9000)	10M	Dark Blue / White	Silver / Blue	R-8 #3	21-40 74P HYVO
	2700-3700 (9000-12000)	10B	Dark Blue / White	Silver / Blue	R-8 #3	21-40 74P HYVO

ENGINE

Type . . . . . Liquid Cooled Case Reed w/VES
Displacement 500cc
Bore . . . . . 2.776″ (70.5mm)
Stroke . . . . . 2.520″ (64mm)
Piston / Cylinder Clearance . . . 0.0045″ - 0.0055″ (0.11 - 0.14mm)
Service Limit . . . . . N/A
Piston Marking 2252c
Piston Ring Marking . . . . . N/A
Piston Ring End Gap . . . . . 0.012″ - 0.018″ (0.30 - 0.46mm)
Head ccs (Uninstalled) . . . . . 26.5±0.5cc
Head ccs (Installed) . . . . . 25.2±0.5cc
Operating RPM±200 . . . . . 8400 RPM
Idle RPM±200 . . . . . 1500 RPM
Engagement RPM±300 . . . . . 4100 RPM
Cylinder Head Torque . . . . . 20-24 ft.lbs. (28-33 Nm)
Cylinder Base Nut Torque . . . . 30-34 ft.lbs. (41-47 Nm)
Crankcase Torque (8mm) . . . . . 20-24 ft.lbs. (28-33 Nm)
Crankcase Torque (10mm) . . . N/A
Flywheel Torque . . . . . 90 ft.lbs. (124 Nm)
Engine Compression . . . 120 psi
Fuel Pump Manuf. . . . . Walbro
Fuel Pump Mark FPA-3
Oil Pump Manuf. . . . . Mikuni
Oil Pump Mark 06
Cylinder Head Mark 3021040

MODEL: . . . . . INDY 500 XC SP EDGE
MODEL NUMBER: . S01NP5CS (A, B)
ENGINE MODEL: . . S5044POA2-1948

ELECTRICAL

Flywheel I.D. . . . . Kokusan 4060223
CDI Marking 4010440
Alternator Output . . . 280 Watts
Ignition Timing . . . . . 20° BTDC@3000RPM±1.5°
With TPS Unplugged.
0.0944″ (0.0811 - 0.11)
2.3986mm (2.0584 - 2.7664)
Spark Plug / Gap . . . Champion RN57YCC / 0.028″ (0.7mm)
Lights: Head . . . . . PN 2870448 (x2)
Tail . . . . . PN 4030024 (x2)
Brake . . . . . PN 4030045 (x1)
Voltage Regulator . . T1
Electric Start . . . . . Option
Magneto Pulses 6

CAPACITIES

Fuel Tank . . . . . 11.8 gallons (44.7 liters)
Oil Tank . . . . . 4 quarts (3.8 liters)
Coolant . . . . . 4 quarts (3.8 liters)
Chaincase Oil . . . . . 11 fl. oz..(325cc)

SUSPENSION / CHASSIS

Body Style . . . . . EDGE
Front Suspension . . EDGE
Front Shocks . . . . . Fox IFP
IFS Spring Rate . . . . 68/160#/in.
Front Spring Preload 1 3/4″ Thread Adjust
Front Vertical Travel 10.3″ (26.2cm.)
Rear Suspension . . . Improved Travel EDGE
Rear Axle Travel . . . 13.9″ (35.3cm.)
Front Track Shock . . Fox IFP
Spring Rate . . . . . 160#/in. variable
Rear Track Shock . . Position Sensitive
Rear Springs . . . . . .375″ (sq.) / 77°
Track Type . . . . . 15″x121″x.91″ (38.1x307.34x2.31cm.)
Track Tension . . . . . 3/8″ - 1/2″ (1-1.3 cm.) slack with 10# (4.54kg) weight 16″ (40.64cm.) ahead of rear idler shaft.
Overall Snowmobile Length . . . . . 113″ (287cm.)
Overall Snowmobile Height . . . . . 45″ (114cm.)
Maximum Snowmobile Width . . . . . 48″ (122cm.)

CHAINCASE

Sprockets / Chain . . . 22-40-74P HYVO
Reverse . . . . . Option
Brake Pads . . . . . Type 81, Large
Chaincase Center Dist. 7.92″ (20.12cm.)
Driveshaft Sprockets . 2 Drivers Wide
Brake Type . . . . . Polaris HPB, Liquid Cooled

OPTIONAL REAR TORSION SPRINGS

SOFT	MEDIUM(STD)	FIRM
.359″(Sq.) Diameter x 77°	**.375″(Sq.) Diameter x 77°**	**.405″(Sq.) Diameter x 77°**
L.H . 7041629-067	L.H. 7041942-067	L.H. 7041940-067
R.H. 7041630-067	R.H. 7041943-067	R.H. 7041941-067

MODEL: . . . . . INDY 600 XC SP EDGE / 600 EDGE X
MODEL NUMBER: . S01NP6ES (A, B, X)
ENGINE MODEL: . . S6044POA2-1949

CARBURETION

Type . . . . . (2) TM 38 Mikuni w/TPS
Main Jet 430
Pilot Jet 40
Jet Needle 9DFH-60-3
Needle Jet P-8
Cutaway 2.5
Air Screw . . . . . N/A
Valve Seat . . . . . 1.5 Viton
Fuel Octane (R+M/2) . Key Switch Adjustable
Throttle Gap
Under Cutaway . . . . . 0.0787″ (2mm)
Pilot Air Jet . . . . . 0.9 Long
Starter Jet 140
Fuel Screw . . . . . 1.5 Turns
Exhaust Valve Spring . Pink

CLUTCH

Type P-85
Belt 3211080
Belt Width (Projected) . 1.438″ (36.52mm)
Side Angle (Overall) . . 28°
Outside Circumference 46.625″
Center Distance . . . . . 11.50″
Shift Weights 10-58
Primary Spring . . . . . Dark Blue/White
Secondary Spring . . . . Silver/Blue
Driven Helix . . . . . R-11 #2

JETTING CHART

Altitude		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20_ to +10_F -29_to -12_C	+10_to +40_F -12_ to +5_C	Above +40_F Above 5_C
Meters (Feet)	0-900 (0-3000)	460 #3	430 #3	400 #3	380 #3
	900-1800 (3000-6000)	410 #3	390 #3	360 #3	340 #2
	1800-2700 (6000-9000)	370 #3	340 #3	310 #2	290 #2
	2700-3700 (9000-12000)	320 #3	290 #2	270 #2	260 #2

XXX
#X
- # refers to the clip position from top of jet needle.

- Production Setting

CLUTCH CHART

Altitude		DRIVE		DRIVEN		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-58	Dark Blue / White	Silver / Blue	R-11 #2	23-39 74P HYVO
	900-1800 (3000-6000)	10-56	Dark Blue / White	Silver / Blue	R-11 #2	23-39 74P HYVO
	1800-2700 (6000-9000)	10-54	Dark Blue / White	Silver / Blue	R-11 #2	32-39 74P HYVO
	2700-3700 (9000-12000)	10-54	Dark Blue / White	Silver / Blue	R-11 #3	23-39 74P HYVO

ENGINE

Type . . . . . Liquid Cooled Case Reed w/VES
Displacement 600cc
Bore . . . . . 3.041″ (77.25mm)
Stroke 2.520 (64mm)
Piston / Cylinder Clearance . . . .0045″-.0059″ (.11-.15mm)
Piston Marking 2202a
Piston Ring Marking . . . . . N/A
Piston Ring End Gap . . . . . .014″-.020″ (.38-.51mm)
Head ccs (Uninstalled) 36-37cc
Head ccs (Installed) 29-30cc
Operating RPM±200 8000
Idle RPM±100 1400
Engagement RPM±200 4250
Cylinder Head Torque . . . . . 20-24 ft.lbs. (28-33 Nm)
Cylinder Base Nut Torque . . . . 30-34 ft.lbs. (41-47 Nm)
Crankcase Torque (8mm) . . . . . 20-24 ft.lbs. (28-33 Nm)
Crankcase Torque (10mm) . . . N/A
Flywheel Torque . . . . . 90 ft.lbs. (124 Nm)

Engine Compression . . . 120 psi
Fuel Pump Manuf. . . . . Walbro
Fuel Pump Mark E-806
Oil Pump Manuf. . . . . Mikuni
Oil Pump Mark 02A
Cylinder Head Mark 3022057

MODEL: . . . . . INDY 600 XC SP EDGE / 600 EDGE X
MODEL NUMBER: . S01NP6ES (A, B, X)
ENGINE MODEL: . . S6044POA2-1949

ELECTRICAL

Flywheel I.D. . . . . Kokusan 4060223
CDI Marking 4010439
Alternator Output . . . 280 Watts
Ignition Timing . . . . . 24° BTDC@3250RPM±500 RPM
With TPS unplugged
0.1350″
3.430mm
Spark Plug / Gap . . . Champion RN57YCC / 0.025″ (0.64mm)
Lights: Head . . . . . PN 2870448 (x2)
Tail . . . . . PN 4030024 (x2)
Brake . . . . . PN 4030045 (x1)
Voltage Regulator . . T1
Electric Start . . . . . Option
Magneto Pulses 6

CAPACITIES

Fuel Tank . . . . . 11.8 gallons (44.7 liters)
Oil Tank . . . . . 4 quarts (3.8 liters)
Coolant . . . . . 4 quarts (3.8 liters)
Chaincase Oil . . . . . 11 fl. oz..(325cc)

SUSPENSION / CHASSIS

Body Style . . . . . EDGE
Front Suspension . . EDGE
Front Shocks . . . . . Fox IFP
IFS Spring Rate . . . . 68/160#/in.
Front Spring Preload 1 3/4″ Thread Adjust
Front Vertical Travel 10.3″ (26.2cm.)
Rear Suspension . . . Improved Travel EDGE
Rear Axle Travel . . . 13.9″ (35.3cm.)
Front Track Shock . . Fox IFP
Spring Rate . . . . . 160#/in. variable
Rear Track Shock . . Position Sensitive
Rear Springs . . . . . .375″ (sq.) / 77°
Track Type . . . . . 15″x121″x.91″ (38.1x307.34x2.31cm.)
Track Tension . . . . . 3/8″ - 1/2″ (1-1.3 cm.) slack with 10# (4.54kg) weight 16″ (40.64cm.) ahead of rear idler shaft.
Overall Snowmobile Length . . . . . 113″ (287cm.)
Overall Snowmobile Height . . . . . 45″ (114cm.)
Maximum Snowmobile Width . . . . . 48″ (122cm.)

CHAINCASE

Sprockets / Chain . . . 23-39-74P HYVO
Reverse . . . . . Option
Brake Pads . . . . . Type 81, Large
Chaincase Center Dist. 7.92″ (20.12cm.)
Driveshaft Sprockets . 2 Drivers Wide
Brake Type . . . . . Polaris HPB, Liquid Cooled

OPTIONAL REAR TORSION SPRINGS

SOFT	MEDIUM(STD)	FIRM
.359″(Sq.) Diameter x 77°	**.375″(Sq.) Diameter x 77°**	**.405″(Sq.) Diameter x 77°**
L.H . 7041629-067	L.H. 7041942-067	L.H. 7041940-067
R.H. 7041630-067	R.H. 7041943-067	R.H. 7041941-067

MODEL: . . . . . INDY 700 XC EDGE
MODEL NUMBER: . S01NP7AS (A, B)
ENGINE MODEL: . . S7070POA1-1951

CARBURETION

Type . . . . . (2) TM40 Mikuni
Main Jet 460
Pilot Jet 45
Jet Needle 9DFH06-57-2
Needle Jet P-8
Cutaway 2.0
Fuel Screw . . . . . 1.25 Turns
Valve Seat 1.8
Fuel Octane (R+M/2) . 87 Non-Oxygenated or 89 Oxygenated
Throttle Gap
Under Cutaway . . . . . 0.0787″ (2.0mm)
Starter Jet 145
Pilot Air Jet . . . . . 0.8 Long

CLUTCH

Type P-85
Belt 3211080
Belt Width (Projected) . 1.438″ (36.52mm)
Side Angle (Overall) . . 28°
Outside Circumference 46.625″
Center Distance . . . . . 11.50″
Shift Weights . . . . . 10-60 Bushed
Primary Spring . . . . . Almond / Round
Secondary Spring . . . . Silver / Blue
Driven Helix . . . . . R-11 #2

JETTING CHART

Altitude		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20_ to +10_F -29_to -12_C	+10_to +40_F -12_ to +5_C	Above +40_F Above 5_C
Meters (Feet)	0-900 (0-3000)	490 #2	460 #2	430 #2	400 #2
	900-1800 (3000-6000)	440 #2	410 #2	380 #2	360 #1
	1800-2700 (6000-9000)	390 #2	360 #2	330 #1	310 #1
	2700-3700 (9000-12000)	330 #2	310 #1	280 #1	260 #1

XXX
#X - # refers to the clip position from top of jet needle.

- Production Setting

CLUTCH CHART

Altitude		DRIVE		DRIVEN		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-60 Bushed	Almond Round	Silver / Blue	R-11 #2	23-39 74P HYVO
	900-1800 (3000-6000)	10-58 Bushed	Almond Round	Silver / Blue	R-11 #2	23-39 74P HYVO
	1800-2700 (6000-9000)	10-56 Bushed	Almond Round	Silver / Blue	R-11 #3	22-39 74P HYVO
	2700-3700 (9000-12000)	10-54 Bushed	Almond Round	Silver / Blue	R-11 #3	22-39 74P HYVO

ENGINE

Type . . . . . Liquid Cooled Case Reed Twin
Displacement 700cc
Bore . . . . . 3.1889″ (81mm)
Stroke . . . . . 2.6772″ (68mm)
Piston / Cylinder Clearance . . . 0.0047″ - 0.0060″ (0.12 - 0.15mm)
Service Limit . . . . . N/A
Piston Marking 2108
Piston Ring Marking . . . . . N/A
Piston Ring End Gap . . . . . 0.014″ - 0.020″ (0.36 - 0.51mm)
Head ccs (Uninstalled) . . . . . 40.2±.50cc
Head ccs (Installed) . . . . . 31 - 32cc
Operating RPM±200 . . . . . 8250 RPM
Idle RPM±200 . . . . . 1500 RPM
Engagement RPM±200 . . . . . 4100 RPM
Cylinder Head Torque . . . . . 18-22 ft.lbs. (25-30 Nm)
Cylinder Base Nut Torque . . . . 30-34 ft.lbs. (41-47 Nm)
Crankcase Torque (8mm) . . . . . 20-24 ft.lbs. (28-33 Nm)
Crankcase Torque (10mm) . . . 26-30 ft.lbs. (36-42 Nm)
Flywheel Torque . . . . . 90 ft.lbs. (124 Nm)

Engine Compression . . . 125 psi
Fuel Pump Manuf. . . . . Walbro
Fuel Pump Mark FPA-4
Oil Pump Manuf. . . . . Mikuni
Oil Pump Mark 03A
Cylinder Head Mark 3021022

MODEL: . . . . . INDY 700 XC EDGE
MODEL NUMBER: . S01NP7AS (A, B)
ENGINE MODEL: . . S7070POA1-1951

ELECTRICAL

Flywheel I.D. . . . . Kokusan 4060223
CDI Marking 4010331
Alternator Output . . . 280 Watts
Ignition Timing . . . . . 19° BTDC@2500RPM±1.5°
0.0907″ (0.077″ - 0.11″)
2.3036mm (2.0 - 2.7mm)
Spark Plug / Gap . . . Champion RN57YCC / 0.025″ (0.64mm)
Lights: Head . . . . . PN 2870448 (x2)
Tail . . . . . PN 4030024 (x2)
Brake . . . . . PN 4030045 (x1)
Voltage Regulator . . T1
Electric Start . . . . . Option
Magneto Pulses 6

CAPACITIES

Fuel Tank . . . . . 11.8 gallons (44.7 liters)
Oil Tank . . . . . 4 quarts (3.8 liters)
Coolant . . . . . 4 quarts (3.8 liters)
Chaincase Oil . . . . . 11 fl. oz..(325cc)

SUSPENSION / CHASSIS

Body Style . . . . . EDGE
Front Suspension . . EDGE
Front Shocks . . . . . Fox IFP
IFS Spring Rate . . . . 68/160#/in.
Front Spring Preload 1 3/4″ Thread Adjust
Front Vertical Travel 10.3″ (26.2cm.)
Rear Suspension . . . Improved Travel EDGE
Rear Axle Travel . . . 13.9″ (35.3cm.)
Front Track Shock . . Fox IFP
Spring Rate . . . . . 160#/in. variable
Rear Track Shock . . Position Sensitive
Rear Springs . . . . . .375″ (sq.) / 77°
Track Type . . . . . 15″x121″x.91″ (38.1x307.34x2.31cm.)
Track Tension . . . . . 3/8″ - 1/2″ (1-1.3 cm.) slack with 10# (4.54kg) weight 16″ (40.64cm.) ahead of rear idler shaft.
Overall Snowmobile Length . . . . . 113″ (287cm.)
Overall Snowmobile Height . . . . . 45″ (114cm.)
Maximum Snowmobile Width . . . . . 48″ (122cm.)

CHAINCASE

Sprockets / Chain . . . 23-39-74P HYVO
Reverse . . . . . Option
Brake Pads . . . . . Type 81, Large
Chaincase Center Dist 7.92″ (20.12cm.)
Driveshaft Sprockets . 2 Drivers Wide
Brake Type . . . . . Polaris HPB, Liquid Cooled

OPTIONAL REAR TORSION SPRINGS

SOFT	MEDIUM(STD)	FIRM
.359″(Sq.) Diameter x 77°	**.375″(Sq.) Diameter x 77°**	**.405″(Sq.) Diameter x 77°**
L.H . 7041629-067	L.H. 7041942-067	L.H. 7041940-067
R.H. 7041630-067	R.H. 7041943-067	R.H. 7041941-067

MODEL: . . . . . INDY 800 XC SP EDGE
MODEL NUMBER: . S01NP8BS (A, B)
ENGINE MODEL: . . S8070POA1-1952

CARBURETION

Type . . . . . (2) TM 40 Mikuni
Main Jet 460
Pilot Jet 45
Jet Needle 9EFY2-61-3
Needle Jet P-8
Cutaway 2.0
Fuel Screw . . . . . 1.75 Turns
Valve Seat 1.8
Fuel Octane (R+M/2) . Key Switch Adjustable
91 Premium
89 Regular
Throttle Gap
Under Cutaway . . . . . 0.0787″ (2.0mm)
Starter Jet 145
Pilot Air Jet . . . . . 0.7 Long

CLUTCH

Type P-85
Belt 3211080
Belt Width (Projected) . 1.438″ (36.52mm)
Side Angle (Overall) . . 28°
Outside Circumference 46.625″
Center Distance . . . . . 11.50″
Shift Weights 10-64
Primary Spring . . . . . Almond / Round
Secondary Spring Silver
Driven Helix . . . . . R-12 #2

JETTING CHART

Altitude		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20_ to +10_F -29_to -12_C	+10_to +40_F -12_ to +5_C	Above +40_F Above 5_C
Meters (Feet)	0-900 (0-3000)	490 #3	460 #3	430 #3	400 #3
	900-1800 (3000-6000)	440 #3	420 #3	390 #3	370 #2
	1800-2700 (6000-9000)	400 #3	380 #3	350 #2	330 #2
	2700-3700 (9000-12000)	360 #3	340 #2	320 #2	300 #2

XXX
#X - # refers to the clip position from top of jet needle.

- Production Setting

CLUTCH CHART

Altitude		DRIVE		DRIVEN		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-64	Almond Round	Silver	R-12 #2	25-41 76P HYVO
	900-1800 (3000-6000)	10-62	Almond Round	Silver	R-12 #2	25-41 76P HYVO
	1800-2700 (6000-9000)	10-60	Almond Round	Silver /Blue	R-12 #2	25-41 76P HYVO
	2700-3700 (9000-12000)	10-58	Almond Round	Silver /Blue	R-12 #2	25-41 76P HYVO

ENGINE

Type . . . . . Liquid Cooled Case Reed Twin
Displacement 794cc
Bore . . . . . 3.3464″ (85mm)
Stroke . . . . . 2.7559″ (70mm)
Piston / Cylinder Clearance . . . 0.006″ - 0.0074″ (0.15 - 0.188mm)
Service Limit . . . . . N/A
Piston Marking 2261
Piston Ring Marking . . . . . N/A
Piston Ring End Gap . . . . . 0.016″ - 0.022″ (0.41 - 0.56mm)
Head ccs (Uninstalled) . . . . . 50.0±0.5cc
Head ccs (Installed) . . . . . 36.0 - 37.0cc
Operating RPM±200 . . . . . 8000 RPM
Idle RPM±200 . . . . . 1300 RPM
Engagement RPM±200 . . . . . 4100 RPM
Cylinder Head Torque . . . . . 18-22 ft.lbs. (25-30 Nm)
Cylinder Base Nut Torque . . . . 30-34 ft.lbs. (41-47 Nm)
Crankcase Torque (8mm) . . . . . 20-24 ft.lbs. (28-33 Nm)
Crankcase Torque (10mm) . . . 26-30 ft.lbs. (36-41 Nm)
Flywheel Torque . . . . . 90 ft.lbs. (124 Nm)
Engine Compression . . . 140 psi
Fuel Pump Manuf. . . . . Walbro
Fuel Pump Mark FPA-4
Oil Pump Manuf. . . . . Mikuni
Oil Pump Mark 03A
Cylinder Head Mark 3021066

MODEL: . . . . . INDY 800 XC SP EDGE
MODEL NUMBER: . S01NP8BS (A, B)
ENGINE MODEL: . . S8070POA1-1952

ELECTRICAL

Flywheel I.D. . . . . Kokusan 4060223
CDI Marking 4010405
Alternator Output . . . 280 Watts
Ignition Timing . . . . . 13° BTDC@3000±500RPM
0.0443″
1.1251mm
Spark Plug / Gap . . . Champion RN57YCC / 0.028″ (0.7mm)
Lights: Head . . . . . PN 2870448 (x2)
Tail . . . . . PN 4030024 (x2)
Brake . . . . . PN 4030045 (x1)
Voltage Regulator . . T1
Electric Start . . . . . Option
Magneto Pulses 6

CAPACITIES

Fuel Tank . . . . . 11.8 gallons (44.7 liters)
Oil Tank . . . . . 4 quarts (3.8 liters)
Coolant . . . . . 4 quarts (3.8 liters)
Chaincase Oil . . . . . 11 fl. oz..(325cc)

SUSPENSION / CHASSIS

Body Style . . . . . EDGE
Front Suspension . . EDGE
Front Shocks . . . . . Fox IFP
IFS Spring Rate . . . . 68/160#/in.
Front Spring Preload 1 3/4″ Thread Adjust
Front Vertical Travel 10.3″ (26.2cm.)
Rear Suspension . . . Improved Travel EDGE
Rear Axle Travel . . . 13.9″ (35.3cm.)
Front Track Shock . . Fox IFP
Spring Rate . . . . . 160#/in. variable
Rear Track Shock . . Position Sensitive
Rear Springs . . . . . .375″ (sq.) / 77°
Track Type . . . . . 15″x121″x1.0″ (38.1x307.34x2.54cm.)
Track Tension . . . . . 3/8″ - 1/2″ (1-1.3 cm.) slack with 10# (4.54kg) weight 16″ (40.64cm.) ahead of rear idler shaft.
Overall Snowmobile Length . . . . . 113″ (287cm.)
Overall Snowmobile Height . . . . . 45″ (114cm.)
Maximum Snowmobile Width . . . . . 48″ (122cm.)

CHAINCASE

Sprockets / Chain . . . 25-41-76P HYVO
Reverse . . . . . Option
Brake Pads . . . . . Type 81, Large
Chaincase Center Dist. 7.92″ (20.12cm.)
Driveshaft Sprockets . 4 Drivers Wide
Brake Type . . . . . Polaris HPB, Liquid Cooled

OPTIONAL REAR TORSION SPRINGS

SOFT	MEDIUM(STD)	FIRM
.359″(Sq.) Diameter x 77°	**.375″(Sq.) Diameter x 77°**	**.405″(Sq.) Diameter x 77°**
L.H . 7041629-067	L.H. 7041942-067	L.H. 7041940-067
R.H. 7041630-067	R.H. 7041943-067	R.H. 7041941-067

MODEL: . . . . . INDY 800 XCR
MODEL NUMBER: . S01SB8AS
ENGINE MODEL: . . EC79-PL013

CARBURETION

Type . . . . . (3) TM 38Mikuni
Main Jet 440
Pilot Jet 50
Jet Needle 9DH6-54-3
Needle Jet . . . . . P-4 Fixed
Cutaway 2.0
Idle Mixture Screw . . . . 0.75 Turns
Valve Seat . . . . . 1.5 Viton
Fuel Octane (R+M/2) . Key Switch Adjustable
91 Premium
89 Regular
Throttle Gap
Under Cutaway . . . . . 0.059″ (1.5mm)
Starter Jet 145
Pilot Air Jet 0.9
Exhaust Valve Spring . Blue

CLUTCH

Type P-85
Belt 3211075
Belt Width (Projected) . 1.438″ (36.52mm)
Side Angle (Overall) . . 28°
Outside Circumference 47.625″
Center Distance . . . . . 12.00″
Shift Weights . . . . . 10-60 Bushed
Primary Spring . . . . . Almond
Secondary Spring . . . . Silver / Blue
Driven Helix . . . . . R-12 #2

JETTING CHART

Altitude		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20_ to +10_F -29_to -12_C	+10_to +40_F -12_ to +5_C	Above +40_F Above 5_C
Meters (Feet)	0-900 (0-3000)	460 #3	440 #3	420 #2	390 #2
	900-1800 (3000-6000)	420 #3	400 #3	380 #2	350 #2
	1800-2700 (6000-9000)	380 #3	360 #2	340 #2	320 #2
	2700-3700 (9000-12000)	340 #2	320 #2	300 #2	280 #2

XXX #X - # refers to the clip position from top of jet needle.

- Production Setting

CLUTCH CHART

Altitude		DRIVE		DRIVEN		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-60 Bushed	Almond	Silver / Blue	R-12 #2	24-39 70P HYVO
	900-1800 (3000-6000)	10-58 Bushed	Almond	Silver / Blue	R-12 #2	24-39 70P HYVO
	1800-2700 (6000-9000)	10-58 Bushed	Almond	Silver / Blue	R-12 #2	23-41 70P HYVO
	2700-3700 (9000-12000)	10-56 Bushed	Almond	Silver / Blue	R-12 #2	23-41 70P HYVO

ENGINE

Type . . . . . L/C Case Reed Triple w/VES
Displacement 794cc
Bore . . . . . 2.8346″ (72mm)
Stroke . . . . . 2.5591″ (65mm)
Piston / Cylinder Clearance . . . 0.0028″ - 0.0041″ (0.07 - 0.105mm)
Service Limit . . . . . 0.0078″ (0.20mm)
Piston Marking 79B
Piston Ring Marking 79A
Piston Ring End Gap . . . . . 0.012″ - 0.018″ (0.30 - 0.45mm)
Head ccs (Uninstalled) 28.1cc
Head ccs (Installed) 23.9cc
Operating RPM±200 . . . . . 8500 RPM
Idle RPM±200 . . . . . 1500 RPM
Engagement RPM±300 . . . . . 4000 RPM
Cylinder Head Torque . . . . . 18-19.5 ft.lbs. (25-27 Nm)
Cylinder Base Nut Torque . . . . 23-25 ft.lbs. (32-35 Nm)
Crankcase Torque (8mm) . . . . . 20-22 ft.lbs. (28-30 Nm)
Crankcase Torque (10mm) . . . 23-35 ft.lbs. (32-35 Nm)
Flywheel Torque . . . . . 60-65 ft.lbs. (83-90 Nm)
Engine Compression . . . 140 psi
Fuel Pump Manuf. . . . . Mikuni
Fuel Pump Mark DF62
Oil Pump Manuf. . . . . Mikuni
Oil Pump Mark 79A
Cylinder Head Mark . . . . N / 79

MODEL: . . . . . INDY 800 XCR
MODEL NUMBER: . S01SB8AS
ENGINE MODEL: . . EC79-PL013

ELECTRICAL

Flywheel I.D. FP9103
CDI Marking CU7312
Alternator Output . . . 280 Watts
Ignition Timing . . . . . 26° BTDC@3500RPM±1.5°
0.163″ BTDC (±0.008″)
4.138mm BTDC (±0.021mm)
Spark Plug / Gap . . . Champion RN2C / 0.028″ (0.7mm)
Lights: Head . . . . . Low: PN 2870448 (x1), High: PN 4010253 (x2)
Tail . . . . . PN 4032084 (x2)
Brake . . . . . PN 4030045 (x2)
Voltage Regulator . . LR7
Electric Start . . . . . Option
*LR7= Full wave voltage regulator
Magneto Pulses 6

CAPACITIES

Fuel Tank . . . . . 11.8 gallons (44.7 liters)
Oil Tank . . . . . 2.4 quarts (2.3 liters)
Coolant . . . . . 7 quarts (6.6 liters)
Chaincase Oil . . . . . 9 fl. oz..(266cc)

SUSPENSION / CHASSIS

Body Style . . . . . Gen II
Front Suspension . . Indy XC-10
Front Shocks . . . . . Fox IFP
IFS Spring Rate . . . . 120#/in.
Front Spring Preload 1 7/8″ Thread Adjust
Front Vertical Travel 10″ (25.4cm.)
Rear Suspension . . . XTRA-10 121″
Rear Axle Travel . . . 10.2″ (25.9cm.)
Front Track Shock . . Fox IFP
Spring Rate . . . . . 200#/in. variable
Rear Track Shock . . Electronic Adjustable Shock
Rear Springs . . . . . .359″ (sq.) / 77°
Track Type . . . . . 15″x121″x.91″ (38.1x307.34x2.31cm.)
Track Tension . . . . . 3/8″ - 1/2″ (1-1.3 cm.) slack with 10# (4.54kg) weight 16″ (40.64cm.) ahead of rear idler shaft.
Overall Snowmobile Length . . . . . 109″ (277cm.)
Overall Snowmobile Height . . . . . 44″ (112cm.)
Maximum Snowmobile Width . . . . . 48″ (122cm.)

CHAINCASE

Sprockets / Chain . . . 24-39-70P HYVO
Reverse . . . . . Option
Brake Pads . . . . . Type 81, Large
Chaincase Center Dist. 7.05″ (17.91cm.)
Driveshaft Sprockets . 4 Drivers
Brake Type . . . . . Polaris HPB, Liquid Cooled

OPTIONAL REAR TORSION SPRINGS

SOFT	MEDIUM(STD)	FIRM
.359″(Sq.) Diameter x 85°	**.359″(Sq.) Diameter x 77°**	**.375″(Sq.) Diameter x 77°**
L.H. 7041763-067	L.H. 7041629-067	L.H. 7041631-067
R.H. 7041764-067	R.H. 7041630-067	R.H. 7041632-067