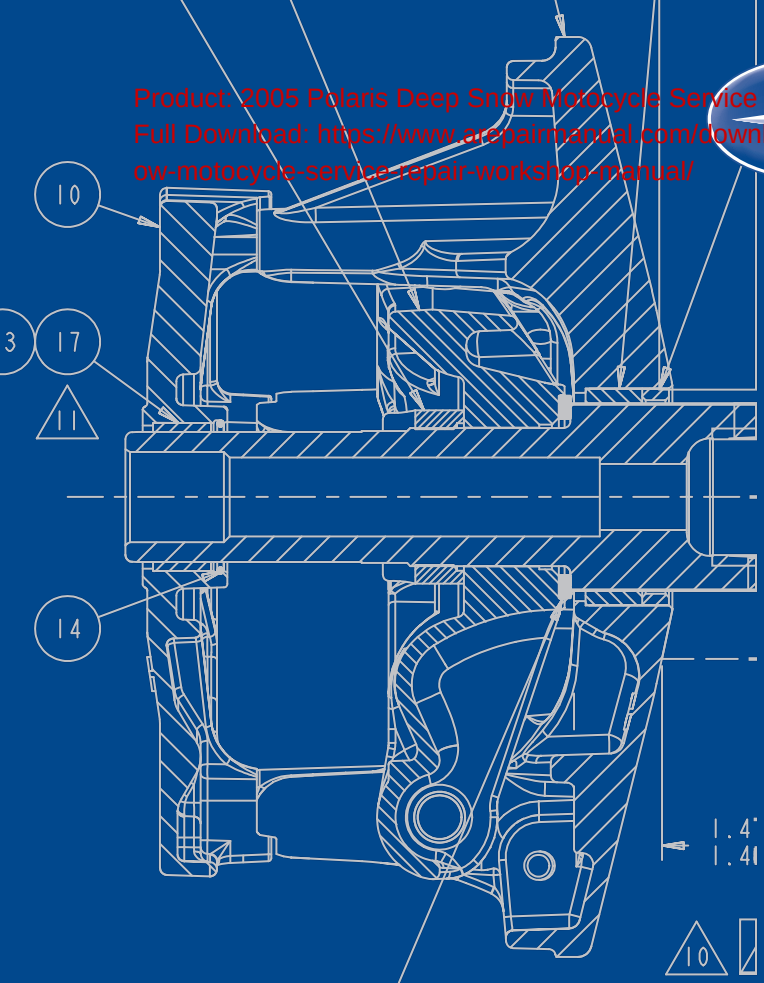
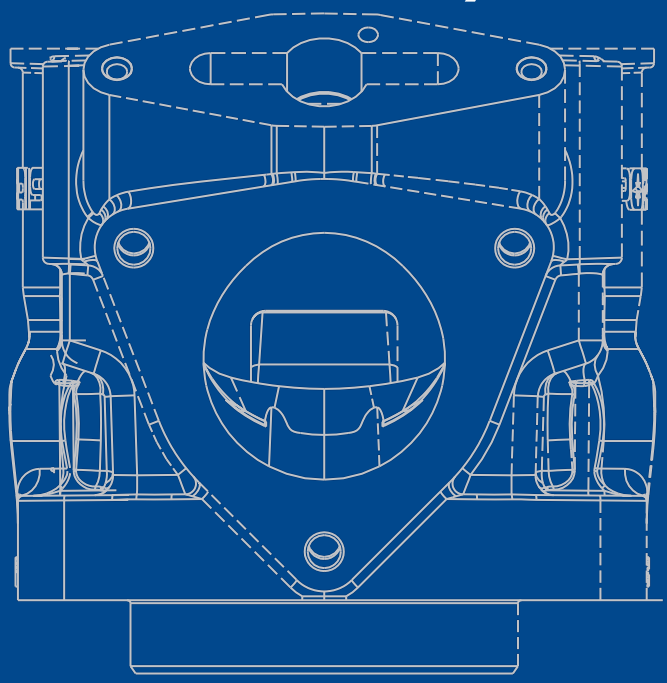
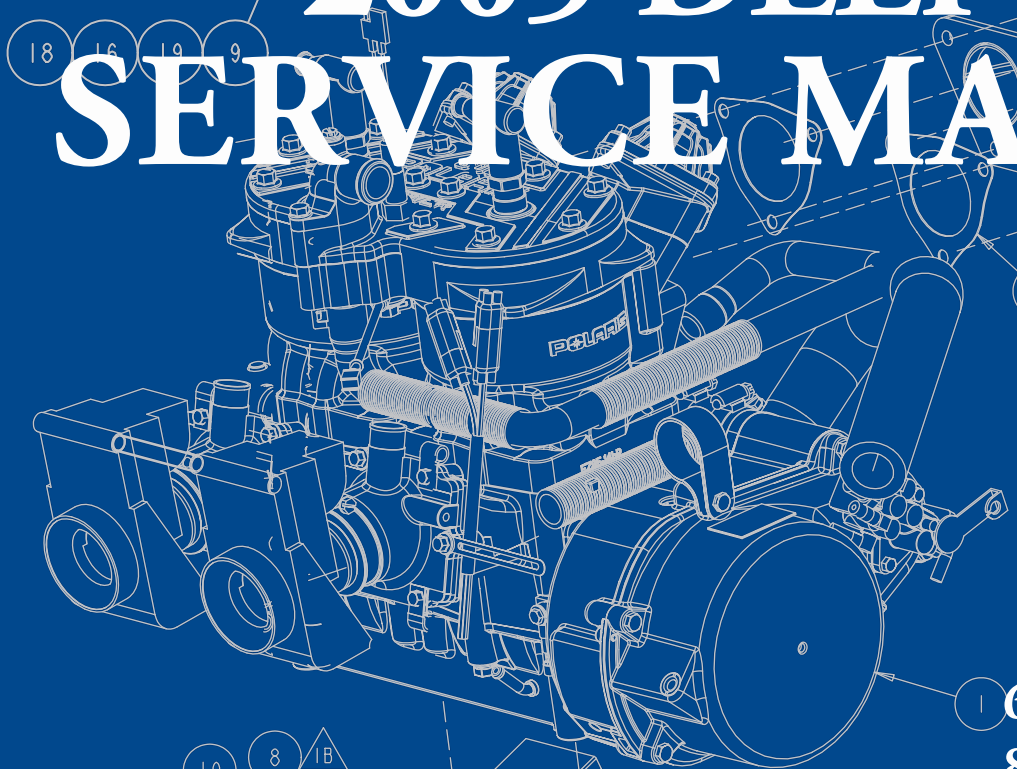
POLARIS®
The Way Out.





2005 DEEP SNOW SERVICE MANUAL



TRAIL RMK
600 RMK
700 RMK
800 RMK
900 RMK
600 SWITCHBACK™
800 SWITCHBACK™

PN 9919302

UNDERSTANDING SAFETY LABELS AND INSTRUCTIONS

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

NOTE:	• A NOTE provides key information to clarify instructions.

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

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

⚠ WARNING

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

CAUTION:

A CAUTION indicates special precautions that must be taken to avoid personal injury, or snowmobile 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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2005 DEEP SNOW MANUAL

Foreword

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

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

This manual includes 2005 Model Year information, along with service specifications. A table of contents is placed at the beginning of each chapter, and an alphabetic index is provided at the end of the manual for location of specific page numbers and service information. Keep this manual available for reference in the shop area.

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

Comments or suggestions about this manual may be directed to:

Polaris Sales Inc.
Snow Engineering Publications Department
2100 Hwy 55 Medina, Minnesota 55340.

2005 DEEP SNOW MANUAL

(PN9919302)

TABLE OF CONTENTS

NOTES

CHAPTER 1

SPECIFICATIONS

NOTES:

1. FASTENER TORQUE: SEE TABLE.

FASTENER TORQUE TABLE

A 45 ± 5 IN-LBS	G 15 ± 5 IN-LBS	N 1.5-3 FT-LBS	
B 9 ± .5 FT-LBS	H 7 ± 1 FT-LBS	P 12 ± 1.5 FT-LBS	
C 90 ± 10 FT-LBS	J 24 ± 6 IN-LBS	R 24 ± 2 FT-LBS	
D 22 ± 2 FT-LBS	K 10 ± 1.5 FT-LBS	S 28 ± 2 FT-LBS	
E 18 ± 2.5 FT-LBS	L 18-40 FT-LBS	T 16 ± 2 FT-LBS	
F 32 ± 5 FT-LBS	M 4 ± .5 FT-LBS	V 30 ± 5 IN-LBS	

2. SEAL SURFACES WITH SEALANT (P/N 8560061).
3. RADIAL PLAY OF CRANKSHAFT CONNECTING ROD (P/N 1202122) RELATIVE TO PISTON PIN TO BE 0.001 - 0.014. TOLERANC ACHIEVED BY MATCHING BEARING COLOR CODE TO PAINT DOT ON SMALL END OF CONNECTING ROD. RED-RED, WHITE-WHITE, B PRE-SELECTION TABLE.
4. APPLY LOCTITE PIPE SEALANT (P/N 8570089).
5. APPLY LOCTITE-242 (P/N 8570010) TO THREADS.
6. OIL PUMP DRIVE SHAFT MUST BE INDEXED TO ENGAGE INTO THE WATERPUMP DRIVE SHAFT (P/N 5132273)
7. APPLY LOCTITE-262 (P/N 8560044) TO CRANKSHAFT TAPER. THE SURFACE UNDER THE FLYWHEEL MUST BE COMPLETELY COATE
8. UPON ASSEMBLY OF PISTONS, APPLY GOLD 2-CYCLE OIL (P/N 8570066).
9. ASM DWGS: ENSURE THAT TAIL END OF ROPE IS SECURED BY THE ROPE KNOT IN THE PULLEY POCKET. ROPE KNOT MUST NOT PROJECT FURTHER THAN 3.0MM ABOVE THE TOP OF THE PULLEY POCKET (AUDIT)

NOTES

MODEL: . . . . . TRAIL RMK
MODEL NUMBER: . . . . S05NJ5BS(A)
ENGINE MODEL: EC55PM071

ENGINE		CARBURETION	
Engine Type	Liberty™	Type	Mikuni VM34SS w/ACCS
Engine Displacement cc's	544	Main Jet	260 PTO / 250 MAG
Bore in / mm	2.87" / 73mm	Pilot Jet	35
Stroke in / mm	2.56" / 65mm	Jet Needle	6DEH11 / 3
Cylinders	2	Needle Jet	Q-0 (480)
Piston / Cylinder Clearance in / mm	.0045 - .0053" .114 - .135mm	Throttle Gap UnderCutaway in / mm	.250" 6.35mm
Piston Ring End Gap in / mm	.015 - .022" .4 - .55mm	Cutaway	3.0
Piston Marking	5MD	Valve Seat	1.5 Viton
Piston Ring Marking	N	Starter Jet	1.5
Operating RPM ±200	7000	Fuel Screw	N/A
Idle RPM ±200	1600	Pilot Air Jet	N/A
Engagement RPM ±300	3800	Air Screw	1.0 Turns
		Fuel Octane (R+M/2)	87 Oct. NonOxy / 89 Oct. Oxy

Altitude		AMBIENT TEMPERATURE					
		Below -30°F Below -34°C	-30° to -10°F -34°to -23°C	-10°to +10°F -23° to -12°C	+10°to +30°F -12°to -1°C	+30°to +50°F -1°to +10°C	Above +50°F Above +10°C
Meters (Feet)	0-600 (0-2000)	290/280 #3	280/270 #3	270/260 #3	260/250 #3	250/240 #3	240/230 #3
	600-1200 (2000-4000)	290/280 #3	280/270 #3	270/260 #3	260/250 #3	250/240 #3	240/230 #3
	1200-1800 (4000-6000)	290/280 #3	280/270 #3	270/260 #3	260/250 #3	250/240 #3	240/230 #3
	1800-2400 (6000-8000)	290/280 #3	280/270 #3	270/260 #3	260/250 #3	250/240 #3	240/230 #3
	2400-3000 (8000-10000)	290/280 #3	280/270 #3	270/260 #3	260/250 #3	250/240 #3	240/230 #3
	3000-3700 (10000-12000)	290/280 #3	280/270 #3	270/260 #3	260/250 #3	250/240 #3	240/230 #3

Altitude		DRIVE CLUTCH		DRIVEN CLUTCH		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-64 Bushed	Dark Blue / White	Red / Blue	40° Team Reverse	19-43 74P
	900-1800 (3000-6000)	10-62 Bushed	Dark Blue / White	Red / Blue	40° Team Reverse	19-43 74P
	1800-2700 (6000-9000)	10-60 Bushed	Dark Blue / White	Red / Blue	40° Team Reverse	19-43 74P
	2700-3700 (9000-12000)	10-58 Bushed	Dark Blue / White	Red / Blue	40° Team Reverse	19-43 74P

DRIVE CLUTCH	
Type	P-85
Shift Weights	10-60 Bushed
Drive Spring	Red/Blue
DRIVEN CLUTCH	
Type	Team Roller Reverse
Spring	Dark Blue/White
Helix Angle	40° Team Reverse
BELT	
Belt Part Number	3211078
Belt Width (Projected)	1.438" / 3.65cm.
Side Angle (Overall)	28°
Outside Diameter	46.625" / 118.4cm.
Center Distance	11.5" / 29.2cm.

CHAINCASE	
Center DIstance	7.92" / 20.12cm.
Gearing : Chain	19-43 :74P
Reverse	Electronic Reverse
Brake Pads	Type 81
Brake Type	Air Cooled
CAPACITIES	
Fuel Tank	11.8 Gal. / 45 Liters
Oil Tank	3.25 Qts / 3 Liters
Coolant	N/A
Chain Case Oil	9 fl. oz. / 266 ml
SLED DIMENSION	
Unit Length / Height / Width in / cm.	121" / 48" / 48" 308 / 122 / 122 cm.

FRONT SUSPENSION	
Type	EDGE RMK (V/ESC)
Standard IFS Shocks	7042197 Nitrex
Standard IFS Spring Rate	80#/in.
Standard Spring Pre-Load	.75"/1.9cm
Premium IFS Shocks	7042059 Arvin IFP
Premium Spring Rate	75#/In.
Premium Spring Pre-Load	9.75"/24.8cm Installed length
Front Vertical Travel	7.6" / 19.3cm.
TRACK	
Width / Length / Lug Height	15"/136"/1.25" (38 cm./345 cm./3.18 cm.)
Track Tension See page 3.10	

REAR SUSPENSION	
Type	EDGE RMK
Standard FTS	7042085 Nitrex
Standard FTS Spring Rate	170#
Standard Spring Pre-Load	N/A
Premium FTS	7042084 Arvin IFP
Premium Spring Rate	170#
Premium Spring Pre-Load	2.98" (7.57cm) from bottom of shock body to bottom of spring retainer
Standard RTS	Select / PN 7042058
Premium RTS	Arvin IFP C/A 7042176
Torsion Spring	.347" (Sq) x 77°
See page 11.7 for optional springs	

ELECTRICAL			
Flywheel I.D.	FP9312	Spark Plug / Gap	NGK BR9ES .028" / .70mm
CDI Marking	CU7236	Voltage Regulator	LR7
Alternator Output	240 watts	Magneto Pulses	6
Ignition Timing (see conversion chart page 13.4)	27°@3000 RPM±1.5° 14°@6500 RPM±1.5°	Electric Start	Standard Accessory Premuim Optional

MODEL: . . . . . 600 RMK 144”
MODEL NUMBER: . . . . S05NK6ES(A)
ENGINE MODEL: S2712-6044-PI6E

ENGINE		CARBURETION	
Engine Type	Liberty™	Type	Mikuni TM 38
Engine Displacement cc’s	599	Main Jet	310
Bore in / mm	3.04” / 77.25mm	Pilot Jet	45
Stroke in / mm	2.52” / 64mm	Jet Needle	9DGI01-60 / 2
Cylinders	2	Needle Jet	P-8
Piston / Cylinder Clearance in / mm	.0045 - .0059” .115 - .149mm	Throttle Gap UnderCutaway in / mm	.11” 2.7mm
Piston Ring End Gap in / mm	.014 - .020” .14 - .20mm	Cutaway	1.5 (N)
Piston PN	3021308	Valve Seat	1.5
Piston Ring Marking	N/A	Starter Jet	140
Operating RPM ±200	8000	Fuel Screw	1.0 Turns
Idle RPM ±200	1500	Pilot Air Jet	N/A
Engagement RPM ±300	3900	Air Screw	.75
Exhaust Valve Spring	Green/White	Fuel Octane (R+M/2)	87 Oct. NonOxy / 89 Oct. Oxy

Altitude		AMBIENT TEMPERATURE					
		Below -30°F Below -34°C	-30° to -10°F -34°to -23°C	-10°to +10°F -23° to -12°C	+10°to +30°F -12°to -1°C	+30°to +50°F -1°to +10°C	Above +50°F Above +10°C
Meters (Feet)	0-600 (0-2000)	450 #4	430 #4	420 #3	400 #3	380 #3	370 #3
	600-1200 (2000-4000)	410 #4	390 #3	380 #3	360 #3	340 #3	330 #2
	1200-1800 (4000-6000)	380 #3	360 #3	350 #3	330 #3	320 #2	300 #2
	1800-2400 (6000-8000)	360 #3	340 #3	320 #3	310 #2	290 #2	280 #2
	2400-3000 (8000-10000)	340 #3	320 #3	300 #2	290 #2	270 #2	260 #2
	3000-3700 (10000-12000)	330 #3	310 #2	290 #2	280 #2	260 #2	240 #2

Altitude		DRIVE CLUTCH		DRIVEN CLUTCH		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-60 Bushed	Black/Green	7043063	56 / 42 - .36 ER	19-39 : 72P
	900-1500 (3000-5000)	10-58 Bushed				
	1500-2100 (5000-7000)	10-56 Bushed				
	2100-2700 (7000-9000)	10-54 Bushed				
	2700-3350 (9000-11000)	10AL Bushed				
	3350-4000 (11000-13000)	10 Bushed				

DRIVE CLUTCH	
Type	P-85
Shift Weights	10-54 Bushed
Drive Spring	Black/Green
DRIVEN CLUTCH	
Type	Team Roller Reverse
Spring	7043063
Helix Angle	54 / 42 - .36 Reverse
BELT	
Belt Part Number	3211080
Belt Width (Projected)	1.438" / 3.65cm.
Side Angle (Overall)	28°
Outside Diameter	46.625" / 118.4cm.
Center Distance	11.5" / 29.2cm.

CHAINCASE	
Center Distance	7.92" / 20.12cm.
Gearing : Chain	19-39 : 72 P
Reverse	Electronic Reverse
Brake Pads	Type 81
Brake Type	Liquid Cooled
CAPACITIES	
Fuel Tank	11.8 Gal. / 45 Liters
Oil Tank	3.25 Qts / 3 Liters
Coolant	5 Qts / 4.7 Liters
Chain Case Oil	9 fl. oz. / 299ml
SLED DIMENSION	
Unit Length / Height / Width in / cm.	124" / 48" / 45.5" 315 / 122 / 116cm.

FRONT SUSPENSION	
Type	EDGE RMK (V/ESC)
Standard IFS Shocks	7042197 Nitrex
Standard IFS Spring Rate	100#
Standard Spring Pre-Load	9.75"/24.7cm Installed
Premium IFS Shocks	7042059 Arvin IFP
Premium Spring Rate	100#
Premium Spring Pre-Load	4.25"/10.8cm
Front Vertical Travel	7.6"/19.3cm
TRACK	
Width / Length / Lug Height	15"/144"/2" (38 cm./366 cm./5 cm.)
Track Tension See page 3.10	

REAR SUSPENSION	
Type	EDGE RMK
Standard FTS	7042058 Nitrex
Standard FTS Spring Rate	170#
Standard Spring Pre-Load	7.375"/18.7 Installed
Premium FTS	7042084 Arvin IFP
Premium Spring Rate	170#
Premium Spring Pre-Load	2.98"/7.6cm
Standard RTS	7042085 Select
Premium RTS	7042176 Arvin IFP C/A
Torsion Spring	.359/47°
See page 11.7 for optional springs	

ELECTRICAL			
Flywheel I.D.	4010677	Spark Plug / Gap	Champion RN57YCC / .028" / .70mm
CDI Marking	4010834	Voltage Regulator	T1
Alternator Output	280 watts	Magneto Pulses	6
Ignition Timing (see conversion chart on page 13.4)	24°@3500 RPM±1.5° w/TPS Disconnected	Electric Start	Standard Accessory Premium Optional

SPECIFICATIONS

MODEL: . . . . . 700 RMK
MODEL NUMBER: . . . . S05N(K,L)7CS(A)
ENGINE MODEL: S2775-7070-PI7C

ENGINE		CARBURETION	
Engine Type	Liberty™	Type	Mikuni TM 40
Engine Displacement cc's	701	Main Jet	340
Bore in / mm	3.19" / 81mm	Pilot Jet	45
Stroke in / mm	2.68" / 68mm	Jet Needle	9DGN5-57 / 2
Cylinders	2	Needle Jet	P-8
Piston / Cylinder Clearance in / mm	.0044" - .0058" .111 - .147mm	Throttle Gap UnderCutaway in / mm	0.098" 2.5mm
Piston Ring End Gap in / mm	.012" - .018" .304 - .457 mm	Cutaway	2.0
Piston PN	3021307	Valve Seat	1.8
Piston Ring Marking	N/A	Starter Jet	145
Operating RPM ±200	8000	Fuel Screw	1.75 Turns
Idle RPM ±200	1500	Pilot Air Jet	N/A
Engagement RPM ±300	3800	Air Screw	1.0 Turns
Exhaust Valve Spring	Orange	Fuel Octane (R+M/2)	87 Oct. NonOxy / 89 Oct. Oxy

Altitude		AMBIENT TEMPERATURE					
		Below -30°F Below -34°C	-30° to -10°F -34°to -23°C	-10°to +10°F -23° to -12°C	+10°to +30°F -12°to -1°C	+30°to +50°F -1°to +10°C	Above +50°F Above +10°C
Meters (Feet)	0-600 (0-2000)	500 #4	490 #4	470 #3	450 #3	430 #3	410 #3
	600-1200 (2000-4000)	470 #4	450 #3	430 #3	410 #3	390 #3	380 #2
	1200-1800 (4000-6000)	440 #3	420 #3	400 #3	380 #3	370 #2	350 #2
	1800-2400 (6000-8000)	400 #3	380 #3	360 #3	340 #2	330 #2	310 #2
	2400-3000 (8000-10000)	360 #3	340 #3	320 #2	300 #2	290 #2	270 #2
	3000-3700 (10000-12000)	320 #3	300 #2	290 #2	270 #2	250 #2	230 #2

Altitude		DRIVE CLUTCH		DRIVEN CLUTCH		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-600 (0-2000)	10-64 Bushed	Black/Green	7043063	56 / 42 - .36 ER	19-39 : 72P
	600-1200 (2000-4000)	10-62 Bushed	Black/Green			
	1200-1800 (4000-6000)	10-60 Bushed	Black/Green			
	1800-2400 (6000-8000)	10-58 Bushed	Black/Green			
	2400-3000 (8000-10000)	10-56 Bushed	Black/Green			
	3000-3600 (11000-12000)	10-54 Bushed	Black/Green			

EV Spring Recommendation

Altitude meters(feet)	EV Spring
0-1200 (0-4000)	Green/Yellow
1200-3600 (4000-12000)	Orange

DRIVE CLUTCH	
Type	P-85
Shift Weights	10-58 Bushed
Drive Spring	Black/Green
DRIVEN CLUTCH	
Type	Team Roller Reverse
Driven Spring	7043063
Helix Angle	58 / 42 - .36 Reverse
BELT	
Belt Part Number	3211080
Belt Width (Projected)	1.438" / 3.65cm.
Side Angle (Overall)	28°
Outside Diameter	46.625" / 118.4cm.
Center Distance	11.5" / 29.2cm.

CHAINCASE	
Center Distance	7.92" / 20.12cm.
Gearing : Chain	19-39 : 72 P
Reverse	Electronic Reverse
Brake Pads	Type 81
Brake Type	Liquid Cooled
CAPACITIES	
Fuel Tank	11.8 Gal. / 45 Liters
Oil Tank	3.25 Qts / 3 Liters
Coolant	5 Qts. / 4.7 Liters
Chain Case Oil	9 fl. oz. / 266ml
SLED DIMENSION	
Unit Length / Height / Width in / cm. (144")	124" / 48" / 45.5" 315 / 122 / 116 cm.
Unit Length / Height / Width in / cm. (151")	130" / 48" / 45.5" 330 / 122 / 116 cm.

FRONT SUSPENSION	
Type	EDGE RMK (V/ESC)
Standard IFS Shocks	7042197 Nitrex
Standard IFS Spring Rate	100#
Standard Spring Pre-Load	9.75"/24.7cm Installed
Premium IFS Shocks	7042059 Arvin IFP
Premium Spring Rate	100#
Premium Spring Pre-Load	4.25"/10.8cm
Front Vertical Travel	7.6"/19.3cm
TRACK	
Width / Length / Lug Height	15"/144"/2" (38 cm./366 cm./5 cm.)
Width / Length / Lug Height	15"/151"/2" (38 cm./384 cm./5 cm.)
Track Tension	See Page 3.10

REAR SUSPENSION	
Type	EDGE RMK
Standard FTS	7042058 Nitrex
Standard FTS Spring Rate	170#
Standard Spring Pre-Load	7.375"/18.7 Installed
Premium FTS	7042084 Arvin IFP
Premium Spring Rate	170#
Premium Spring Pre-Load	2.98"/7.6cm
Standard RTS	7042085 Select
Premium RTS	7042176 Arvin IFP C/A
Torsion Spring	.359/47°
See page 11.7 for optional springs	

ELECTRICAL			
Flywheel I.D.	4010677	Spark Plug / Gap	Champion RN57YCC .025" / .70mm
CDI Marking	4010835	Voltage Regulator	T1
Alternator Output	280 watts	Magneto Pulses	6
Ignition Timing(see conversion chart on page 13.4)	20 @ 2000 RPM w/ TPS Disconnected	Electric Start	Standard Accessory Premium Optional

MODEL: . . . . . 800 RMK
MODEL NUMBER: . . . . S05N(M,K,L)8CS(A,B)
ENGINE MODEL: S2776-8070-PI8C

ENGINE		CARBURETION	
Engine Type	Liberty™	Type	Mikuni TM40
Engine Displacement cc's	794	Main Jet	350
Bore in / mm	3.35" / 85mm	Pilot Jet	45
Stroke in / mm	2.76" / 70mm	Jet Needle	9DGN6-57 / 2
Cylinders	2	Needle Jet	P-8
Piston / Cylinder Clearance in / mm	.006 - .0074" .152 -.188mm	Throttle Gap UnderCutaway in / mm	0.102" 2.6mm
Piston Ring End Gap in / mm	.016 - .022" .40 - .559mm	Cutaway	2.0
Piston PN	3021315	Valve Seat	1.8
Piston Ring Marking	N/A	Starter Jet	145
Operating RPM ±200	8000	Fuel Screw	1.5 Turns
Idle RPM ±200	1500	Pilot Air Jet	N/A
Engagement RPM ±300	3800	Air Screw	.75 Turns
Exhaust Valve Spring	Pink	Fuel Octane (R+M/2)	87 Oct. NonOxy / 89 Oct. Oxy

Altitude		AMBIENT TEMPERATURE					
		Below -30°F Below -34°C	-30° to -10°F -34°to -23°C	-10°to +10°F -23° to -12°C	+10°to +30°F -12°to -1°C	+30°to +50°F -1°to +10°C	Above +50°F Above +10°C
Meters (Feet)	0-600 (0-2000)	510N #5	490 #3	470 #4	450 #4	430 #3	410 #3
	600-1200 (2000-4000)	480 #4	470 #4	450 #4	430 #3	410 #3	390 #2
	1200-1800 (4000-6000)	450 #4	430 #4	410 #3	390 #3	370 #2	350 #2
	1800-2400 (6000-8000)	410 #4	390 #3	370 #3	350 #2	330 #2	310 #2
	2400-3000 (8000-10000)	370 #3	350 #3	330 #2	310 #2	290 #2	270 #2
	3000-3700 (10000-12000)	340 #3	320 #2	300 #2	280 #2	260 #2	240 #1

Altitude		DRIVE CLUTCH		DRIVEN CLUTCH		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-66 Bushed	Black/Green	7043063	58 / 42 - .36 Rev.	19-39 : 72P
	900-1500 (3000-5000)	10-64 Bushed				
	1500-2100 (5000-7000)	10-62 Bushed				
	2100-2700 (7000-9000)	10-60 Bushed				
	2700-3350 (9000-11000)	10-58 Bushed				
	3350-4000 (11000-13000)	10-56 Bushed				

EV Spring Recommendation

Altitude meters(feet)	EV Spring
0-1200 (0-4000)	Pink/Yellow
1200-3600 (4000-12000)	Pink

DRIVE CLUTCH	
Type	P-85
Shift Weights	10-60 Bushed
Drive Spring	Black/Green
DRIVEN CLUTCH	
Type	Team Roller Reverse
Driven Spring	7043063
Helix Angle	58 / 42 - .36 Reverse
BELT	
Belt Part Number	3211080
Belt Width (Projected)	1.438" / 3.65cm.
Side Angle (Overall)	28°
Outside Diameter	46.625" / 118.4cm.
Center Distance	11.5" / 29.2cm.

CHAINCASE	
Center DIstance	7.92" / 20.12cm.
Gearing : Chain	19-39 : 72 P
Reverse	Electronic Reverse
Brake Pads	Type 81
Brake Type	Liquid Cooled
CAPACITIES	
Fuel Tank	11.8 Gal. / 45 Liters
Oil Tank	3.25 Qts / 3 Liters
Coolant	5 Qts / 4.7 Liters
Chain Case Oil	9 fl. oz. / 266 ml
SLED DIMENSION	
Unit Length / Height / Width in / cm.	124" / 48" / 45.5" 315 / 122 / 116 cm.
	130" / 48" / 45.5" 330 / 122 / 116 cm.

FRONT SUSPENSION	
Type	EDGE RMK (V/ESC)
Standard IFS Shocks	7042197 Nitrex
Standard IFS Spring Rate	100#
Standard Spring Pre-Load	9.75"/24.7cm Installed
Premium IFS Shocks	7042059 Arvin IFP
Premium Spring Rate	100#
Premium Spring Pre-Load	4.25"/10.8cm
Front Vertical Travel	7.6"/19.3cm
TRACK	
Width / Length / Lug Height	15"/144"/2" (38 cm./366 cm./5 cm.)
Width / Length / Lug Height	15"/151"/2" (38 cm./384 cm./5 cm.)
Track Tension	See Page 3.10

REAR SUSPENSION	
Type	EDGE RMK
Standard FTS	7042058 Nitrex
Standard FTS Spring Rate	170#
Standard Spring Pre-Load	7.375"/18.7 Installed
Premium FTS	7042084 Arvin IFP
Premium Spring Rate	170#
Premium Spring Pre-Load	2.98"/7.6cm
Standard RTS	7042085 Select
Premium RTS	7042176 Arvin IFP C/A
TORSION SPRINGS	
Torsion Spring	.359/47°
See page 11.7 for optional springs	

ELECTRICAL			
Flywheel PN	4010677	Spark Plug / Gap	Champion RN57YCC/ .025" / .64mm
CDI PN	4010842	Voltage Regulator	T1
Alternator Output	280 watts	Magneto Pulses	6
Ignition Timing(see conversion chart on page 13.4)	29°@3250 RPM±1.5° w/ TPS disconnected	Electric Start	Standard Accessory Premium Optional

MODEL: . . . . . 900 RMK
MODEL NUMBER: . . . . S05P(L,M)8DS(A,B,C,D)
ENGINE MODEL: S2884-8686-PI8D

ENGINE	
Engine Type	Liberty
Engine Displacement cc	866
Bore in / mm	3.46”/ 83mm
Stroke in / mm	3.15” / 80mm
Cylinders	2
Piston / Cylinder Clearance in / mm	.0045” - .0098” .114 - .249
Piston Ring End Gap in / mm	.016” - .022” .406-.56
Piston Marking	3021327
Piston Ring Marking	N/A
Operating RPM ±200	7400
*Idle RPM ±200	1400
Engagement RPM ±300	3700
Exhaust Valve Spring	Purple
CHAINCASE	
Center Distance in/cm	11.35” / 28.83cm
Gearing	19 : 39 - 90P
Reverse	Electronic
Brake Pads	2202727
Brake Type	Type 94 (DOT 4)
CAPACITIES	
Fuel Tank gal./l	10.8 / 40.9
Oil Tank qts./l	3 / 2.8
Coolant qts. / l	6.7 - 6.9 / 6.3 - 6.4
Chain Case Oil oz. / ml	11 / 325.3

FUEL SYSTEM	
Type	Clean Fire Injection
Regulator Pressure	4 Bar (58psi)
THROTTLE BODY	
Throttle Body Bore Size in/cm	2” / 51mm
TPS voltage @ idle	.92 - .94
Throttle Body Manufacture	Mikuni
DRIVE CLUTCH	
Type	P-85
Center Distance in/cm	11.5” / 29.2
Spring	Black / Green
Shift Weight	10-70
DRIVEN CLUTCH	
Type	TEAM
Spring	7043058
Helix	62/46-36 ER
BELT	
Width in/cm	1.438” / 3.652cm
Length in/cm	46.625” / 118.4275cm
Part Number	3211080
DIMENSIONS	
Length in/cm	128 / 325 134 / 340
Height in/cm	46.5 / 118
Width in/cm	46.33 / 118

Altitude		DRIVE CLUTCH		DRIVEN CLUTCH		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-74	Black/Green	7043058	62/46-36 ER	19 : 39 - 90P
	900-1500 (3000-5000)	10-74				
	1500-2100 (5000-7000)	10-72				
	2210-2700 (7000-9000)	10-70				
	2700-3350 (9000-11000)	10-68				
	3350-4000 (11000-13000)	10-66				

Idle RPM is factory set and is adjusted automatically through the barometric sensor inside the ECU. DO NOT attempt to adjust idle on the throttle body or engine performance may be affected.

FRONT SUSPENSION	
Type	IQ
Standard IFS Shocks	7043049 AFX
Stock IFS Spring Rate	110#
Stock Spring Pre-Load	11.38” / 29cm Installed
Premium IFS Shocks	7043090 Arvin IFP
Premium Spring Rate	100#
Premium Spring Pre-Load	10” / 25.4cm Installed
Front Vertical Travel	8.84 in / 22.4cm
TRACK	
Width in/cm	15/38.1
Length in/cm	151/384 159/404 166/422
Lug Height in/cm	(151) 2 or 2.4/5 or 6.1 (159) 2 or 2.4/5 or 6.1 (166) 2.4/6.1
Track Tension	See page 3.10

REAR SUSPENSION	
Type	IQ
Standard FTS	7043048 FX
Standard FTS Spring Rate	170#
Standard Spring Pre-Load	Fixed
Premium FTS	7042335 Arvin IFP
Premium FTS Spring Rate	170#
Premium FTS Spring Pre-Load	7.25” / 18.4 cm Installed
Standard RTS	7043047 AFX
Premium RTS	7043046 Arvin IFP/Res CA
TORSION SPRINGS	
Stock Torsion Spring	.359/77°
Light Torsion Spring	.347/77°
Heavy Torsion Spring	.375/77°

ELECTRICAL			
Flywheel I.D.	4011119	Spark Plug / Gap	Champion RN57YCC / .025mm(.003”)
Base ECU	4011081	Voltage Regulator	4010866
Alternator Output	400watts	Stator	4010727
Ignition Timing(see conversion chart on page 13.4)	14° @ 3000RPM	Electric Start	TBD

MODEL: . . . . . 600 SWITCHBACK™
MODEL NUMBER: . . . . S05NS6ES(A)
ENGINE MODEL: S2709-6044-PI6E

ENGINE		CARBURETION	
Engine Type	Liberty™	Type	Mikuni TM 38
Engine Displacement cc's	599	Main Jet	420
Bore in / mm	3.04" / 77.25mm	Pilot Jet	50
Stroke in / mm	2.52" / 64mm	Jet Needle	9DGI01-60 / 4
Cylinders	2	Needle Jet	P-6
Piston / Cylinder Clearance in / mm	.0045"-.0059" .115 - .149mm.	Throttle Gap UnderCutaway in / mm	0.079" 2.0mm
Piston Ring End Gap in / mm	.014-.020" .356 - .508mm	Cutaway	1.5
Piston PN	3021308	Valve Seat	1.5
Piston Ring Marking	N/A	Starter Jet	140
Operating RPM ±200	8000	Fuel Screw	1.5 Turns
Idle RPM ±200	1500	Pilot Air Jet	N/A
Engagement RPM ±300	3800	Air Screw	0.5 Turns
Exhaust Valve Spring	Green/White	Fuel Octane (R+M/2)	87 Oct. NonOxy / 89 Oct. Oxy

Altitude		AMBIENT TEMPERATURE					
		Below -30°F Below -34°C	-30° to -10°F -34°to -23°C	-10°to +10°F -23° to -12°C	+10°to +30°F -12°to -1°C	+30°to +50°F -1°to +10°C	Above +50°F Above +10°C
Meters (Feet)	0-600 (0-2000)	450 #5	430 #5	420 #4	400 #4	380 #4	370 #4
	600-1200 (2000-4000)	410 #5	390 #4	380 #4	360 #4	340 #4	330 #3
	1200-1800 (4000-6000)	380 #4	360 #4	350 #4	330 #4	320 #3	300 #3
	1800-2400 (6000-8000)	360 #4	340 #4	320 #4	310 #3	290 #3	280 #3
	2400-3000 (8000-10000)	340 #4	320 #4	300 #3	290 #3	270 #3	260 #3
	3000-3700 (10000-12000)	330 #4	310 #3	290 #3	280 #3	260 #3	240 #3

Altitude		DRIVE CLUTCH		DRIVEN CLUTCH		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-900 (0-3000)	10-60 Bushed	Black/Green	7043063	56 / 42 - .36 ER	22-40:74P
	900-1500 (3000-5000)	10-58 Bushed				22-40:74P
	1500-2100 (5000-7000)	10-56 Bushed				22-40:74P
	2100-2700 (7000-9000)	10-54 Bushed				19-39:72P
	2700-3350 (9000-11000)	10AL Bushed				19-39:72P
	3350-4000 (11000-13000)	10 Bushed				19-39:72P

DRIVE CLUTCH	
Type	P-85
Shift Weights	10-60 Bushed
Drive Spring	Black / Green
DRIVEN CLUTCH	
Type	Team Roller Reverse
Driven Spring	7043063
Helix Angle	56 / 42 - .36 Reverse
BELT	
Belt Part Number	3211080
Belt Width (Projected)	1.438" / 3.65cm.
Side Angle (Overall)	28°
Outside Diameter	46.625" / 118.4cm.
Center Distance	11.5" / 29.2cm.

CHAINCASE	
Center Distance	7.92" / 20.12cm.
Gearing : Chain	22-40 : 74 P
Reverse	Electronic Reverse
Brake Pads	Type 81
Brake Type	Liquid Cooled
CAPACITIES	
Fuel Tank	11.8 Gal. / 45 Liters
Oil Tank	3.25 Qts / 3 Liters
Coolant	5 Qts / 4.7 Liters
Chain Case Oil	9 fl. oz. / 266 ml
SLED DIMENSION	
Unit Length / Height / Width in / cm.	124" / 48" / 47" 315 / 122 / 119 cm.

FRONT SUSPENSION	
Type	EDGE RMK
IFS Shocks	7043083 Alum IFP
IFS Spring Rate	100#/in.
IFS Spring Pre-Load	10.5" / 26.7cm Installed
Front Vertical Travel	7.1-7.4 / 18 - 18.8cm.
TRACK	
Width	15" / 38 cm.
Length	144" / 366 cm.
Lug Height	1.25" / 3.175 cm.
Track Tension	See page 3.10

REAR SUSPENSION	
Type	EDGE RMK
FTS	7042084 Arvin IFP
FTS Spring Rate	170#/in.
FTS Pre-Load	2.98" / 7.6 cm.
RTS	7042176 Arvin IFP C/A
Torsion Spring	.359" (Sq) x 47°
Optional springs see page 11.7	

ELECTRICAL			
Flywheel I.D.	4010677	Spark Plug / Gap	Champion RN57YCC .028" / .70mm
CDI Marking	4010830	Voltage Regulator	T1
Alternator Output	280 watts	Magneto Pulses	6
Ignition Timing(see conversion chart on page 13.4)	24°@3000 RPM±1.5° w/TPS Disconnected	Electric Start	Accessory

MODEL: . . . . . 800 SWITCHBACK™
MODEL NUMBER: . . . . S05NSCS(A)
ENGINE MODEL: S2708-8070-PI8C

ENGINE		CARBURETION	
Engine Type	Liberty™	Type	Mikuni TM 40
Engine Displacement cc's	794	Main Jet	470
Bore in / mm	3.35" / 85mm	Pilot Jet	45
Stroke in / mm	2.76" / 70mm	Jet Needle	9DGN6-57/4
Cylinders	2	Needle Jet	P-8
Piston / Cylinder Clearance in / mm	.006 - .0074" .152 - .188mm	Throttle Gap UnderCutaway in / mm	0.079" 2.0mm
Piston Ring End Gap in / mm	.016 - .022" .406 - .559mm	Cutaway	2.0
Piston PN	3021315	Valve Seat	1.8
Piston Ring Marking	N/A	Starter Jet	145
Operating RPM ±200	8000	Fuel Screw	1.0 Turns
Idle RPM ±200	1500	Pilot Air Jet	N/A
Engagement RPM ±300	3800	Air Screw	1.0 Turns
Exhaust Valve Spring	Pink / Yellow	Fuel Octane (R+M/2)	87 Oct. NonOxy / 89 Oct. Oxy

Altitude		AMBIENT TEMPERATURE					
		Below -30°F Below -34°C	-30° to -10°F -34°to -23°C	-10°to +10°F -23° to -12°C	+10°to +30°F -12°to -1°C	+30°to +50°F -1°to +10°C	Above +50°F Above +10°C
Meters (Feet)	0-600 (0-2000)	510N #5	490 #4	470 #4	450 #4	430 #3	410 #3
	600-1200 (2000-4000)	480 #4	470 #4	450 #4	430 #3	410 #3	390 #2
	1200-1800 (4000-6000)	450 #4	430 #4	410 #3	390 #3	370 #2	350 #2
	1800-2400 (6000-8000)	410 #4	390 #3	370 #3	350 #2	330 #2	310 #2
	2400-3000 (8000-10000)	370 #3	350 #3	330 #2	310 #2	290 #2	270 #2
	3000-3700 (10000-12000)	340 #3	320 #2	300 #2	280 #2	260 #2	240 #1

Altitude		DRIVE CLUTCH		DRIVEN CLUTCH		
		Shift Weight	Clutch Spring	Clutch Spring	Driven Helix	Chaincase Gearing
Meters (Feet)	0-600 (0-2000)	10-66 Bushed	Black/Green	7043063	58 / 42 - .36 ER	23-39:74P
	600-1200 (2000-4000)	10-64 Bushed				23-39:74P
	1200-1800 (4000-7000)	10-62 Bushed				23-39:74P
	1800-2400 (6000-8000)	10-60 Bushed				21-41:74P
	2400-3000 (8000-10000)	10-58 Bushed				21-41:74P
	3000-3600 (10000-12000)	10-56 Bushed				21-41:74P

DRIVE CLUTCH	
Type	P-85
Shift Weights	10-66 Bushed
Drive Spring	Black / Green
DRIVEN CLUTCH	
Type	Team Roller Reverse
Driven Spring	7043063
Driven Helix Angle	58/42-.36 ER
BELT	
Belt Part Number	3211080
Belt Width (Projected)	1.438" / 3.65cm.
Side Angle (Overall)	28°
Outside Diameter	46.625" / 118.4cm.
Center Distance	11.5" / 29.2cm.

CHAINCASE	
Center Distance	7.92" / 20.12cm.
Gearing : Chain	23-39 : 74 P
Reverse	Electronic Reverse
Brake Pads	Type 81
Brake Type	Liquid Cooled
CAPACITIES	
Fuel Tank	11.8 Gal. / 45 Liters
Oil Tank	3.25 Qts / 3 Liters
Coolant	5 Qts/ 4.7 Liters
Chain Case Oil	9 fl. oz. / 266 ml
SLED DIMENSION	
Unit Length / Height / Width in / cm.	124" / 48" / 47" 315 / 122 / 119 cm.

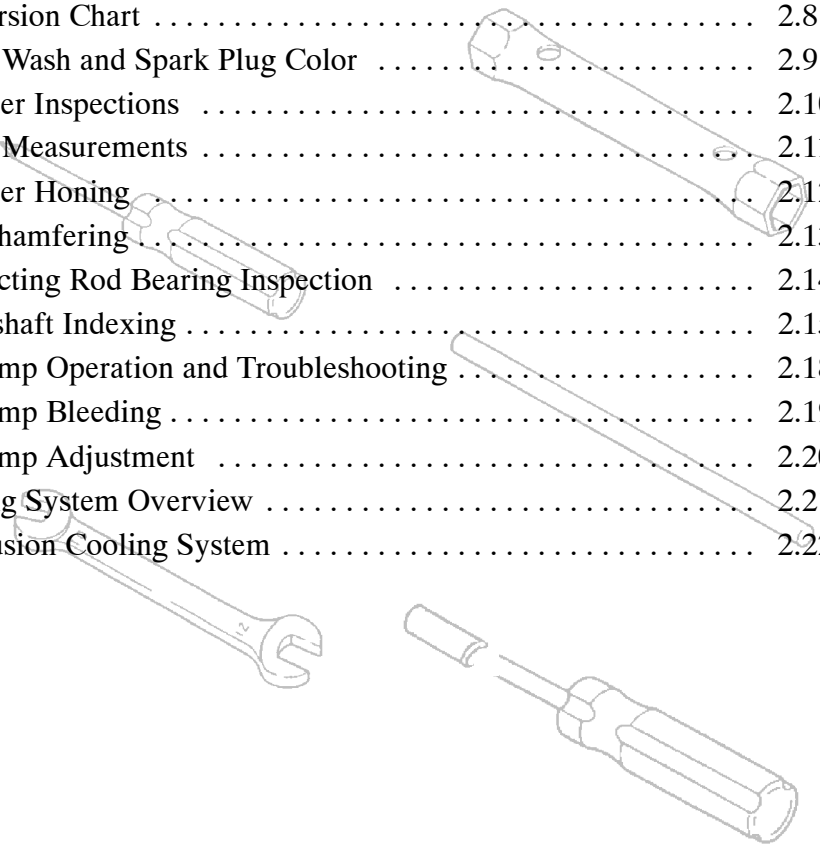
FRONT SUSPENSION	
Type	EDGE RMK
IFS Shocks	7043083 Alum IFP
IFS Spring Rate	100#/in.
IFS Spring Pre-Load	10.5" / 26.7cm Installed
Front Vertical Travel	7.1-7.4 / 18 - 18.8cm.
TRACK	
Width	15" / 38 cm.
Length	144" / 366 cm.
Lug Height	1.25" / 3.175 cm.
Track Tension	See page 3.10

REAR SUSPENSION	
Type	EDGE RMK
FTS	7042084 Arvin IFP
FTS Spring Rate	170#/in.
FTS Pre-Load	2.98" / 7.6 cm.
RTS	7042176 Arvin IFP C/A
Torsion Spring	.359" (Sq) x 47°
Optional springs see page 11.7	

ELECTRICAL			
Flywheel PN	4010677	Spark Plug / Gap	Champion RN57YCC / .025" / .70mm
CDI PN	4010841	Voltage Regulator	T1
Alternator Output	280 watts	Magneto Pulses	6
Ignition Timing(see conversion chart on page 13.4)	29°@3250 RPM±1.5° w/TPS Disconnected	Electric Start	Accessory

NOTES

CHAPTER 2
GENERAL

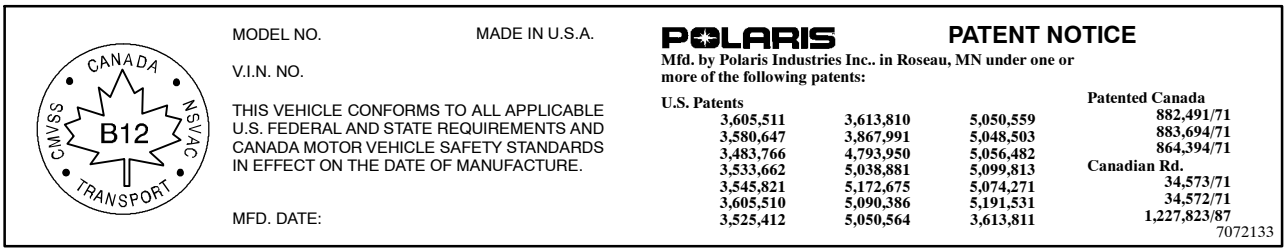


2005 MODEL NUMBER DESIGNATION

EXAMPLE: S05NB4BS

S	05	N	B	4	B	S	#
Identifier (1st Digit)	ModelYear (2nd/3rd Digit)	Model Line (4th Digit)	Model Type (5th Digit)	Engine Size (cc) (6th Digit)	Engine modifier (6th/7th Digit)	VIN Identifier (8th Digit)	Option Identifier (9th Digit)
S=Snow	05=2005	M=Fusion	A=50th Anniv Special	0=0-99cc	1A=121 F/C OHV 4 cycle Fuji	E=Europe unit	
		N=Edge	B=Basic or Standard	1=100-199	3A=340 F/C Piston Port	S=Standard Production Unit	
		P=IQ RMK	D=Classic	2=200-299cc	4B=488 L/C Piston Port		
		S=Gen II	E=M-10 Performance	3=300-399cc	4C=440 EV L/C Case Reed (Dom)		
		W=Mini Indy	J=136 RMK	4=400-499cc	5B=544 F/C Cylinder Reed		
			K=144 RMK	5=500-599cc	5C=500 EFV L/C Case Reed 2 Cyl (Dom)		
			L=151 RMK	6=600-600cc	6E=600 EV L/C Case Reed 2 Cyl (Dom)		
			M=159 RMK	7=700-799cc	7C=700 EV L/C Case Reed 2 Cyl (Dom)		
			N=166 RMK	8=800-899cc	7D=780 4-stroke EFI 2 Cyl (Dom)		
			P=Performance	9=900+cc	8C=800 EV L/C Case Reed 2 Cyl (Dom)		
			S=Switchback		8D=866 EV SDI Case Reed		
			T=Touring				
			U=Utility				
			X=Racer/Pro X				

TUNNEL DECAL



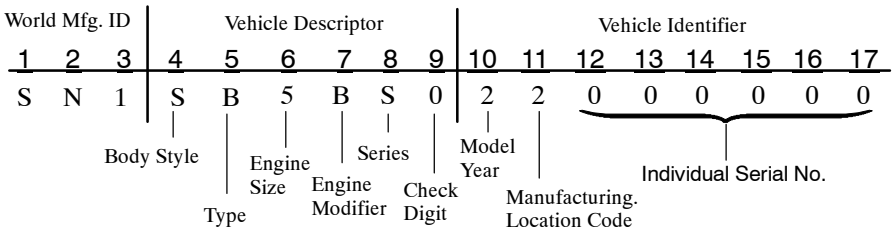
These numbers should be referred to in any correspondence regarding warranty, service or replacement parts.
The machine model and serial number identification decal is located on the right front side of the tunnel. The serial number is permanently stamped into the tunnel. The model number is embossed 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 SN1. 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
L=Lite	B=Base Model	1=100-199 cc's	A=Fan	S=Domestic
N=Edge	D=Deluxe	2=200-299 cc's	B=Liquid Twin	U=Europe
S=Gen II	P=Performance	3=300-399 cc's	C=Case Reed Twin	
W=Mini	R=RMK	4=400-499 cc's	D=Liquid Triple	
	S=SKS	5=500-599 cc's	E=Case Reed Triple	
	T=Touring	6=600-699 cc's		
	U=Utility	7=700-799 cc's		
	X=Racer	8=800-899 cc's		

PUBLICATION PART NUMBERS

Model	Model No.	Owner's Manual	Owners Manual Supplement	Parts Manual	Microfiche
Trail RMK	S05NJ5BS(A)	9919706	9919097	9919276	9919277
600 RMK	S05NK6ES(A)	9919706	9919098	9919278	9919279
700 RMK	S05N(K,L)7CS(A)	9919706	9919381	9919278	9919279
800 RMK	S05N(M,K,L)8CS(A,B)	9919706	9919383 (144) 9919384 (151) 9919385 (159)	9919278	9919279
900 RMK	S05P(L,M)8DS(A,B,C,D)	9919077	9919104 (151) 9919105 (159) 9919106 (166)	9919292	9919293
600 Switchback	S05NS6ES(A)	9919076	9919095	9919280	9919281
800 Switchback	S05NSCS(A)	9919076	9919095	9919280	9919281

SERVICE MANUALS

Service Manuals	2004
2000-2005 120 XC SP / PRO X	**9919307**
Trail Sport 500 Indy, Supersport	**9919300**
Touring 340 Edge Touring, Trail Touring (Deluxe), Widetrak LX, 600 Edge Touring (50th), 800 Edge Touring	**9919304**
Frontier Frontier Touring	**9919305**
Classic 340 Classic, 500 Classic, 550 Classic, 600 Classic, 800 Classic	**9919301**
Deep Snow Trail RMK, 600/700/800 RMK, 600/800 Switchback™, 900 RMK	**9919302**
Performance 500/600/700/800 XC SP, 900 Fusion	**9919303**
2005 Specification Handbook	**9919311**
2005 Snowmobile Wallcharts	**9919309**
Track Poster	**9918459**
Flat Rate Manual	**9919308**
Snowmobile Care and Adjusting for the Perfect Ride (DVD) (2004)	**9918923**
Snowmobile Care and Adjusting for the Perfect Ride (VHS) (2004)	**9918908**
2005 Snowmobile Quick Start Guide (DVD) (2005)	**9919129**

GENERAL SERVICE PRECAUTIONS

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.

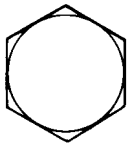
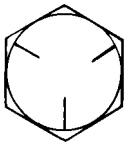
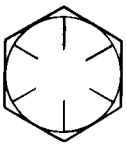
⚠ Whenever removing or reinstalling batteries, care should be taken to avoid the possibility of explosion resulting in serious burns. Always disconnect the negative (black) cable first and reconnect it last. Battery electrolyte contains sulphuric acid and is poisonous! Serious burns can result from contact 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.

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	.125	
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	.250	
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 00	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	.750	
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	1.000	

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.

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

CONVERSION CHART

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's	x .03381	= Fluid Ounces (oz)
lb.	x .454	= kg
kg	x 2.2046	= lb.
Cubic inches (cu in)	x 16.387	= Cubic centimeters (cc's)
Cubic centimeters (cc's)	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