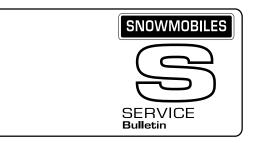
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Date: June 16, 1996

SUBJECT:	1996 Sho	p Manual

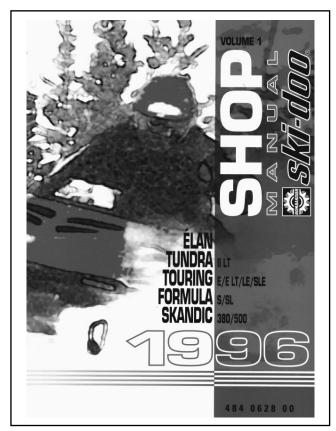
Y	/EAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
	1996	ALL	ALL	ALL

The 1996 Shop Manual will be delivered in 3 volumes. They will be automatically shipped to dealers.

Volume 1 (P/N 484 0628 00) covers repair procedure for:

Élan Tundra II LT Touring E/E LT/LE/SLE Skandic 380/500 Formula S/SL

Shop Manual Volume 1 is presently at press.



Volume 2 covers repair procedures for:

Grand Touring 500/580/SE Formula SLS Formula STX/STX LT Summit 500 Mach 1

Volume 3 covers repair procedures for:

MX Z 440/583 Formula Z/SS Formula III/III LT Summit 583/670 Mach Z/Z LT Skandic WT

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No. **96-2 REVISION 1** 

Date: May 27, 1996 **SUBJECT: Spring Chart** 

,	YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
	1996	ALL (Except utility models)	ALL	ALL

This bulletin is divided into 2 main sections.

#### Section 1, Spring Applications

Is a quick reference chart which provides authorized spring applications per Ski-Doo model. It contains the standard spring part number (in gray shading) as installed at the factory, as well as 1 softer spring and 1 harder spring recommendation.

#### Section 2, Spring Specifications

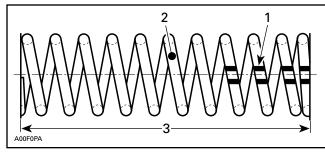
Refers to spring specifications.

The informations in this bulletin supersede all informations previously published.

Please update your Shop Manual by indicating the number of this bulletin in the proper section of the manual.

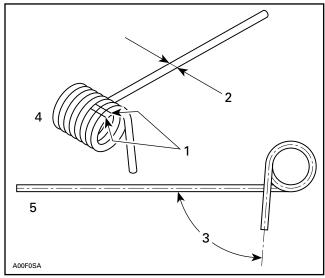
#### COIL SPRINGS (Compression)

#### Type R (Straight on Both Ends)



- Color Code Stripes
- Wire Diameter
- 3. Free Length

#### **TORSION SPRINGS**



- Color Code Stripes
- Wire Diameter
- Opening Angle (°)
- 4. Left Hand (LH) 5. Right Hand (RH)

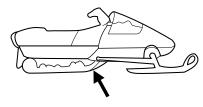
# SECTION 1 SPRING APPLICATIONS

# FRONT SPRINGS MODEL (P/N) SOFTER SPRING (P/N) STANDARD (P/N) HARDER SPRING

MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING
MACH Z	414 9744 00	414 9565 00	414 9761 00
MACH Z LT	414 9744 00	414 9565 00	414 9761 00
MACH 1	414 9744 00	414 9565 00	414 9761 00
FORMULA III	414 9744 00	414 9564 00	414 9761 00
FORMULA III LT	414 9744 00	414 9564 00	414 9761 00
FORMULA Z	414 9281 00	414 9761 00	415 0397 00
FORMULA SS	414 9281 00	414 9761 00	415 0397 00
FORMULA STX	414 8951 00	414 9561 00	415 0397 00
FORMULA STX LT	414 8951 00	414 9561 00	415 0397 00
FORMULA SLS	414 8951 00	414 9561 00	415 0397 00
FORMULA SL	414 8951 00	414 9561 00	415 0397 00
FORMULA S	414 8951 00	414 9560 00	415 0397 00
MX-Z 670	414 9744 00	414 9563 00	414 9761 00
MX-Z 583	414 9744 00	414 9560 00	414 9761 00
MX-Z 440	414 9744 00	414 9560 00	414 9761 00
SUMMIT 670	414 9168 00	414 9686 00	415 0396 00
SUMMIT 583	414 9168 00	414 9686 00	415 0396 00
SUMMIT 500	414 9168 00	414 9686 00	415 0396 00
GRAND TOURING SE	414 9744 00	414 9568 00	414 9761 00
GRAND TOURING 580	414 8951 00	414 9559 00	415 0397 00
GRAND TOURING 500	414 8951 00	414 9559 00	415 0397 00
TOURING SLE	414 8951 00	414 9560 00	415 0397 00
TOURING LE	414 8951 00	414 9560 00	415 0397 00
TOURING ELT	414 8951 00	414 9560 00	415 0397 00
TOURING E	414 8951 00	414 9560 00	415 0397 00
SKANDIC 500	414 8593 00	414 9558 00	414 9686 00
SKANDIC 380	414 8593 00	414 9558 00	414 9686 00

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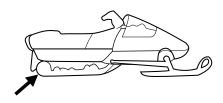
# CENTER SPRINGS



MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING
MACH Z	414 9760 00	414 8778 00	415 0137 00
MACH Z LT	414 8778 00	415 0137 00	415 0401 00
MACH 1	414 9760 00	414 8778 00	415 0137 00
FORMULA III	414 9760 00	414 8778 00	415 0137 00
FORMULA III LT	414 8778 00	415 0137 00	415 0401 00
FORMULA Z	414 9293 00	415 0129 00	415 0398 00
FORMULA SS	414 9293 00	415 0129 00	415 0398 00
FORMULA STX	414 9168 00	414 9562 00	414 9760 00
FORMULA STX LT	414 9562 00	414 9760 00	415 0399 00
FORMULA SLS	414 9168 00	414 9562 00	414 9760 00
FORMULA SL	Not Applicable	414 9744 00	414 9745 00
FORMULA S	Not Applicable	414 9744 00	414 9745 00
MX-Z 670	Not Applicable	414 8951 00	415 0400 00
MX-Z 583	Not Applicable	414 8951 00	415 0400 00
MX-Z 440	Not Applicable	414 8951 00	415 0400 00
SUMMIT 670	414 9562 00	414 9760 00	415 0399 00
SUMMIT 583	414 9562 00	414 9760 00	415 0399 00
SUMMIT 500	414 9562 00	414 9760 00	415 0399 00
GRAND TOURING SE	414 8778 00	415 0137 00	415 0401 00
GRAND TOURING 580	414 9562 00	414 9760 00	415 0399 00
GRAND TOURING 500	414 9562 00	414 9760 00	415 0399 00
TOURING SLE	414 9744 00	414 9745 00	414 7977 00
TOURING LE	414 9744 00	414 9745 00	414 7977 00
TOURING ELT	414 9744 00	414 9745 00	414 7977 00
TOURING E	Not Applicable	414 9744 00	414 9745 00
SKANDIC 500	414 9745 00	414 9745 00	414 7977 00
SKANDIC 380	414 9745 00	414 9745 00	414 7977 00

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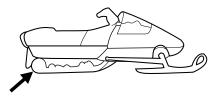
# REAR SPRINGS



MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING
FORMULA Z	414 9436 00 LH	415 0106 00 LH	414 9443 00 LH
	414 9435 00 RH	415 0105 00 RH	414 9442 00 RH
FORMULA SS	414 9436 00 LH	415 0106 00 LH	414 9443 00 LH
	414 9435 00 RH	415 0105 00 RH	414 9442 00 RH
FORMULA STX	414 8663 00 LH	414 9436 00 LH	415 0106 00 LH
	414 8662 00 RH	414 9435 00 RH	415 0105 00 RH
FORMULA STX LT	414 9436 00 LH	415 0106 00 LH	414 9443 00 LH
	414 9435 00 RH	415 0105 00 RH	414 9442 00 RH
FORMULA SLS	414 8663 00 LH	414 9436 00 LH	415 0106 00 LH
	414 8662 00 RH	414 9435 00 RH	415 0105 00 RH
FORMULA SL	Not Applicable	414 8663 00 LH 414 8662 00 RH	414 9436 00 LH 414 9435 00 RH
FORMULA S	Not Applicable	414 8663 00 LH 414 8662 00 RH	414 9436 00 LH 414 9435 00 RH
MX-Z 670	414 8663 00 LH	414 9436 00 LH	415 0106 00 LH
	414 8662 00 RH	414 9435 00 RH	415 0105 00 RH
MX-Z 583	414 8663 00 LH	414 9436 00 LH	415 0106 00 LH
	414 8662 00 RH	414 9435 00 RH	415 0105 00 RH
MX-Z 440	414 8663 00 LH	414 9436 00 LH	415 0106 00 LH
	414 8662 00 RH	414 9435 00 RH	415 0105 00 RH
SUMMIT 670	Not Applicable	414 8663 00 LH 414 8662 00 RH	414 9436 00 LH 414 9435 00 RH
SUMMIT 583	Not Applicable	414 8663 00 LH 414 8662 00 RH	414 9436 00 LH 414 9435 00 RH
SUMMIT 500	Not Applicable	414 8663 00 LH 414 8662 00 RH	414 9436 00 LH 414 9435 00 RH
GRAND TOURING 580	414 9436 00 LH	415 0106 00 LH	414 9443 00 LH
	414 9435 00 RH	415 0105 00 RH	414 9442 00 RH
GRAND TOURING 500	414 9436 00 LH	415 0106 00 LH	414 9443 00 LH
	414 9435 00 RH	415 0105 00 RH	414 9442 00 RH
TOURING SLE	414 8663 00 LH	414 9436 00 LH	415 0106 00 LH
	414 8662 00 RH	414 9435 00 RH	415 0105 00 RH
TOURING LE	414 8663 00 LH	414 9436 00 LH	415 0106 00 LH
	414 8662 00 RH	414 9435 00 RH	415 0105 00 RH
TOURING ELT	414 8663 00 LH	414 9436 00 LH	415 0106 00 LH
	414 8662 00 RH	414 9435 00 RH	415 0105 00 RH

LH= Left Hand RH=Right Hand

# REAR SPRINGS



MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING	
TOURING E	Not Applicable	414 8663 00 LH 414 8662 00 RH	414 9436 00 LH 414 9435 00 RH	
SKANDIC 500	414 8663 00 LH 414 8662 00 RH	414 9436 00 LH 414 9435 00 RH	415 0106 00 LH 415 0105 00 RH	
SKANDIC 380	414 8663 00 LH 414 8662 00 RH	414 9436 00 LH 414 9435 00 RH	415 0106 00 LH 415 0105 00 RH	
MACH Z	414 8091 00	415 0145 00	415 0144 00	
MACH Z LT	414 8091 00	415 0145 00	415 0144 00	
MACH 1	414 8091 00	415 0145 00	415 0144 00	
FORMULA III	414 8715 00	415 0139 00	415 0144 00	
FORMULA III LT	414 8715 00	415 0139 00	415 0144 00	
GRAND TOURING SE	414 9271 00	415 0138 00	415 0144 00	

LH= Left Hand RH=Right Hand

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# **SECTION 2**

# SPRING SPECIFICATIONS

# **COIL SPRINGS SPECIFICATIONS**

P/N	TYPE	SPRING RATE (lbs/in) ± 10	FREE LENGTH (mm) ± 3	WIRE DIAMETER (mm) ± .05	COLOR CODE STRIPES	COLOR OF SPRING
291 000 794	R	100	215	6.65	PI/WH	BLACK
414 7713 00	R	135	272.5	8.41	BK/BK	SAFARI RED
414 7823 00	R	225	165	8.41	ВК	SAFARI RED
414 7882 00	R	150	272.5	8.41	BK/YL	SAFARI RED
414 7894 00	R	135	272.5	8.41	BK/BK	AQUA BLUE
414 7977 00	R	135	272.5	8.41	BK/BK	FLAME RED
414 7978 00	R	135	272.5	8.41	BK/BK	PEARL BLUE
414 7979 00	R	135	272.5	8.41	BK/BK	VIOLET
414 8030 00	R	65	408	6.17	BL/OR	BLACK
414 8088 00	R	120	272.5	7.77	BK/OR	SAFARI RED
414 8093 00	R	160	213.1	7.77	WH	BLACK
414 8095 00	R	150 ± 5	256.8	7.92	ВК	YELLOW
414 8101 00	R	125 ± 5	256.8	7.49	WH	YELLOW
414 8593 00	R	90 ± 7	239	7.14	BK/WH	YELLOW
414 8616 00	R	135	272.5	8.41	BK/BK	BLACK
414 8690 00	R	125 ± 5	256.8	7.49	WH	SAFARI RED
414 8716 00	R	150 ± 5	256.8	7.92	WH	VIOLET
414 8778 00	R	160 ± 7	223.1	7.92	WH/WH	BLACK
414 8910 00	R	100 ± 7	260	7.14	WH/BK	SAFARI RED
414 8938 00	R	185 ± 7	213	8.41	GN/GN	YELLOW
414 8951 00	R	100	255	7.14	PI/GD	BLACK
414 9168 00	R	90 ± 7	239	7.14	RD	FIREFLY GREEN
414 9281 00	R	110	256.8	7.77	GD/BK	SAFARI RED
414 9286 00	R	100 ± 7	260	7.14	GD	RASPBERRY
414 9293 00	R	110	256.8	7.77	BK/RD	PEARL BLUE
414 9295 00	R	100 ± 7	260	7.14	RD/YL	PEARL BLUE
414 9402 00	R	140 ± 7	223	7.77	WH/GN	BLACK

SPRING COLOR CODES									
BK=BLACK	BL=BLUE	GD=GOLD	GN=GREEN	OR=ORANGE	PI=PINK	RD=RED	SI=SILVER	WH=WHITE	YL=YELLOW

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# **COIL SPRINGS SPECIFICATIONS**

P/N	TYPE	SPRING RATE (lbs/in) ± 10	FREE LENGTH (mm) ± 3	WIRE DIAMETER (mm) ± .05	COLOR CODE STRIPES	COLOR OF SPRING
414 9558 00	R	100	239	7.14	RD/GN/GN	BLACK
414 9559 00	R	125 ± 5	256.8	7.49	BK/RD	NEON GREEN
414 9560 00	R	125 ± 5	256.8	7.49	BL/RD	BLACK
414 9561 00	R	125 ± 5	256.8	7.49	BL/BL/BL	VIPER RED
414 9562 00	R	115	242	7.77	PI/BL	BLACK
414 9563 00	R	100	265	7.14	PI/WH/BL	YELLOW
414 9564 00	R	100 ± 7	260	7.14	RD/YL/BL	ROYAL VIOLET
414 9565 00	R	100 ± 7	260	7.14	BL/YL/GN	VIPER RED
414 9568 00	R	100 ± 7	260	7.14	RD/YL	NEON GREEN
414 9686 00	R	125	235	7.49	RD	NEON GREEN
414 9744 00	R	90	265	7.14	GN/OR	BLACK
414 9745 00	R	115	265	7.49	OR/WH	BLACK
414 9760 00	R	135	242	8.25	PI/GN	BLACK
414 9761 00	R	125	262	7.92	PI/YL	VIPER RED
415 0129 00	R	115	260	7.92	PI/YL	BLACK
415 0137 00	R	200	230	8.71	PI/OR/YL	BLACK
415 0138 00	R	150	264	7.77	BK/PI/WH	NEON GREEN
415 0139 00	R	150	264	7.77	PI/WH/YL	ROYAL VIOLET
415 0142 00	R	150	264	7.77	GN/OR/BL	PEARL BLUE
415 0145 00	R	150	264	7.77	BK/WH/OR	VIPER RED
415 0206 00	R	125	203.2	7.60	4 Green lines	BLACK
415 0207 00	R	150	203.2	7.96	4 Red lines	BLACK
415 0208 00	R	70	152	5.73	4 Blue lines	BLACK
415 0209 00	R	150	190.5	8.29	4 Pink lines	BLACK
415 0355 00	R	125	262	7.92	SI/GN	YELLOW
415 0356 00	R	125	235	7.49	OR	FRENCH BLUE
415 0357 00	R	125	262	7.92	SI/OR	JAY BLUE
415 0358 00	R	125	262	7.92	SI/PI	FIR GREEN
415 0359 00	R	125	262	7.92	YL	BLACK
415 0385 00	R	100	265	7.14	SI/GD	VIPER RED

SPRING COLOR CODES												
BK=BLACK BL=BLUE GD=GOLD GN=GREEN OR=ORANGE PI=PINK RD=RED SI=S								WH=WHITE	YL=YELLOW			

# **COIL SPRINGS SPECIFICATIONS**

P/N	TYPE	SPRING RATE (lbs/in) ± 10	FREE LENGTH (mm) ± 3	WIRE DIAMETER (mm) ± .05	COLOR CODE STRIPES	COLOR OF SPRING
415 0396 00	R	150	235	8.41	GN	BLACK
415 0397 00	R	150	258	8.71	PI	BLACK
415 0398 00	R	140	257	8.71	SI	BLACK
415 0399 00	R	150	238	8.71	SIMH	BLACK
415 0400 00	R	130	250	8.25	SI/SI	BLACK
415 0401 00	R	215	218	9.19	OR/PI	BLACK
415 0575 00	R	160	260	8.71	RD/GD	BLACK
415 0582 00	<b>415 0582 00</b> R		270	7.92	N/A	BLACK
503 1007 00	R	65	290	6.35	BL/YL	BLACK

SPRING COLOR CODES												
BK=BLACK	BL=BLUE	GD=GOLD	GN=GREEN	OR=ORANGE	PI=PINK	RD=RED	SI=SILVER	WH=WHITE	YL=YELLOW			

# TORSION SPRINGS SPECIFICATIONS

P/N	WIRE DIAMETER (mm)	OPENING ANGLE ±7°	COLOR CODE	COLOR OF SPRING
414 8663 00 LH 414 8662 00 RH	10.3	85°	YL	BLACK
414 9436 00 LH 414 9435 00 RH	10.6	90°	WH	BLACK
414 9443 00 LH 414 9442 00 RH	11.11	90°	GN	BLACK
415 0106 00 LH 415 0105 00 RH	10.6	80°	RD	BLACK

LH=Left Hand RH=Right Hand

	SPRING COLOR CODES												
BK=BLACK	BL=BLUE	GD=GOLD	GN=GREEN	OR=ORANGE	PI=PINK	RD=RED	SI=SILVER	WH=WHITE	YL=YELLOW				

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Date: August 18, 1995

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1995	SUMMIT 1 <sup>st</sup> series	3838 and 3839	ALL
1994	MACH 1	3863 and 3880	ALL
1994	GRAND TOURING SE	3866	ALL

Different cylinder heights exist for the 670 type engines.

Do not use the replacement cylinder P/N 420 9231 95 on the 1<sup>st</sup> series of the 1995 (1994 1/2) Summit or any 1994 and older 670 type engines, without first checking the cylinder height.

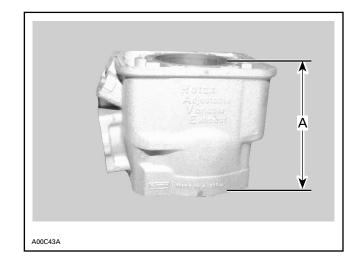
For older 670 type engines the superseded cylinder P/N 420 9291 93 with the correct height is now available.

Specificati	ons
P/N	Height + 0.1 mm (0.004 in)
420 9135 27 original (old) number 420 9291 93 superseded (new) number	121.5 mm (4.783 in)
420 9231 95 newer cylinder	121.3 mm (4.776 in)

Cylinder P / N 420 9231 95 is the cylinder used on the  $2^{\rm nd}$  series 1995 Summit 670, the 1995 Formula SS and 1995 Grand Touring SE.

Cylinder height is determined by measuring from the base gasket surface to the top of the cylinder liner (A) (not the cylinder water jacket casting). Refer to the following illustration.

**SUBJECT: Cylinder Height** 



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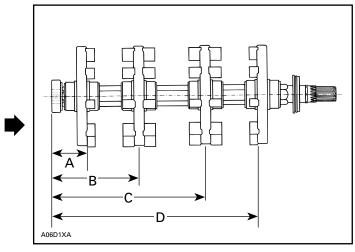
No. 96-4 **Revision 1** 

Date: September 27, 1995 **SUBJECT: Drive Sprocket Assembly Dimensions** 

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	S Series and F Series (ALL DSA CHASSIS)	ALL	ALL
1995	S Series and F Series (ALL DSA CHASSIS)	ALL	ALL
1994	F Series (ALL DSA CHASSIS)	ALL	ALL
1993	F Series (ALL DSA CHASSIS)	ALL	ALL

When reinstalling the sprockets on the drive axle on the above mentioned models, note the revised measurements.

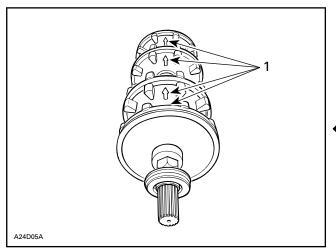
Sprockets must be assembled as follows.



- A. 65.8 mm (2-9/16 in)
- 159.3 mm (6-1/4 in)
- C. 282.3 mm (11-1/16 in) D. 375.8 mm (14-3/4 in)

NOTE: Alignment of center sprockets are measured center to center. Whereas, the outer sprockets are not.

Ensure to align indexing marks of each sprocket when assembling.



#### TYPICAL

1. Indexing marks aligned

Please update the Ski-Doo Shop manuals for the above mentioned model years. Indicate the number of this bulletin in the REAR SUSPENSION section of the manual.

Please route	e to:
	lnit.
Service	
Sales	
Parts	





Date: September 12, 1995

DDEL N	JUN	/IBER			S	ER	IAL	ΝL	JM	BEI	R	

**SUBJECT: Loctite on Crankshaft** 

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
ALL	ALL	ALL	ALL

A new Loctite product has been developed to be used when rebuilding crankshafts on all Ski-Doo models.

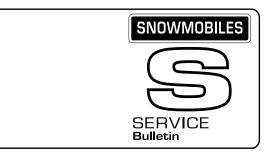
This new product, Loctite 642 (P / N 293 8000 39) has been developed to be used on press fit parts only and we strongly suggests that it be used.

Please update your *Shop Manual* by indicating the number of this bulletin in the engine section of the manual.

This is a service tip, no warranty applies.

Please route to:				
	Init.			
Service				
Sales				
Parts				





Date: September 13, 1995

**SUBJECT : Reverse Transmission Kit** 

YEA	3	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	3	FORMULA SLS	CDN / 1049 U.S. / 1050 SWEDEN / 1097	ALL

Starting from now, transmission kit for 1996 Formula SLS is :

P/N 860 4229 00.

Dealers who have ordered kit P / N 860 4227 00 for this model can modify it as follows :

Replace the following 2 parts:

Retaining Ring
 Coupling Shaft
 (P / N 504 0941 00)
 (P / N 504 0942 00)

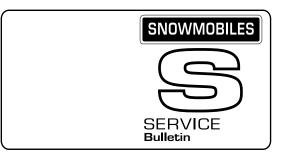
Order and install these 2 parts following same procedure of instruction sheet.

Retaining Ring
 Coupling Shaft
 (P / N 504 0763 00)
 (P / N 504 0977 00)

Re-stock the unused parts or call your parts analyst for a return authorization (no handling fee will be charged).

Please route to:			
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Parts			
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Date: September 22, 1995

SUBJECT: Replacement of Front Member or Tunnel

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	All DSA Chassis S-2000 and F-2000 Series	ALL	ALL

When replacing either a front member or a tunnel (see the attached part number list) be sure to properly align them when reassembling.

Align the tunnel and the front member to each other by pushing them firmly together.

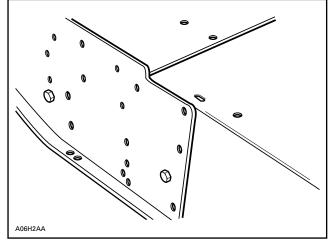
Install three 10 mm bolts and one 8 mm bolt in the following locations.

A 10 mm bolt in both holes for the front arm of the rear suspension.

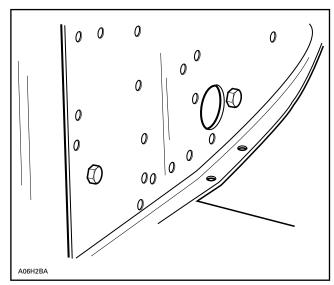
A 10 mm bolt in the front mounting hole for the chaincase.

An 8 mm bolt in the front drive shaft bearing mounting hole.

Refer to the following illustrations.



RH SIDE



LH SIDE

After both components are aligned install nuts on the bolts and tighten them.

Using either the tunnel or the front member as a template (whichever is not being replaced), drill rivet holes in the component being replaced.

NOTE: Use short rivets P/N 390 4022 00 wherever 2 plates are being riveted together and long rivets P/N 390 4023 00 wherever 3 plates are being riveted together.

Drill 4.8mm (3/16 in) rivet holes in the top first, install the rivets.

Drill the side rivet holes last, install the rivets.

Remove the alignment bolts after all the rivets between the front member and the tunnel are installed.

NOTE: When replacing a tunnel remove the original Model / serial number plate and rivet it to the new tunnel.

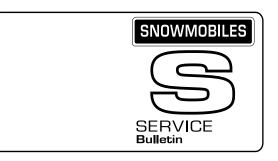
Please update your *Shop Manual* by indicating the number of this bulletin in section 09 BODY / FRAME.

PART NUMBER	Description	Applicable 1996 model numbers and names
518 313 040	Front member	1073,1074-Grand Touring SE
518 313 045	Front member	1081,1082-Mach 1
518 313 050	Front member	1059,1058-Summit 500 1061,1062-Summit 670 1064,1065-Summit 583
518 313 043	Front member	1530-Touring E 1523-Formula S 1521,1522-Formula SL
518 313 041	Front member	1054,1055-Formula STX 1078,1079-Formula SS 1090,1091-Formula Z 1056,1057-Formula STX LT (2) 1070,1071-Grand Touring 580
518 313 042	Front member	1049,1050-Formula SLS 1067,1068-Grand Touring 500
518 313 044	Front member	1531,1532-Skandic 500 1534,1535-Skandic 380 1527,1528-Touring LE 1524,1525-Touring SLE 1542-Touring E LT
518 313 046	Front member	1076,1077-Formula III 1084,1085-Mach Z 1100,1101-Formula III LT
518 313 049	Front member	1051,1052-MXZ 440 1094,1095-MXZ 583
518 313 244	Tunnel*	1056,1057-Formula STX LT (2) 1070,1071-Grand Touring 580
518 313 240	Tunnel*	1081,1082-Mach 1 1076,1077-Formula III 1084,1085-Mach Z
518 313 252	Tunnel*	1049,1050 Formula SLS 1051,1052-MXZ 440 1094,1095-MXZ 583
518 313 245	Tunnel*	1067,1068-Grand Touring 500
518 313 251	Tunnel*	1058,1059-Summit 500
518 313 247	Tunnel*	1530-Touring E 1523-Formula S 1521,1522-Formula SL
518 313 241	Tunnel*	1054,1055-Formula STX 1078,1079-Formula SS 1090,1091-Formula Z
518 313 250	Tunnel*	1531,1532-Skandic 500 1534,1535-Skandic 380 1527,1528-Touring LE 1524,1525-Touring SLE 1542-Touring E LT
518 313 253	Tunnel*	1073,1074-Grand Touring SE 1087,1088-Mach Z LT

<sup>\*</sup>When replacing a tunnel remove the original Model / serial number plate and rivet it to the new tunnel.

Please route to:		
	lnit.	
Service		
Sales		
Parts		





Revision 1

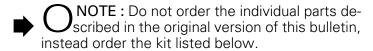
Date: December 12, 1995

#### SUBJECT : Installation of New Large Diameter Rewind Starter

Year	Applicable Vehicles	Serial Number
1996 All vehicles equipped with a 494 or 583 type engine		ALL
1995 All vehicles equipped with a 454, 467, 583 or 670 type engine		ALL
1994	Engine type 583 in the Formula STX, Formula Z and Summit Engine type 467 in the MX, MX Z and Summit	ALL

For easier pulling when manually starting a vehicle install the new large diameter rewind starter assembly and related parts.

#### **PARTS**





# ADDITIONAL PARTS FOR 1995 VEHICLES

Description	P/N	Qty
Engine support <sup>1</sup>	512 0544 00	1
Engine support <sup>2</sup>	512 0545 00	1

Formula SS; Formula STX and STX LT; MX; Summit 583 and 670; Grand Touring 470, 580 and SE

# ADDITIONAL PARTS FOR 1994 VEHICLES

Description	P/N	Qty
Engine support <sup>1</sup>	512 0544 00	1
Engine support <sup>2</sup>	512 0545 00	1

<sup>&</sup>lt;sup>1</sup> Formula STX ; Formula Z ; Summit 470 and 583 ; MX

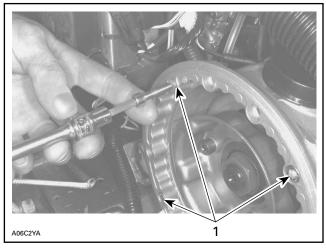
#### **PROCEDURE**

Remove the original rewind starter as outlined in the appropriate section of the *Shop Manual*.

Install the adapter flange to the crankcase with 4 M6 x 25 Allen screws, torque them to 9 N $\bullet$ m (7 lbf $\bullet$ ft).

<sup>&</sup>lt;sup>2</sup> Mach 1, Formula Z and MX Z

<sup>&</sup>lt;sup>2</sup> MX 7

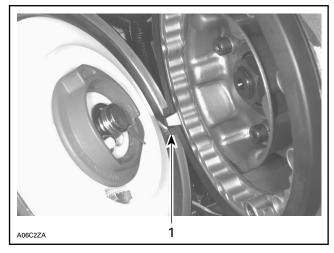


1. 3 of the 4 M6 x 25 Allen screw locations

Install the damper ring over the outer flange of the adapter.

Install the rewind assembly aligning the cut out in the rewind with the notch in the adapter flange.

Install the rewind clamp aligning the notch with the embossment in the adapter flange. Tighten the screw on the rewind clamp to 9 N•m (7 lbf•ft).



1. Notch aligned with the embossment

Properly route the rewind rope through the guides and into the rewind handle. An example is given in the following illustration.

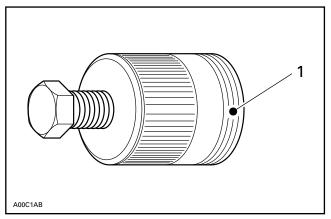
Please route to:				
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Service				
Sales				
Parts				





SUBJECT : Magneto Puller Tool (P / N 529 0225 00)

When using the magneto puller in conjunction with the puller ring to remove the magneto flywheel from the crankshaft, apply a thin coat of anti-seize lubricant (P / N 413 7010 00) on threads of puller tool.



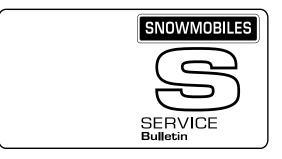
1. Apply anti-seize lubricant on threads

Date: December 7, 1995

This will prevent any sticking or damage to tool threads, providing a long life span of both tools.

Please route to:				
	Init.			
Service				
Sales				
Parts				





Date: December 21, 1995

YEAR

1996

MODEL NUMBER	SERIAL NUMBER
1537 and 1539	ALL

**SUBJECT: Tachometer** 

This bulletin contains supplementary instructions to properly install a tachometer on the above mentioned models.

**MODEL NAME** 

Skandic WT

It must be used in conjunction with the instruction sheet of existing kit (P/N 861 7463 00).

#### PARTS REQUIRED

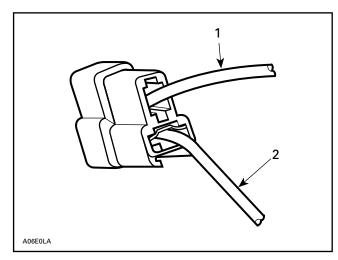
	DESCRIPTION	P/N	QTY
1	Wire (RED) (18 gauge)	N/A	660 mm (26 in)
2	Wire (YELLOW- BLACK) (18 gauge)	N/A	660 mm (26 in)
3	Connector (female)	561 5031 00	4
4-5	Housing (male)	409 2046 00	2
6	Connector (male)	561 5034 00	2
7	Housing (female)	409 2045 00	1

#### **PROCEDURE**

Cut the wires to 330 mm (13 in) to have 2 YEL-LOW-BLACK wires and 2 RED wires.

Install female connector no. 3 to one end of each wire.

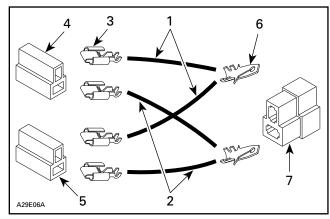
Insert the connectors, (1 YELLOW-BLACK wire and 1 RED wire) into housing no. 4. Repeat using housing **no. 5**.



2. YELLOW-BLACK

Join other ends of YELLOW-BLACK wires together then install male connector no. 6. Proceed to do the same with RED wires.

Install connectors into housing no. 7.



- RED wires YELLOW-BLACK wires
- Female connectors
- Male housing A
- Male housing B
- Male connectors
- Female housing C

Unplug housing from speedometer.

Connect housing A to speedometer.

Connect housing B to tachometer.

Connect housing C to vehicle wiring harness.

Verify that both gauges operate properly.

This is a service procedure, no warranty applies.

Please update your *Shop Manual* by indicating the number of this bulletin in the proper section of the manual.

Please rout	e to:	
	Init.	
Service		
Sales		,
Parts		F
	J	l





Date: December 22, 1995 SUBJECT: Mandatory and recommended tools

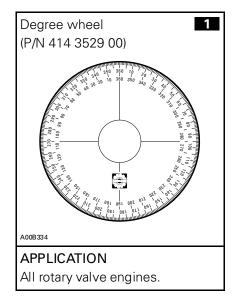
\	YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
	1996	ALL	ALL	ALL

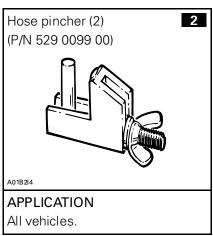
Attached is a list of tools to properly service Ski-Doo snowmobiles. The list includes both the mandatory tools found in tool kit P/N 861 7437 00 and the optional tools that are ordered separately. The list of Service Products, both mandatory and optional, are not part of any kit and must all be ordered separately. If you need to replace or add to your tool inventory these items can be ordered through your regular parts channels.

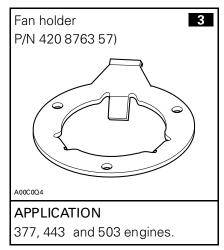
# SERVICE TOOLS

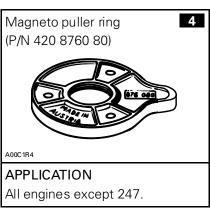
NOTE: The numbers outlined in black (example: 1) are reference numbers to tools from other divisions (Sea-Doo Watercraft and/or Sea-Doo Jet Boats). Matching reference numbers indicate the same tool is being used even if the part numbers are different.

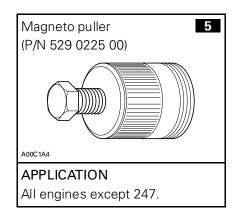
#### **ENGINE - MANDATORY SERVICE TOOLS**

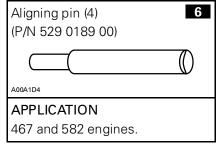


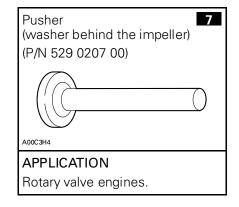




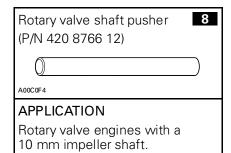


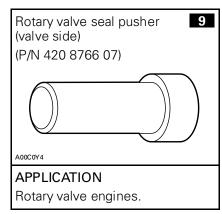


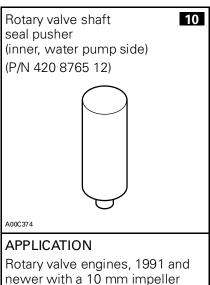




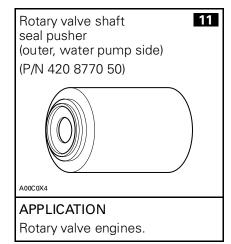
#### **ENGINE (continued) - MANDATORY SERVICE TOOLS**

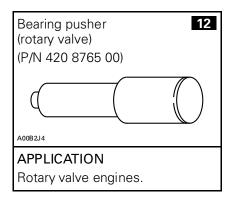


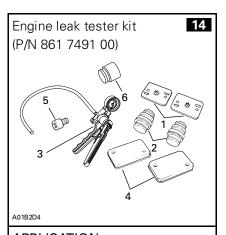




shaft.







APPLICATION
All engines.

Parts included in the kit:

- 1) Exhaust oulet plug (2) (P/N 529 0246 00)
- 2) Intake manifold plug (2) (P/N 529 0110 00)
- 3) Air pump (1) (P/N 529 0218 00)
- 4) RAVE system plug (2) (P/N 529 0112 00)
- 5) Adapter (2) (P/N 517 2349 00)
- 6) Intake manifold plug 779 (P/N 529 0305 00)

2-1/4 in plug (1) (P/N 529 0211 00)

2-3/4 in plug (1) (P/N 529 0212 00)

Plates (2)

(P/N 529 0213 00)

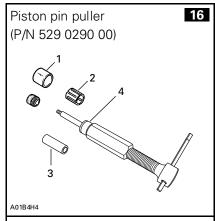
Radiator plug (1) (P/N 529 0214 00)

Clamp (1) (P/N 408 8035 00)

Adapter 3/16 ID x 1/8 NPT (2) (P/N 408 2011 00)

NOTE: Must maintain a pressure of 5 lb during 3 minutes. Never pressurize over 5 lb.

#### **ENGINE (continued) - MANDATORY SERVICE TOOLS**

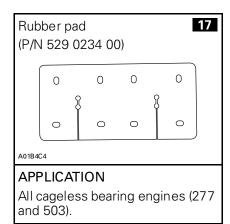


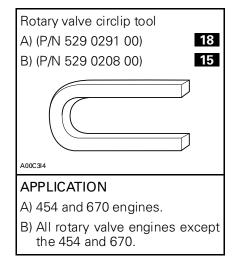
#### APPLICATION

All engines.

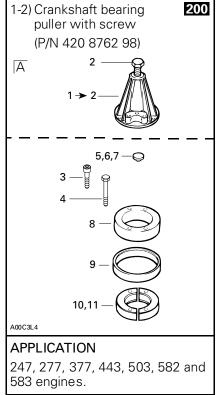
Parts included:

- 1) Locating sleeve (3) (P/N 529 0238 00)
- 2) Expansion sleeve (3) (P/N 529 0237 00)
- 3) Adaptor (P/N 529 0236 00)
- 4) U-bushing (P/N 529 0277 03)





The following tools are highly recommended to optimize your basic tool kit and reduce repair time.

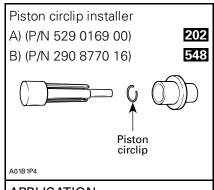


1-2) Crankshaft bearing puller with screw (P/N 420 8776 35)
B
4
A01B544
APPLICATION 247, 277, 377, 443, 454, 494, 503, 582, 583, 599, 670 and 779

engines.

	Use with crankshaft bearing pullers A (P/N 420 8762 98) or B (P/N 420 8776 35).			
1)	Bolt (M16 x 1.5 x 150) For either $\boxed{A}$ or $\boxed{B}$ pullers.	(P/N 420 9407 55)	258	
2)	Screw M8 x 40 (4) A puller MAG side, B puller MAG	(P/N 420 8406 81) and PTO side.	559	
3)	Screw M8 x 70 (4) A puller only, PTO side.	(P/N 420 8412 01)	560	
4)	Crankshaft protector 247 engine.	(P/N 420 9768 90)	260	
5)	Crankshaft protector PTO A or B puller; all engines except 2	(P/N 420 8765 52) 247.	259	
6)	Crankshaft protector MAG A or B puller; all engines except 2	(P/N 420 8765 57) 247.	554	
7)	Distance ring PTO A puller; 377, 443, 503, 582 and 5	(P/N 420 8765 69) 583 engines.	557	
8)	Puller ring Use with half rings (P/N 420 9774	(P/N 420 9774 90) 75 or 420 2760 25).	555	
9)	Half ring (2)  A or B puller; for 72 mm O.D. be	(P/N 420 9774 75) arings.	556	
10)	Half ring  A or B puller; for 62 mm O.D. be	(P/N 420 2760 25) arings.	558	
11)	Puller ring For half rings (P/N 420 9774 79).	(P/N 420 9774 94)	251	
12)	Half ring B puller only ; 80 mm O.D. bearin	(P/N 420 9774 79) gs.	252	

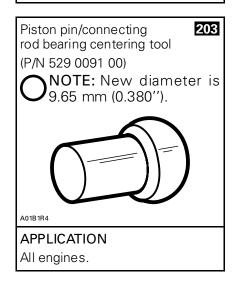
96-11 Page 5 of 27

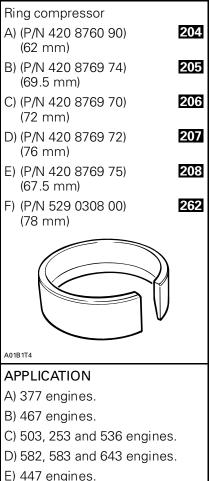


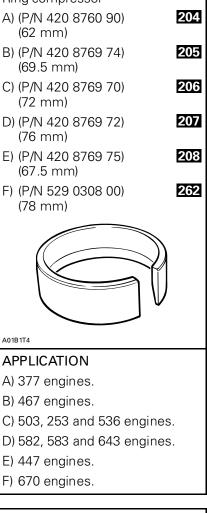
#### **APPLICATION**

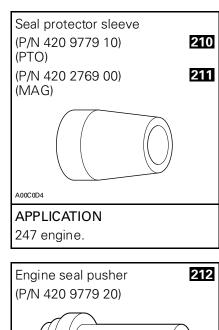
A) All engines except 670.

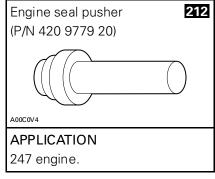
B) 670 engines.

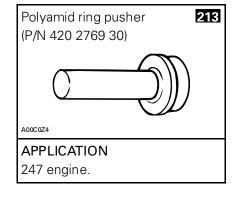


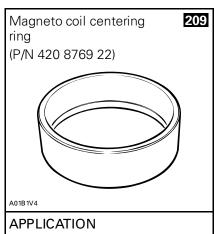






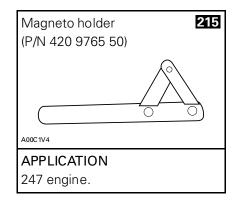


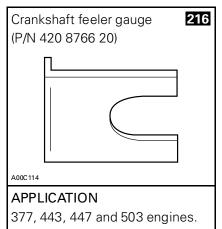


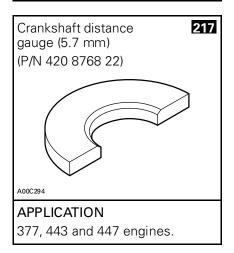


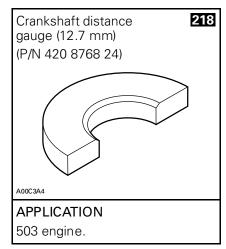
All engines with Nippondenso CDI

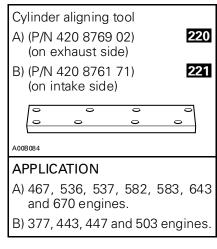
(160 W).

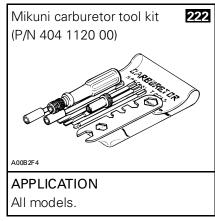


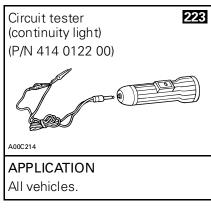


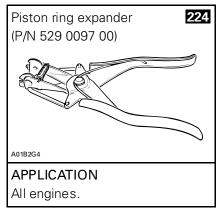


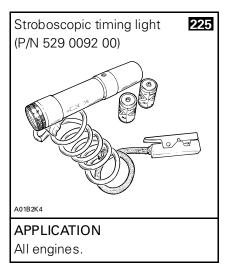


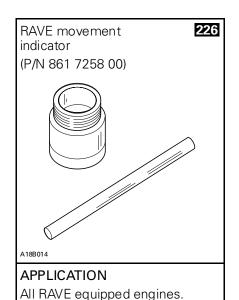


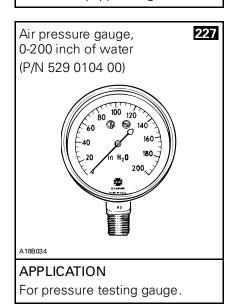


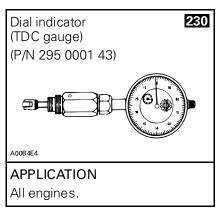


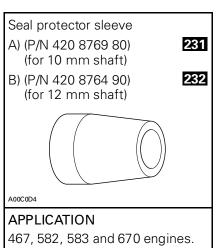


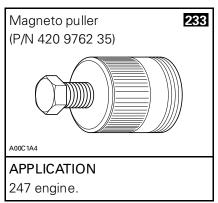


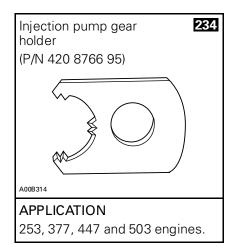


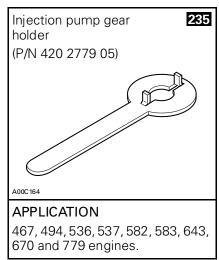


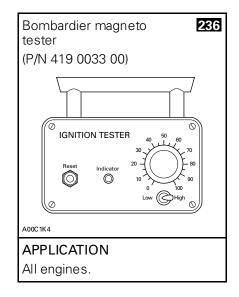


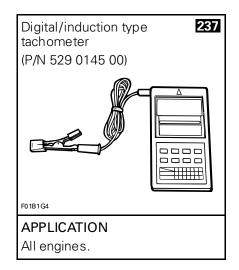


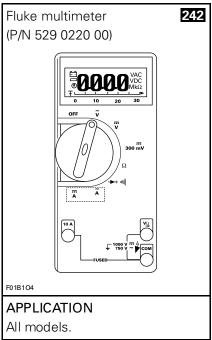


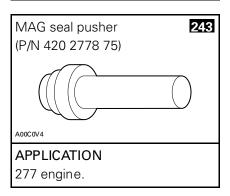


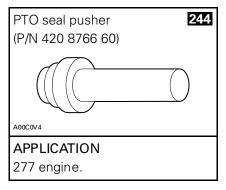


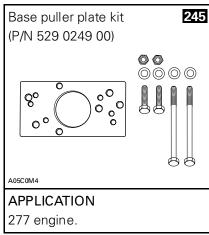


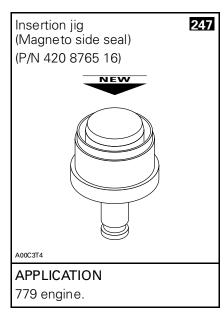


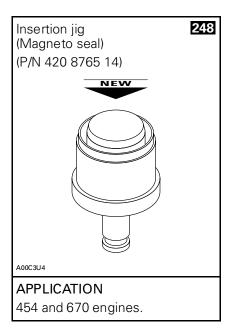


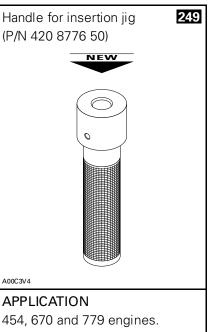


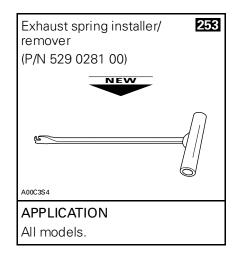


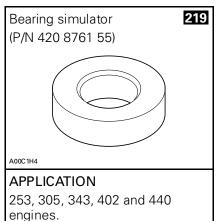


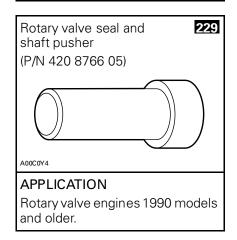


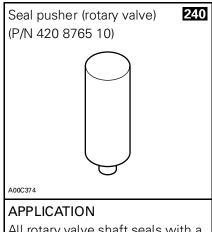




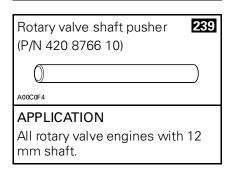


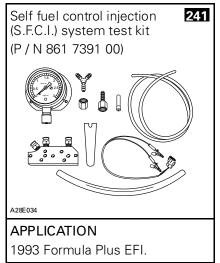


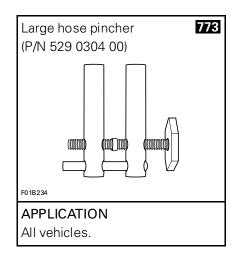




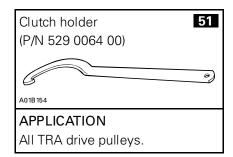
All rotary valve shaft seals with a 12 mm I.D.

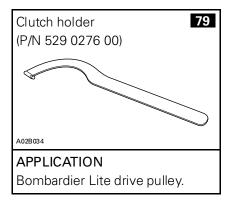


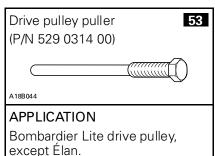


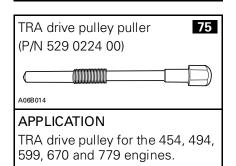


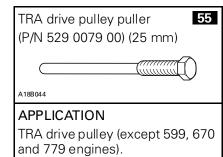
#### TRANSMISSION - MANDATORY SERVICE TOOLS

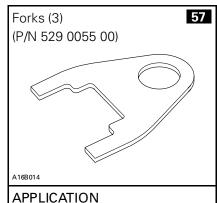




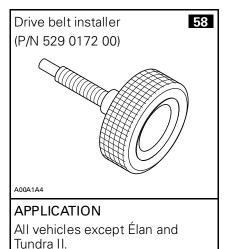


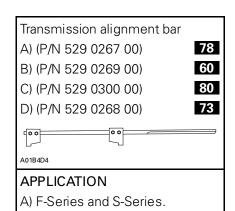


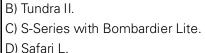


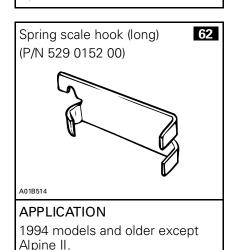


All vehicles equipped with a TRA drive pulley.

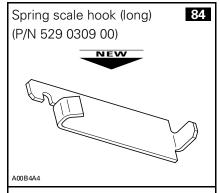






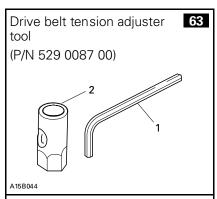


#### TRANSMISSION (continued) - MANDATORY SERVICE TOOLS



#### **APPLICATION**

F-Series and S-Series (1995 and newer).

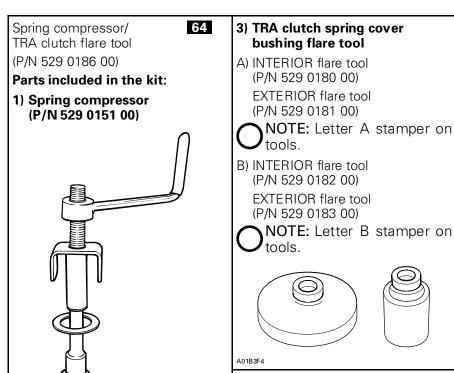


#### **APPLICATION**

All vehicles except Élan, Tundra II and Skandic WT.

Parts included:

- 1) Hex wrench (P/N 420 8767 30
- 2) Socket wrench (P/N 529 0150 00)

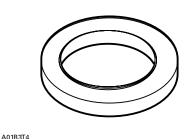


#### APPLICATION (1)

S and F-Series and Alpine II driven pulley type.

All TRA pulley.

2) Washer (2) (P/N 732 9000 15)



APPLICATION (2)

All applications.

4) TRA clutch outer half bushing flare tool

INTERIOR flare tool (P/N 529 0184 00)

A) TRA pulley (25 mm shaft). B) TRA pulley (27 mm shaft).

APPLICATION (3)

EXTERIOR flare tool (P/N 529 0185 00)

NOTE: Letter C stamped on tools.



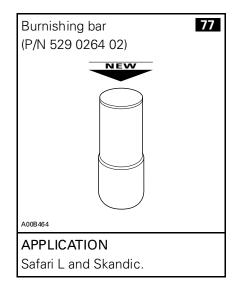


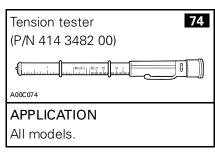
A01B3l4

APPLICATION (4)

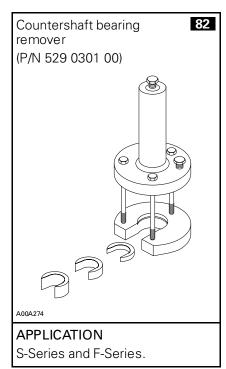
All TRA drive pulleys.

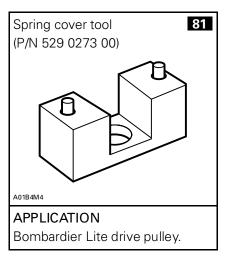
#### TRANSMISSION (continued) - MANDATORY SERVICE TOOLS

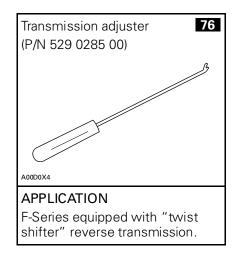






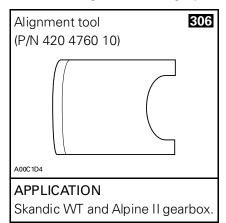




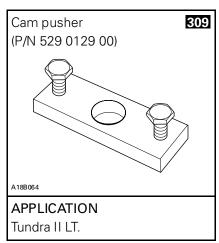


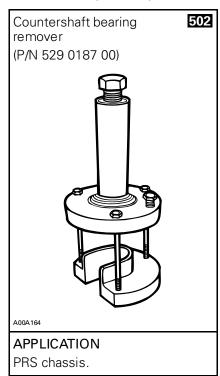
#### TRANSMISSION (continued) - RECOMMENDED SERVICE TOOLS

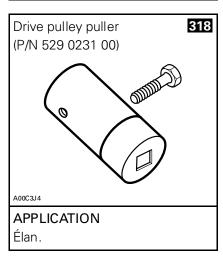
The following tools are highly recommended to optimize your basic tool kit and reduce repair time.

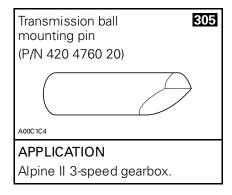


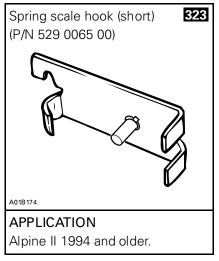




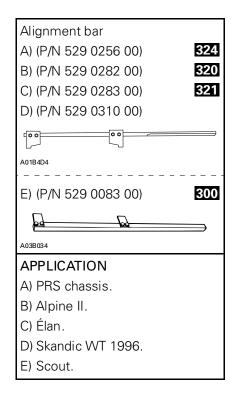


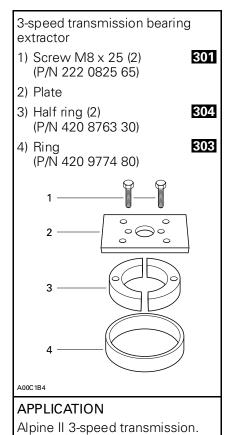


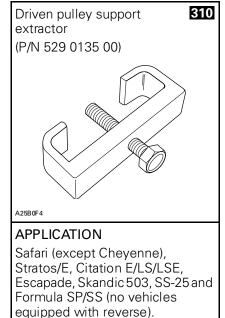


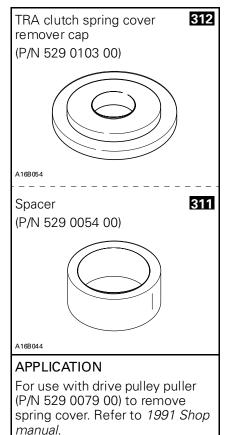


#### TRANSMISSION (continued) - RECOMMENDED SERVICE TOOLS

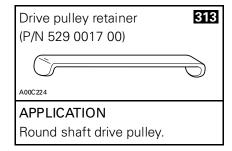


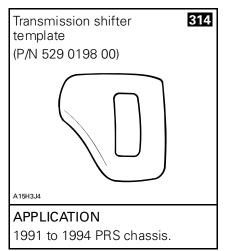


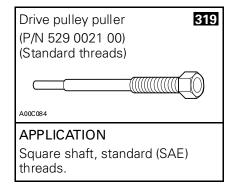


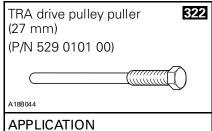


#### TRANSMISSION (continued) - RECOMMENDED SERVICE TOOLS

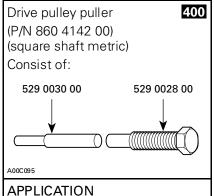




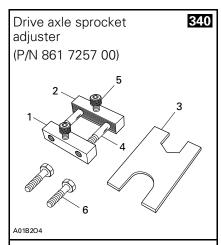




TRA drive pulley (27 mm) shaft except 454, 670 and 779 engines.



APPLICATION
Square shaft, metric threads drive pulley.



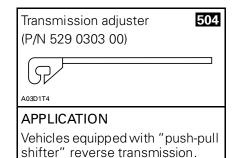
#### APPLICATION

All vehicles except Élan.

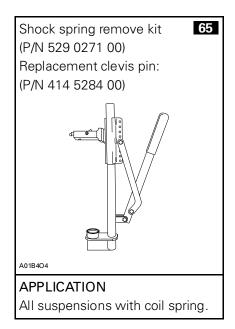
Parts included in the kit:

- 1) Block with threads (P/N 529 0107 00)
- 2) Block without threads (P/N 529 0108 00)
- 3) Plate (P/N 529 0106 00)
- 4) Bolt M10 (2) (P/N 222 0075 65)
- 5) Allen screw M8 (2) (P/N 222 9830 65)
- 6) Screw M8 (2) (P/N 222 0825 65)

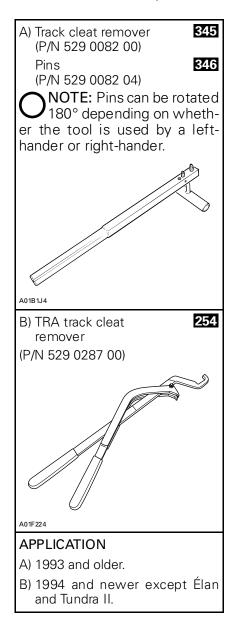
NOTE: When the tool is to be use between tunnel and sprocket use screw M8.

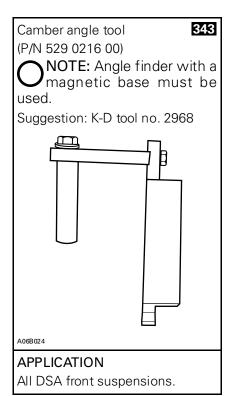


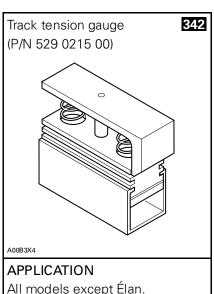
## SUSPENSION - MANDATORY SERVICE TOOLS

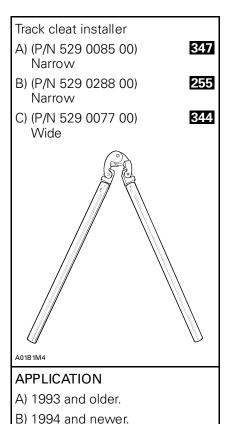


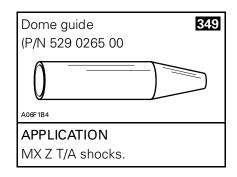
### SUSPENSION (continued) - RECOMMENDED SERVICE TOOLS







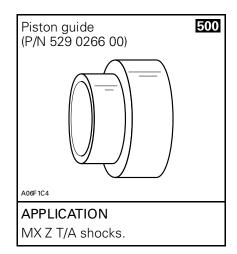


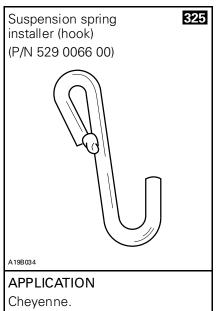


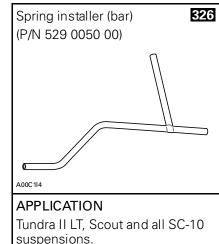
C) 1992 and older with wide cleat

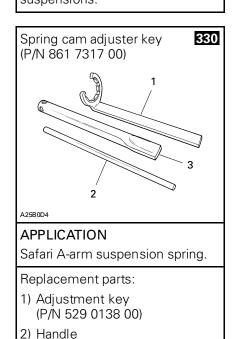
opening.

### SUSPENSION (continued) - RECOMMENDED SERVICE TOOLS



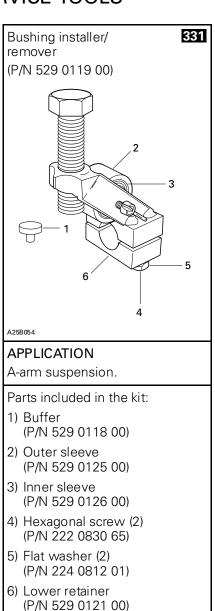




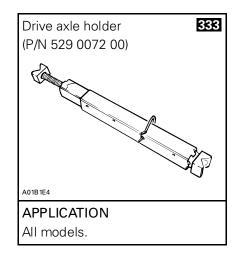


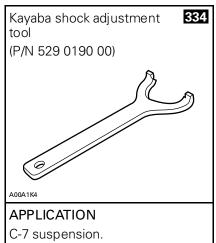
(P/N 529 0140 00)

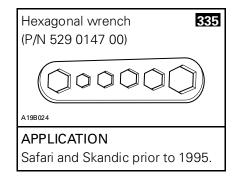
 Key extension (P/N 529 0139 00)

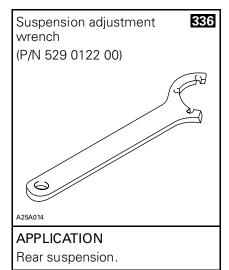


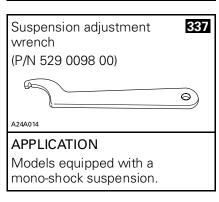
### SUSPENSION (continued) - RECOMMENDED SERVICE TOOLS

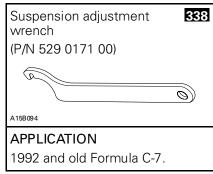


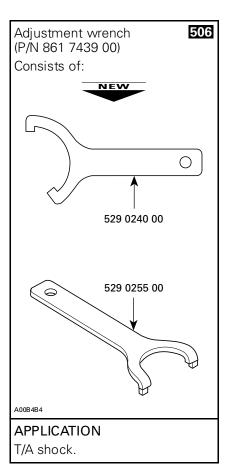




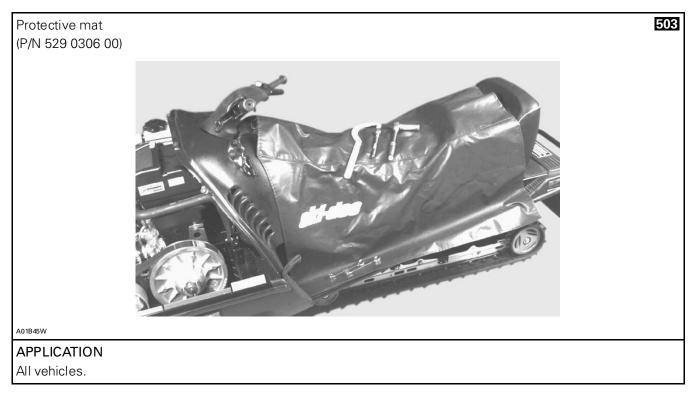


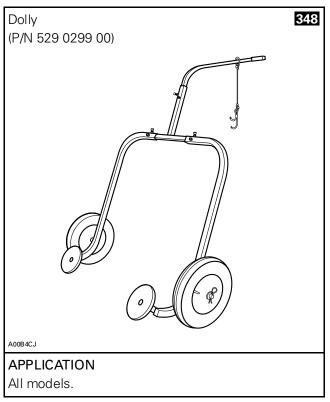


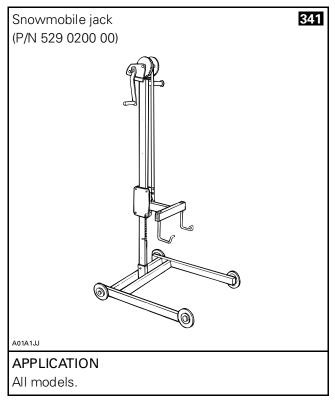




### **VEHICLES - RECOMMENDED SERVICE TOOLS**







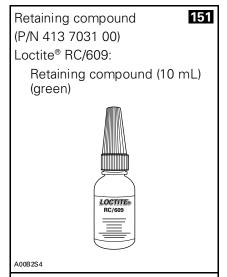
## SERVICE PRODUCTS

NOTE: The numbers outlined in black (example: 11 ) are reference to tool numbers from other divisions (Sea-Doo Watercraft and/or Sea-Doo Jet Boats). Matching reference numbers indicate the same tool is being used, even if the part numbers are different.

### MANDATORY SERVICE PRODUCTS

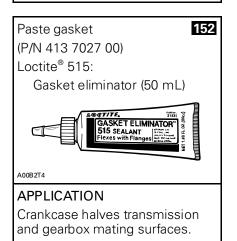
Loctite® is a trademarks of Loctite Corporation.

Dow Corning® is a trademarks of Dow Corning Corporation.

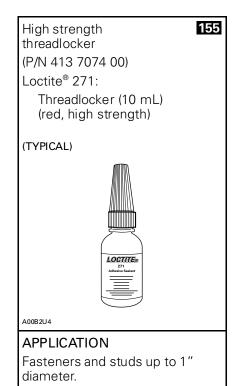


#### **APPLICATION**

Used for retaining bushings, bearings in slightly worn housing or on shaft.







### MANDATORY SERVICE PRODUCTS (continued)



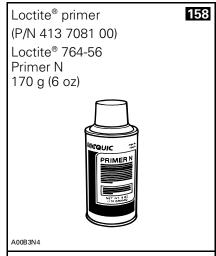
#### **APPLICATION**

Clean mating surfaces of cylinders and crankcase. Remove carbon in combustion chambers.



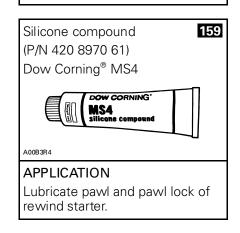
#### **APPLICATION**

Clean carburetor parts and degrease all oily surfaces.



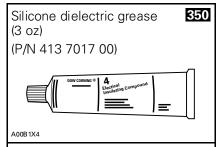
#### **APPLICATION**

To prepare mating surfaces before applying paste gasket, retaining compound or threadlockers.



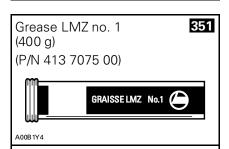
96-11

### RECOMMENDED SERVICE PRODUCTS



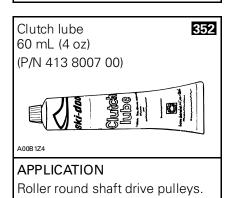
#### **APPLICATION**

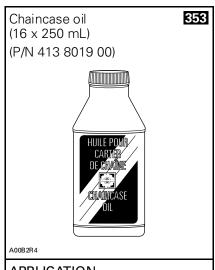
On all electric connections. High tension coil and spark plug connections. Connector housings, etc.



#### **APPLICATION**

Mainly used between regulators or rectifiers and upper column to transfer the heat build-up and to assure a good ground.





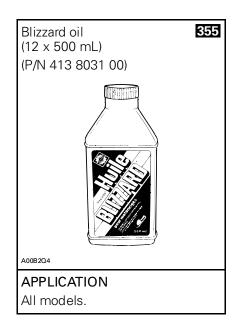
#### APPLICATION

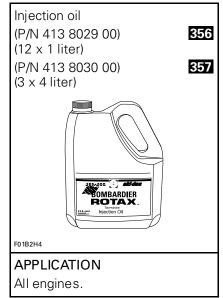
Chaincase lubricant on Élan and Tundra II.



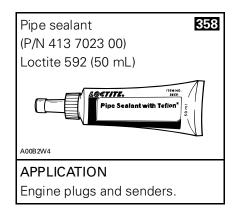
#### **APPLICATION**

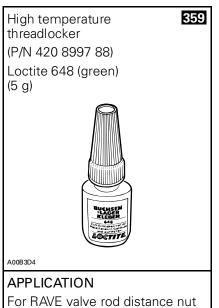
Chaincase lubricant on all models except Élan and Tundra II.





### RECOMMENDED SERVICE PRODUCTS (continued)

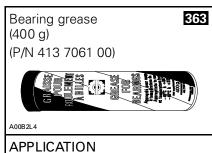




on 583, 670 and 779 engines.



#### APPLICATION Unpainted surfaces of drive pulley countershaft.



For idler bearings, ski legs, leaf spring cushion pads, seal interior lips, rear hub bearings, bogie wheels, countershaft bearings, etc.

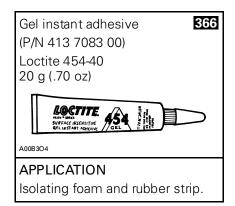


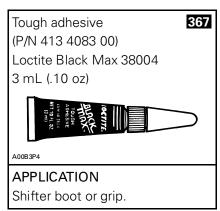


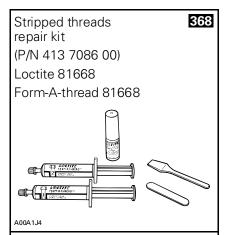
#### **APPLICATION**

Engine, chaincase, pulleys and any greasy surfaces.

### RECOMMENDED SERVICE PRODUCTS (continued)

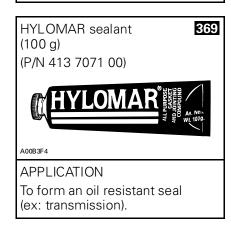


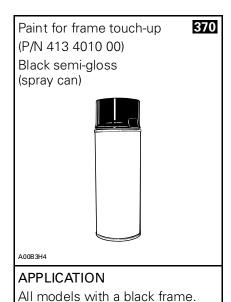




#### **APPLICATION**

Repair damaged threads of grade 5 (SAE) or 8.8 (metric) maximum. Do not use in applications where temperatures will exceed 149°C (300°F) or on critical assemblies.



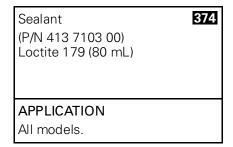


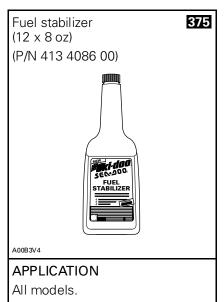
General purpose instant adhesive Loctite 495 (3 g) (P/N 413 7032 00)

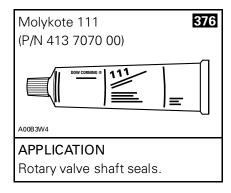
#### **APPLICATION**

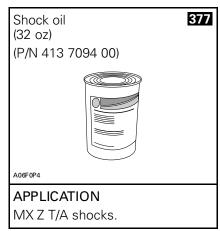
Rubber to metal bonding and most hard plastic.

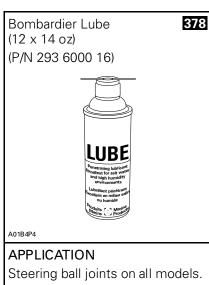
### RECOMMENDED SERVICE PRODUCTS (continued)







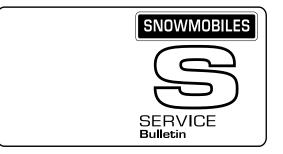






Please route to:			
	Init.		
Service			
Sales			
Parts			





Date: December 22, 1995

**SUBJECT: Fuel Octane Requirement** 

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	MACH Z / LT	1084, 1085, 1086, 1087, 1088, 1089	ALL

The fuel requirement for the Mach Z and Mach Z LT is incorrectly stated in some publications. The correct Mach Z fuel requirement is:

91 
$$\frac{R+M}{2}$$

as correctly stated on the fuel cap of the vehicle.

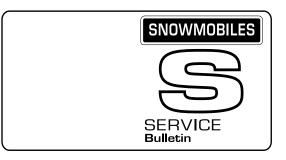
Correct page 40 and 109 in the *Operator's Guide* (P/N 414 9706 00) and the technical specifications of the *Shop Manual Volume 3* (P/N 484 0628 02) and *Predelivery Bulletin 96-13*.

Also inform your staff as well and your customers of this fuel requirement for the Mach Z.

CAUTION: Failure to use the proper fuel could result in non-warrantable and severe engine damage.

Please route to:			
	Init.		
Service			
Sales			
Parts			





ALL

Date: December 22, 1995

YEAR

1996

vehicles.

MODEL NUMBER	SERIAL NUMBER
1076, 1077, 1093, 1100,	۸۱۱

**SUBJECT: Spark Plug Fouling** 

The above mentioned vehicles may foul the spark plugs. The following measures should be taken to ensure correct and enjoyable operation of these

MODEL NAME

FORMULA III / LT

Please inform your customers and entire staff of these procedures

In addition to this bulletin a letter will be mailed to all registered owners of the previously mentioned vehicles to inform them of the changes in the Operator's Guide. A copy is attached to this bulletin.

### NEW STARTING PROCEDURE

Follow the correct starting procedure listed here and make the appropriate corrections to page 45 in the Operator's Guide (P / N 414 9706 00).

**NOTE**: It is especially important to closely follow this procedure during initial break-in. The engine is running slightly richer at this time because of the oil added to the first tank of fuel.

### **Initial Cold Starting**

NOTE: Do not use the throttle lever until after the choke lever is turned off.

Move the choke lever to position 2 and start the engine. As soon as the engine starts move the lever to position 1. After a few seconds (10 seconds maximum) move the choke lever to OFF

NOTE: In severe cold weather, colder than -20°C (-4°F) you may need to turn the choke on and off a couple of times to position 1 once the engine is started.

#### Warm Engine Starting

1101, 1102

Start the engine without any choke. If the engine will not start after two pulls of the rope or two 5 second attempts with the electric starter move choke lever to position 1. Start the engine without activating the throttle lever. As soon as the engine starts move the choke lever to OFF.

### SPARK PLUGS

On page 108 of the same Operator's Guide correct the spark plug type for the Formula III to NGK BR 10 ES.

#### AIR SCREWS

The air screws must be set to the specified 1-1/2 turns open. This will ensure proper operation of the vehicle in all temperatures.

CAUTION: Any setting greater than this could eventually lead to severe engine damage.

Please rout	e to:
	Init.
Service	
Sales	
Parts	

Date: April 18, 1996





No. 96-14

#### **REVISION 1**

SUBJECT: Anti-Seize Lubricant on Acceleration and Control Modulator (ACM))

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	MX Z 440	1051, 1052, 1053	ALL
1996	MX Z 583	1094, 1095, 1096	ALL
1996	MX Z 670	1187, 1188	ALL
1996	Formula Z	1090, 1091, 1092	ALL
1996	Formula SS	1078, 1079, 1080	ALL

During regular maintenance or every 10 hours apply Loctite 767 anti-seize lubricant (P / N 413 7010 00) onto the ACM stem.

A container of Loctite anti-seize lubricant (454 g (16 oz)) will be sent directly to all dealers free of charge.

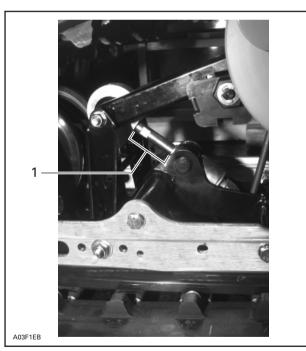
Dealers will be invoiced then a credit note will be issued.

CAUTION: Omitting to apply anti-seize lubricant on the ACM stem may result in ice build-up which may cause damage to the ACM mechanism.

### **PROCEDURE**

Clean the ACM assembly of all grease, dirt and ice.

Compress rear suspension, hold and apply antiseize lubricant generously onto the stem.



REAR SUSPENSION COMPRESSED

1. ACM stem, apply anti-seize lubricant to this area

Move suspension up and down several times to assure the anti-seize lubricant has penetrated throughout the ACM assembly.

### Additional Information

CAUTION: Adding washers to the stem beneath the cup on the ACM will prevent the stem from extending fully when the suspension is compressed. End result, The stem WILL break or other components on the ACM assembly may fail.

Please update the *Ski-Doo Shop Manual*, Volume 3, Section 07-01, Rear Suspension.

Please route to:			
	Init.		
Service			
Sales			
Parts			





Date: January 23, 1996

**SUBJECT : Pulley Cleaning (Reminder)** 

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	ALL	ALL	ALL

At predelivery, it is very important to properly clean the drive and driven pulleys (especially for the high performance models) in order to remove the protective coating for the shipping.

Make sure the entire surface of the drive belt travel is clean; open the driven pulley as required to achieve a perfect cleaning.

Use Loctite Cleaning Solvent (P / N 413 7082 00) as usual.

If customer reports engine overreving condition, slippage, overheating or breakage of the drive belt, pulleys should be cleaned. Replace the drive belt as required.

CAUTION: Do not installed a new drive belt without properly cleaning the pulleys.

Please route to:  Service Sales	SKI-D
Parts	



No. **96-16** Replaces **95-14** REVISION 1

Date: March 11, 1996 SUBJECT: Ski-Doo Paint Codes

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	All	All	All

This bulletin lists B.A.S.F. R-M and PPG paint codes corresponding to snowmobile hood, frame, cylinder head/cover and suspension spring colors.

It is divided in 5 sections:

- Ski-Doo Paint Codes
- New Ski-Doo Paint Codes
- Frame Paint Codes
- Cylinder Head/Cover and Suspension Component Paint Codes
- Models with Corresponding Hood Paint Codes

Refer to Service bulletin 95-14 for paint codes prior to 1991.

### SKI-DOO HOOD PAINT CODES

вомва	RDIER	B.A.S.F. R-M	PPG	SPRAY CAN
B101	CAN-AM RED		DCC 69917	
B102	SKI-DOO YELLOW 80		DCC 88208	413 4055 00
B103	PERFORMANCE ORANGE		DCC 69918	
B104	ICE ORANGE		DCC 69919	
B105	MIDNIGHT BLUE	RM 85003	DCC 17876	413 4033 00
B106	EBONY BLACK	RM 84976	DCC 9553	413 4026 00
B108	M-S ORANGE 81		DCC 69920	413 4035 00
B109	SAFARI RED	RM 84977 ①	DCC 78185 @	
B111	SILVER		DBU 38261	413 4060 00
B114	POLAR WHITE	RM 86001	DCC 98197	
B121	SKI-DOO YELLOW 84	RM 84978	DCC 88209	413 4078 00
B122	SPECIAL WHITE		DCC 98198	
B123	SILVER GRAY	RM 84979	DBU 38260 @	413 4040 00
B136	SUNSET ORANGE	RM 84980	DCC 69921	
B137	BLUE STRATOSPHERE	RM 84981	DBU 17877	

### SKI-DOO HOOD PAINT CODES (CONTINUED)

вомва	RDIER	B.A.S.F. R-M	PPG	SPRAY CAN
B142	MAPLE RED	RM 84982	DBU 59965 @	
B144	GUNMETAL GRAY	RM 84983	DBU 38257	413 4092 00
B145	METALLIC RED	RM 84066 ①	DBU 78186 ①	413 4084 00
B146	METALLIC BLACK	RM 84984	DBU 9552 @	413 4085 00
B147	DARK GRAY	RM 84985	DBU 38258	
B148	SAND GRAY	RM 84986	DBU 38259	413 4093 00
B151	WILD BERRIES	RM 84987	DBU 78187 ① ②	
B152	SUNFLOWER YELLOW	RM 84988	DBU 88210 ① ②	413 4087 00
B153	SNOW WHITE	RM 80470	DBU 98199	
B154	PEARL WHITE	1	DBU 98200 ① ②	413 4088 00
B155	MAGENTA	RM 85000		
B156	MEDITERRANEAN BLUE	RM 79810	DBU 17878 ①	
B158	MULBERRY	RM 79888	DBU 59966	
B160	DEEP BLACK	RM 85366	DBU 9554	413 4091 00
B161	QUARTZ PINK	RM 85176 ①	DBU 78188 ① ②	
B162	PEACOCK BLUE	RM 21009 ①	DBU 49688 ① ②	
B163	PEARL BLUE	RM 85017 ①	①	413 4089 00
B164	AQUA BLUE	Refer to new paint codes		
B165	VIOLET	Refer to new paint codes		413 4090 00
B166	FLAME RED	Refer to nev	w paint codes	
B167	BAVARIAN BLUE	RM 21618	DBU 18911	413 4097 00
B168	PLUM	RM 80348	Refer to new paint codes	
B169	FOREST GREEN	RM 79833 3 RM 79833-4 4	DBU 49591	413 4096 00
B170	METALLIC QUARTZ	RM 80262 ①	DBU 39002	
B172	TEAL BLUE	RM 87929 ①	DBU 18910	413 4103 00
B173	RASBERRY	RM 87365 ①	SICO: ID 3289	
B174	FIREFLY GREEN METALLIC	RM 80369 ③ RM 80369-46 ④		
B175	ROYAL VIOLET		DAU 51487-K	413 4104 00
B175A	ROYAL VIOLET NON-METALLIC	RM 87930 3 RM 87930-9 4		
B176	VIPER RED			413 4108 00
B177	OCEAN GREEN (METALLIC)	RM 88482		413 4109 00
B177A	OCEAN GREEN (NON-METALLIC)	RM 88480		

① A white undercoat must be applied: B.A.S.F. = 54-M25

Page 2 of 7

R-M = BC 190 or 285-100

PPG = DMD 663

② Approximate match

<sup>3 1995</sup> models and earlier

<sup>4 1996</sup> models

### **NEW SKI-DOO PAINT CODE**

B-164	AQUA BLUE		1
RM			
ВС	50	=	41.7
ВС	500	=	107.8
ВС	410	=	155.8
ВС	190	=	274.7

B-165	VIOL	ET	1
RM			
ВС	50	=	41.7
ВС	300	=	167.7
ВС	410	=	187.6
ВС	470	=	194.9
ВС	190	=	261.0

B-166	FLAME RED		1
RM			
ВС	50	=	41.7
ВС	710	=	146.4
ВС	830	=	148.8
ВС	815	=	174.3

B-168	PLUI	M	
RM			
ВС	50	=	83.4
ВС	840	=	515.0
ВС	300	=	730.9
ВС	180	=	855.9
ВС	250	=	864.6

### FRAME PAINT CODES

BLACK	B-106
RED	B-109
BAVARIAN BLUE	B-167
METALLIC QUARTZ	B-170
OCEAN GREEN	B-177

### CYLINDER HEAD/COVER PAINT **CODES**

Engine	Cylinder Head/Cover Color	Code
467	Yellow	B-152
582	Pearl Blue	B-163
583	Metallic Red	B-145
599	Magenta	B-155 @
670	Plum	B-168
779	Plum	B-168

### SUSPENSION COMPONENT **PAINT CODES**

	ension spring wheel color	B.A.S.F. FM	PPG
B-106	Black	RM 84976	DCC 9553
B-166	Flame Red (1993-1994	See new	See new
B-165	Violet	See new	See new
B-152	Yellow	RM 84988	DBU 88210 ②
B-163	Pearl Blue (Grand Touting)	RM 85017 ®	
B-164	Aqua Blue (1993 MX)	See new	See new
B-173	Raspberry	RM 87365 ®	
B-109	Safari Red	RM 84977 ®	DCC 78185 ②
B-174	Firefly Green (Metallic)	RM 80369 3 RM 80369-64	
B-175A	Royal Violet (non-metallic)	RM 87930 3 RM 87930-9 4	
B-177	Ocean Green (Metallic)	RM 88481	
B-178	Neon Green	RM 87961	

Total mixed quantity does not equal 1 liter
 Approximate match
 1995 models and earlier

<sup>4 1996</sup> models

⑤ A white undercoat must be applied. (See bottom of page 2)

# MODEL WITH CORRESPONDING HOOD PAINT CODES

Description	Model number	Bombardie hood paint code
1996		
Élan	3053	B-160
Tundra II LT	3264	B-152
Tundra II LT (Sweden)	3265	B-152
Skandic 380 (Canada)	1534	B-160
Skandic 380 (U.S.)	1535	B-160
Skandic 380 (Sweden)	1536	B-160
Skandic 500 (Canada)	1531	B-160
Skandic 500 (U.S.)	1532	B-160
Skandic 500 (Sweden)	1533	B-160
Skandic WT	1537	B-160
Skandic WT (U.S.)	1539	B-160
Touring E (Canada)	1530	B-177 <i>A</i>
Touring ELT 2 (Canada)	1542	B-177 <i>A</i>
Touring LE (Canada)	1527	B-177 <i>A</i>
Touring LE (U.S.)	1528	B-177
Touring LE (Sweden)	1529	B-177
Touring SLE (Canada)	1524	B-177
Touring SLE (U.S.)	1525	B-177 <i>A</i>
Formula S (Canada)	1523	B-17
Formula S (Sweden)	1541	B-17
Formula SL (Canada)	1521	B-17
Formula SL (U.S.)	1522	B-17
Grand Touring 500 (Canada)	1067	B-17
Grand Touring 500 (U.S.)	1068	B-17
Grand Touring 500 (Sweden)	1069	B-17
Grand Touring 580 (Canada)	1070	B-17
Grand Touring 580 (U.S.)	1071	B-17
Grand Touring 580 (Sweden)	1072	B-17
Grand Touring SE (Canada)	1073	B-17
Grand Touring SE (U.S.)	1074	B-17
Grand Touring SE (Sweden)	1075	B-17
Summit 500 (Canada)	1058	B-169
Summit 500 (U.S.)	1059	B-169
Summit 583 (Canada)	1064	B-169
Summit 583 (U.S.)	1065	B-169

Description	Model number	Bombardier hood paint code
1996		
Summit 583 (Sweden)	1066	B-16
Summit 670 (Canada)	1061	B-169
Summit 670 (U.S.)	1062	B-169
Summit 670 (Sweden)	1063	B-169
MX Z 440 (Canada)	1051	B-152
MX Z 440 (U.S.)	1052	B-152
MX Z 440 (Sweden)	1053	B-152
MX Z 583 (Canada)	1094	B-152
MX Z 583 (Sweden)	1095	B-152
MX Z 583 (U.S.)	1096	B-152
MX Z 670 (Canada)	1187	B-152
MX Z 670 (U.S.)	1188	B-152
Formula III (Canada)	1076	B-175
Formula III (U.S.)	1077	B-175
Formula III (Sweden)	1093	B-175
Formula III LT (Canada)	1100	B-175
Formula III LT (U.S.)	1101	B-175
Formula III LT (Sweden)	1102	B-175
Formula SLS (Canada)	1049	B-176
Formula SLS (U.S.)	1050	B-176
Formula SLS (Sweden)	1097	B-176
Formula STX (Canada)	1054	B-176
Formula STX (U.S.)	1055	B-176
Formula STX LT (2) (Canada)	1056	B-176
Formula STX LT (2) (U.S.)	1057	B-176
Formula Z (Canada)	1090	B-175
Formula Z (U.S.)	1091	B-175
Formula Z (Sweden)	1092	B-175
Formula SS (Canada)	1078	B-175
Formula SS (U.S.)	1079	B-175
Mach 1 (Canada)	1081	B-160
Mach 1 (U.S.)	1082	B-160
Mach 1 (Sweden)	1083	B-160
Mach Z (Canada)	1084	B-160
Mach Z (U.S.)	1085	B-160
Mach Z (Sweden)	1086	B-160
Mach Z LT (Canada)	1087	B-160
Mach Z LT (U.S.)	1088	B-160
Mach Z LT (Sweden)	1089	B-160

Description	Model number	Bombardier hood paint code
1995		
Élan	3052	B-160
Alpine II	3357	B-152
Tundra II LT	3262	B-152
Tundra II LT (Sweden)	3263	B-152
Skandic 380 (Canada)	1505	B-160
Skandic 380 (Sweden)	1507	B-160
Skandic 380 (U.S.)	1518	B-160
Skandic 500 (Canada)	1504	B-160
Skandic 500 (Sweden)	1508	B-160
Skandic 500 (U.S.)	1517	B-160
Skandic WT	1515	B-160
Skandic Mountain SP	1516	B-160
Touring E (Canada)	1503	B-172
Touring LE (Canada)	1502	B-162
Touring LE (Sweden)	1510	B-162
Touring LE (U.S.)	1519	B-162
Touring SLE (Canada)	1501	B-162
Touring SLE (U.S.)	1511	B-162
Touring SLE (Sweden)	1512	B-162
Formula S (Canada)	1520	B-145
Formula SL (Canada)	1500	B-145
Formula SL (U.S.)	1513	B-145
Grand Touring 470 (Canada)	1022	B-163
Grand Touring 470 (U.S.)	1023	B-163
Grand Touring 470 (Sweden)	1046	B-163
Grand Touring 580 (Canada)	1024	B-163
Grand Touring 580 (U.S.)	1025	B-163
Grand Touring 580 (Sweden)	1026	B-163
Grand Touring SE 670 (Canada)	1027	B-163
Grand Touring SE 670 (U.S.)	1028	B-167
Grand Touring SE 670 (Sweden)	1029	B-167
Summit 583 (Canada)	1013	B-169
Summit 583 (U.S.)	1014	B-169
Summit 583 (Sweden)	1015	B-169
Summit 670 1st series (Canada)	3838	B-169

Description	Model number	Bombardier hood paint code
1995		
Summit 670 1st series (U.S.)	3839	B-169
Summit 670 2 <sup>nd</sup> series (Canada)	1016	B-169
Summit 670 2 <sup>nd</sup> series (U.S.)	1017	B-169
Summit 670 2 <sup>nd</sup> series (Sweden)	1018	B-169
MX (Canada)	1000	B-152
MX (U.S.)	1001	B-152
MX Z (Canada)	1035	B-152
MX Z (U.S.)	1036	B-152
MX Z (Sweden)	1037	B-152
Formula STX (Canada)	1003	B-145
Formula STX (U.S.)	1004	B-145
Formula STX LT (2) (Canada)	1007	B-145
Formula STX LT (2) (U.S.)	1008	B-145
Formula Z (Canada)	1030	B-145
Formula Z (U.S.)	1031	B-145
Formula Z (Sweden)	1032	B-145
Formula SS (Canada)	1033	B-145
Formula SS (U.S.)	1034	B-145
Formula SS (Sweden)	1047	B-145
Mach 1 670 (Canada)	1043	B-160
Mach 1 670 (U.S.)	1044	B-160
Mach 1 (Sweden)	1045	B-160
Formula III (Canada)	1038	B-175
Formula III (U.S.)	1039	B-175
Mach Z (Canada)	1040	B-160
Mach Z (U.S.)	1041	B-160
Mach Z (Sweden)	1042	B-160

Description	Model number	Bombardier hood paint code
1994		
Élan	3051	B-160
Tundra II	3258	B-152
Tundra II LT	3259	B-152
Alpine II	3356	B-152
Safari L	3682	B-172
Safari DL	3683	B-172
Safari DL (Sweden)	3694	B-172

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Description	Model number	Bombardier hood paint code
1994		
Safari Rally E	3689	B-172
Skandic II 377	3685	B-160
Skandic II 377 R	3686	B-160
Skandic II 377 R (Sweden)	3690	B-160
Skandic II 503 R	3687	B-160
Skandic II 503 R (Sweden)	3691	B-160
Skandic II 503 R SLT	3688	B-160
Skandic II 503 R SLT (Sweden)	3692	B-160
Formula MX (Canada)	3868	B-152
Formula MX (U.S.)	3883	B-152
Formula MX (Sweden)	3885	B-152
Formula MX Z (Canada)	3870	B-152
Formula MX Z (U.S.)	3886	B-152
Summit 470 (Canada)	3871	B-169
Summit 470 (U.S.)	3888	B-169
Summit 470 (2) (Canada)	3865	B-169
Summit 470 (2) (U.S.)	3887	B-169
Summit 583 (2) (Canada)	3881	B-169
Summit 583 (2) (U.S.)	3882	B-169
Summit 583 (Canada)	3876	B-169
Summit 583 (U.S.)	3891	B-169
Summit 583 (2) (Sweden)	3890	B-169
Formula STX (Canada)	3873	B-145
Formula STX (U.S.)	3893	B-145
Formula STX (Sweden)	3892	B-145
Formula STX (2) (Canada)	3874	B-145
Formula STX (2) (U.S.)	3894	B-145
Grand Touring	3867	B-163
Grand Touring (Sweden)	3879	B-163
Grand Touring XTC	3864	B-163
Grand Touring XTC (Sweden)	3878	B-163
Grand Touring SE	3866	B-167
Formula ST (Canada)	3872	B-145
Formula ST (U.S.)	3889	B-145
Formula Z (Canada)	3875	B-145
Formula Z (U.S.)	3897	B-145
Formula Z (Sweden)	3896	B-145
MACH 1	3863	B-160
MACH 1 (Sweden)	3880	B-160

Description	Model number	Bombardier hood paint code
1994		
MACH Z (Canada)	3877	B-160
MACH Z (Sweden)	3898	B-160
MACH Z (U.S.)	3899	B-160

Description	Model Bombard number hood pa	
1000		code
<b>1993</b> Élan	2050	D 100
	3050	B-160
Tundra	3256	B-152
Tundra LT	3257	B-152
Alpine II	3355	B-136
Safari L	3670	B-162
Safari DL	3671	B-162
Safari 503 Rally	3672	B-162
Skandic II 377	3673	B-160
Skandic II 377 R	3674	B-160
Skandic 503 R	3675	B-160
Skandic 503 R SLT	3676	B-160
Skandic 503 R SLT (Sweden)	3678	B-160
Skandic 503 R (Sweden)	3679	B-160
Skandic 377 R (Sweden)	3680	B-160
Safari DL (Sweden)	3681	B-162
Formula MX	3791	B-154
Formula MX XTC R	3792	B-154
Formula Plus	3793	B-145
Formula Plus E	3794	B-145
Formula Plus XTC	3795	B-145
Grand Touring	3796	B-163
Formula MACH 1	3797	B-160
Formula MACH 1 XTC	3798	B-160
Formula Plus EFI	3799	B-145
Formula MX Z	3844	B-152
Formula MACH Z	3845	B-160
Formula MX (2)	3846	B-154
Formula MX ZA	3847	B-152
Formula MACH ZA	3848	B-160
Formula Plus X	3849	B-145
Formula PLUS (2)	3850	B-145
Formula MACH (2)	3852	B-160
Formula MX XTC R (Sweden)	3854	B-154

Description	Model number	Bombardier hood paint code	
1993			
Formula PLUS (Sweden)	3855	B-145	
Formula PLUS XTC (Sweden)	3856	B-145	
Grand Touring (Sweden)	3857	B-163	
Formula PLUS EFI (Sweden)	3858	B-145	
Formula MACH 1 (Sweden)	3859	B-160	
Formula MACH 1 XTC (Sweden)	3860	B-160	
Formula MX Z (Sweden)	3861	B-152	
Formula MACH Z (Sweden)	3862	B-160	

Description	Model number	Bombardier hood paint code
1992		
Élan	3049	B-106
Safari LCE	3658	B-146
Safari GLX	3659	B-158
Safari L	3662	B-153
Safari LE	3663	B-161
Skandic II 377	3669	B-160
Skandic II 377R	3665	B-160
Scout	3668	B-121
Formula MX	3775	B-154
Formula Plus	3777	B-145
Formula Plus E	3778	B-145
Formula Plus X	3790	B-145
Formula Plus XTC	3779	B-145
Formula Plus XTC E	3780	B-145
Formula MACH 1	3781	B-160
Formula MACH 1 X	3789	B-160
Formula MACH 1 XTC	3782	B-160
Formula MACH 1 XTC (2)	3783	B-160
Formula MX XTC R	3788	B-154

Description	Model number	Bombardier hood paint code
1991		
Élan	3048	B-106
Alpine II	3352	B-136
Safari L	3650	B-152
Safari LE	3651	B-155
Safari LX	3652	B-156
Safari LXE	3653	B-156
Safari GLX	3654	B-158
Safari LCE	3656	B-146
Formula MX	3755	B-154
Formula MX E	3756	B-154
Formula MX XTC	3757	B-154
Formula MX XTC E	3758	B-154
Formula MX XTC SS/SR	3769	B-154
Formula MX XTC E SS/SR	3770	B-154
Formula MX X	3766	B-154
Formula Plus	3759	B-145
Formula Plus E	3760	B-145
Formula Plus XTC	3761	B-145
Formula Plus XTC E	3762	B-145
Formula Plus XTC SS/SR	3771	B-145
Formula Plus XTC E SS/SR	3772	B-145
Formula Plus X	3767	B-145
Formula MACH 1	3763	B-146
Formula MACH 1 XTC	3764	B-146
Formula MACH 1 XTC SS/SR	3773	B-146
Formula MACH 1 X	3768	B-146

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Please route	e to:
	Init.
Service	
Sales	
Parts	
	J





Date: February 21, 1996

# SUBJECT : Cold Temperature Carburetor Calibration

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	ALL	ALL	ALL

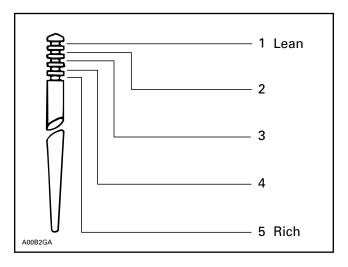
### CARBURETOR

#### MX-Z 583

When operating in temperatures colder than -20°C (-4°F) the carburetion will need to be recalibrated.

CAUTION: This is especially important if the vehicle is being operated at a constant and/or high speed. If the procedure is not followed severe engine damage may occur.

Richen the mid-range by moving the circlip down one additional groove to position 4, from its original position 3, this raises the needle in the slide letting more fuel into the engine. Refer to the following illustration.



Change the main jets as specified in the following chart.

#### MAIN JET CHART

Altitude	Sea	600 m	1 200 m	1 800 m	2 400 m	3 000 m	
Temperature	Level	2 000 ft	4 000 ft	6 000 ft	8 000 ft	10 000 ft	
ñ 40∞C	<i>300</i>	<i>280</i>	<i>260</i>	<i>240</i>	<i>220</i>	<i>210</i>	<i>PTO</i>
ñ 40 ∞F	280	260	240	220	200	190	MAG
ñ 30 ∞C	<i>290</i>	<i>270</i>	<i>250</i>	<i>230</i>	<i>210</i>	<i>200</i>	<i>PTO</i>
ñ 20 ∞F	270	250	230	210	190	180	MAG
ñ 20 ∞C	270	250	230	210	190	180	PTO
ñ 4 ∞F	260	240	220	200	180	170	MAG
ñ 10 ∞C	260	240	220	200	185	175	PTO
14 ∞F	250	230	210	190	175	165	MAG
0 ∞C	255	235	215	195	175	165	PTO
32 ∞F	245	225	205	185	165	155	MAG
10 ∞C	245	225	205	185	165	155	PTO
50 ∞F	235	215	195	175	155	145	MAG
20 ∞C	235	215	195	175	155	145	PTO
70 ∞F	225	205	185	165	145	135	MAG

NOTE: For the MX-Z 583 the PTO side jet recommendation for -30°C (-20°F) and colder is new, discard prior jetting information. This information supersedes all prior specifications.

#### Other Models

All 1996 model year vehicles are calibrated for -20°C (-4°F) and will operate best at or near this temperature.

When a vehicle is operated in colder temperatures move the circlip on the jet needle one slot down as shown in the earlier illustration and change the main jets as specified in the following chart.

CAUTION: If these recommendations are not followed severe engine damage may occur.

The following chart is compiled from "High altitude and Sea level technical data sheets" P/N 484 0624 00 but lists cold weather main jet recommendations for Sea level only.

		MA JE	
Vehicle	Ambient air temperature	-30∞C -20∞F	-40∞C -40∞F
Mach Z Mach Z LT	PTO CTR MAG	390 380 390	400 390 400
Mach 1	PTO MAG	430 410	440 420
Formula III Formula III LT	PTO CTR MAG	340 330 340	350 340 350
Formula SS		370	380
Formula Z		350	360
Formula STX Formula STX LT	PTO MAG	330 340	340 350
Formula SLS	PTO MAG	330	340
Formula SL	PTO MAG	200 190	210 200
Formula S		145	150

		MAIN JETS	
Vehicle	Ambient air temperarure	-30∞C -20∞F	-40∞C -40∞F
MX-Z 670	PTO MAG	310 280	320 290
MX-Z 440	PTO MAG	240 220	250 230
Grand Touring SE		370	380
Grand Touring 580	PTO MAG	370 380	390 400
Grand Touring 500		330	340
Touring SLE	PTO MAG	200 190	210 200
Touring LE		185	195
Touring E / E LT		145	150
Skandic 500	PTO MAG	200 190	210 200
Skandic 380		145	150
Skandic WT		230	240
Tundra II LT		200	210
lan		165	170

NOTE: Any model vehicle that is operated in temperatures colder than -20 °C (-4°F) needs the main jets changed as described in the previous chart. A more complete list of the different jetting for other temperatures and altitudes can be found in the "High altitude and Sea level technical data" sheets P/N 484 0624 00 mentioned previously.

Please route	e to:
	Init.
Service	
Sales	
Parts	





Date : March 8, 1996 SUBJECT : New Drill Bit (for self-piercing rivets on chassis)

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	ALL	ALL	ALL

When drilling self-piercing rivets, use the new Supertanium<sup>™</sup> drill bit (P / N 529 0318 00), now available in a 5 mm (3/16 in) size and shipped in packs of 2.

For proper drilling instructions and to prevent premature wear, follow the procedure below.

### **PROCEDURE**

Always use a variable speed electric drill.

It is not necessary to center punch the rivet head, simply center the drill bit on the rivet and drill.

Maintain a slow to medium speed at all times when drilling. The proper speed is attained when a constant chip is ejected.

NOTE: To increase bit life, use Bombardier synthetic chaincase oil (P/N 413 8033 00) as a cutting oil.

CAUTION: High speed drilling will cause excessive heat which may destroy the cutting edge of the bit, therefore avoid using pneumatic drills.

Order for the new Supertanium<sup>™</sup> drill bit through the regular parts channel.

Please update the *Shop Manual*, section 09, BODY / FRAME with the bulletin number.

Please route to:		
	Init.	
Service		
Sales		
Parts		





Date: March 6, 1996

SUBJECT	Steering	Pad	<b>Switches</b>
---------	----------	-----	-----------------

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	Grand Touring 670	1061, 1062, 1063	ALL
1995	Grand Touring 670	1027, 1028, 1029	ALL
1994	Grand Touring 670	3866	ALL

In the event that the thumb warmer and / or heating grips do not heat properly, the original connectors beneath the switches on the steering pad may come loose and fall off of the switches.

Replace original connectors with new "click type" connectors. Proceed as follows:

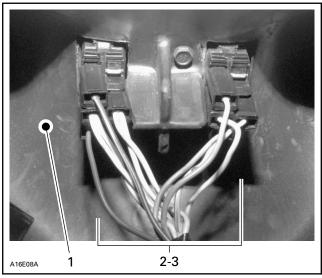
Remove steering padding.

Remove original connectors from switches.

Prior to removing connectors, identify wire colors and location for installation references.

CAUTION: Always remove connectors by pulling on connector housing. Never remove connectors by pulling on the wire.

Refer to the following photo.



- Remove steering pad
- Remove original connectors in the state of t Remove original connectors from switches

Remove original connector housings and connectors from wires.

Install new 1-wire connectors (P / N 409 0101 00) as well as new 1-wire housings (P / N 409 0104 00) on the single wires and new 2-wire connectors (P/N 409 0106 00) and 2-wire housings (P/N 409 0104 00) on the double wires; plug connectors to switches.

Order six 1-wire connectors and housings and two 2-wire connectors and housings.

Install remaining parts in the reverse order of removal.

Please route to:			
	Init.		
Service			
Sales			
Parts			





Date: March 7, 1996

### **SUBJECT: Ignition Timing (BTDC)**

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	Grand Touring 580	1070, 1071, 1072	ALL

The ignition timing data that was previously published for the above mentioned vehicles must be corrected.

The new ignition timing (BTDC) is 1.75 mm (.069 in).

NOTE: Ignition timing is performed when the engine is at 6000 RPM (engine cold) with headlamp turned on.

CAUTION: Severe engine damage may occur if this new adjustment is not performed.

Please ensure to correct all ignition timing data in the following 1996 publications;

- Shop Manual (P / N 484 0628 01), SECTION 10, Technical data.
- Predelivery Bulletin No. 96-5, page 19 of 22, Technical data.
- Specification Booklet (P / N 480 1400 00), page 242.
- Racing Handbook (P / N 484 0623 00), SEC-TION 2, page 02-8.

Please route to:	SKI-I
Init.	
Service	
Sales	
Parts	





#### **REVISION 1**

**SUBJECT: Stroboscopic Timing Light** 

Date: June 10, 1996

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
ALL	ALL	ALL	ALL

With the new advanced technology used in Bombardier's products, a high performance stroboscopic timing light must be used to achieve an accurate timing reading.

In order to meet our specific characteristics this new stroboscopic timing light has been designed up to Bombardier standards.

This stroboscopic timing light is highly recommended to all Bombardier dealers.

#### **PART**

This new timing light, (P/N 529 0319 00), is now available and can be ordered through regular parts system.



#### CHARACTERISTICS

- 1. Rated to work up to 6000 engine RPM. For example:
  - a. On a 3-cylinder Bombardier engine, 6,000 RPM means 18,000 ignition sparks to monitor.
  - b. On a 2-cylinder engine, 6,000 RPM means 12,000 ignition sparks to monitor.

### **CAUTION**

If an inadequate stroboscopic timing light is used, it may produce erratic and/or unstable lighting leading to severe engine damage.

2. A trigger inside the stroboscopic timing light will keep an equal lighting from 1 to 3 cylinder engines to optimize the beam power.

This feature will produce maximum battery efficiency and longer battery life.

- 3. The magnetic induction pick-up clip is totally reversible to ensure proper reading of system polarity and avoid erratic or non reading.
- 4. Will produce optimum lighting at a distance of 10 cm to 20 cm (4 in to 8 in) from the timing mark location.
- 5. Internal battery power. Uses two type D alkaline batteries.
- 6. Equipped with LED indicator to monitor battery condition. The indicator can be seen through the lens.
- 7. Scratches or surface damages on the lens will not affect the lighting efficiency.

NOTE: The after market offers a huge variety of stroboscopic timing lights which look externally similar. Their performances are almost all different. The purchase of the stroboscopic timing light must be based on technical prerequisite

Please route to:	SKI-doo.
Service Sales	Bombardier
Parts	



Date: April 5, 1996 SUBJECT: Belt Slippage

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	SKANDIC WT	1537 / 1539	ALL
1995	SKANDIC WT	1515	ALL

The following is the procedure to solve the problem of drive belt slipping in the pulleys.

### **PROCEDURE**

Check for proper alignment of the pulleys according to SKI-DOO specifications.

Verify proper driven pulley spring preload ((Pull + Release) / 2), according to SKI-DOO specifications.

Replace drive belt (P / N 414 6175 00) by (P / N 414 6338 00).

CAUTION: Do not install a new drive belt without properly cleaning the pulleys.

Adjust belt deflection as per SKI-DOO specifications.

Please route to:	SKI-doo.
Service Sales	Bombardier
Parts	



Date: April 19, 1996

#### **SUBJECT: Vehicle Storage Procedure**

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	ALL	ALL	ALL

During the summer months or when a vehicle is not being used for more than one month is when proper storage is a necessity. Any worn, broken or damaged parts should be replaced at this time.

WARNING: Unless otherwise specified, engine should be turned OFF for all lubrication and maintenance procedures.

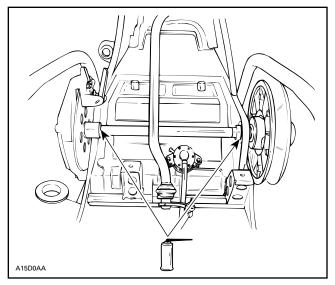
### LUBRICATION / INSPECTION

Lubricate the steering mechanism. Inspect all components for tightness.

Oil all moving joints of the brake mechanism.

WARNING: Do not lubricate the throttle and / or brake cables and housings. Avoid getting oil on the brake pads.

For proper operation, brake disc and driven pulley must slide freely on countershaft. Lubricate sparingly.



TYPICAL

CAUTION: Do not lubricate excessively as lubricant could contact and soil brake pads and / or drive belt.

Lubricate remaining recommended lubrication points. Refer to *Shop Manual*.

Coat all electrical connections and switches with silicone dielectric grease (P / N 413 7017 00). If unavailable, use petroleum jelly.

### TRACK

Lift rear of vehicle until track is clear of the ground and support with a brace or trestle. Do not release track tension.

### **FUEL SYSTEM**

With the new fuel additives, it is critical to use the fuel stabilizer (Sta-Bil®) P/N 413 4086 00 (250 mL) to prevent fuel deterioration, gum formation and fuel system components corrosion. Follow instructions on product container.

Pour fuel stabilizer in fuel tank prior to starting engine for internal parts lubrification so that stabilizer flows everywhere in fuel system.

After engine starting, use primer several times so that stabilizer flows inside it.

Do not drain fuel system.

### **ENGINE**

Engine internal parts must be lubricated to protect them from possible rust formation during the storage period.

To perform the storage procedures proceed as follows:

 Start the engine and allow it to run at idle speed until the engine reaches its operating temperature.

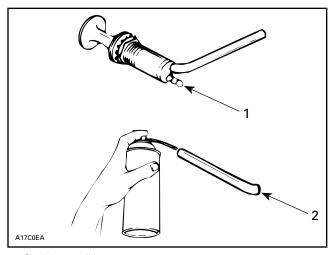
WARNING: Ensure the track is free of all particles which could be thrown out while it is rotating. Keep hands, tools, feet and clothing clear of track. Ensure no one is standing in close proximity to the vehicle.

• Stop the engine.

### Models Equipped with a Primer

Refer to 1996 Operator's Guide or 1996 Shop Manual page 02-01-3.

- To prevent fuel from draining, primer button should be pushed all the way in.
- Disconnect the primer outlet hose from the primer valve (straight coupling).



- Straight coupling
   To intake manifold
- Insert storage oil (P / N 496 0141 00) nozzle into primer outlet hose.

### Models Equipped with a Choke

Remove air silencer(s) to spray storage oil into each carburetor bore.

#### All Models

- Restart engine and run at idle speed.
- Inject storage oil until the engine stalls or until approximately half a can has entered the engine.

- With the engine stopped, remove the spark plug(s) and spray storage oil into each cylinder.
- Crank slowly 2 or 3 revolutions to lubricate cylinder(s).
- Reinstall the spark plugs.

NOTE: If equipped with a primer, reconnect the primer outlet hose to the primer valve.

WARNING: This procedure must only be performed in a well ventilated area. Do not run engine during storage period.

### DRIVE AND DRIVEN PULLEYS

Remove belt guard and slip off drive belt. Spray antirust product on pulleys.

### **BATTERY (IF APPLICABLE)**

The battery should be removed from snowmobile for storage period.

CAUTION: A poorly charged or a discharged battery will freeze and damage its elements and possibly damage its casing and parts surrounding the battery.

Disconnect the battery cables and vent tube then remove the battery from the snowmobile.

WARNING: Always disconnect battery cables, if equipped, exactly in the specified order. Disconnect BLACK negative ground cable first, then RED positive cable.

Check electrolyte level. Refill as necessary with distilled water. Fully charge battery at a maximum rate of 2.0 A.

WARNING: Gases given off by a battery being charged are highly explosive. Always charge in a well ventilated area. Keep battery away from cigarettes or open flames. Avoid skin contact with electrolyte.

Before storing the battery clean outside surface with a solution of baking soda and water. Remove all deposits from posts then rinse with tap water.

CAUTION: Do not allow cleaning solution to enter battery interior since it will destroy the electrolyte.

Coat battery posts with dielectric grease or petroleum jelly.

To prevent battery from discharging, store it on a wooden shelf in a cool, dry place. Recharge at least every 40 days.

### TRANSMISSION / CHAINCASE

Drain then refill with proper amount of Bombardier chaincase oil.

TRANSMISSION / CHAINCASE OIL TYPE		
Bombardier Synthetic Oil (P / N 413 8028 00)	Bombardier Mineral Oil (P / N 413 8019 00)	
Skandic WT Grand Touring (All Models) Formula Z Formula STX Formula STX LT (2) Mach Z (All Models) Mach 1 Formula III (All Models) Formula SS MX-Z (All Models) Formula SLS Summit (All Models)	Skandic 500 Touring (All Models) Formula S Formula SL	

CAUTION: Do not use other types of oil. Do not mix this synthetic oil with other types of oil.

### **BODY CARE**

### **Fabrics**

To clean the entire vehicle, use only flannel cloths or "Kimtowels" wipers no. 58-380 from Kimberly-Clark.

CAUTION: Do not use other types of fabrics on windshield and hood to avoid damaging further surfaces to clean.

CAUTION: For aluminum parts use only aluminum cleaner and follow instructions on container.

96-23 Page 3 of 4

### **Cleaning Products**

UTILITY	COMPONENT	PRODUCT	AVAILABLE AT
To clean <b>THIN</b> coats of grease.	Entire snowmobile including metallic parts.	Endust, from Bristol Myers.	Hardware stores or supermarkets.
To clean <b>THICK</b> coats of grease.		Simple Green from Sunshine Makers Inc.	Hardware stores or automotive parts retailers.
To clean grease	Aluminum parts	Dursol cleaner	Hardware stores or automotive parts retailers.
To clean / repair LIGHT scratches.	Windshield and hood.	Slip Streamer Motorcycle Cleaner and Polish.	Automobile parts retailers.
To clean / repair <b>DEEP</b> scratches.		Slip Streamer Motorcycle Windshield Heavy Duty Scratch Remover.	
		Finish job with Slip Streamer Polish.	

Touch up all metal spots where paint has been scratched off. Spray all metal parts with antirust product.

Wax the hood and the painted portion of the frame for better protection.

NOTE: Apply wax on glossy finish only.

### **FINAL STEPS**

Block air intake hole and exhaust system hole using clean cloths.

Protect the vehicle with a cover to prevent dust accumulation during storage.

CAUTION: If snowmobile has to be stored outside it is necessary to cover it with an opaque tarpaulin. This will prevent sun rays and grime from affecting plastic components and vehicle finish.

Please route to:	
Init.	
Service	-
Sales	
Parts	
l J	





Date : April 30, 1996 SUBJECT : Nippondenso CDI Trigger Coil Testing

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1993 to 1996	ROTAX ENGINES 2 cyl. and 3 cyl.	454, 467, 494, 582, 583, 599, 670 and 779	ALL

The tester setting for checking the trigger coil output has been changed.

The tester dial position must be set at 15 and the tester switch position set at LOW.

NOTE: The testing procedure remains the same. Only the tester setting is changed.

### TRIGGER COIL OUTPUT

TESTER WIRES	COMPONENT WIRES	TESTER SWITCH POSITION	TESTER DIAL POSITION
N	BLUE / YELLOW Wire of trigger coil	LOW	15
Р	WHITE / YELLOW Wire of trigger coil		

Please update your previous *Shop Manuals* as per the following references :

### SHOP MANUAL REFERENCE

YEAR	SECTION	PAGE Testing Procedure	PAGE Summary Table
1993	04	04-06-17	04-06-19
1994	06	06-06-16	06-06-19
1995	06	06-06-16	06-06-19
1996 Vol. 2	06	06-06-3	06-06-6
1996 Vol. 3	06	06-06-4	06-06-7

Please route to:	
Service Init. Sales Parts	





No. **96-25 REVISION 1** 

Date: May 16, 1996 SUBJECT: Crankshaft Deflection

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	FORMULA S (377)	1523, 1541	ALL
1996	FORMULA SL, (503)	1521, 1522, 1540	ALL
1996	FORMULA SLE (503)	1524, 1525, 1526	ALL
1996	TOURING E (377)	1530	ALL
1996	TOURING E (LT) (377)	1541, 1542, 1543	ALL
1996	TOURING LE (443)	1527, 1528, 1529	ALL
1996	SKANDIC 500 (503)	1531, 1532, 1533	ALL
1996	SKANDIC 380 (377)	1534, 1535, 1536	ALL
1996	SKANDIC WT (503)	1537, 1538, 1539	ALL

When checking crankshaft deflection on any of the above mentioned models, both crankshaft and crankcase must be replaced if crankshaft deflection exceeds the specified tolerance on PTO side and if internal wear is detected in crankcase.

Refer to the following tables to order the proper replacement parts.

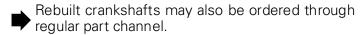
# PARTS REQUIRED

CRANKCASE ASSY (incl. Crankshaft, Crankcase and Seals)			
ENGINE TYPE P/N QTY			
377/443	420 8814 97	1	
503	420 8814 98	1	

CRANKSHAFT ONLY		
ENGINE TYPE	P/N	QTY
377/443	420 8872 47	1
503	420 9964 47	1

CRANKCASE ONLY		
ENGINE TYPE	P/N	QTY
377/443	420 8877 81	1
503	420 8877 92	1

#### Rebuilt Crankshafts.



REBUILT CRANKSHAFT ONLY		
ENGINE TYPE	P/N	QTY
377/443	421 0000 09	1
503	421 0000 11	1

# CRANKSHAFT DEFLECTION MEASUREMENT

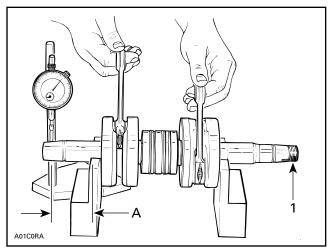
Crankshaft deflection is measured with a dial indicator.

# Measuring (in Engine)

First, check deflection with crankshaft in engine. If deflection exceeds the specified tolerance, recheck deflection using V-shapped blocks to determine the defective part(s). See below.

# Measuring (on bench)

Once engine is dissassembled, check crankshaft deflection on V-shaped blocks. If deflection exceeds the specified tolerance, it can be worn bearings or a bent crankshaft. Remove crankshaft bearings and check deflection again on V-shaped blocks to determine the defective part(s). See measurement A in the following illustration.



#### **TYPICAL**

1. Measure at mid point between the key and the first thread A. See table below

#### Crankshaft Deflection on PTO Side

ENGINE TYPE	DISTANCE A mm (in)	MAXIMUM ON PTO SIDE mm (in)
377, 443	75.5 (2.972)	0.05 (.002)
503	82.8 (3.248)	0.06 (.002)

#### Crankshaft Deflection on MAG Side

ENGINE TYPE	MAXIMUM ON MAG SIDE mm (in)
ALL	0.03 (.001)

# Crankshaft Deflection in Center of Crankshaft

ENGINE TYPE	MAXIMUN IN CENTER OF CRANKSHAFT
ALL	0.08 mm (.0031 in)

NOTE: Crankshaft deflection can not be correctly measured between centers of a lathe.

If the deflection exceeds the specified tolerance, crankshaft should be repaired or replaced

Update the 1996 Ski-Doo Shop Manuals, Volume 1, Volume 2 and Volume 3, by adding this information in Section 04, Engine, of the concerned manuals.

Please route to:	ski-do
Service Init. Sales Parts	Bomba



Date: May 24, 1996 SUBJECT: Shock Absorbers Trouble-shooting

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	ALL	ALL	ALL

#### SUSPENSION INSPECTION

In the case that vehicle bottoms out, check the two following points:

- 1. Check for proper spring adjustment according to rider weight.
- 2. Check for ice or snow accumulation and clean it.

#### SHOCK ABSORBER INSPECTION

Remove shock absorber from suspension. Refer to *Ski-Doo Shop Manual* for proper procedure.

Position piston rod straight up and secure shock body end in a bench vise with soft jaws.

# Do not clamp directly on shock body.

Examine shock for leaks. Compress and extend the piston several times over its entire stroke checking that it moves smoothly and with uniform resistance.

Pay attention to the following conditions that will denote a shock that needs replacement.

#### Frozen Shock Absorber (All Types)

Keep shock absorber in a frozen area for 4 hours. Compress and extend piston rod. Piston will offer more resistance compare to a new one.

#### Internal Pressure Lost (HPG Racing Only)

Compress piston rod over entire stroke. Piston rod will not move back by itself after complete compression.

#### Gaz Leaks in Oil Chamber (HPG Racing Only)

Check that piston rod is fully extend. Wait 5 minutes to allow gaz transfer. Fully compress piston rod over entire stroke. Piston will skip or move with a non-uniform resistance.

NOTE: On HPG Racing shock absorbers, make sure that sealing point is aligned. If not, warranty is void.

Please route to:	
	Init.
Service	
Sales	
Parts	
	J





Date: September 16, 1996 SUBJECT: Muffler Shell

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	Grand Touring* SE	ALL	ALL
1997	Grand Touring 583	ALL	ALL
1997	Mach* 1 (699)	ALL	ALL
1997	Formula* Z	ALL	ALL
1997	Formula 583	ALL	ALL
97-96	Grand Touring 500	ALL	ALL
97-96	MX Z* 670	ALL	ALL
97-96	MX Z 583	ALL	ALL
97-96	MX Z 440	ALL	ALL
97-96	Summit* 670	ALL	ALL
97-96	Summit 583	ALL	ALL
97-96	Summit 500	ALL	ALL
97-96	Formula 500(SLS)	ALL	ALL
97-96-95	Mach Z/Mach Z LT	ALL	ALL
97-96-95	Formula III/Formula III LT	ALL	ALL
96-95	Mach 1 (2 pipes)	ALL	ALL

In the event that muffler shell attachment points break, muffler shells only can be replaced with new ones. All applicable models are listed on the above chart.

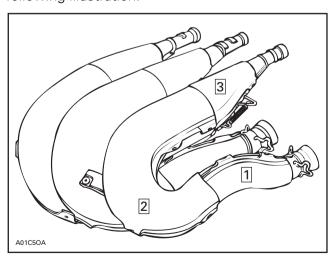
#### PARTS REQUIRED

DESCRIPTION	P/N
MUFFLER SHELL	Refer to following chart on next page
RIVET	390 4023 00
REINFORCEMENT CLEAT	514 0465 03
WASHER	517 2259 00

# MUFFLER SHELL P/N CHART

YEAR	MODEL	MUFFLE	ER SHELL	P/N	
97-96	Grand Touring 500 Summit 500 Formula 500(SLS) MX Z 440	UPPER SHELL LOWER SHELL (1996) LOWER SHELL (1997)		514 0440 20 514 0440 21 514 0485 04	
97-96 97-96 97-96 97-96 97 97	Summit 583 Summit 670 MX Z 583 MX Z 670 Formula 583 Formula Z Grand Touring 583	UPPER SHELL LOWER SHELL		514 0446 10 514 0446 11	
		РТО	RIGHT FRONT SHELL (1) LEFT FRONT SHELL (1)	514 0380 10 514 0380 11	
97-96-95 97-96-95	,		CENTER/MAG	RIGHT FRONT SHELL (1) LEFT FRONT SHELL (1)	514 0378 10 514 0378 11
97 97		PTO/CENTER/MAG	LOWER MID SHELL (2) UPPER MID SHELL (2)	514 0378 15 514 0378 16	
		FTO/CENTEN/IVIAG	LOWER REAR SHELL (3) UPPER REAR SHELL (3)	514 0378 17 514 0378 18	
96-95	Mach 1 (2 pines)	PTO	LOWER SHELL UPPER SHELL	514 0415 05 514 0415 06	
90-90	Mach 1 (2 pipes)	MAG	LOWER SHELL UPPER SHELL	514 0416 05 514 0416 06	

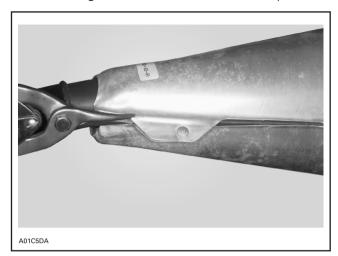
(1), (2) and (3) from the above chart refer to the following illustration.



#### **PROCEDURE**

Remove muffler.

Bend attachment point tabs upward and cut with metal cutting tool, as shown on the next photo.



TYPICAL — CUT ATTACHMENT POINT TAB

Remove lower and upper shells.

Remove existing insulators and reinstall them in new shells.

**NOTE:** Ensure not to damage material when removing insulators.

Position new shell onto muffler.

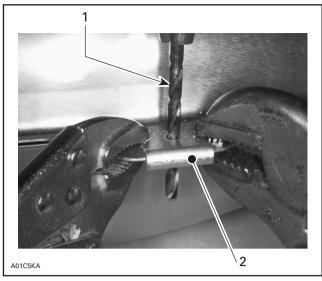
Position reinforcement cleat onto attachment point tab and secure with VISE-GRIP pliers.

Using a 4.8 mm (3/16 in) drill bit, drill a hole, as shown on the next photo.



# **WARNING**

When drilling, do not hold reinforcement cleat by hand.



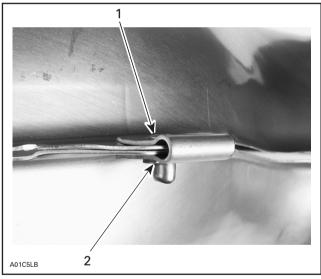
Drill bit 4.8 mm (3/16 in)
 Reinforcement cleat

Remove pliers.

Remove burrs from hole edges.

Secure reinforcement cleat with rivet and washer, as shown on the following photo.

**NOTE:** Position washer on the bottom side of the reinforcement cleat.



Rivet head
 Washer

Repeat procedure for all muffler shell attachment tabs.



# **CAUTION**

Bend tabs as per previous assembly in order to avoid contact between tuned pipes.

Reinstall muffler.

96-27 Page 3 of 3

Please rout	e to:
	Init.
Service	
Sales	
Parts	
	J





Date: September 19, 1996

**SUBJECT: SC-10 Suspension Kit Update** 

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1996	FORMULA III	ALL	ALL
1996	MACH Z	ALL	ALL

In SC-10 suspension conversion kit (P/N 861 7597 00), a small quantity of instruction sheets (P/N 415 0720 00) are in error.

On page 2 of 3 in the INSTALLATION section of the instruction sheet, it is indicated to drill holes using a 6 mm (15/64 in) drill bit, which is incorrect.

THE ACTUAL DRILL BIT SIZE REQUIRED IS 4.8 mm (3/16 in).

The attached instruction sheet has been corrected and should be used in order to properly complete the installation. Look for the black arrows in the marge to identify where the corrections have been made.

Please route to:	
Init.	
Service	.
Sales	
Parts	
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Date: October 15, 1996

# SUBJECT: Pre-Season Inspection (Owner's Expense)

Ī	YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
ĺ	ALL	ALL	ALL	ALL

Proper vehicle inspection is necessary after summer months or when a vehicle has not been used for more than one month. Any worn, broken or damaged parts should be replaced.



#### **WARNING**

Unless otherwise specified, engine should be turned off for lubrication and inspection procedures.

# LUBRICATION/INSPECTION

Lubricate the steering mechanism. **Inspect all components for tightness**.

For proper operation, brake disc and driven pulley must slide freely on countershaft. Lubricate sparingly.



#### WARNING

Do not lubricate the throttle and/or brake cables and housings. Avoid getting oil on the brake pads.

Lubricate remaining recommended lubrication points. Refer to *Shop Manual*.

#### **FUEL SYSTEM**

Remove rags from air intake and exhaust system. Check fuel filter in reservoir for any damage. Replace as necessary.

Check fuel valve and primer/choke proper operation.

Inspect fuel system for any leaks.

Inspect throttle cables for proper synchronization. Refer to section *ENGINE* (*CARBURETOR AND FUEL PUMP*) in *Shop Manual*.

#### **ENGINE**

Perform a leak test on the engine to check all seals and gaskets. Refer to section *ENGINE* (*LEAK TEST*) of *Shop Manual*.

Check oil level in oil tank, add oil as necessary.



# **CAUTION**

Use Bombardier Rotax injection oil mineral or synthetic.

Check condition of spark plugs. Replace if necessary. Refer to section *ELECTRICAL* (SPARK PLUGS) in Shop Manual.

### **COOLING SYSTEM**

Perform a cooling system leak test as described in section *ENGINE* (*LEAK TEST*) of *Shop Manual*. Check coolant level in coolant reservoir. Add cool-

ant if necessary.

# TRANSMISSION/CHAINCASE

Check drive chain and adjust if necessary. Chaincase oil should have been changed in the vehicle storage procedure. If not, drain then refill with proper amount of Bombardier synthetic chaincase oil (P/N 413 8033 00). For Elan and Tundra II only, use chaincase oil (P/N 413 8019 00). Refer to section *TRANSMISSION* (CHAINCASE) from *Shop Manual*.

#### **BRAKE SYSTEM**

Inspect brake pads for proper thickness. Refer to section *TRANSMISSION* (BRAKE) from *Shop Manual*.

# Hydraulic Brake

Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.



#### **CAUTION**

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.

Inspect brake pads for proper thickness. Refer to section *TRANSMISSION* (BRAKE) from *Shop Manual*.

#### Mechanical Brake

For vehicles equipped with ratchet wheel, check for proper ratchet operation. Refer to section *TRANSMISSION* (BRAKE) from *Shop Manual*.

#### DRIVE AND DRIVEN PULLEYS

Clean drive and driven pulleys.

Check for proper driven pulley alignment and spring pre-load. Refer to section *TRANSMIS-SION* (DRIVE AND DRIVEN PULLEY) from Shop Manual.

Inspect belt for cracks, fraying or abnormal wear. Replace as necessary.

#### SUSPENSION

Examine all shock absorbers for any leaks if so, replace with new one.

# Rear Suspension

Inspect stopper straps, stopper rubbers, idler wheels, slider shoes and track for abnormal wear.

# Front Suspension

Inspect skis and runner shoes, replace as necessary. Refer to section *STEERING/FRONT SUS-PENSION* (SUSPENSION AND SKI SYSTEM) from Shop Manual.

# **BATTERY (IF EQUIPPED)**

Check electrolyte level in battery. Refill as necessary with distilled water. Fully charged battery.



#### **WARNING**

Never charge or boost battery while installed on vehicle.



### **WARNING**

Gases given off by a battery being charged are highly explosive. Always charge in a well ventilated area. Keep battery away from open flames. Avoid skin contact with electrolyte.

Reinstall battery in vehicle. Refer to section *ELECTRICAL* (*BATTERY*) from *Shop Manual* for proper procedure.



#### WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

### FINAL INSPECTION

Check rewind starter rope condition.

Inspect all electrical connectors and apply dielectric grease (P/N 413 7017 00), as necessary.

Inspect spark plug cables condition and proper connection.

**Start engine** and check for proper engine and electrical operation.

Please route	to:
Service [ Sales [ Parts [	Init.





Date: November 7, 1996

#### **SUBJECT: Choke Nut Tool**

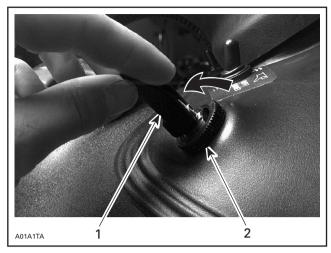
YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	SKANDIC* 380/500/WT/SWT	1120/1121/1122/1117 1118/1119/1134/1135 1189/1136/1137/1190	ALL
1997	MACH* 1	1177/1178/1179/1180 1181/1182/1183/1184 1185	ALL
1997	MX Z* 440	1171/1172/1173	ALL
1997	FORMULA* III/III LT	1148/1149/1150/1151 1152/1153	ALL
1997	FORMULA* S/SL	1108/1109/1106/1107	ALL
1997	TOURING* SLE/LE/E/ELT	1110/1111/1112/1113 1114/1115/1116/1186	ALL
1996	FORMULA* III/III LT	1076/1077/1093/1100 1101/1102	ALL
1996	FORMULA* S/SL	1523/1541/1521/1522 1540	ALL
1996	TOURING* SLE/LE	1524/1525/1526/1527 1528/1529	ALL
1996	SKANDIC* 500/WT	1531/1532/1533/1537 1539	ALL
1995	FORMULA* III	1038/1039	ALL
1995	SKANDIC* WT MOUNTAIN* SP	1515/1516	ALL

A new recommended tool is now available. This tool may be used in order to not damage the choke nut.

DESCRIPTION	P/N
CHOKE NUT TOOL	529 0322 00

# **PROCEDURE**

Set choke lever to half opened position, as shown on the next photo.



TYPICAL — CHOKE LEVER SET TO HALF POSITION

- Choke lever
   Choke nut

Intall choke nut tool onto choke nut then unscrew or tighten as required.

**NOTE:** Ensure that tool teeth properly fit with nut teeth. Refer to the following photo.



INSTALL TOOL ONTO CHOKE NUT

Please route to:	SKI-d
Service	Bo
Sales	
Parts	



**UPDATE** 

Date: January 24, 1997 SUBJECT: Technical Data

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1996	Canada and United States: Formula* Z	1090 and 1091	ALL
1996	Sweden: Formula Z	1092	ALL

The technical data sheet, page 10-02-2 from 1996 Ski-Doo Shop Manual Volume 3, for the above mentioned models has been updated.

Please update your 1996 Ski-Doo Shop Manual Volume 3, with the following table.

DESCRIPTION	DATA
Carburetor Type	VM 40 325/326
Main Jet	340/340
Needle Jet	224 AA-2
Pilot Jet	45
Needle Identification — Clip Position	7DL7-3