

Please route to:

Init.

Service

Sales

Parts



No. **99-1**

Date: September 15, 1998

SUBJECT: Spring Reference According to Load

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	All (except utility models)	All	All

The following tables are intended to annex suspension decal on snowmobiles. These tables describe additional settings for optimum comfort according to load.

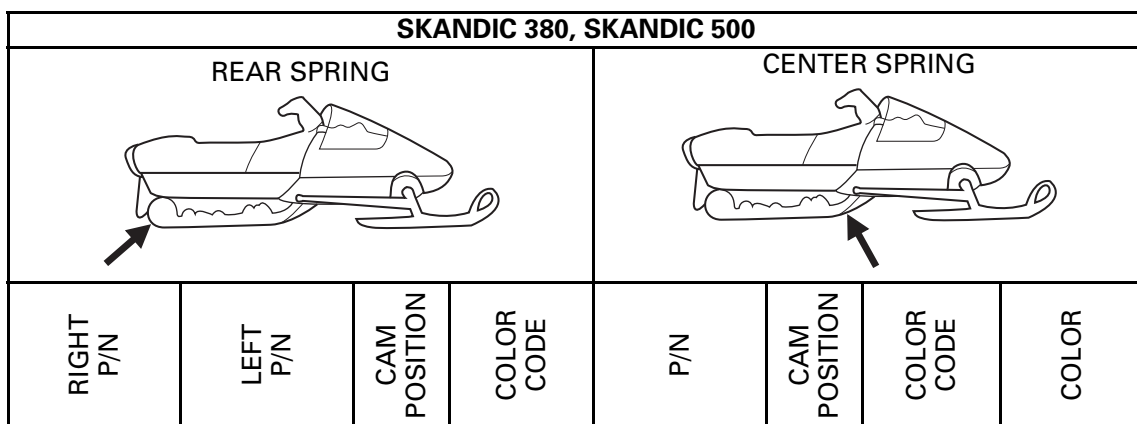
NOTE: The A.C.M.(Accelerator and Control Modulator) nut must be fully tightened when performing suspension adjustments (see *Operator's Guide*).

TOURING LE, TOURING E							
REAR SPRING				CENTER SPRING			
RIGHT P/N	LEFT P/N	CAM POSITION	COLOR CODE	P/N	CAM POSITION	COLOR CODE	COLOR

Standard								
Up to 200 lb	414 944 200	414 944 300	1	Green	415 069 900	N.A.	SI/YL/YL	Black
200 lb to 280 lb	414 944 200	414 944 300	2	Green	415 069 900	N.A.	SI/YL/YL	Black
280 lb to 320 lb	414 944 200	414 944 300	3	Green	415 069 900	N.A.	SI/YL/YL	Black
320 lb to 350 lb	414 944 200	414 944 300	4	Green	415 069 900	N.A.	SI/YL/YL	Black
Option 1								
Up to 250 lb	415 060 700	415 060 800	1	Blue	414 771 300	N.A.	BK/BK	Safari Red
250 lb to 330 lb	415 060 700	415 060 800	2	Blue	414 771 300	N.A.	BK/BK	Safari Red
330 lb to 370 lb	415 060 700	415 060 800	3	Blue	414 771 300	N.A.	BK/BK	Safari Red
370 lb to 400 lb	415 060 700	415 060 800	4	Blue	414 771 300	N.A.	BK/BK	Safari Red

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

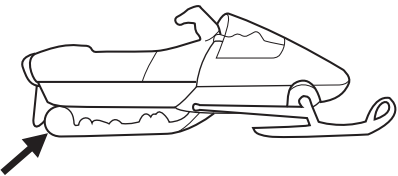
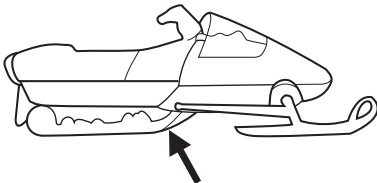
SKANDIC 380, SKANDIC 500



Standard								
Up to 200 lb	414 944 200	414 944 300	1	Green	503 189 000	N.A.	YL/GD/YL	Black
200 lb to 280 lb	414 944 200	414 944 300	2	Green	503 189 000	N.A.	YL/GD/YL	Black
280 lb to 320 lb	414 944 200	414 944 300	3	Green	503 189 000	N.A.	YL/GD/YL	Black
320 lb to 350 lb	414 944 200	414 944 300	4	Green	503 189 000	N.A.	YL/GD/YL	Black
Option 1								
Up to 250 lb	415 060 700	415 060 800	1	Blue	414 771 300	N.A.	BK/BK	Safari Red
250 lb to 330 lb	415 060 700	415 060 800	2	Blue	414 771 300	N.A.	BK/BK	Safari Red
330 lb to 370 lb	415 060 700	415 060 800	3	Blue	414 771 300	N.A.	BK/BK	Safari Red
370 lb to 400 lb	415 060 700	415 060 800	4	Blue	414 771 300	N.A.	BK/BK	Safari Red

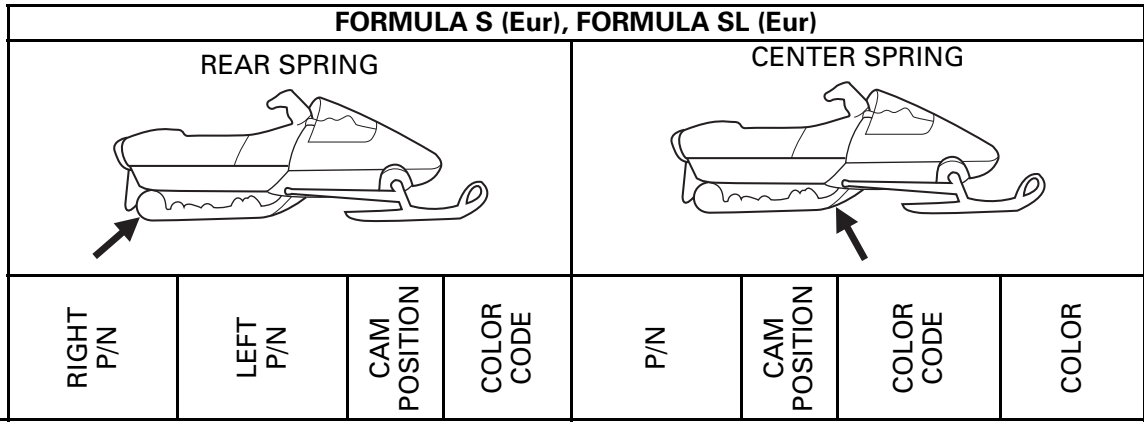
SPRING COLOR CODES

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FORMULA S (Can/US), FORMULA SL (Can/US)							
REAR SPRING				CENTER SPRING			
							
RIGHT P/N	LEFT P/N	CAM POSITION	COLOR CODE	P/N	CAM POSITION	COLOR CODE	COLOR

Standard								
Up to 125 lb	414 866 200	414 866 300	1	Yellow	415 069 900	N.A.	SI/YL/YL	Black
125 lb to 150 lb	414 866 200	414 866 300	2	Yellow	415 069 900	N.A.	SI/YL/YL	Black
150 lb to 175 lb	414 866 200	414 866 300	3	Yellow	415 069 900	N.A.	SI/YL/YL	Black
175 lb to 200 lb	414 866 200	414 866 300	4	Yellow	415 069 900	N.A.	SI/YL/YL	Black
Option 1								
Up to 175 lb	414 9435 00	414 9436 00	1	White	414 771 300	N.A.	BK/BK	Safari Red
175 lb to 200 lb	414 9435 00	414 9436 00	2	White	414 771 300	N.A.	BK/BK	Safari Red
200 lb to 225 lb	414 9435 00	414 9436 00	3	White	414 771 300	N.A.	BK/BK	Safari Red
225 lb to 250 lb	414 9435 00	414 9436 00	4	White	414 771 300	N.A.	BK/BK	Safari Red
Option 2								
Up to 225 lb	415 010 500	415 010 600	1	Red	414 771 300	N.A.	BK/BK	Safari Red
225 lb to 250 lb	415 010 500	415 010 600	2	Red	414 771 300	N.A.	BK/BK	Safari Red
250 lb to 275 lb	415 010 500	415 010 600	3	Red	414 771 300	N.A.	BK/BK	Safari Red
275 lb to 300 lb	415 010 500	415 010 600	4	Red	414 771 300	N.A.	BK/BK	Safari Red
Option 3								
Up to 275 lb	414 944 200	414 944 300	1	Green	414 771 300	N.A.	BK/BK	Safari Red
275 lb to 300 lb	414 944 200	414 944 300	2	Green	414 771 300	N.A.	BK/BK	Safari Red
300 lb to 325 lb	414 944 200	414 944 300	3	Green	414 771 300	N.A.	BK/BK	Safari Red
325 lb to 350 lb	414 944 200	414 944 300	4	Green	414 771 300	N.A.	BK/BK	Safari Red
Option 4								
Up to 325 lb	415 060 700	415 060 800	1	Blue	414 771 300	N.A.	BK/BK	Safari Red
325 lb to 350 lb	415 060 700	415 060 800	2	Blue	414 771 300	N.A.	BK/BK	Safari Red
350 lb to 375 lb	415 060 700	415 060 800	3	Blue	414 771 300	N.A.	BK/BK	Safari Red
375 lb to 400 lb	415 060 700	415 060 800	4	Blue	414 771 300	N.A.	BK/BK	Safari Red

SPRING COLOR CODES
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Standard

Up to 225 lb	415 010 500	415 010 600	1	Red	415 069 900	N.A.	SI/YL/YL	Black
225 lb to 250 lb	415 010 500	415 010 600	2	Red	415 069 900	N.A.	SI/YL/YL	Black
250 lb to 275 lb	415 010 500	415 010 600	3	Red	415 069 900	N.A.	SI/YL/YL	Black
275 lb to 300 lb	415 010 500	415 010 600	4	Red	415 069 900	N.A.	SI/YL/YL	Black

Option 1

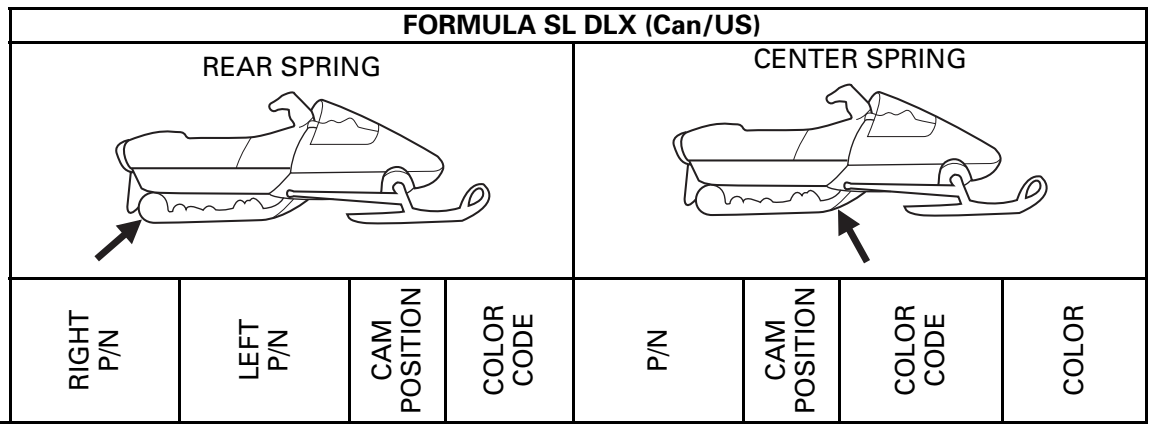
Up to 275 lb	414 944 200	414 944 300	1	Green	414 771 300	N.A.	BK/BK	Safari Red
275 lb to 300 lb	414 944 200	414 944 300	2	Green	414 771 300	N.A.	BK/BK	Safari Red
300 lb to 325 lb	414 944 200	414 944 300	3	Green	414 771 300	N.A.	BK/BK	Safari Red
325 lb to 350 lb	414 944 200	414 944 300	4	Green	414 771 300	N.A.	BK/BK	Safari Red

Option 2

Up to 325 lb	415 060 700	415 060 800	1	Blue	414 771 300	N.A.	BK/BK	Safari Red
325 lb to 350 lb	415 060 700	415 060 800	2	Blue	414 771 300	N.A.	BK/BK	Safari Red
350 lb to 375 lb	415 060 700	415 060 800	3	Blue	414 771 300	N.A.	BK/BK	Safari Red
375 lb to 400 lb	415 060 700	415 060 800	4	Blue	414 771 300	N.A.	BK/BK	Safari Red

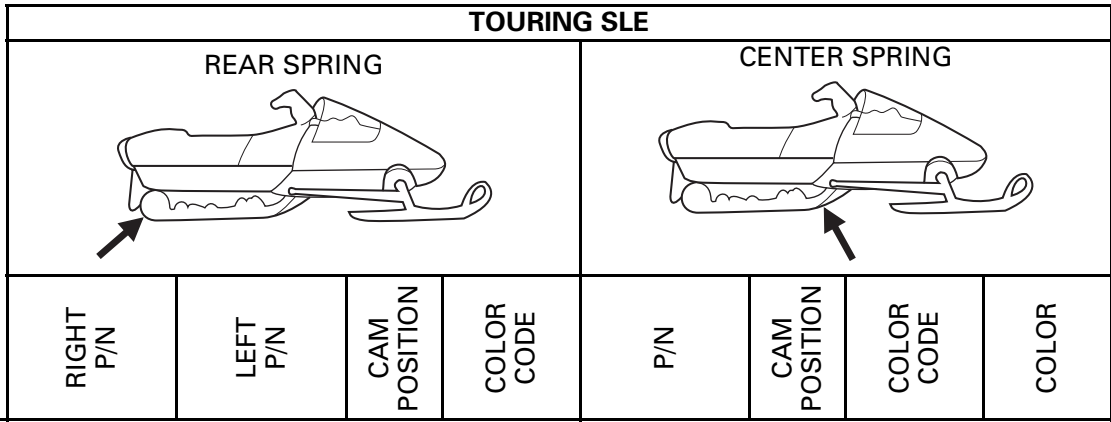
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Standard								
Up to 150 lb	414 866 200	414 866 300	1	Yellow	415 070 100	1	GD/YL/YL	Black
150 lb to 180 lb	414 866 200	414 866 300	2	Yellow	415 070 100	2	GD/YL/YL	Black
180 lb to 210 lb	414 866 200	414 866 300	3	Yellow	415 070 100	3	GD/YL/YL	Black
210 lb to 240 lb	414 866 200	414 866 300	4	Yellow	415 070 100	4	GD/YL/YL	Black
240 lb to 265 lb	414 866 200	414 866 300	4	Yellow	415 070 100	5	GD/YL/YL	Black
Option 1								
Up to 200 lb	414 943 500	414 943 600	1	White	415 070 500	1	BL/YL/YL	Black
200 lb to 230 lb	414 943 500	414 943 600	2	White	415 070 500	2	BL/YL/YL	Black
230 lb to 260 lb	414 943 500	414 943 600	3	White	415 070 500	3	BL/YL/YL	Black
260 lb to 290 lb	414 943 500	414 943 600	4	White	415 070 500	4	BL/YL/YL	Black
290 lb to 315 lb	414 943 500	414 943 600	4	White	415 070 500	5	BL/YL/YL	Black
Option 2								
Up to 250 lb	415 010 500	415 010 600	1	Red	415 070 500	1	BL/YL/YL	Black
250 lb to 280 lb	415 010 500	415 010 600	2	Red	415 070 500	2	BL/YL/YL	Black
280 lb to 310 lb	415 010 500	415 010 600	3	Red	415 070 500	3	BL/YL/YL	Black
310 lb to 340 lb	415 010 500	415 010 600	4	Red	415 070 500	4	BL/YL/YL	Black
340 lb to 365 lb	415 010 500	415 010 600	4	Red	415 070 500	5	BL/YL/YL	Black
Option 3								
Up to 300 lb	414 944 200	414 944 300	1	Green	415 070 500	1	BL/YL/YL	Black
300 lb to 330 lb	414 944 200	414 944 300	2	Green	415 070 500	2	BL/YL/YL	Black
330 lb to 360 lb	414 944 200	414 944 300	3	Green	415 070 500	3	BL/YL/YL	Black
360 lb to 390 lb	414 944 200	414 944 300	4	Green	415 070 500	4	BL/YL/YL	Black
390 lb to 415 lb	414 944 200	414 944 300	4	Green	415 070 500	5	BL/YL/YL	Black
Option 4								
Up to 350 lb	415 060 700	415 060 800	1	Blue	415 070 500	1	BL/YL/YL	Black
350 lb to 380 lb	415 060 700	415 060 800	2	Blue	415 070 500	2	BL/YL/YL	Black
380 lb to 410 lb	415 060 700	415 060 800	3	Blue	415 070 500	3	BL/YL/YL	Black
410 lb to 440 lb	415 060 700	415 060 800	4	Blue	415 070 500	4	BL/YL/YL	Black
440 lb to 465 lb	415 060 700	415 060 800	4	Blue	415 070 500	5	BL/YL/YL	Black

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Standard

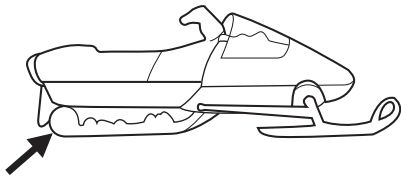
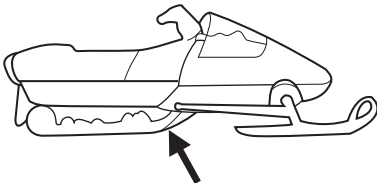
Up to 200 lb	414 944 200	414 944 300	1	Green	415 070 500	1	BL/YL/YL	Black
200 lb to 250 lb	414 944 200	414 944 300	2	Green	415 070 500	1	BL/YL/YL	Black
250 lb to 300 lb	414 944 200	414 944 300	3	Green	415 070 500	2	BL/YL/YL	Black
300 lb to 350 lb	414 944 200	414 944 300	4	Green	415 070 500	3	BL/YL/YL	Black
350 lb to 375 lb	414 944 200	414 944 300	4	Green	415 070 500	4	BL/YL/YL	Black
375 lb to 400 lb	414 944 200	414 944 300	4	Green	415 070 500	5	BL/YL/YL	Black

Option 1

Up to 250 lb	415 060 700	415 060 800	1	Blue	415 071 000	1	SI/RD/YL	Black
250 lb to 300 lb	415 060 700	415 060 800	2	Blue	415 071 000	1	SI/RD/YL	Black
300 lb to 350 lb	415 060 700	415 060 800	3	Blue	415 071 000	2	SI/RD/YL	Black
350 lb to 400 lb	415 060 700	415 060 800	4	Blue	415 071 000	3	SI/RD/YL	Black
400 lb to 425 lb	415 060 700	415 060 800	4	Blue	415 071 000	4	SI/RD/YL	Black
425 lb to 450 lb	415 060 700	415 060 800	4	Blue	415 071 000	5	SI/RD/YL	Black

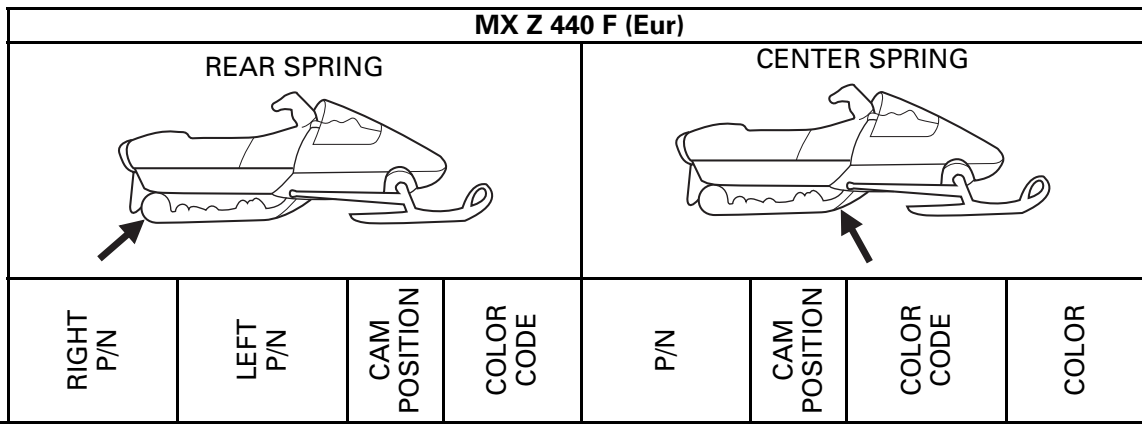
SPRING COLOR CODES

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MX Z 440 F (Can/US)							
REAR SPRING				CENTER SPRING			
							
RIGHT P/N	LEFT P/N	CAM POSITION	COLOR CODE	P/N	CAM POSITION	COLOR CODE	COLOR

Standard								
Up to 150 lb	414 943 500	414 943 600	1	White	415 070 100	1	GD/YL/YL	Black
150 lb to 180 lb	414 943 500	414 943 600	2	White	415 070 100	2	GD/YL/YL	Black
180 lb to 210 lb	414 943 500	414 943 600	3	White	415 070 100	3	GD/YL/YL	Black
210 lb to 240 lb	414 943 500	414 943 600	4	White	415 070 100	4	GD/YL/YL	Black
240 lb to 265 lb	414 943 500	414 943 600	4	White	415 070 100	5	GD/YL/YL	Black
Option 1								
Up to 200 lb	415 010 500	415 010 600	1	Red	415 070 500	1	BL/YL/YL	Black
200 lb to 230 lb	415 010 500	415 010 600	2	Red	415 070 500	2	BL/YL/YL	Black
230 lb to 265 lb	415 010 500	415 010 600	3	Red	415 070 500	3	BL/YL/YL	Black
265 lb to 300 lb	415 010 500	415 010 600	4	Red	415 070 500	4	BL/YL/YL	Black
300 lb to 325 lb	415 010 500	415 010 600	4	Red	415 070 500	5	BL/YL/YL	Black
Option 2								
Up to 250 lb	414 944 200	414 944 300	1	Green	415 070 500	1	BL/YL/YL	Black
250 lb to 280 lb	414 944 200	414 944 300	2	Green	415 070 500	2	BL/YL/YL	Black
280 lb to 325 lb	414 944 200	414 944 300	3	Green	415 070 500	3	BL/YL/YL	Black
325 lb to 350 lb	414 944 200	414 944 300	4	Green	415 070 500	4	BL/YL/YL	Black
350 lb to 375 lb	414 944 200	414 944 300	4	Green	415 070 500	5	BL/YL/YL	Black
Option 3								
Up to 300 lb	415 060 700	415 060 800	1	Blue	415 070 500	1	BL/YL/YL	Black
300 lb to 330 lb	415 060 700	415 060 800	2	Blue	415 070 500	2	BL/YL/YL	Black
330 lb to 375 lb	415 060 700	415 060 800	3	Blue	415 070 500	3	BL/YL/YL	Black
375 lb to 400 lb	415 060 700	415 060 800	4	Blue	415 070 500	4	BL/YL/YL	Black
400 lb to 425 lb	415 060 700	415 060 800	4	Blue	415 070 500	5	BL/YL/YL	Black

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Standard

Up to 200 lb	415 010 500	415 010 600	1	Red	415 070 100	1	GD/YL/YL	Black
200 lb to 230 lb	415 010 500	415 010 600	2	Red	415 070 100	2	GD/YL/YL	Black
230 lb to 265 lb	415 010 500	415 010 600	3	Red	415 070 100	3	GD/YL/YL	Black
265 lb to 300 lb	415 010 500	415 010 600	4	Red	415 070 100	4	GD/YL/YL	Black
300 lb to 325 lb	415 010 500	415 010 600	4	Red	415 070 100	5	GD/YL/YL	Black

Option 1

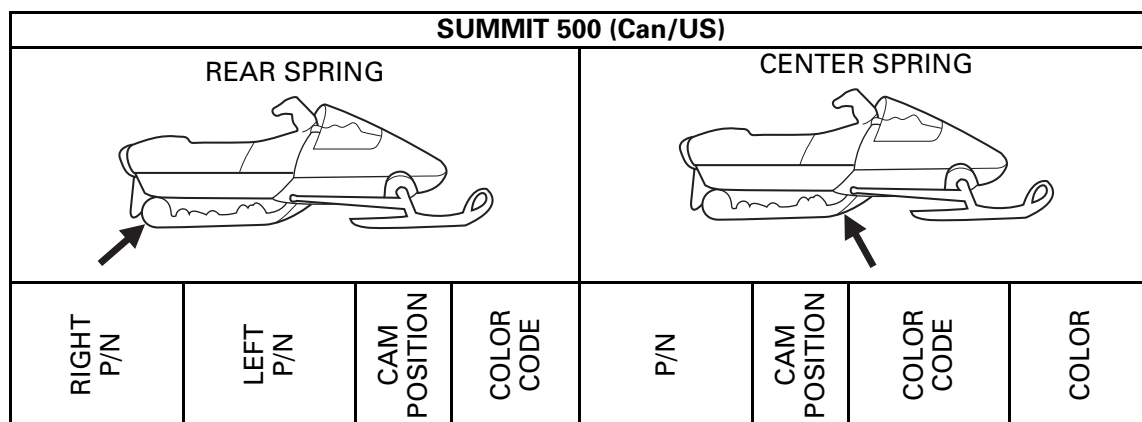
Up to 250 lb	414 944 200	414 944 300	1	Green	415 070 500	1	BL/YL/YL	Black
250 lb to 280 lb	414 944 200	414 944 300	2	Green	415 070 500	2	BL/YL/YL	Black
280 lb to 325 lb	414 944 200	414 944 300	3	Green	415 070 500	3	BL/YL/YL	Black
325 lb to 350 lb	414 944 200	414 944 300	4	Green	415 070 500	4	BL/YL/YL	Black
350 lb to 375 lb	414 944 200	414 944 300	4	Green	415 070 500	5	BL/YL/YL	Black

Option 2

Up to 300 lb	415 060 700	415 060 800	1	Blue	415 070 500	1	BL/YL/YL	Black
300 lb to 330 lb	415 060 700	415 060 800	2	Blue	415 070 500	2	BL/YL/YL	Black
330 lb to 375 lb	415 060 700	415 060 800	3	Blue	415 070 500	3	BL/YL/YL	Black
375 lb to 400 lb	415 060 700	415 060 800	4	Blue	415 070 500	4	BL/YL/YL	Black
400 lb to 425 lb	415 060 700	415 060 800	4	Blue	415 070 500	5	BL/YL/YL	Black

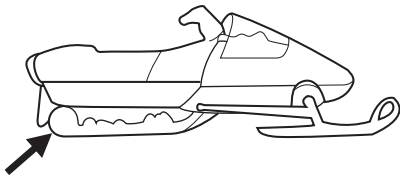
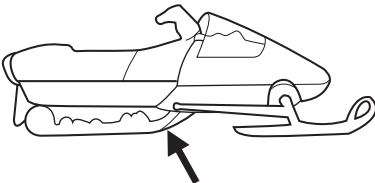
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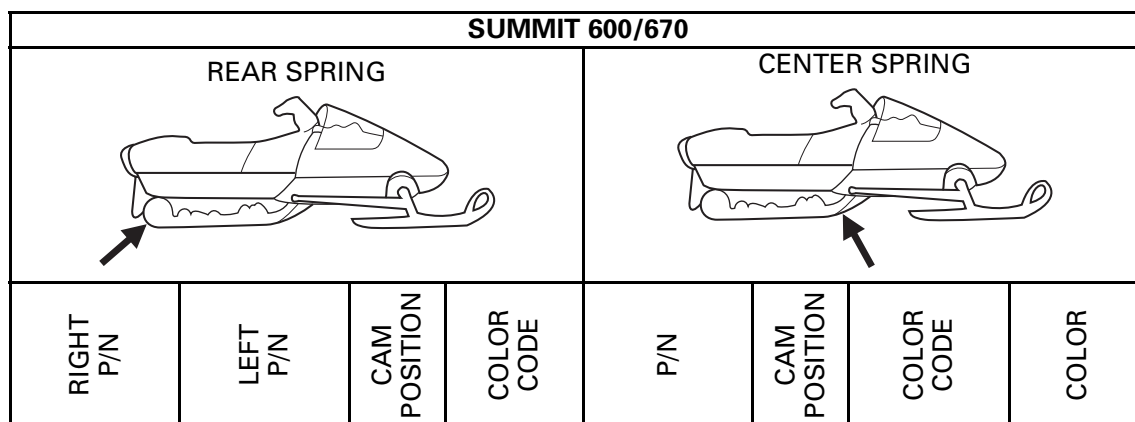
Standard								
Up to 150 lb	414 866 200	414 866 300	1	Yellow	415 070 500	1	BL/YL/YL	Black
150 lb to 180 lb	414 866 200	414 866 300	2	Yellow	415 070 500	2	BL/YL/YL	Black
180 lb to 210 lb	414 866 200	414 866 300	3	Yellow	415 070 500	3	BL/YL/YL	Black
210 lb to 240 lb	414 866 200	414 866 300	4	Yellow	415 070 500	4	BL/YL/YL	Black
240 lb to 265 lb	414 866 200	414 866 300	4	Yellow	415 070 500	5	BL/YL/YL	Black
Option 1								
Up to 200 lb	414 943 500	414 943 600	1	White	415 071 000	1	SI/RD/YL	Black
200 lb to 230 lb	414 943 500	414 943 600	2	White	415 071 000	2	SI/RD/YL	Black
230 lb to 265 lb	414 943 500	414 943 600	3	White	415 071 000	3	SI/RD/YL	Black
265 lb to 300 lb	414 943 500	414 943 600	4	White	415 071 000	4	SI/RD/YL	Black
300 lb to 325 lb	414 943 500	414 943 600	4	White	415 071 000	5	SI/RD/YL	Black
Option 2								
Up to 250 lb	415 010 500	415 010 600	1	Red	415 071 000	1	SI/RD/YL	Black
250 lb to 280 lb	415 010 500	415 010 600	2	Red	415 071 000	2	SI/RD/YL	Black
280 lb to 325 lb	415 010 500	415 010 600	3	Red	415 071 000	3	SI/RD/YL	Black
325 lb to 350 lb	415 010 500	415 010 600	4	Red	415 071 000	4	SI/RD/YL	Black
350 lb to 375 lb	415 010 500	415 010 600	4	Red	415 071 000	5	SI/RD/YL	Black
Option 3								
Up to 300 lb	414 944 200	414 944 300	1	Green	415 071 000	1	SI/RD/YL	Black
300 lb to 330 lb	414 944 200	414 944 300	2	Green	415 071 000	2	SI/RD/YL	Black
330 lb to 375 lb	414 944 200	414 944 300	3	Green	415 071 000	3	SI/RD/YL	Black
375 lb to 400 lb	414 944 200	414 944 300	4	Green	415 071 000	4	SI/RD/YL	Black
400 lb to 425 lb	414 944 200	414 944 300	4	Green	415 071 000	5	SI/RD/YL	Black
Option 4								
Up to 350 lb	415 060 700	415 060 800	1	Blue	415 071 000	1	SI/RD/YL	Black
350 lb to 380 lb	415 060 700	415 060 800	2	Blue	415 071 000	2	SI/RD/YL	Black
380 lb to 425 lb	415 060 700	415 060 800	3	Blue	415 071 000	3	SI/RD/YL	Black
425 lb to 450 lb	415 060 700	415 060 800	4	Blue	415 071 000	4	SI/RD/YL	Black
450 lb to 475 lb	415 060 700	415 060 800	4	Blue	415 071 000	5	SI/RD/YL	Black

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SUMMIT 500 (Eur)							
REAR SPRING				CENTER SPRING			
							
RIGHT P/N	LEFT P/N	CAM POSITION	COLOR CODE	P/N	CAM POSITION	COLOR CODE	COLOR

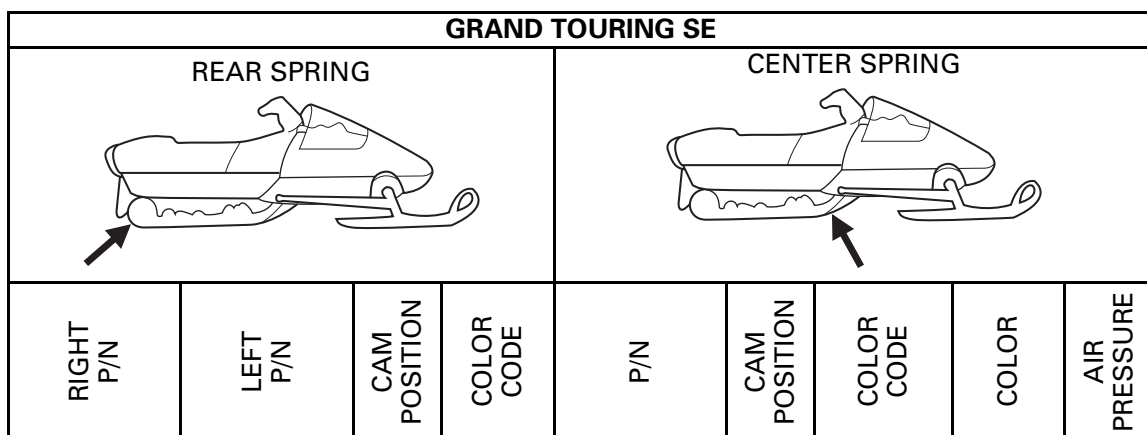
Standard								
Up to 200 lb	414 943 500	414 943 600	1	White	415 070 500	1	BL/YL/YL	Black
200 lb to 230 lb	414 943 500	414 943 600	2	White	415 070 500	2	BL/YL/YL	Black
230 lb to 265 lb	414 943 500	414 943 600	3	White	415 070 500	3	BL/YL/YL	Black
265 lb to 300 lb	414 943 500	414 943 600	4	White	415 070 500	4	BL/YL/YL	Black
300 lb to 325 lb	414 943 500	414 943 600	4	White	415 070 500	5	BL/YL/YL	Black
Option 1								
Up to 250 lb	415 010 500	415 010 600	1	Red	415 071 000	1	SI/RD/YL	Black
250 lb to 280 lb	415 010 500	415 010 600	2	Red	415 071 000	2	SI/RD/YL	Black
280 lb to 325 lb	415 010 500	415 010 600	3	Red	415 071 000	3	SI/RD/YL	Black
325 lb to 350 lb	415 010 500	415 010 600	4	Red	415 071 000	4	SI/RD/YL	Black
350 lb to 375 lb	415 010 500	415 010 600	4	Red	415 071 000	5	SI/RD/YL	Black
Option 2								
Up to 300 lb	414 944 200	414 944 300	1	Green	415 071 000	1	SI/RD/YL	Black
300 lb to 330 lb	414 944 200	414 944 300	2	Green	415 071 000	2	SI/RD/YL	Black
330 lb to 375 lb	414 944 200	414 944 300	3	Green	415 071 000	3	SI/RD/YL	Black
375 lb to 400 lb	414 944 200	414 944 300	4	Green	415 071 000	4	SI/RD/YL	Black
400 lb to 425 lb	414 944 200	414 944 300	4	Green	415 071 000	5	SI/RD/YL	Black
Option 3								
Up to 350 lb	415 060 700	415 060 800	1	Blue	415 071 000	1	SI/RD/YL	Black
350 lb to 380 lb	415 060 700	415 060 800	2	Blue	415 071 000	2	SI/RD/YL	Black
380 lb to 425 lb	415 060 700	415 060 800	3	Blue	415 071 000	3	SI/RD/YL	Black
425 lb to 450 lb	415 060 700	415 060 800	4	Blue	415 071 000	4	SI/RD/YL	Black
450 lb to 475 lb	415 060 700	415 060 800	4	Blue	415 071 000	5	SI/RD/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



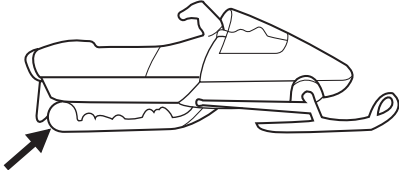
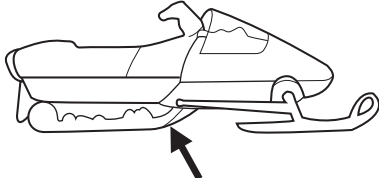
Standard								
Up to 150 lb	414 943 500	414 943 600	1	White	415 070 100	1	GD/YL/YL	Black
150 lb to 180 lb	414 943 500	414 943 600	2	White	415 070 100	2	GD/YL/YL	Black
180 lb to 210 lb	414 943 500	414 943 600	3	White	415 070 100	3	GD/YL/YL	Black
210 lb to 240 lb	414 943 500	414 943 600	4	White	415 070 100	4	GD/YL/YL	Black
240 lb to 265 lb	414 943 500	414 943 600	4	White	415 070 100	5	GD/YL/YL	Black
Option 1								
Up to 200 lb	415 010 500	415 010 600	1	Red	415 070 500	1	BL/YL/YL	Black
200 lb to 230 lb	415 010 500	415 010 600	2	Red	415 070 500	2	BL/YL/YL	Black
230 lb to 265 lb	415 010 500	415 010 600	3	Red	415 070 500	3	BL/YL/YL	Black
265 lb to 300 lb	415 010 500	415 010 600	4	Red	415 070 500	4	BL/YL/YL	Black
300 lb to 325 lb	415 010 500	415 010 600	4	Red	415 070 500	5	BL/YL/YL	Black
Option 2								
Up to 250 lb	414 944 200	414 944 300	1	Green	415 070 500	1	BL/YL/YL	Black
250 lb to 280 lb	414 944 200	414 943 000	2	Green	415 070 500	2	BL/YL/YL	Black
280 lb to 325 lb	414 944 200	414 944 300	3	Green	415 070 500	3	BL/YL/YL	Black
325 lb to 350 lb	414 944 200	414 944 300	4	Green	415 070 500	4	BL/YL/YL	Black
350 lb to 375 lb	414 944 200	414 944 300	4	Green	415 070 500	5	BL/YL/YL	Black
Option 3								
Up to 300 lb	415 060 700	415 060 800	1	Blue	415 070 500	1	BL/YL/YL	Black
300 lb to 330 lb	415 060 700	415 060 800	2	Blue	415 070 500	2	BL/YL/YL	Black
330 lb to 375 lb	415 060 700	415 060 800	3	Blue	415 070 500	3	BL/YL/YL	Black
375 lb to 400 lb	415 060 700	415 060 800	4	Blue	415 070 500	4	BL/YL/YL	Black
400 lb to 425 lb	415 060 700	415 060 800	4	Blue	415 070 500	5	BL/YL/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



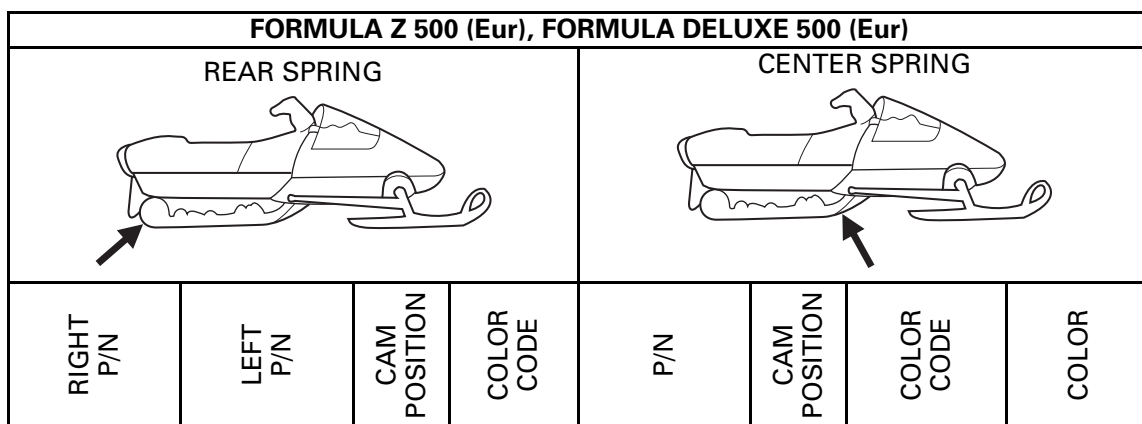
Standard									
Up to 175 lb	415 010 500	415 010 600	1	Red	415 057 600	3	BL/GD	Black	1/8
175 lb to 225 lb	415 010 500	415 010 600	1	Red	415 057 600	3	BL/GD	Black	1/4
225 lb to 300 lb	415 010 500	415 010 600	1	Red	415 057 600	3	BL/GD	Black	1/2
300 lb to 350 lb	415 010 500	415 010 600	1	Red	415 057 600	3	BL/GD	Black	3/4
350 lb to 400 lb	415 010 500	415 010 600	2	Red	415 057 600	3	BL/GD	Black	3/4
400 lb to 450 lb	415 010 500	415 010 600	3	Red	415 057 600	3	BL/GD	Black	3/4
450 lb to 500 lb	415 010 500	415 010 600	4	Red	415 057 600	3	BL/GD	Black	3/4
500 lb to 550 lb	415 010 500	415 010 600	4	Red	415 057 600	3	BL/GD	Black	4/4
Option 1									
Up to 225 lb	414 944 200	414 944 300	1	Green	415 070 700	3	YL/YL/YL	Black	1/8
225 lb to 275 lb	414 944 200	414 944 300	1	Green	415 070 700	3	YL/YL/YL	Black	1/4
275 lb to 325 lb	414 944 200	414 944 300	1	Green	415 070 700	3	YL/YL/YL	Black	1/2
325 lb to 385 lb	414 944 200	414 944 300	1	Green	415 070 700	3	YL/YL/YL	Black	3/4
385 lb to 440 lb	414 944 200	414 944 300	2	Green	415 070 700	3	YL/YL/YL	Black	3/4
440 lb to 500 lb	414 944 200	414 944 300	3	Green	415 070 700	3	YL/YL/YL	Black	3/4
500 lb to 550 lb	414 944 200	414 944 300	4	Green	415 070 700	3	YL/YL/YL	Black	3/4
550 lb to 600 lb	414 944 200	414 944 300	4	Green	415 070 700	3	YL/YL/YL	Black	4/4
Option 2									
Up to 275 lb	415 060 700	415 060 800	1	Blue	415 070 700	3	YL/YL/YL	Black	1/8
275 lb to 325 lb	415 060 700	415 060 800	1	Blue	415 070 700	3	YL/YL/YL	Black	1/4
325 lb to 375 lb	415 060 700	415 060 800	1	Blue	415 070 700	3	YL/YL/YL	Black	1/2
375 lb to 435 lb	415 060 700	415 060 800	1	Blue	415 070 700	3	YL/YL/YL	Black	3/4
435 lb to 490 lb	415 060 700	415 060 800	2	Blue	415 070 700	3	YL/YL/YL	Black	3/4
490 lb to 550 lb	415 060 700	415 060 800	3	Blue	415 070 700	3	YL/YL/YL	Black	3/4
550 lb to 600 lb	415 060 700	415 060 800	4	Blue	415 070 700	3	YL/YL/YL	Black	3/4
600 lb to 650 lb	415 060 700	415 060 800	4	Blue	415 070 700	3	YL/YL/YL	Black	4/4

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

FORMULA Z 500/583 (Can/US), FORMULA DELUXE 500/583 (Can/US)							
REAR SPRING				CENTER SPRING			
							
RIGHT P/N	LEFT P/N	CAM POSITION	COLOR CODE	P/N	CAM POSITION	COLOR CODE	COLOR

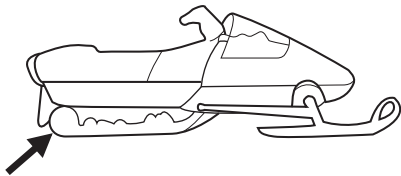
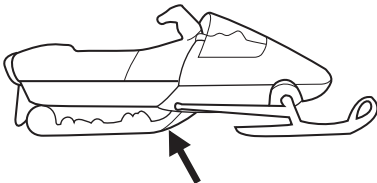
Standard								
Up to 150 lb	415 010 500	415 010 600	1	Red	415 070 400	1	GN/YL/YL	Black
150 lb to 180 lb	415 010 500	415 010 600	2	Red	415 070 400	2	GN/YL/YL	Black
180 lb to 210 lb	415 010 500	415 010 600	3	Red	415 070 400	3	GN/YL/YL	Black
210 lb to 240 lb	415 010 500	415 010 600	4	Red	415 070 400	4	GN/YL/YL	Black
240 lb to 275 lb	415 010 500	415 010 600	4	Red	415 070 400	5	GN/YL/YL	Black
Option 1								
Up to 200 lb	414 944 200	414 944 300	1	Green	415 103 600	1	GN/GN/YL	Safari Red
200 lb to 230 lb	414 944 200	414 944 300	2	Green	415 103 600	2	GN/GN/YL	Safari Red
230 lb to 260 lb	414 944 200	414 944 300	3	Green	415 103 600	3	GN/GN/YL	Safari Red
265 lb to 300 lb	414 944 200	414 944 300	4	Green	415 103 600	4	GN/GN/YL	Safari Red
300 lb to 325 lb	414 944 200	414 944 300	4	Green	415 103 600	5	GN/GN/YL	Safari Red
Option 2								
Up to 250 lb	415 060 700	415 060 800	1	Blue	415 103 600	1	GN/GN/YL	Safari Red
250 lb to 280 lb	415 060 700	415 060 800	2	Blue	415 103 600	2	GN/GN/YL	Safari Red
280 lb to 310 lb	415 060 700	415 060 800	3	Blue	415 103 600	3	GN/GN/YL	Safari Red
325 lb to 350 lb	415 060 700	415 060 800	4	Blue	415 103 600	4	GN/GN/YL	Safari Red
350 lb to 375 lb	415 060 700	415 060 800	4	Blue	415 103 600	5	GN/GN/YL	Safari Red

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



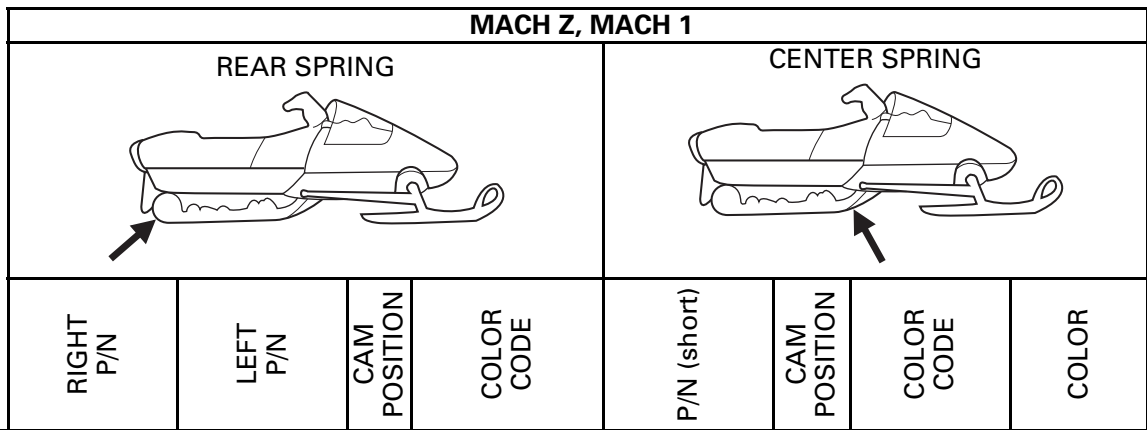
Standard								
Up to 200 lb	414 944 200	414 944 300	1	Green	415 070 400	1	GN/YL/YL	Black
200 lb to 230 lb	414 944 200	414 944 300	2	Green	415 070 400	1	GN/YL/YL	Black
230 lb to 260 lb	414 944 200	414 944 300	3	Green	415 070 400	1	GN/YL/YL	Black
260 lb to 300 lb	414 944 200	414 944 300	4	Green	415 070 400	1	GN/YL/YL	Black
300 lb to 325 lb	414 944 200	414 944 300	4	Green	415 070 400	1	GN/YL/YL	Black
Option 1								
Up to 250 lb	415 060 700	415 060 800	1	Blue	415 103 600	1	GN/GN/YL	Safari Red
250 lb to 280 lb	415 060 700	415 060 800	2	Blue	415 103 600	2	GN/GN/YL	Safari Red
280 lb to 310 lb	415 060 700	415 060 800	3	Blue	415 103 600	3	GN/GN/YL	Safari Red
310 lb to 350 lb	415 060 700	415 060 800	4	Blue	415 103 600	4	GN/GN/YL	Safari Red
350 lb to 375 lb	415 060 700	415 060 800	4	Blue	415 103 600	5	GN/GN/YL	Safari Red

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

FORMULA III 600							
REAR SPRING				CENTER SPRING			
							
RIGHT P/N	LEFT P/N	CAM POSITION	COLOR CODE	P/N	CAM POSITION	COLOR CODE	COLOR

Standard								
Up to 200 lb	414 944 200	414 944 300	1	Green	415 103 600	1	GN/GN/YL	Black
200 lb to 240 lb	414 944 200	414 944 300	2	Green	415 103 600	2	GN/GN/YL	Black
240 lb to 270 lb	414 944 200	414 944 300	3	Green	415 103 600	3	GN/GN/YL	Black
270 lb to 300 lb	414 944 200	414 944 300	4	Green	415 103 600	4	GN/GN/YL	Black
300 lb to 310 lb	414 944 200	414 944 300	4	Green	415 103 600	5	GN/GN/YL	Black
310 lb to 320 lb	414 944 200	414 944 300	4	Green	415 103 600	6	GN/GN/YL	Black
320 lb to 330 lb	414 944 200	414 944 300	4	Green	415 103 600	7	GN/GN/YL	Black
Option 1								
Up to 250 lb	415 060 700	415 060 800	1	Blue	415 057 500	1	RD/GD	Black
250 lb to 290 lb	415 060 700	415 060 800	2	Blue	415 057 500	2	RD/GD	Black
290 lb to 320 lb	415 060 700	415 060 800	3	Blue	415 057 500	3	RD/GD	Black
320 lb to 350 lb	415 060 700	415 060 800	4	Blue	415 057 500	4	RD/GD	Black
350 lb to 360 lb	415 060 700	415 060 800	4	Blue	415 057 500	5	RD/GD	Black
360 lb to 370 lb	415 060 700	415 060 800	4	Blue	415 057 500	6	RD/GD	Black
370 lb to 380 lb	415 060 700	415 060 800	4	Blue	415 057 500	7	RD/GD	Black

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



Standard

Up to 150 lb	503 189 241	503 189 242	1	Orange/Yellow	415 090 500	1	YL/BL/YL	Black
150 lb to 180 lb	503 189 241	503 189 242	2	Orange/Yellow	415 090 500	2	YL/BL/YL	Black
180 lb to 210 lb	503 189 241	503 189 242	3	Orange/Yellow	415 090 500	3	YL/BL/YL	Black
210 lb to 250 lb	503 189 241	503 189 242	4	Orange/Yellow	415 090 500	5	YL/BL/YL	Black
250 lb to 265 lb	503 189 241	503 189 242	4	Orange/Yellow	415 090 500	6	YL/BL/YL	Black
265 lb to 280 lb	503 189 241	503 189 242	4	Orange/Yellow	415 090 500	7	YL/BL/YL	Black

					P/N (long)	CAM POSITION	COLOR CODE	COLOR
					415 090 600	1	RD/BL/YL	Black
					415 090 600	2	RD/BL/YL	Black
					415 090 600	3	RD/BL/YL	Black
					415 090 600	5	RD/BL/YL	Black
					415 090 600	6	RD/BL/YL	Black
					415 090 600	7	RD/BL/YL	Black

Option 1

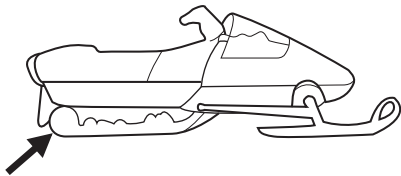
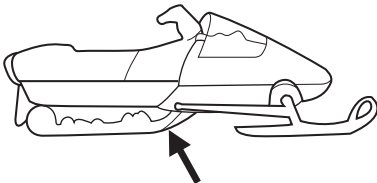
Up to 200 lb	414 944 200	414 944 300	1	Green	415 103 600	1	GN/GN/YL	Black
200 lb to 230 lb	414 944 200	414 944 300	2	Green	415 103 600	2	GN/GN/YL	Black
230 lb to 260 lb	414 944 200	414 944 300	3	Green	415 103 600	3	GN/GN/YL	Black
260 lb to 300 lb	414 944 200	414 944 300	4	Green	415 103 600	5	GN/GN/YL	Black
300 lb to 315 lb	414 944 200	414 944 300	4	Green	415 103 600	6	GN/GN/YL	Black
315 lb to 330 lb	414 944 200	414 944 300	4	Green	415 103 600	7	GN/GN/YL	Black

Option 2

Up to 250 lb	415 060 700	415 060 800	1	Blue	415 103 600	1	GN/GN/YL	Black
250 lb to 280 lb	415 060 700	415 060 800	2	Blue	415 103 600	2	GN/GN/YL	Black
280 lb to 310 lb	415 060 700	415 060 800	3	Blue	415 103 600	3	GN/GN/YL	Black
310 lb to 350 lb	415 060 700	415 060 800	4	Blue	415 103 600	5	GN/GN/YL	Black
350 lb to 365 lb	415 060 700	415 060 800	4	Blue	415 103 600	6	GN/GN/YL	Black
365 lb to 380 lb	415 060 700	415 060 800	4	Blue	415 103 600	7	GN/GN/YL	Black

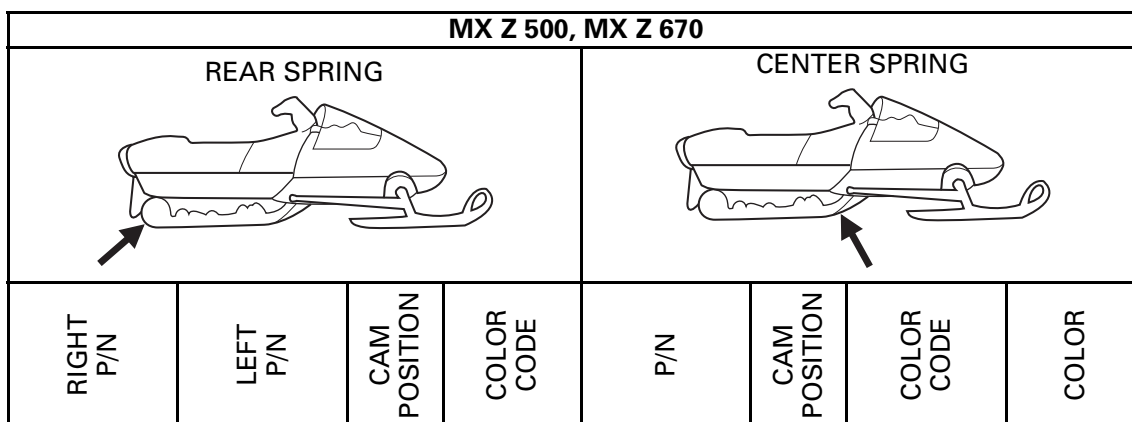
SPRING COLOR CODES

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

GRAND TOURING 583, GRAND TOURING 500							
REAR SPRING				CENTER SPRING			
							
RIGHT P/N	LEFT P/N	CAM POSITION	COLOR CODE	P/N	CAM POSITION	COLOR CODE	COLOR

Standard								
Up to 190 lb	414 944 200	414 944 300	1	Green	415 070 600	1	RD/YL/YL	Black
190 lb to 250 lb	414 944 200	414 944 300	2	Green	415 070 600	2	RD/YL/YL	Black
250 lb to 300 lb	414 944 200	414 944 300	3	Green	415 070 600	3	RD/YL/YL	Black
300 lb to 350 lb	414 944 200	414 944 300	4	Green	415 070 600	4	RD/YL/YL	Black
350 lb to 375 lb	414 944 200	414 944 300	4	Green	415 070 600	5	RD/YL/YL	Black
Option 1								
Up to 240 lb	415 060 700	415 060 800	1	Blue	415 057 600	1	BL/GD	Black
240 lb to 300 lb	415 060 700	415 060 800	2	Blue	415 057 600	2	BL/GD	Black
300 lb to 350 lb	415 060 700	415 060 800	3	Blue	415 057 600	3	BL/GD	Black
350 lb to 400 lb	415 060 700	415 060 800	4	Blue	415 057 600	4	BL/GD	Black
400 lb to 425 lb	415 060 700	415 060 800	4	Blue	415 057 600	5	BL/GD	Black

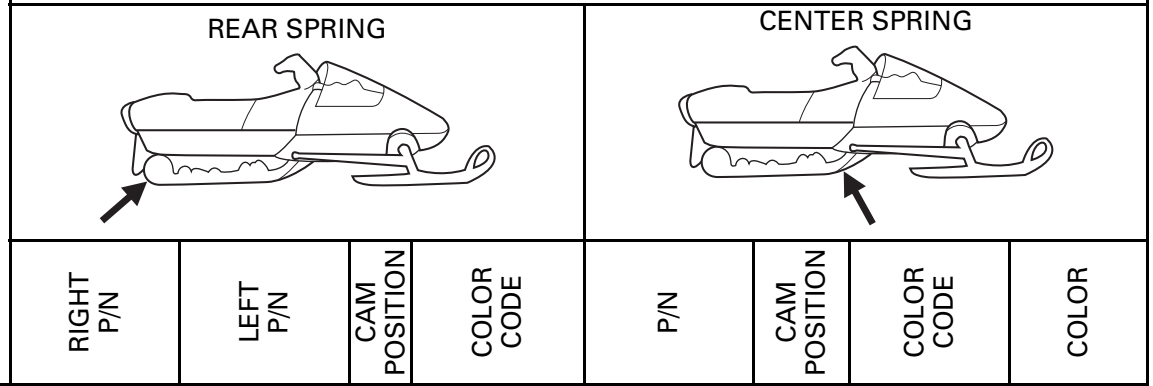
SPRING COLOR CODES
BK = BLACK BL = BLUE GD = GOLD GN = GREEN OR = ORANGE PI = PINK RD = RED SI = SILVER WH = WHITE YL = YELLOW



Standard								
Up to 150 lb	414 943 500	414 943 600	1	White	415 103 600	1	GN/GN/YL	Black
150 lb to 180 lb	414 943 500	414 943 600	2	White	415 103 600	2	GN/GN/YL	Black
180 lb to 210 lb	414 943 500	414 943 600	3	White	415 103 600	3	GN/GN/YL	Black
210 lb to 250 lb	414 943 500	414 943 600	4	White	415 103 600	5	GN/GN/YL	Black
250 lb to 265 lb	414 943 500	414 943 600	4	White	415 103 600	6	GN/GN/YL	Black
265 lb to 280 lb	414 943 500	414 943 600	4	White	415 103 600	7	GN/GN/YL	Black
Option 1								
Up to 200 lb	415 010 500	415 010 600	1	Red	415 057 500	1	RD/GD	Black
200 lb to 230 lb	415 010 500	415 010 600	2	Red	415 057 500	2	RD/GD	Black
230 lb to 260 lb	415 010 500	415 010 600	3	Red	415 057 500	3	RD/GD	Black
260 lb to 300 lb	415 010 500	415 010 600	4	Red	415 057 500	5	RD/GD	Black
300 lb to 315 lb	415 010 500	415 010 600	4	Red	415 057 500	6	RD/GD	Black
315 lb to 330 lb	415 010 500	415 010 600	4	Red	415 057 500	7	RD/GD	Black
Option 2								
Up to 250 lb	414 944 200	414 944 300	1	Green	415 057 500	1	RD/GD	Black
250 lb to 280 lb	414 944 200	414 944 300	2	Green	415 057 500	2	RD/GD	Black
280 lb to 310 lb	414 944 200	414 944 300	3	Green	415 057 500	3	RD/GD	Black
310 lb to 350 lb	414 944 200	414 944 300	4	Green	415 057 500	5	RD/GD	Black
350 lb to 365 lb	414 944 200	414 944 300	4	Green	415 057 500	6	RD/GD	Black
365 lb to 380 lb	414 944 200	414 944 300	4	Green	415 057 500	7	RD/GD	Black
Option 3								
Up to 300 lb	415 060 700	415 060 800	1	Blue	415 057 500	1	RD/GD	Black
300 lb to 330 lb	415 060 700	415 060 800	2	Blue	415 057 500	2	RD/GD	Black
330 lb to 360 lb	415 060 700	415 060 800	3	Blue	415 057 500	3	RD/GD	Black
360 lb to 400 lb	415 060 700	415 060 800	4	Blue	415 057 500	5	RD/GD	Black
400 lb to 415 lb	415 060 700	415 060 800	4	Blue	415 057 500	6	RD/GD	Black
415 lb to 430 lb	415 060 700	415 060 800	4	Blue	415 057 500	7	RD/GD	Black

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

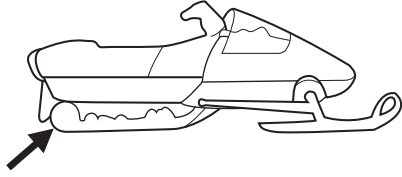
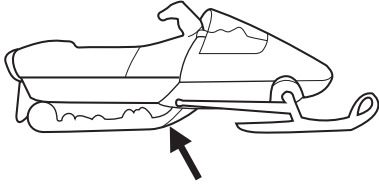
MX Z 600



Standard								
Up to 180 lb	503 188 100	503 188 200	1	Blue/Yellow	415 057 500	1	RD/GD	Black
180 lb to 210 lb	503 188 100	503 188 200	2	Blue/Yellow	415 057 500	2	RD/GD	Black
210 lb to 240 lb	503 188 100	503 188 200	3	Blue/Yellow	415 057 500	3	RD/GD	Black
240 lb to 250 lb	503 188 100	503 188 200	4	Blue/Yellow	415 057 500	4	RD/GD	Black
250 lb to 260 lb	503 188 100	503 188 200	4	Blue/Yellow	415 057 500	5	RD/GD	Black
260 lb to 275 lb	503 188 100	503 188 200	4	Blue/Yellow	415 057 500	6	RD/GD	Black
275 lb to 295 lb	503 188 100	503 188 200	4	Blue/Yellow	415 057 500	7	RD/GD	Black
Option 1								
Up to 230 lb	414 944 200	414 944 300	1	Green	415 057 600	1	BL/GD	Black
230 lb to 260 lb	414 944 200	414 944 300	2	Green	415 057 600	2	BL/GD	Black
260 lb to 290 lb	414 944 200	414 944 300	3	Green	415 057 600	3	BL/GD	Black
290 lb to 300 lb	414 944 200	414 944 300	4	Green	415 057 600	4	BL/GD	Black
300 lb to 310 lb	414 944 200	414 944 300	4	Green	415 057 600	5	BL/GD	Black
310 lb to 325 lb	414 944 200	414 944 300	4	Green	415 057 600	6	BL/GD	Black
325 lb to 345 lb	414 944 200	414 944 300	4	Green	415 057 600	7	BL/GD	Black
Option 2								
Up to 280 lb	415 060 700	415 060 800	1	Blue	415 057 600	1	BL/GD	Black
280 lb to 310 lb	415 060 700	415 060 800	2	Blue	415 057 600	2	BL/GD	Black
310 lb to 340 lb	415 060 700	415 060 800	3	Blue	415 057 600	3	BL/GD	Black
340 lb to 350 lb	415 060 700	415 060 800	4	Blue	415 057 600	4	BL/GD	Black
350 lb to 360 lb	415 060 700	415 060 800	4	Blue	415 057 600	5	BL/GD	Black
360 lb to 375 lb	415 060 700	415 060 800	4	Blue	415 057 600	6	BL/GD	Black
375 lb to 395 lb	415 060 700	415 060 800	4	Blue	415 057 600	7	BL/GD	Black

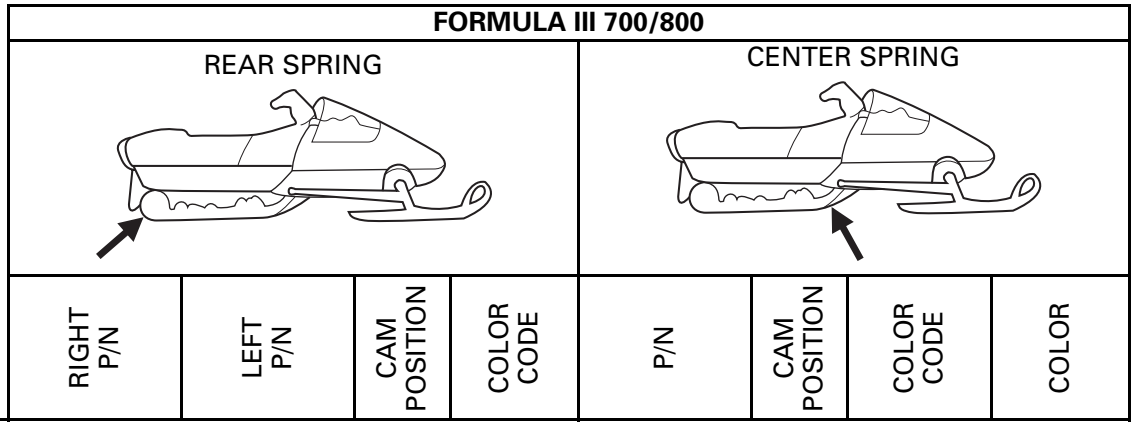
SPRING COLOR CODES

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

GRAND TOURING 700							
REAR SPRING				CENTER SPRING			
							
RIGHT P/N	LEFT P/N	CAM POSITION	COLOR CODE	P/N	CAM POSITION	COLOR CODE	COLOR

Standard								
Up to 200 lb	415 060 700	415 060 800	1	Blue	415 057 600	1	BL/GD	Black
200 lb to 250 lb	415 060 700	415 060 800	2	Blue	415 057 600	2	BL/GD	Black
250 lb to 300 lb	415 060 700	415 060 800	3	Blue	415 057 600	3	BL/GD	Black
300 lb to 350 lb	415 060 700	415 060 800	4	Blue	415 057 600	4	BL/GD	Black
350 lb to 400 lb	415 060 700	415 060 800	4	Blue	415 057 600	5	BL/GD	Black
Option 1								
Up to 225 lb	415 060 700	415 060 800	1	Blue	415 070 700	1	YL/YL/YL	Black
225 lb to 275 lb	415 060 700	415 060 800	2	Blue	415 070 700	2	YL/YL/YL	Black
275 lb to 325 lb	415 060 700	415 060 800	3	Blue	415 070 700	3	YL/YL/YL	Black
325 lb to 375 lb	415 060 700	415 060 800	4	Blue	415 070 700	4	YL/YL/YL	Black
375 lb to 425 lb	415 060 700	415 060 800	4	Blue	415 070 700	5	YL/YL/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

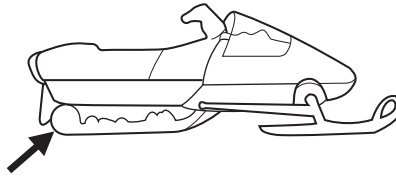


Standard								
Up to 200 lb	414 944 200	414 944 300	1	Green	415 103 600	1	GN/GN/YL	Black
200 lb to 240 lb	414 944 200	414 944 300	2	Green	415 103 600	2	GN/GN/YL	Black
240 lb to 270 lb	414 944 200	414 944 300	3	Green	415 103 600	3	GN/GN/YL	Black
270 lb to 300 lb	414 944 200	414 944 300	4	Green	415 103 600	5	GN/GN/YL	Black
Option 1								
Up to 250 lb	415 060 700	415 060 800	1	Blue	415 057 500	1	RD/GD	Black
250 lb to 290 lb	415 060 700	415 060 800	2	Blue	415 057 500	2	RD/GD	Black
290 lb to 320 lb	415 060 700	415 060 800	3	Blue	415 057 500	3	RD/GD	Black
320 lb to 350 lb	415 060 700	415 060 800	4	Blue	415 057 500	5	RD/GD	Black

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

FORMULA Z 670, FORMULA DLX 670

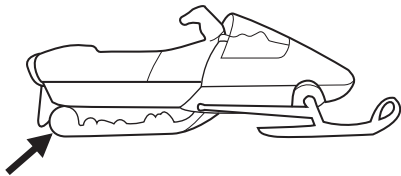
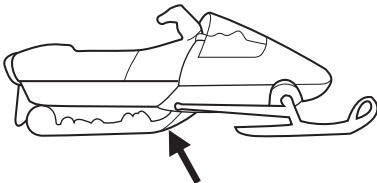
REAR SPRING



	SHORT P/N	SHORT COLOR CODE	LONG P/N	LONG COLOR CODE	CAM POSITION
Standard					
Up to 150 lb	415 090 300	GD/RD/YL	415 090 400	WH/RD/YL	1
150 lb to 180 lb	415 090 300	GD/RD/YL	415 090 400	WH/RD/YL	2
180 lb to 210 lb	415 090 300	GD/RD/YL	415 090 400	WH/RD/YL	3
210 lb to 240 lb	415 090 300	GD/RD/YL	415 090 400	WH/RD/YL	4
240 lb to 270 lb	415 090 300	GD/RD/YL	415 090 400	WH/RD/YL	5
Option 1					
Up to 180 lb	415 090 300	GD/RD/YL	415 110 400	YL/OR/YL	1
180 lb to 210 lb	415 090 300	GD/RD/YL	415 110 400	YL/OR/YL	2
210 lb to 240 lb	415 090 300	GD/RD/YL	415 110 400	YL/OR/YL	3
240 lb to 270 lb	415 090 300	GD/RD/YL	415 110 400	YL/OR/YL	4
270 lb to 300 lb	415 090 300	GD/RD/YL	415 110 400	YL/OR/YL	5

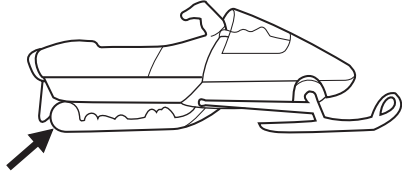
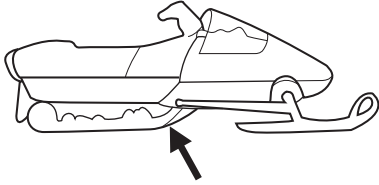
SPRING COLOR CODES

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

MACH Z LT (Can/US)							
REAR SPRING				CENTER SPRING			
							
RIGHT P/N	LEFT P/N	CAM POSITION	COLOR CODE	P/N	CAM POSITION	COLOR CODE	COLOR

Standard								
Up to 200 lb	415 010 500	415 010 600	1	Red	415 057 600	2	BL/GD	Black
200 lb to 250 lb	415 010 500	415 010 600	2	Red	415 057 600	2	BL/GD	Black
250 lb to 300 lb	415 010 500	415 010 600	3	Red	415 057 600	2	BL/GD	Black
300 lb to 350 lb	415 010 500	415 010 600	4	Red	415 057 600	3	BL/GD	Black
350 lb to 400 lb	415 010 500	415 010 600	4	Red	415 057 600	5	BL/GD	Black
Option 1								
Up to 250 lb	414 944 200	414 944 300	1	Green	415 070 700	2	YL/YL/YL	Black
250 lb to 300 lb	414 944 200	414 944 300	2	Green	415 070 700	2	YL/YL/YL	Black
300 lb to 350 lb	414 944 200	414 944 300	3	Green	415 070 700	2	YL/YL/YL	Black
350 lb to 400 lb	414 944 200	414 944 300	4	Green	415 070 700	3	YL/YL/YL	Black
400 lb to 450 lb	414 944 200	414 944 300	4	Green	415 070 700	5	YL/YL/YL	Black
Option 2								
Up to 300 lb	415 060 700	415 060 800	1	Blue	415 070 700	2	YL/YL/YL	Black
300 lb to 350 lb	415 060 700	415 060 800	2	Blue	415 070 700	2	YL/YL/YL	Black
350 lb to 400 lb	415 060 700	415 060 800	3	Blue	415 070 700	2	YL/YL/YL	Black
400 lb to 450 lb	415 060 700	415 060 800	4	Blue	415 070 700	3	YL/YL/YL	Black
450 lb to 500 lb	415 060 700	415 060 800	4	Blue	415 070 700	5	YL/YL/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

MACH Z LT (Eur)							
REAR SPRING				CENTER SPRING			
							
RIGHT P/N	LEFT P/N	CAM POSITION	COLOR CODE	P/N	CAM POSITION	COLOR CODE	COLOR

Standard

Up to 200 lb	415 060 700	415 060 800	1	Blue	415 057 600	1	BL/GD	Black
200 lb to 250 lb	415 060 700	415 060 800	2	Blue	415 057 600	2	BL/GD	Black
250 lb to 300 lb	415 060 700	415 060 800	3	Blue	415 057 600	3	BL/GD	Black
300 lb to 350 lb	415 060 700	415 060 800	4	Blue	415 057 600	4	BL/GD	Black
350 lb to 400 lb	415 060 700	415 060 800	4	Blue	415 057 600	5	BL/GD	Black

Option 1

Up to 225 lb	415 060 700	415 060 800	1	Blue	415 070 700	1	YL/YL/YL	Black
225 lb to 275 lb	415 060 700	415 060 800	2	Blue	415 070 700	2	YL/YL/YL	Black
275 lb to 325 lb	415 060 700	415 060 800	3	Blue	415 070 700	3	YL/YL/YL	Black
325 lb to 375 lb	415 060 700	415 060 800	4	Blue	415 070 700	4	YL/YL/YL	Black
375 lb to 425 lb	415 060 700	415 060 800	4	Blue	415 070 700	5	YL/YL/YL	Black

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-2**

Date: September 23, 1998

SUBJECT: Spring Chart

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1999	All (except utility models)	All	All

This bulletin is divided into 2 main sections.

Section 1: Spring Applications

It is a quick reference chart which provides authorized spring application for each 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.

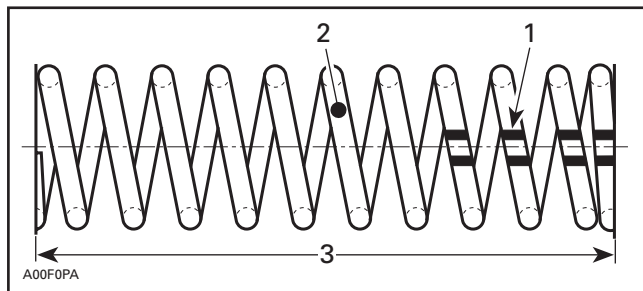
The informations in this bulletin supersede all informations previously published.

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)**

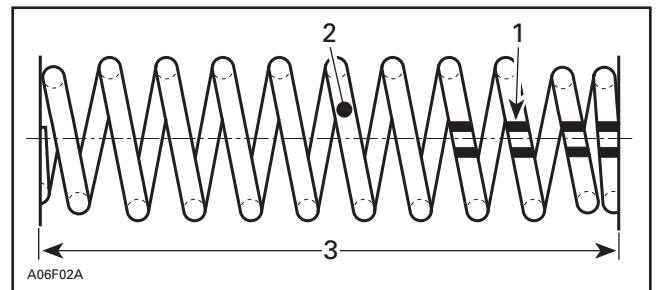
(Single Spring Rate)



1. Color code stripes
2. Wire diameter
3. Free length

**Type T
(barrel shape on both ends)**

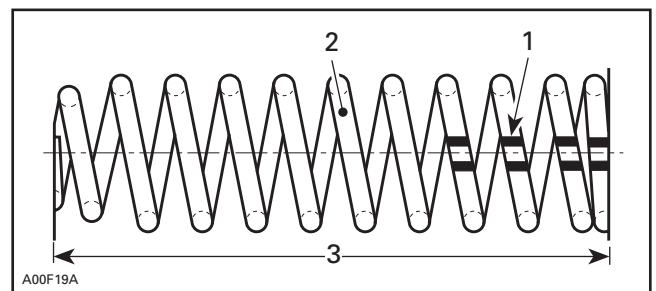
(Single Spring Rate)



1. Color code stripes
2. Wire diameter
3. Free length

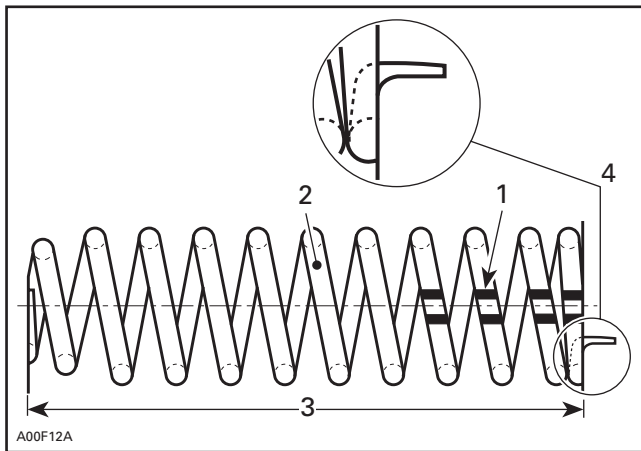
**Type S
(barrel shape on one end)**

(Single Spring Rate)



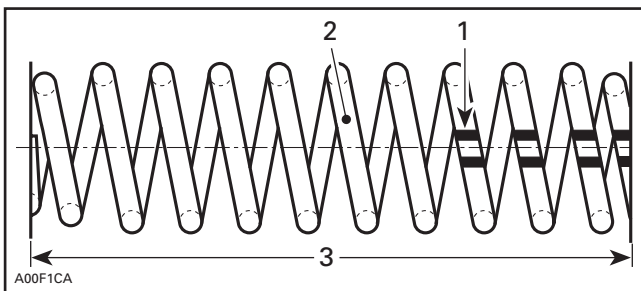
1. Color code stripes
2. Wire diameter
3. Free length

Type U
 (barrel shape on one end with
 positioning tab at the other end)
 (Single Spring Rate)



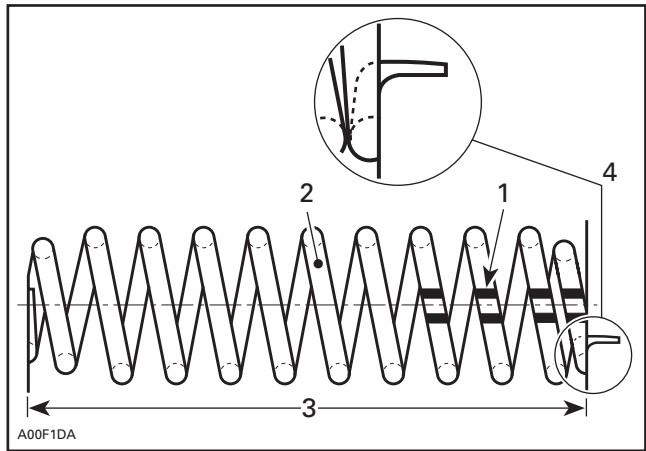
1. Color code stripes
2. Wire diameter
3. Free length
4. Positioning tab

Type 2
 (barrel shape on 1 to 1-1/2 active coils
 on both ends)
 (Dual Spring Rate)



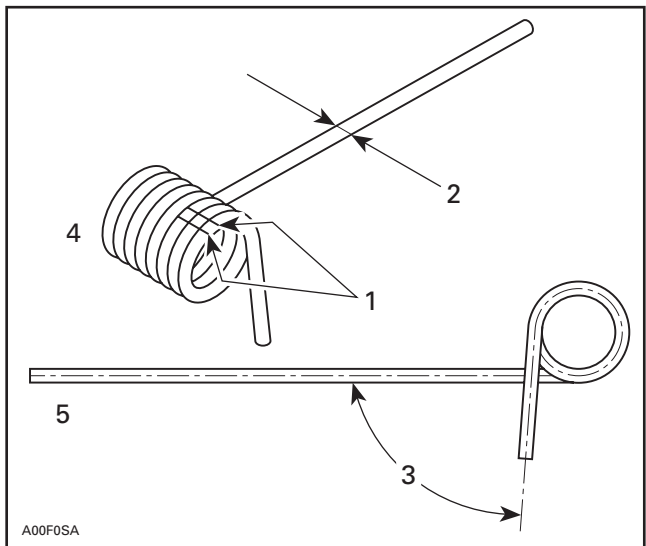
1. Color code stripes
2. Wire diameter
3. Free length

Type 4
 (barrel shape on 1 to 1-1/2 active coils
 on both ends with positioning tab at the
 color code coils end)
 (Dual Spring Rate)



1. Color code stripes
2. Wire diameter
3. Free length
4. Positioning tab

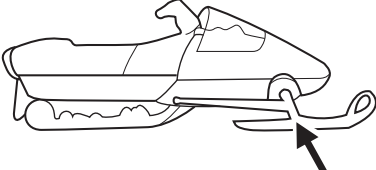
TORSION SPRINGS



1. Color code stripes
2. Wire diameter
3. Opening angle (°)
4. Left hand (LH)
5. Right hand (RH)

SECTION 1

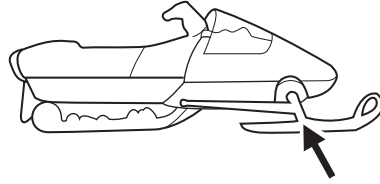
SPRING APPLICATIONS

1999		FRONT SPRINGS		1999	
					
MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING		
MACH Z	414 956 300	415 075 900	415 039 700		
MACH Z LT	Not Applicable	505 070 153	505 070 298		
MACH 1	414 956 300	414 976 100	415 039 700		
FORMULA III 800	Not Applicable	505 070 153	505 070 298		
FORMULA III 700	Not Applicable	505 070 153	505 070 298		
FORMULA III 600	Not Applicable	415 079 300	505 070 144		
FORMULA Z 670	Not Applicable	505 070 240	415 075 900		
FORMULA Z 583	414 956 300	415 075 900	415 039 700		
FORMULA DE LUXE 583	414 956 300	415 075 900	415 039 700		
FORMULA DE LUXE 500	414 956 300	415 075 900	415 039 700		
FORMULA Z 500	414 956 300	415 075 900	415 039 700		
FORMULA SL	414 956 300	415 075 900	415 039 700		
FORMULA SL DE LUXE	414 956 300	415 075 900	415 039 700		
FORMULA S	414 956 300	415 075 900	415 039 700		
FORMULA S DE LUXE	414 956 300	415 075 900	415 039 700		
FORMULA DE LUXE 670	414 956 300	415 075 900	415 039 700		
MX Z 670	505 070 302	505 070 233	505 070 300		
MX Z 600	Not Applicable	505 070 181	Not Applicable		
MX Z 500	505 070 302	505 070 233	505 070 300		
MX Z 440 F	414 956 300	415 075 900	415 039 700		
SUMMIT X 670	414 916 800	415 083 700	415 039 600		
SUMMIT 600	Not Applicable	505 070 020	505 070 305		
SUMMIT 500	414 916 800	415 083 700	415 039 600		
GRAND TOURING SE (Can/US)	Not Applicable	505 070 092	505 070 298		
GRAND TOURING SE (Eur)	Not Applicable	505 070 093	505 070 144		
GRAND TOURING 700	Not Applicable	505 070 091	505 070 298		

1999

FRONT SPRINGS

1999

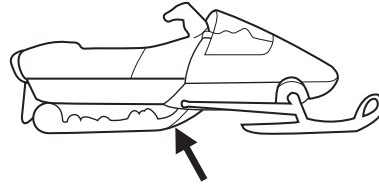


MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING
GRAND TOURING 583	414 956 300	505 070 089	415 039 700
GRAND TOURING 500	414 956 300	505 070 089	415 039 700
TOURING SLE	414 956 300	415 035 900	415 039 700
TOURING LE	414 956 300	415 035 900	415 039 700
TOURING E	414 956 300	415 035 900	415 039 700
SKANDIC 500	414 859 300	414 955 800	414 968 600
SKANDIC 380	414 859 300	414 955 800	414 968 600
TUNDRA	414 803 000	415 095 200	Not Applicable
TUNDRA R	Not Applicable	505 070 130	Not Applicable

1999

CENTER SPRINGS

1999

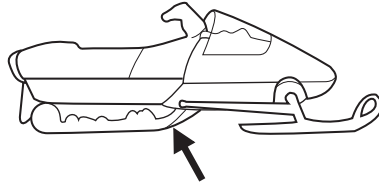


MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING
MACH Z	415 070 400	415 090 500 415 090 600	415 103 600
MACH Z LT	415 057 500	415 057 600	415 070 700
MACH 1	415 070 400	415 090 500 415 090 600	415 103 600
FORMULA III 800	415 070 400	415 103 600	415 057 500
FORMULA III 700	415 070 400	415 103 600	415 057 500
FORMULA III 600	415 070 400	415 103 600	415 057 500
FORMULA Z 670	Not Applicable	415 090 400 415 090 300	415 110 400 415 090 300
FORMULA Z 583	414 974 400	415 070 400	415 103 600
FORMULA DE LUXE 583	414 974 400	415 070 400	415 103 600
FORMULA DE LUXE 500	414 974 400	415 070 400	415 103 600
FORMULA Z 500	414 974 400	415 070 400	415 103 600
FORMULA SL	414 974 400	415 069 900	414 771 300
FORMULA SL DE LUXE	414 859 300	415 070 100	415 070 500
FORMULA S	414 974 400	415 069 900	414 771 300
FORMULA S DE LUXE	414 974 400	415 069 900	414 771 300
FORMULA DE LUXE 670	Not Applicable	415 090 400 415 090 300	415 110 400 415 090 300
MX Z 670	415 070 400	415 103 600	415 057 500
MX Z 600	415 103 600	415 057 500	415 057 600
MX Z 500	415 070 400	415 103 600	415 057 500
MX Z 440 F	414 859 300	415 070 100	415 070 500
SUMMIT X 670	414 859 300	415 070 100	415 070 500
SUMMIT 600	414 859 300	415 070 100	415 070 500
SUMMIT 500	415 070 100	415 070 500	415 071 000
GRAND TOURING SE	415 057 500	415 057 600	415 070 700
GRAND TOURING 700	415 057 500	415 057 600	415 070 700
GRAND TOURING 583	415 035 900	415 070 600	415 057 600
GRAND TOURING 500	415 035 900	415 070 600	415 057 600

1999

CENTER SPRINGS

1999

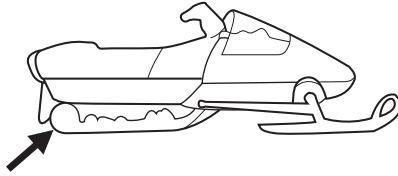


MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING
TOURING SLE	415 070 100	415 070 500	415 071 000
TOURING LE	414 974 400	415 069 900	414 771 300
TOURING E	414 974 400	415 069 900	414 771 300
SKANDIC 500	414 974 400	503 189 000	414 771 300
SKANDIC 380	414 974 400	503 189 000	414 771 300
TUNDRA	Not Applicable	414 880 500 LH 414 880 400 RH	Not Applicable
TUNDRA R	Not Applicable	414 880 500 LH 414 880 400 RH	Not Applicable

1999

REAR SPRINGS

1999



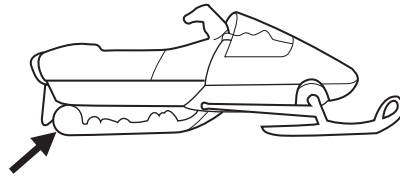
MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING
MACH Z	415 010 600 LH 415 010 500 RH	503 189 242 LH 503 189 241 RH	414 944 300 LH 414 944 200 RH
MACH Z LT (Can/US)	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH
MACH Z LT (Eur)	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH	Not Applicable
MACH 1	415 010 600 LH 415 010 500 RH	503 189 242 LH 503 189 241 RH	414 944 300 LH 414 944 200 RH
FORMULA III 800	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
FORMULA III 700	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
FORMULA III 600	415 010 600 LH 414 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
FORMULA Z 500 (Can/US)	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH
FORMULA Z 500 (Eur)	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
FORMULA Z 583	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH
FORMULA DE LUXE 583	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH
FORMULA DE LUXE 500LC (Can/US)	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH
FORMULA DE LUXE 500LC (Eur)	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
FORMULA SL (Can/US)	Not Applicable	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH
FORMULA SL DE LUXE (Can/US)	Not Applicable	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH
FORMULA SL (Eur)	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH
FORMULA S (Can/US)	Not Applicable	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH
FORMULA S DE LUXE (Can/US)	Not Applicable	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH

LH = Left Hand RH = Right Hand

1999

REAR SPRINGS

1999



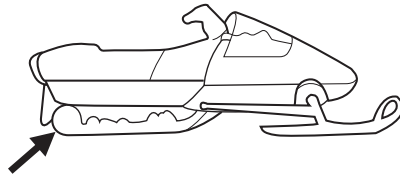
MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING
FORMULA S (Eur)	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH
MX Z 670	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH
MX Z 600	415 010 600 LH 415 010 500 RH	503 188 200 LH 503 188 100 RH	414 944 300 LH 414 944 200 RH
MX Z 500	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH
MX Z 440 LC	to be determined	503 189 083 LH 503 189 080 RH	to be determined
MX Z 440 F (Can/US)	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH
MX Z 440 F (Eur)	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH
SUMMIT X 670	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH
SUMMIT 600	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH
SUMMIT 500 (Can/US)	Not Applicable	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH
SUMMIT 500 (Eur)	414 866 300 LH 414 866 200 RH	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH
GRAND TOURING SE	414 943 600 LH 414 943 500 RH	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH
GRAND TOURING 700	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH	Not Applicable
GRAND TOURING 583	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
GRAND TOURING 500	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
TOURING SLE	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
TOURING LE	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
TOURING E	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH

LH = Left Hand RH = Right Hand

1999

REAR SPRINGS

1999



MODEL	(P/N) SOFTER SPRING	(P/N) STANDARD	(P/N) HARDER SPRING
SKANDIC 500	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
SKANDIC 380	415 010 600 LH 415 010 500 RH	414 944 300 LH 414 944 200 RH	415 060 800 LH 415 060 700 RH
TUNDRA	Not Applicable	414 880 200 LH 414 880 300 RH	503 189 252 LH 503 189 251 RH
TUNDRA R	Not Applicable	414 880 200 LH 414 880 300 RH	503 189 252 LH 503 189 251 RH

LH = Left Hand RH = Right Hand

SECTION 2

SPRING SPECIFICATIONS

Coil Springs Specifications 1999

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
414 771 300	R	135	272.5	8.41	BK/BK	SAFARI RED
414 782 300	R	225	165	8.41	BK	SAFARI RED
414 788 200	R	150	272.5	8.41	BK/YL	SAFARI RED
414 789 400	R	135	272.5	8.41	BK/BK	AQUA BLUE
414 797 700	R	135	272.5	8.41	BK/BK	FLAME RED
414 797 800	R	135	272.5	8.41	BK/BK	PEARL BLUE
414 797 900	R	135	272.5	8.41	BK/BK	VIOLET
414 803 000	R	65	408	6.17	BL/OR	BLACK
414 808 800	R	120	272.5	7.77	BK/OR	SAFARI RED
414 809 300	R	160	213.1	7.77	WH	BLACK
414 809 500	R	150 ± 5	256.8	7.92	BK	YELLOW
414 810 100	R	125 ± 5	256.8	7.49	WH	YELLOW
414 859 300	R	90 ± 7	239	7.14	BK/WH	YELLOW
414 861 600	R	135	272.5	8.41	BK/BK	YELLOW
414 869 000	R	125 ± 5	256.8	7.49	WH	SAFARI RED
414 871 600	R	150 ± 5	256.8	7.92	WH	VIOLET
414 877 800	R	160 ± 7	223.1	7.92	WH/WH	BLACK
414 891 000	R	100 ± 7	260	7.14	WH/BK	SAFARI RED
414 893 800	R	185 ± 7	213	8.41	GN/GN	YELLOW
414 895 100	R	100	255	7.14	PI/GD	BLACK
414 916 800	R	90 ± 7	239	7.14	RD	FIREFLY GREEN
414 928 100	R	110	256.8	7.77	GD/BK	SAFARI RED
414 928 600	R	100 ± 7	260	7.14	GD	RASPBERRY
414 929 300	R	110	256.8	7.77	BK/RD	PEARL BLUE
414 929 500	R	100 ± 7	260	7.14	RD/YL	PEARL BLUE

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

P/N	TYPE	SPRING RATE (lbs/in) ± 10	FREE LENGTH (mm) ± 3	WIRE DIAMETER (mm) ± .05	COLOR CODE STRIPES	COLOR OF SPRING
414 940 200	R	140 ± 7	223	7.77	WH/GN	BLACK
414 955 800	R	100	239	7.14	RD/GN/GN	BLACK
414 955 900	R	125 ± 5	256.8	7.49	BK/RD	NEON GREEN
414 956 000	R	125 ± 5	256.8	7.49	BL/RD	BLACK
414 956 100	R	125 ± 5	256.8	7.49	BL/BL/BL	VIPER RED
414 956 200	R	115	242	7.77	PI/BL	BLACK
414 956 300	R	100	265	7.14	PI/WH/BL	YELLOW
414 956 400	R	100 ± 7	260	7.14	RD/YL/BL	ROYAL VIOLET
414 956 500	R	100 ± 7	260	7.14	BL/YL/GN	VIPER RED
414 956 800	R	100 ± 7	260	7.14	RD/YL	NEON GREEN
414 968 600	R	125	235	7.49	RD	NEON GREEN
414 974 400	R	90	265	7.14	GN/OR	BLACK
414 974 500	R	115	265	7.49	OR/WH	BLACK
414 976 000	R	135	242	8.25	PI/GN	BLACK
414 976 100	R	125	262	7.92	PI/YL	VIPER RED
415 012 900	R	115	260	7.92	PI/YL	BLACK
415 016 700	R	200	230	8.71	PI/OR/YL	BLACK
415 013 800	R	150	264	7.77	BK/PI/WH	NEON GREEN
415 013 900	R	150	264	7.77	PI/WH/YL	ROYAL VIOLET
415 014 200	R	150	264	7.77	GN/OR/BL	PEARL BLUE
415 014 500	R	150	264	7.77	BK/WH/OR	VIPER RED
415 020 600	R	125	203.2	7.77	4 Green lines	BLACK
415 020 700	R	150	203.2	7.92	4 Red lines	BLACK
415 020 800	R	70	152	5.73	4 Blue lines	BLACK
415 020 900	R	150	190.5	8.29	4 Pink lines	BLACK
415 035 500	R	125	262	7.92	SI/GN	YELLOW
415 035 600	R	125	235	7.49	OR	FRENCH BLUE
415 035 700	R	125	262	7.92	SI/OR	JAY BLUE
415 035 800	R	125	262	7.92	SI/PI	FIR GREEN
415 035 900	R	125	262	7.92	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

P/N	TYPE	SPRING RATE (lbs/in) ± 10	FREE LENGTH (mm) ± 3	WIRE DIAMETER (mm) ± .05	COLOR CODE STRIPES	COLOR OF SPRING
415 038 500	R	100	265	7.14	SI/GD	VIPER RED
415 039 600	R	150	235	8.41	GN	BLACK
415 039 700	R	150	258	8.71	PI	BLACK
415 039 800	R	140	257	8.71	SI	BLACK
415 039 900	R	150	238	8.71	SI/WH	BLACK
415 040 000	R	130	250	8.25	SI/SI	BLACK
415 040 100	R	215	218	9.19	OR/PI	BLACK
415 057 500	R	160	264	8.71	RD/GD	BLACK
415 058 200	R	115	270	7.92	GN/GD	BLACK
415 069 600	R	300	170	9.50	YL/BK/YL	BLACK
415 075 800	R	125	262	7.92	PI/RD/BK	FRENCH BLUE
415 075 900	R	125	262	7.92	BL/RD/BK	YELLOW
415 076 000	R	100	265	7.14	RD/RD/BK	YELLOW
415 083 700	R	125	235	7.49	OR/RD/BK	YELLOW
415 090 300	R	376	76	8.25	GD/RD/YL	BLACK
415 090 500	R	293	45	6.17	YL/BL/YL	BLACK
415 095 200	R	75	408	6.17	BL/BL/YL	BLACK
503 100 700	R	65	290	6.35	BL/YL	BLACK
505 070 089	R	125	262	7.92	GN/BK/BK	GOLDEN WHEAT
505 070 130	R	75	408	6.17	YL/PI/YL	BLACK
415 090 400	S	359	215	10.60	WH/RD/YL	BLACK
415 090 600	S	220	210	9.19	RD/BL/YL	BLACK
415 110 400	S	400	215	11.10	YL/OR/YL	BLACK
414 809 100	T	125 ± 5	274	7.92	GD	YELLOW
414 815 500	T	135	259	7.77	BK/WH	VIOLET
414 852 800	T	100 ± 7	279	7.92	RD	YELLOW
414 871 300	T	125 ± 5	274	7.92	GD	SAFARI RED
414 871 500	T	125 ± 5	274	7.92	GD	VIOLET
414 894 100	T	112 ± 7	279.4	8.41	BK/GN	YELLOW
414 916 900	T	100 ± 7	279	7.92	BK/WH	FIREFLY GREEN

SPRING COLOR CODES

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

P/N	TYPE	SPRING RATE (lbs/in) ± 10	FREE LENGTH (mm) ± 3	WIRE DIAMETER (mm) ± .05	COLOR CODE STRIPES	COLOR OF SPRING
414 925 400	T	100 ± 7	279	7.92	WH/BK	SAFARI RED
414 926 000	T	100 ± 7	279	7.49	BK	RASPBERRY
414 926 900	T	110	279.4	7.77	GN/YL	SAFARI RED
414 927 100	T	110	279.4	7.77	BK/YL	PEARL BLUE
414 927 500	T	100 ± 7	279	7.92	RD/WH	PEARL BLUE
414 988 600	T	100 ± 7	279	7.49	PI/PI	BLACK
414 998 600	T	100 ± 7	279	7.49	BK/PI	SAFARI RED
415 006 900	T	150 ± 7	272.5	8.41	BK/YL	FIREFLY GREEN
415 007 000	T	135 ± 7	272.5	8.41	BK/BK	FIREFLY GREEN
415 014 300	T	150	264	7.77	GN/OR/PI	CAN-AM RED
415 057 500	T	160	264	8.71	RD/GD	BLACK
415 057 600	T	180	260	9.52	BL/GD	BLACK
415 069 900	T	115	265	7.49	SI/YL/YL	BLACK
415 070 000	T	135	242	8.25	WH/YL/YL	BLACK
415 070 100	T	115	242	7.92	GD/YL/YL	BLACK
415 070 200	T	115	270	7.92	PI/YL/YL	BLACK
415 070 300	T	100	264	7.49	OR/YL/YL	BLACK
415 070 400	T	115	270	8.25	GN/YL/YL	BLACK
415 070 500	T	135	242	8.41	BL/YL/YL	BLACK
415 070 600	T	160	264	9.19	RD/YL/YL	BLACK
415 070 700	T	200	263	9.52	YL/YL/YL	BLACK
415 071 000	T	150	242	8.71	SI/RD/YL	BLACK
415 079 300	T	85	290	7.77	RD/BL/BK	YELLOW
415 079 400	T	85	315	8.25	RD/GN/BK	YELLOW
415 079 500	T	85	290	7.77	GN/RD/YL	VIPER RED
415 079 600	T	85	315	8.25	OR/RD/YL	FRENCH BLUE
415 079 700	T	85	315	8.25	PI/YL/RD	PLATINUM
415 103 600	T	135	264	8.25	GN/GN/YL	BLACK
503 127 200	T	170	258	8.71	BL/GN	BLACK
503 135 400	T	250	300	10.31	RD/OR	BLACK

SPRING COLOR CODES

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

P/N	TYPE	SPRING RATE (lbs/in) ± 10	FREE LENGTH (mm) ± 3	WIRE DIAMETER (mm) ± .05	COLOR CODE STRIPES	COLOR OF SPRING
503 189 000	T	115	265	7.92	YL/GD/YL	BLACK
505 070 020	T	90	250	7.77	BK/OR/BK	YELLOW
505 070 093	T	85	290	7.77	BK/GN/BK	GRAND CANYON RED
505 070 144	T	100	290	8.25	RD/BK/RD	YELLOW
505 070 146	T	100	315	8.71	RD/RD/RD	YELLOW
505 070 240	T	90	265	7.49	RD/PI/BK	YELLOW
505 070 305	T	105	250	8.25	RD/OR/BK	YELLOW
415 108 100	U	125	260	8.25	BK/RD/BK	YELLOW
505 070 233	U	125	262	7.92	PI/BL/BK	YELLOW
505 070 300	U	150	258	8.71	GN/PI/BK	YELLOW
505 070 302	U	100	265	7.14	OR/PI/BK	YELLOW
505 070 091	2	65-95	340	8.25	BK/BL/BK	GOLDEN WHEAT
505 070 092	2	65-95	340	8.25	BK/YL/BK	GRAND CANYON RED
505 070 153	2	65-95	340	8.25	GN/GN/BK	YELLOW
505 070 298	2	70-100	340	8.25	BL/PI/BK	YELLOW
505 070 181	4	55-85	320	7.77	PI/BK/BK	YELLOW

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 Specification 1998

P/N	WIRE DIAMETER (mm)	OPENING ANGLE $\pm 7^\circ$	COLOR CODE	COLOR OF SPRING
414 866 300 LH 414 866 200 RH	10.3	85°	YL	BLACK
414 880 200 LH 414 880 300 RH	9.5	100°	Not Applicable	BLACK
414 880 500 LH 414 880 400 RH	10.3	12°	Not Applicable	BLACK
414 943 600 LH 414 943 500 RH	10.6	90°	WH	BLACK
414 944 300 LH 414 944 200 RH	11.11	90°	GN	BLACK
415 010 600 LH 415 010 500 RH	10.6	80°	RD	BLACK
415 060 800 LH 415 060 700 RH	11.11	80°	BL	BLACK
415 069 400 LH 415 069 300 RH	11.11	100°	OR	BLACK
486 071 200 LH 486 071 100 RH	10.3	135°	YL/YL	BLACK
486 071 400 LH 486 071 300 RH	10.3	150°	WH/WH	BLACK
503 188 200 LH 503 188 100 RH	11.11	100°	BL/YL	BLACK
503 189 083 LH 503 189 080 RH	11.5	100°	GD	BLACK
503 189 242 LH 503 189 241 RH	11.11	105°	OR/YL	BLACK
503 189 252 LH 503 189 251 RH	10.3	95°	RD/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

Please route to :

<input type="checkbox"/> Service	<input type="checkbox"/> Init.
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-3**

Date: November 13, 1998

SUBJECT: Technical Specifications

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	All	All	All

This *bulletin* updates and supersedes all service publications for the 1999 models concerning carburetor calibration, drive and driven pulleys.

Please correct all involved publications (*Shop Manual, Predelivery Bulletins, Specification Booklet, Racing Handbook*) accordingly.

CARBURETOR CALIBRATION

CARBURETOR CALIBRATION BOMBARDIER MODELS 1999														
ENGINE	NO. BOMBARDIER	MODEL	CARBURETOR	IDLE ± 0.2	R.P.M. ± 200	M.J.	J.N.	C.A.	P.J.	A.S. ± 1/16	V.S.	N.J.	S.J.	FLOAT LEVEL ± 1
277	403 138 501	Tundra II LT	VM34-529	1.3	1200	190	6DH4-2	2.5	40	1.0	1.5	0-8 (159)	N.A.	23.9
277	403 138 566	Tundra R	VM34-537	1.5	1650	190	6DH4-2	2.5	40	1.0	1.5	0-8 (159)	N.A.	23.9
377	403 138 540	Formula S	VM30-195	1.3	1650	140	6DP9-3	2.5	40	1.25	1.5	P-0 (159)	1.2	23.9
377	403 138 563	Skandic 380, Formula Deluxe 380, Touring E	VM30-196	1.3	1650	140	6DP9-3	2.5	40	1.25	1.5	P-0 (159)	0.9	23.9
443	403 138 543	MX Z 440	VM34-530 PTO	1.5	1650	205	6DH2-3	2.5	35	[1.5]	1.5	P-0 (159)	1.2	23.9
	403 138 544	Touring LE	VM34-531 MAG	1.5	1650	195	6DH2-3	2.5	35	[1.5]	1.5	P-0 (159)	1.2	23.9
453	403 138 000	MX Z x 440 LC	TMX34-1 PTO	1.8	1600	290	6F1Y5/58-3	4.0	25	[1.0]	1.5	Q-6	N.A.	N.A.
494	403 138 527	Formula Z 500	VM38-408 PTO	1.8	1800	300	6DGY9-2	2.5	50	[2.0]	1.5 (V)	Q-3 (480)	N.A.	18.1
	403 138 528	Formula Deluxe 500 LC	VM38-409 MAG	1.8	1800	280	6DGY9-2	2.5	50	[2.0]	1.5 (V)	Q-3 (480)	N.A.	18.1
494	403 138 517	Grand Touring	VM38-410 PTO	1.8	1800	300	6DGY9-2	2.5	50	[2.0]	1.5 (V)	Q-3 (480)	N.A.	18.1
	403 138 518	500	VM38-411 MAG	1.8	1800	280	6DGY9-2	2.5	50	[2.0]	1.5 (V)	Q-3 (480)	N.A.	18.1
494	403 138 521	MX Z 500	VM38-412 PTO	1.8	1800	300	6DGY9-3	2.5	50	[2.5]	1.5 (V)	Q-4 (480)	N.A.	18.1
	403 138 522		VM38-413 MAG	1.8	1800	280	6DGY9-3	2.5	50	[2.5]	1.5 (V)	Q-4 (480)	N.A.	18.1
494	403 138 519	Summit 500	VM38-414 PTO	2.2	1800	350	6DHY48-4	2.5	75	[2.0]	1.5 (V)	Q-6 (480)	N.A.	18.1
	403 138 520	(HAC)	VM38-415 MAG	2.2	1800	330	6DHY48-4	2.5	75	[2.0]	1.5 (V)	Q-6 (480)	N.A.	18.1
503	403 138 541	Skandic 500	VM34-532 PTO	1.5	1650	180	6DH2-3	2.5	40	[1.875]	1.5	P-0 (159)	0.9	23.9
	403 138 542	Touring SLE Formula SL Formula Deluxe 503	VM34-533 MAG	1.5	1650	170	6DH2-3	2.5	40	[1.875]	1.5	P-0 (159)	0.9	23.9
583	403 138 511	Formula Deluxe 583	VM38-416 PTO	2.0	1800	270	6DEY4-2	2.5	50	[2.0]	1.5 (V)	P-7 (480)	N.A.	18.1
	403 138 512	Grand Touring 583	VM38-417 MAG	2.0	1800	260	6DEY4-2	2.5	50	[2.0]	1.5 (V)	P-7 (480)	N.A.	18.1
583	403 138 525	Formula Z 583	VM40-105 PTO	2.0	1800	280	7ECY1-3	2.5	60	[2.0]	1.5 (V)	AA-2 (224)	N.A.	18.1
	403 138 526		VM40-106 MAG	2.0	1800	260	7ECY1-3	2.5	60	[2.0]	1.5 (V)	AA-2 (224)	N.A.	18.1
599	403 138 550	Formula III 600	VM36-190	1.3	1800	270	6DEY2-2	2.5	50	[2.0]	1.5 (V)	P-0 (286)	1.5	18.1
593	403 138 200	MX Z 600	VM40-107	1.3	1600	280	7DFY1-3	2.5	37.5	[0.5]	1.5 (V)	Z-9 (224)	1.3	22.9*
593	403 138 400	Summit 600	VM40-113	1.7	1600	280	7DFY1-3	2.5	37.5	[0.5]	1.5 (V)	Z-9 (224)	1.3	22.9*
670	403 138 513	Formula Deluxe 670	VM40-109 PTO	2.1	1700	310	7EDY1-3	2.5	60	[2.25]	1.5 (V)	AA-3 (224)	N.A.	18.1
	403 138 514	Formula Z 670	VM40-110 MAG	2.1	1700	290	7EDY1-3	2.5	60	[2.25]	1.5 (V)	AA-3 (224)	N.A.	18.1
670	403 138 559	MX Z 670 H.O. (DPM hybrid)	VM44-36 PTO	1.9	1700	340	7ECY1-3	2.5	55	[1.75]	1.5 (V)	AA-4 (224)	N.A.	22.9*
	403 138 560		VM44-37 MAG	1.9	1700	310	7ECY1-3	2.5	55	[1.75]	1.5 (V)	AA-4 (224)	N.A.	22.9*
670	403 138 545	Summit x 670 (DPM hybrid)	VM44-38 PTO	2.4	1700	350	7ECY1-2	2.5	55	[1.75]	1.5 (V)	AA-8 (224)	N.A.	22.9*
	403 138 546		VM44-39 MAG	2.4	1700	340	7ECY1-2	2.5	55	[1.75]	1.5 (V)	AA-8 (224)	N.A.	22.9*
699	403 138 557	Mach 1 Mach 1 R	TM38-C224	1.3	1800	300	8AGY1/41-4	2.0	50	[4.0]	1.5 (V)	N-7 (327)	1.0	21.0
699	403 138 551	Formula III 700	VM38-420	1.2	1800	290	6DEH5-3	2.5	50	[2.5]	1.5 (V)	P-1 (480)	1.5	18.1

**CARBURETOR CALIBRATION
BOMBARDIER MODELS 1999**

ENGINE	NO. BOMBARDIER	MODEL	CARBURETOR	IDLE ± 0.2	R.P.M. ± 200	M.J.	J.N.	C.A.	P.J.	A.S. ± 1/16	V.S.	N.J.	S.J.	FLOAT LEVEL ± 1
699	403 138 547	Grand Touring 700 (DPM)	VM38-422	1.2	1800	290	6DEH5-3	2.5	50	[2.5]	1.5 (V)	P-1 (480)	N.A.	18.1
809	403 138 558	Formula III 800	TM38-C228 PTO	1.3	1800	270	8ADY1/41-3	2.0	50	[4.5]	1.5 (V)	0-2 (327)	1.5	21.0
			CEN	1.3	1800	290	8ADY1/41-3	2.0	50	[4.5]	1.5 (V)	0-2 (327)	1.5	21.0
			MAG	1.3	1800	280	8ADY1/41-3	2.0	50	[4.5]	1.5 (V)	0-2 (327)	1.5	21.0
809	403 138 556	Grand Touring SE (DPM)	TM38-C232 PTO	1.3	1800	270	8ADY1/41-3	2.0	50	[4.5]	1.5 (V)	0-2 (327)	N.A.	21.0
			CEN	1.3	1800	290	8ADY1/41-3	2.0	50	[4.5]	1.5 (V)	0-2 (327)	N.A.	21.0
			MAG	1.3	1800	280	8ADY1/41-3	2.0	50	[4.5]	1.5 (V)	0-2 (327)	N.A.	21.0
809	403 138 555	Mach Z Mach Z R Mach Z LT Mach Z LT R	TM 38-C236	1.3	1800	310	8ADY1/41-3	2.0	50	[4.5]	1.5 (V)	0-2 (327)	1.0	21.0

* = WITH STRAIGHT FLOAT ARM

V = VITON TYPE

[X.XX] = FINE THREAD (20°, 0.5 mm PITCH)

COLOR IDENTIFICATION: MAG: RED

CENTER: YELLOW

PTO: BLUE

DRIVE PULLEY

BOMBARDIER SKI-DOO — 1999 MODELS TRANSMISSION SYSTEM DEFINITION													
MODEL	ENGINE	DRIVE PULLEY											
		MODEL	PART NUMBER	TAPER	RING GEAR	GOVERNOR CUP	SLIDER	SPRING	PIN OR WEIGHT	RAMP OR BLOC	POS. CALIB. OR CAPSULE	ENGAGEMENT ±100 RPM	MAX. SPEED ±100 RPM
Tundra	277	Powerbloc	417 219 700	1:10	No	Standard	N.A.	Turquoise 417 115 900	N.A.	417 114 300	417 114 500 Qty = 2	3100	6900
Tundra R	277	Powerbloc	417 219 700	1:10	No	Standard	N.A.	Turquoise 417 115 900	N.A.	417 114 300	417 114 500 Qty = 2	3100	6900
Formula S	377	Powerbloc	417 221 000	1:10	No	Standard	N.A.	Red/Blue 417 118 400	417 120 400 Qty = 1	417 118 100	417 114 500 Qty = 1	3500	6900
Formula Deluxe 377	377	Powerbloc	417 221 100	1:10	Yes	Standard	N.A.	Red/Blue 417 118 400	417 120 400 Qty = 1	417 118 100	417 114 500 Qty = 1	3500	6900
Touring E	377	Powerbloc	417 220 900	1:10	Yes	Standard	N.A.	Green/Green 417 125 300	417 120 400 Qty = 1	417 118 100	417 114 500 Qty = 1	2500	6900
Skandic 380	377	Powerbloc	417 222 163	1:10	No	Standard	N.A.	Green/Green 417 125 300	417 120 400 Qty = 1	417 118 100	417 114 500 Qty = 1	2500	6900
Touring LE	443	TRA	417 222 054	1:10	Yes	Cushion drive	417 005 800 Peek	Red/Yellow 414 817 500	417 004 309 Hollow	417 005 284 284	2	2900	7000
MX Z 440	443	TRA	417 222 009	1:10	No	Cushion drive	417 005 800 Peek	Blue/Yellow 414 689 500	417 004 309 Hollow	417 005 291X 291X	3	3700	7000
MX Zx 440 LC	453	TRA Light	417 222 080	1:7.5	No No embosses	Light cushion drive	417 222 107 Vespel	White/Silver 417 222 164	504 151 700 10.3 g. Threaded	417 222 089 296	4	5300	8500
Formula Deluxe 500	494	TRA	417 222 015	1:7.5	Yes	Cushion drive	417 005 800 Peek	Violet/Blue 415 034 900	417 004 309 Hollow	417 005 286 286	2	3800	7800
Formula Z 500	494	TRA	417 222 020	1:7.5	No	Cushion drive	417 005 800 Peek	Violet/Yellow 415 015 300	417 004 309 Hollow	417 005 281 281	2	4100	7800
Grand Touring 500	494	TRA	417 222 013	1:7.5	Yes	Cushion drive	417 005 800 Peek	Blue/Green 414 817 700	417 004 309 Hollow	417 005 228 228	2	3600	7800
MX Z 500	494	TRA	417 222 020	1:7.5	No	Cushion drive	417 005 800 Peek	Violet/Yellow 415 015 300	417 004 309 Hollow	417 005 281 281	2	4100	7800
Summit 500	494	TRA	417 222 022	1:7.5	No	Cushion drive	417 005 800 Peek	Green/Blue 414 768 200	417 004 309 Hollow	417 005 294 294	4	4200	7800
Skandic WT LC	494	TRA	—	1:7.5	Yes	Cushion drive	417 005 800 Peek	Yellow/Blue 414 818 000	417 004 308 Solid	417 005 290 290	4	2700	7000
Formula SL	503	TRA	417 222 008	1:10	No	Cushion drive	417 005 800 Peek	Yellow/Red 414 993 000	417 004 309 Hollow	417 005 291X 291X	3	3300	7000
Formula Deluxe 503	503	TRA	417 222 055	1:10	Yes	Cushion drive	417 005 800 Peek	Yellow/Red 414 993 000	417 004 309 Hollow	417 005 291X 291X	3	3300	7000
Skandic WT	503	TRA	—	1:10	Yes	Cushion drive	417 005 800 Peek	Yellow/Orange 414 689 700	417 004 309 Hollow	417 005 290 290	4	2800	6800
Skandic SWT	503	TRA	—	1:10	Yes	Cushion drive	417 005 800 Peek	Red/Yellow 414 817 500	417 004 309 Hollow	417 005 146 146	4	2300	6500
Touring SLE	503	TRA	417 222 032	1:10	Yes	Cushion drive	417 005 800 Peek	Red/Red 414 689 800	417 004 309 Hollow	417 005 291X 291X	3	2900	7000
Skandic 500	503	TRA	417 222 057	1:10	No	Cushion drive	417 005 800 Peek	Red/Red 414 689 800	417 004 309 Hollow	417 005 292X 292X	3	2900	7000
Formula Deluxe 583	583	TRA	417 222 016	1:10	Yes	Cushion drive	417 005 800 Peek	Violet/Blue 415 034 900	417 004 309 Hollow	417 005 286 286	3	4100	7900

**BOMBARDIER SKI-DOO — 1999 MODELS
TRANSMISSION SYSTEM DEFINITION**

MODEL	ENGINE	DRIVE PULLEY											
		MODEL	PART NUMBER	TAPER	RING GEAR	GOVERNOR CUP	SLIDER	SPRING	PIN OR WEIGHT	RAMP OR BLOC	POS. CALIB. OR CAPSULE	ENGAGEMENT ± 100 RPM	MAX. SPEED ± 100 RPM
Formula Z 583	583	TRA	417 222 018	1:1.0	No	Cushion drive	417 005 800 Peek	Violet/Blue 415 034 900	417 004 309 Hollow	417 005 286 286	3	4100	7900
Grand Touring 583	583	TRA	417 222 014	1:1.0	Yes	Cushion drive	417 005 800 Peek	Red/Orange 415 015 200	417 004 309 Hollow	417 005 285 285	3	3100	7900
MX Z 600	593	TRA	417 222 001	1:7.5	No	Cushion drive	417 005 800 Peek	Violet/Yellow 415 015 300	417 004 308 Solid	417 005 281 281	3	3800	8000
Summit 600	593	TRA	417 222 007	1:7.5	No	Cushion drive	417 005 800 Peek	Green/Blue 414 768 200	417 004 309 Hollow	417 005 294 294	5	4200	8000
Formula III 600	599	TRA	417 222 061	1:7.5	No	Standard	417 005 800 Peek	Green/Blue 414 768 200	417 004 308 Solid	417 222 123 297	3	4200	8400
Formula Deluxe 670	670	TRA	417 222 017	1:7.5	Yes	Cushion drive	417 005 800 Peek	Violet/Yellow 415 015 300	417 004 308 Solid	417 005 286 286	3	3800	7700
Formula Z 670	670	TRA	417 222 019	1:7.5	No	Cushion drive	417 005 800 Peek	Violet/Yellow 415 015 300	417 004 308 Solid	417 005 286 286	3	3800	7700
MX Z 670 H.O.	670	TRA	417 222 021	1:7.5	No	Cushion drive	417 005 800 Peek	Green/Blue 414 768 200	417 004 308 Solid	417 222 123 297	2	4200	8000
Summit x 670	670	TRA	417 222 023	1:7.5	No	Cushion drive	417 005 800 Peek	Violet/Yellow 415 015 300	417 004 309 Hollow	417 005 287 287	5	4100	8000
Mach 1	699	TRA	417 222 062	1:7.5	No	Standard	417 222 107 Vespel	Green/Violet 414 762 800	417 004 308 Solid	417 005 286 286	3	4200	8300
Mach 1 R	699	TRA	417 222 062	1:7.5	No	Standard	417 222 107 Vespel	Green/Violet 414 762 800	417 004 308 Solid	417 005 286 286	3	4200	8300
Formula III 700	699	TRA	417 222 058	1:7.5	No	Standard	417 005 800 Peek	Violet/Blue 415 034 900	417 004 308 Solid	417 222 123 297	3	3800	8000
Grand Touring 700	699	TRA	417 222 063	1:7.5	Yes	Standard	417 005 800 Peek	Yellow/Red 414 993 000	417 004 308 Solid	417 005 285 285	4	3300	8000
Formula III 800	809	TRA	417 222 060	1:7.5	No	Standard	417 005 800 Peek	Violet/Blue 415 034 900	417 004 308 Solid	417 222 090 295	3	3800	8000
Grand Touring SE	809	TRA	417 222 053	1:7.5	Yes	Standard	417 005 800 Peek	Yellow/Orange 414 689 700	417 004 308 Solid	417 222 123 297	3	3300	8000
Mach Z	809	TRA	417 222 024	1:7.5	No	Standard	417 222 107 Vespel	Green/Blue 414 768 200	417 004 308 Solid	417 222 090 295	3	4200	8300
Mach Z R	809	TRA	417 222 024	1:7.5	No	Standard	417 222 107 Vespel	Green/Blue 414 768 200	417 004 308 Solid	417 222 090 295	3	4200	8300
Mach Z LT	809	TRA	417 222 024	1:7.5	No	Standard	417 222 107 Vespel	Green/Blue 414 768 200	417 004 308 Solid	417 222 090 295	3	4200	8300
Mach Z LT R	809	TRA	417 222 024	1:7.5	No	Standard	417 222 107 Vespel	Green/Blue 414 768 200	417 004 308 Solid	417 222 090 295	3	4200	8300

DRIVEN PULLEY

BOMBARDIER SKI-DOO — 1999 MODELS TRANSMISSION SYSTEM DEFINITION												
MODEL	ENGINE	BELT	DRIVEN PULLEY						CARTER			
			MODEL	SPRING	PRELOAD NEW/AFTER BREAK-IN PERIOD (±0.7 KG)	CAM (°)	AERODYN. COVERS	BIG BUSHING WIDTH	SPROCKET TOP	SPROCKET BOTTOM	CHAIN LINK	SPROCKET
Tundra	277	414 827 600	Safari	WHITE	3.6	37.8	N.A.	N.A.	14	25	62 Simple	—
Tundra R	277	414 827 600	Safari Reverse	YELLOW	0.0 Position 3	37.8	N.A.	N.A.	14	25	62 Simple	—
Formula S	377	415 060 600	Mach Z	ORANGE	4.8	44	No	25 mm	18	44	70 11 Wide	9 Teeth 179 mm
Formula Deluxe 377	377	415 060 600	LPV27	YELLOW	0.0 Position 3	47-44	No	19 mm	18	44	70 11 Wide	9 Teeth 179 mm
Touring E	377	415 060 600	LPV27	YELLOW	0.0 Position 3	47-44	No	19 mm	18	44	70 11 Wide	9 Teeth 179 mm
Skandic 380	377	415 060 600	LPV27	YELLOW	0.0 Position 3	47-44	No	19 mm	18	44	70 11 Wide	9 Teeth 179 mm
Touring LE	443	415 060 600	LPV27	YELLOW	0.0 Position 3	47-44	No	19 mm	21	44	72 11 Wide	9 Teeth 179 mm
MX Z 440	443	415 060 600	Mach Z	ORANGE	6.1	47	No	25 mm	21	44	72 11 Wide	9 Teeth 179 mm
MX Zx 440 LC	453	414 860 700	MX Zx Roller	BEIGE	7.9/7.0	44 Anodized	No No embosses	19 mm Crimped	21 Steel	43 Light	74 13 Wide	9 Teeth 179 mm
Formula Deluxe 500	494	414 860 700	Formula	BEIGE	7.9/7.0	50	No	19 mm	23	44	72 11 Wide	9 Teeth 179 mm
Formula Z 500	494	414 860 700	Formula	BEIGE	7.9/7.0	50	No	19 mm	23	43 Light	72 11 Wide	9 Teeth 179 mm
Grand Touring 500	494	414 860 700	Formula	BEIGE	7.9/7.0	44	No	19 mm	23	44	72 11 Wide	9 Teeth 179 mm
MX Z 500	494	414 860 700	Formula	BEIGE	7.9/7.0	50	No	19 mm	23	43 Light	72 13 Wide	9 Teeth 179 mm
Summit 500	494	414 860 700	Formula	BEIGE	7.9/7.0	44	No	19 mm	21	43 Light	72 11 Wide	9 Teeth 179 mm
Skandic WT LC	494	414 633 800	IBC Snob 0025	BLUE	7.0	40	N.A.	N.A.	N.A.	N.A.	N.A.	—
Formula SL	503	415 060 600	Mach Z	ORANGE	4.8	44	No	25 mm	21	44	72 11 Wide	9 Teeth 179 mm
Formula Deluxe 503	503	415 060 600	LPV27	YELLOW	0.0 Position 3	47-44	No	19 mm	21	44	72 11 Wide	9 Teeth 179 mm
Skandic WT	503	414 633 800	IBC Snob 0025	BLUE	7.0	40	N.A.	N.A.	N.A.	N.A.	N.A.	—
Skandic SWT	503	414 633 800	IBC Snob 0024	BLUE	6.0	40	N.A.	N.A.	N.A.	N.A.	N.A.	—
Touring SLE	503	415 060 600	LPV27	YELLOW	0.0 Position 3	47-44	No	19 mm	21	44	72 11 Wide	9 Teeth 179 mm

**BOMBARDIER SKI-DOO — 1999 MODELS
TRANSMISSION SYSTEM DEFINITION**

MODEL	ENGINE	BELT	DRIVEN PULLEY						CARTER			
			MODEL	SPRING	PRELOAD NEW/AFTER BREAK-IN PERIOD (± 0.7 KG)	CAM (°)	AERODYN. COVERS	BIG BUSHING WIDTH	SPROCKET TOP	SPROCKET BOTTOM	CHAIN LINK	SPROCKET
Skandic 500	503	415 060 600	LPV27	YELLOW	0.0 Position 3	47-44	No	19 mm	18	44	70 11 Wide	9 Teeth 179 mm
Formula Deluxe 583	583	414 860 700	Formula	BEIGE	7.9/7.0	50	No	19 mm	23	44	72 13 Wide	9 Teeth 179 mm
Formula Z 583	583	414 860 700	Formula	BEIGE	7.9/7.0	50	No	19 mm	25	43 Light	74 13 Wide	9 Teeth 179 mm
Grand Touring 583	583	414 860 700	Formula	BEIGE	7.9/7.0	47	No	19 mm	23	44	72 13 Wide	9 Teeth 179 mm
MX Z 600	593	414 860 700	ZX	BEIGE	7.9/7.0	50	Yes	19 mm	24	43 Light	74 13 Wide	9 Teeth 179 mm
Summit 600	593	414 860 700	ZX	BEIGE	7.9/7.0	47	No	19 mm	21 Steel	43 Light	74 13 Wide	9 Teeth 179 mm
Formula III 600	599	417 300 066	CK3	BEIGE	7.9/7.0	50-47	Yes	25 mm	24	43 Light	72 13 Wide	9 Teeth 179 mm
Formula Deluxe 670	670	417 300 067	Formula	BEIGE	7.9/7.0	50	No	19 mm	25	44	74 13 Wide	9 Teeth 179 mm
Formula Z 670	670	417 300 067	Formula	BEIGE	7.9/7.0	50	No	19 mm	25	43 Light	74 13 Wide	9 Teeth 179 mm
MX Z 670 H.O.	670	417 300 067	Formula	BEIGE	7.9/7.0	53-47	Yes	19 mm	25	43 Light	74 13 Wide	9 Teeth 179 mm
Summit x 670	670	417 300 067	Formula	BEIGE	7.9/7.0	47	No	19 mm	21 Steel	43 Light	72 13 Wide	9 Teeth 176 mm
Mach 1	699	417 300 066	CK3	BEIGE	7.9/7.0	53-44	Yes	25 mm	25	43 Light	72 13 Wide	9 Teeth 179 mm
Mach 1 R	699	417 300 066	HPV27	VIOLET 1000N	0.0	47-44 Anodized	Yes	25 mm	25	43 Light	72 13 Wide	9 Teeth 179 mm
Formula III 700	699	417 300 066	CK3	BEIGE	7.9/7.0	50-47	Yes	25 mm	25	43 Light	72 13 Wide	9 Teeth 179 mm
Grand Touring 700	699	417 300 066	HPV27	VIOLET 1000N	0.0	47-44 Anodized	No	25 mm	24	43 Light	72 13 Wide	9 Teeth 179 mm
Formula III 800	809	417 300 066	CK3	BEIGE	7.9/7.0	50-47	Yes	25 mm	26	43 Light	72 13 Wide	9 Teeth 179 mm
Grand Touring SE	809	417 300 066	HPV27	VIOLET 1000N	0.0	47-44 Anodized	No	25 mm	24	43 Light	72 13 Wide	9 Teeth 179 mm
Mach Z	809	417 300 066	CK3	BEIGE	7.9/7.0	53-44	Yes	25 mm	26	43 Light	72 13 Wide	9 Teeth 179 mm
Mach Z R	809	417 300 066	HPV27	VIOLET 1000N	0.0	47-44 Anodized	Yes	25 mm	26	43 Light	72 13 Wide	9 Teeth 179 mm
Mach Z LT	809	417 300 066	CK3	BEIGE	7.9/7.0	53-44	No	25 mm	25	43 Light	72 13 Wide	9 Teeth 179 mm
Mach Z LTR	809	417 300 066	HPV27	VIOLET 1000N	0.0	47-44 Anodized	No	25 mm	25	43 Light	72 13 Wide	9 Teeth 179 mm

Please route to :

<input type="checkbox"/> Service	<input type="checkbox"/> Init.
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-4**

Date: November 26, 1998

SUBJECT: Plastic Rewind Starter

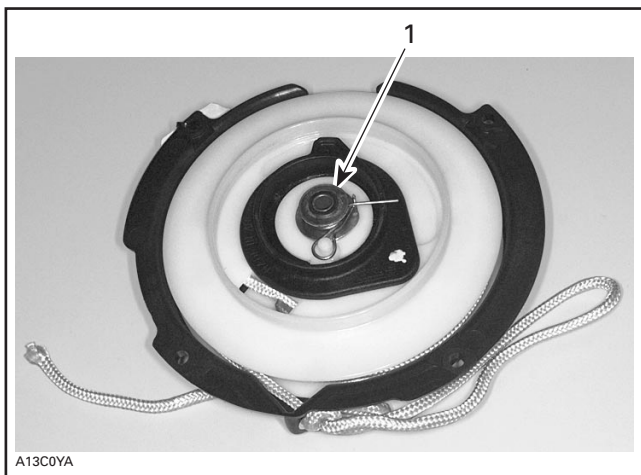
YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Formula SL	1348/1349/1350	All
	Skandic 500	1361/1362/1363	
	MX Z 440	1409/1410/1411/1448/1449	
	Skandic WT/SWT	1429/1430/1431/1432	

During manufacturing process of plastic rewind starters, cover center post and/or rope pulley hole came out incorrect.

To identify a faulty rewind starter, pull the rope 15 times in a row, without starting engine. If rope is slow to return or if it doesn't rewind, replace rewind starter assembly.

◆ WARNING

Do not attempt to remove the locking sleeve from the rewind starter for it may break, allowing components to be projected out.



1. Locking sleeve

All spare parts have been manufactured according to specifications avoiding oval post and/or hole.

PARTS REQUIRED

MODEL	PART NUMBER
Formula SL Skandic 500 MX Z 440	420 888 210
Skandic WT/SWT	420 888 215

Parts are to be ordered through regular channel.
NOTE: Dealers are requested to return faulty rewind starters in a protective wrapping to avoid damages during transport.

United States dealers, return parts to:

Bombardier Motor Corp. of America
c/o Warranty Dept.
7575 Bombardier Court
P.O. Box 8035
Wausau, WI
54402-8035

Canadian dealers, return parts to:

Bombardier Warranty Parts Center
75 J.-A. Bombardier
Sherbrooke, Qc
J1L 1W3

Please update involved *Shop Manuals, Parts Catalogs* and all related publications accordingly.

Please route to :

<input type="checkbox"/> Service	<input type="checkbox"/> Init.
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-5**
REVISION 1 ←

Date: December 11, 1998

SUBJECT: Carburetor Setting

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	Skandic WT	1286/1287	All
1999		1429/1430	

As a service tip, it is possible to reduce fuel consumption and improve partload power on above mentioned snowmobiles, by replacing both carburetor needle jets and ~~resetting needle position from...~~

- ➔
- ➔ **Needle clip has to stay at its original position which is 3.**

New needle jet P-2 (159), (P/N 404 100 700), could be ordered through regular channel.

Refer to *1998 Shop Manual* (P/N 484 068 200) or to *1999 Shop Manual* (P/N 484 200 003) for proper procedure.

- ➔ **NOTE: This publication is not applicable to the Skandic SWT models.**

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-6**
REVISION 1 ←

Date: December 10, 1998

SUBJECT: Outer PTO Bearing Lubrication

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Grand Touring 700/SE	1373/1374/1375/1376	All
	Formula III 600/700/800	1396/1397/1398/1399/1400/1401/1402	
	Summit 600	1345/1346/1461	
	MX Zx 440 LC	1342/1343/1344	
	MX Z 600	1337/1338	
	Mach Z/Z R/Z LT/Z LT R/Z M.H. R	1418/1435/1419/1439/1440/1441 1420/1436/1445/1446/1447/1462	
	Mach 1/1 R	1422/1437/1423/1442/1443/1444	

The PTO end bearing of the above listed vehicle engines has been factory filled with a synthetic grease. Should a crankcase (bottom half) ever need to be disassembled, it is imperative that the following procedures be followed to fill this cavity before reassembly.

The following establishes the new procedure for the outer PTO bearing lubrication on above mentioned models.

REQUIRED

DESCRIPTION	P/N	QUANTITY
Isoflex grease (50 g (1.8 oz) tube)	293 550 021	As specified

NOTE: 50 g tube corresponds to 50 cc of grease.

▼ CAUTION
Never use any type of oil or any other type of grease in PTO cavity; doing so will dramatically reduce bearing life.

NOTE: Recommended Bombardier grease (Isoflex) meets specific requirements of wide temperature range.

OUTER PTO BEARING LUBRICATION

All Engines

Outer PTO bearing must be lubricated with Isoflex grease (P/N 293 550 021).

▼ CAUTION
Make sure not to push Isoflex grease between outside bearing race and half crankcase.

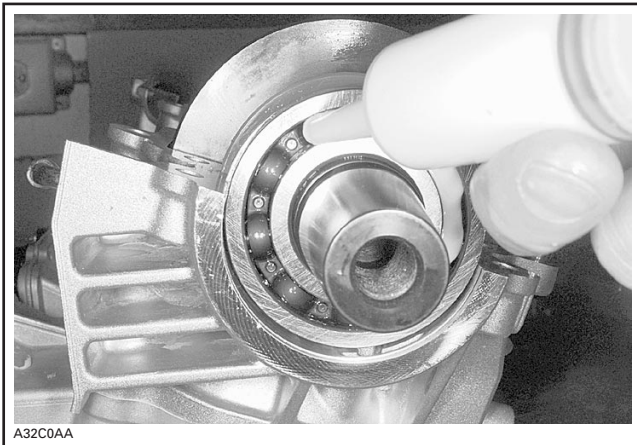
453 and 593 Engine Lubrication and Assembly

Before assembling engine bottom end, PTO bearing must be lubricated with Isoflex grease (P/N 293 550 021).

Crankcase Lubrication

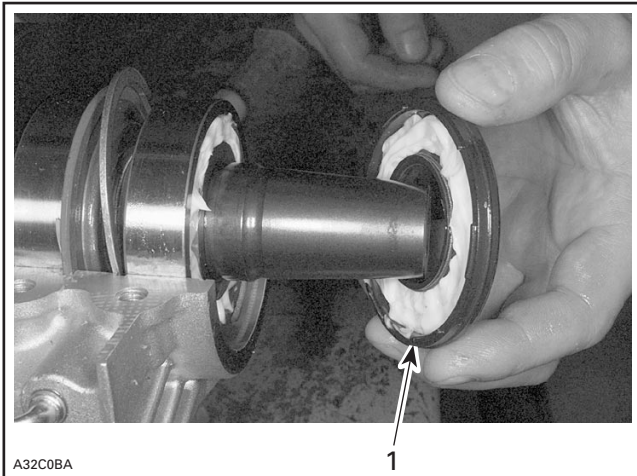
Put 35 cc of grease in a syringe.

With the syringe, fill the outer bearing with grease.



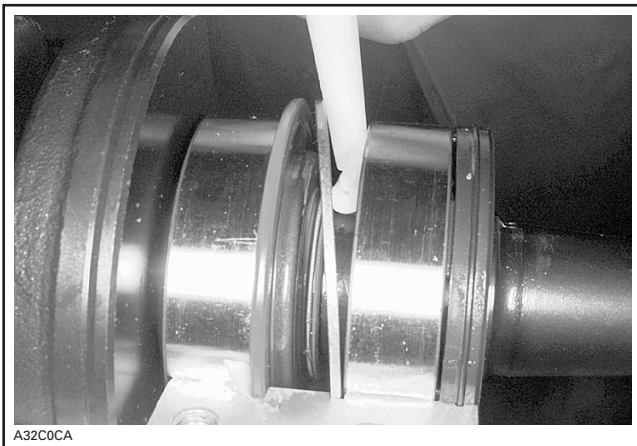
COAT WITH A STREAM OF GREASE ON BALLS

Coat inner side of seal and set it in place.

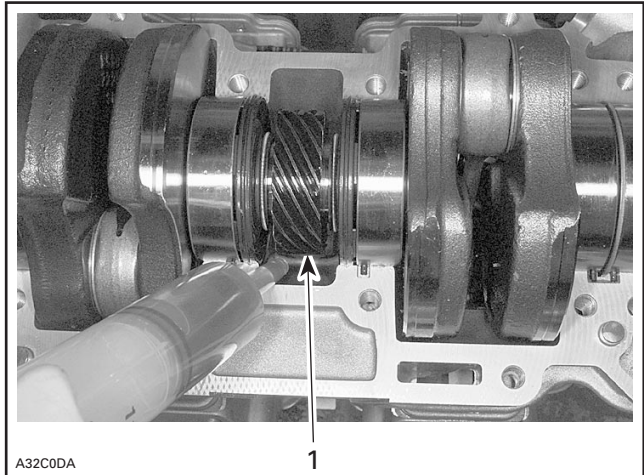


1. Fill with grease and set in place

Use remaining grease to coat inner side of bearing.



Drop 50 mL of oil in central gear pan to lubricate pump gearing as per photo.



1. A bath of oil ensures lubrication of this gearing

Crankcase Assembly

Before assembling both parts of crankcase, assure proper sealing by spreading a seam of 1.2 mm (3/64 in) maximum in diameter on base surface of silicon sealing compound (P/N 420 297 905).

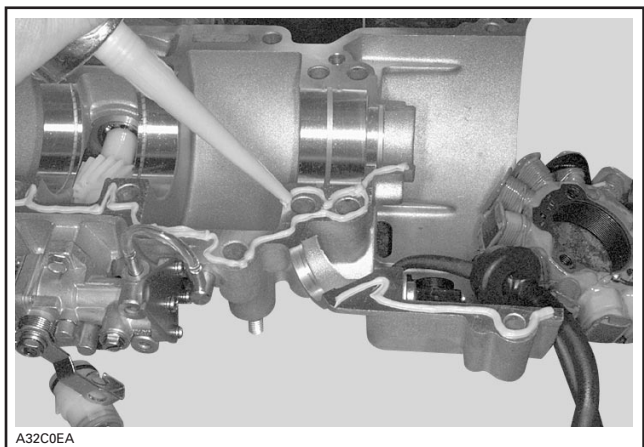
▼ CAUTION

This is a new sealant; do not use Loctite 515 or 518 on case halves.

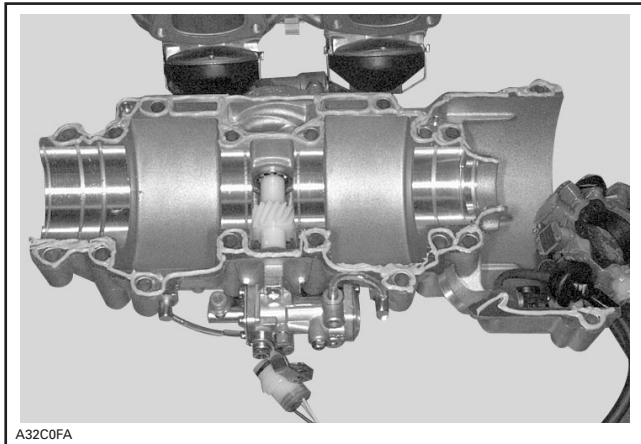
Make sure surfaces are clean and free of grease before applying silicon sealing compound.

▼ CAUTION

Be careful not to spill oil on case halves when reassembling.



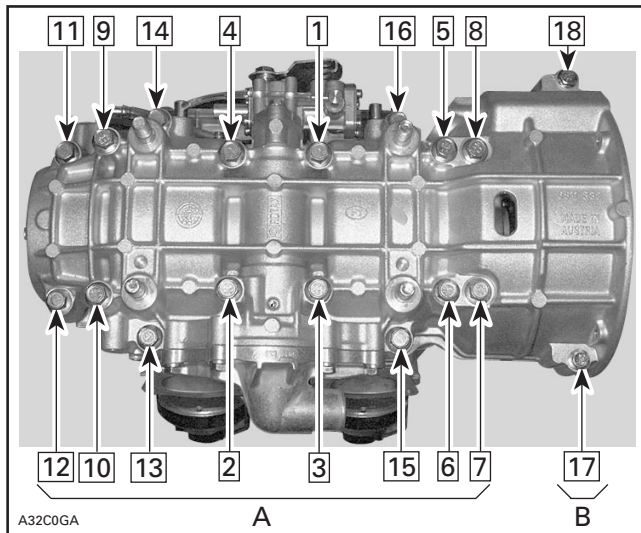
As much as possible, silicon sealing compound must be applied in one run to avoid any risks of leak.



SEAMING COMPLETED — ALL CONTACT SURFACE MUST BE COVERED AND SCREW HOLES SURROUNDED

A 2-step torque procedure is recommended; do a first sequence at 60% of total torque and a second sequence to reach total torque.

Screw all crankcase bolts in place in the following sequence and to the appropriate torque.



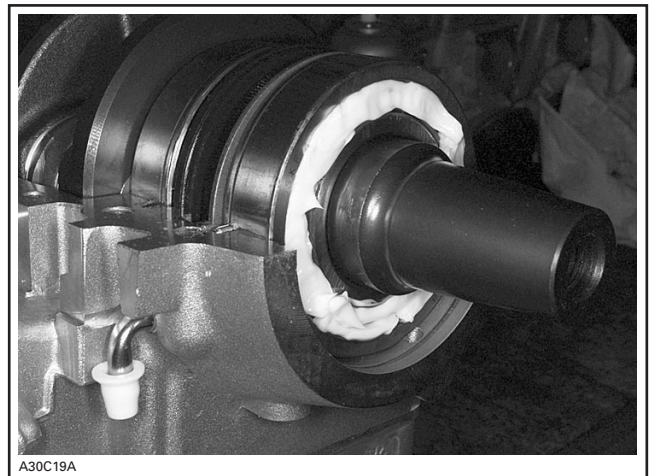
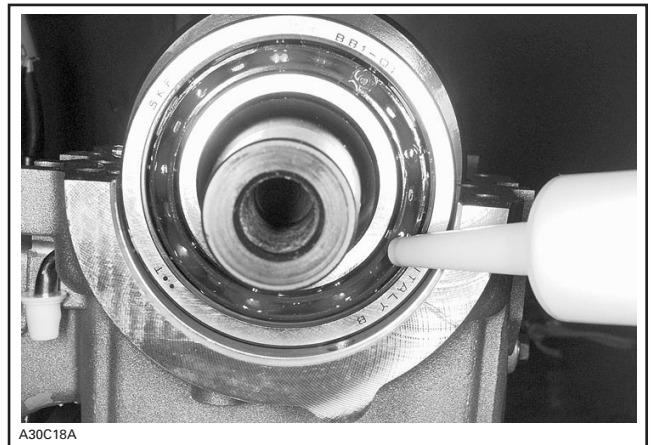
A. Torque bolts 1-16 between 28 and 30 N•m (20.7 and 22.1 lbf•ft)
 B. Torque bolts 17 and 18 between 8 and 10 N•m (5.9 and 7.4 lbf•ft)

NOTE: The total assembly sequence, including sealing compound spreading, screwing and proper torquing of bolts must be performed within 10 minutes, however, it is very important that the 4 center bolts (1-2-3-4) get torqued within a maximum of 2 minutes after applying sealing compound.

599 and 699 Engines

Total quantity of Isoflex grease to be applied is 50 cc.

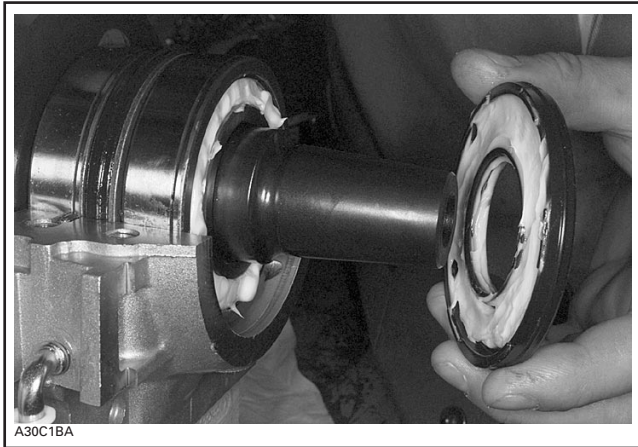
Apply about 7 cc of Isoflex grease to outside bearing cage.



Fill up PTO seal with about 10 cc of Isoflex grease.



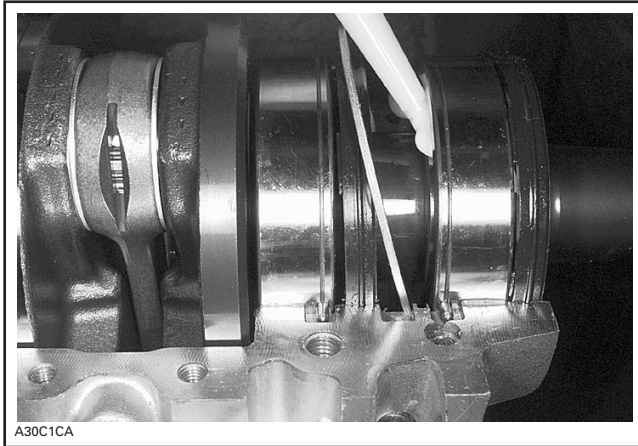
Install PTO seal on crankshaft.



A30C1BA

TYPICAL

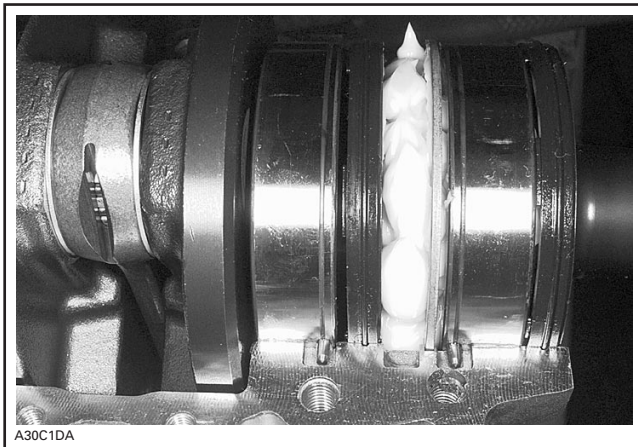
Apply Isoflex grease to inner side of bearing cage.



A30C1CA

Install washer in its crankcase groove.

Fill space between inner side of bearing cage and seal with remaining quantity of Isoflex grease.

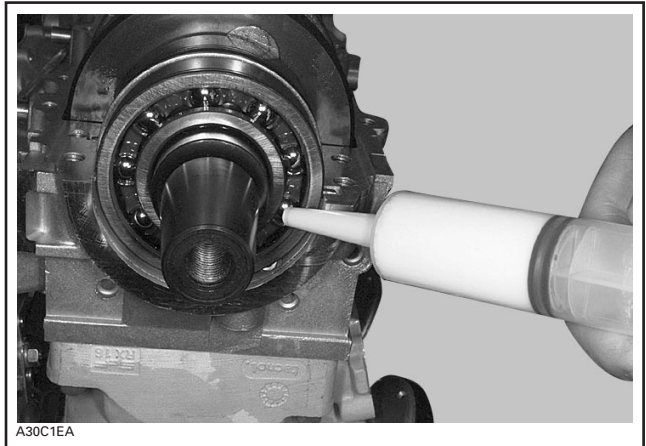


A30C1DA

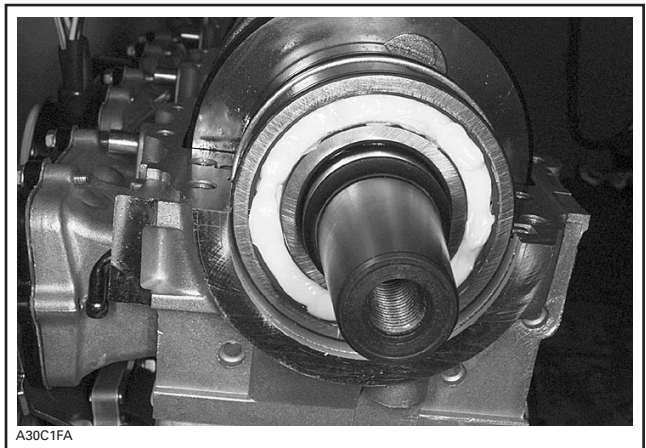
809 Engine

Total quantity of Isoflex grease to be applied is 21 cc.

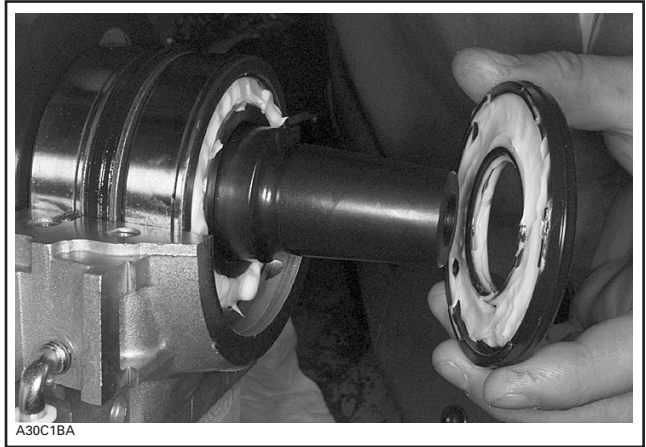
Apply 21 cc of grease to outside bearing cage and seal.



A30C1EA



A30C1FA



A30C1BA

Additional Information

Please update appropriate *Parts Catalog* with the following information.

DESCRIPTION	P/N	INVOLVED ENGINES
Cap	420 960 770	All except 809
Oil tank plug	572 092 900	All

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-7**

Date: December 14, 1998

SUBJECT: Fuel/Temperature Gauge Light Caps

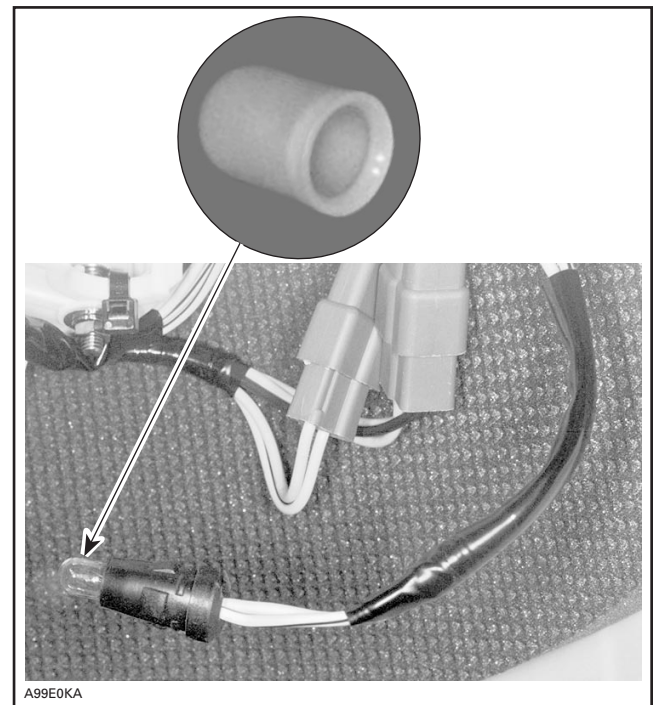
YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	All (equipped with gauges)	All (equipped with gauges)	All (equipped with gauges)
1999	Grand Touring 500/583	1367/1368/1369/1370/ 1371/1372	All
	Formula Deluxe 500/583/670	1377/1378/1379/1380/ 1381/1382/1383	
	Formula Z 500/583/670	1388/1389/1391/1392/ 1393/1394/1395/1458	
	Summit 500	1403/1404/1405	

When Performing Predelivery Procedures

On all 1998 models equipped with fuel/temperature gauges and/or on above mentioned 1999 models make sure you remove light bulb caps in fuel and temperature gauges.



CAP INSTALLED



CAP REMOVED

Kits in Stock

Fuel gauge kits (P/N 861 504 100) and temperature gauge kits (P/N 861 760 800), that might be kept in stock by dealers, are also involved in this modification and bulb caps should be removed prior to retail sale.

When ordering those kits, dealer will receive updated ones.

Please update the following 1998 *Predelivery Bulletins*,

98-3.....Grand Touring 500/583
98-4Formula Deluxe 500/583, Formula Z 583
98-6.....Mach Z/Z R/Z LT/Z LT R
98-7..... Mach 1/1 R
98-10..... Formula Z 670
98-12..... Grand Touring SE/700
98-16..... Formula III 700/700 R
98-19..... Formula III 600/600 LT

and the following 1999 *Predelivery Bulletins*,

99-8 Rev.1Formula Deluxe 500
99-11 Rev.1 Formula Z 500/583/670
99-12.....Formula Deluxe 583
99-13.....Formula Deluxe 670
99-15.....Grand Touring 500/583
99-16..... Summit 500

with the informations contained in this *Service Bulletin*.

Please route to :

<input type="checkbox"/> Service	<input type="checkbox"/> Init.
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-8**

Date: December 29, 1998

**SUBJECT: Shop Manual Supplement for
MX Z 600/700, MX Zx 440 LC
and Summit 600/700**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	MX Z 600	1336/1337/1338	All
1999	MX Z 700	1339/1340/1341	All
1999	MX Zx 440 LC	1342/1343/1344	All
1999	Summit 600	1345/1346/1361	All
1999	Summit 700	1467/1468	All

Maintenance and repair procedures on models above are very like those covered in *Ski-Doo 1999 Shop Manual*, volume 2. However, the following points are specific to ZX series snowmobiles and supersede information found in volume 2 of *Shop Manual*.

For exploded views, refer to *Parts and Accessories Catalogs* featuring the models above.

01 — LUBRICATION AND MAINTENANCE CHART

Refer to *Ski-Doo 1999 Shop Manual*, volume 2.

02 — TROUBLESHOOTING

Refer to *Ski-Doo 1999 Shop Manual*, volume 2.

03 — ENGINE

Refer to *Ski-Doo 1999 Shop Manual*, volume 2 for most of procedures except the followings.

Shut-Off Valve

These vehicles have no manual shut-off valve. Fuel pump automatically performs fuel shut-off.

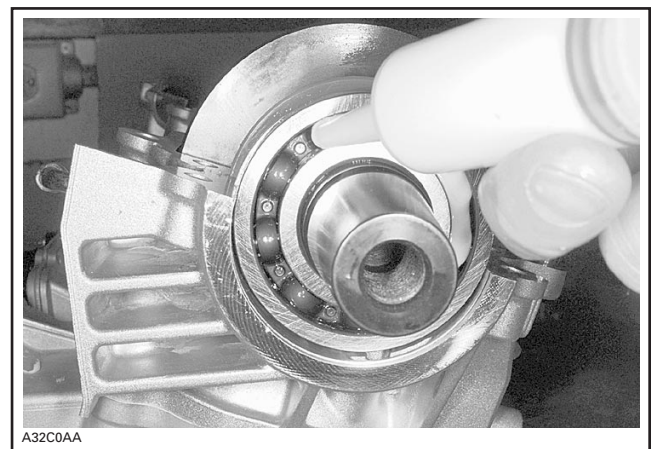
453, 593 and 693 Engine Lubrication and Assembly

Before assembling engine bottom end, ball bearings on PTO must be lubricated with grease (P/N 293 550 021) (the grease tube contains 50 g, which is similar to 50 mL or 50 cc).

Crankcase Lubrication

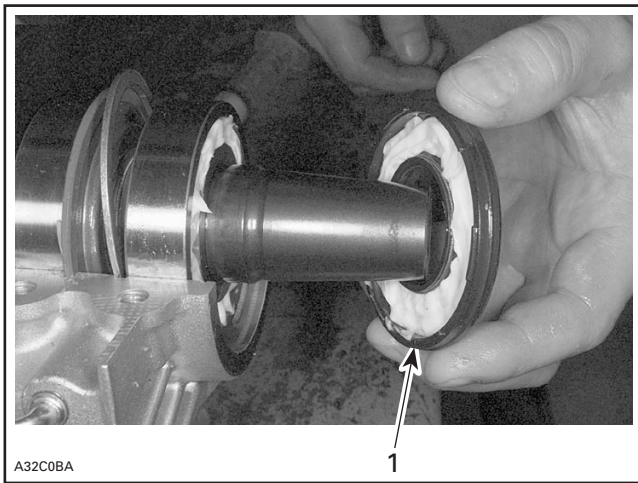
Put 35 to 40 mL of grease in a syringe.

With the syringe, fill the outer ball bearing with grease.



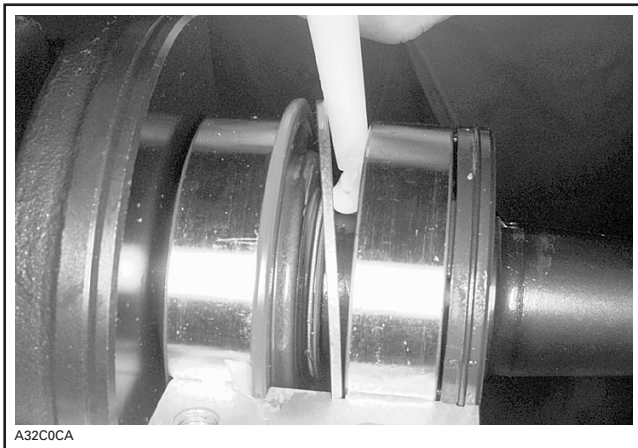
BALLS COATED WITH A SEAM OF GREASE

Coat inner side of seal and set it in place.

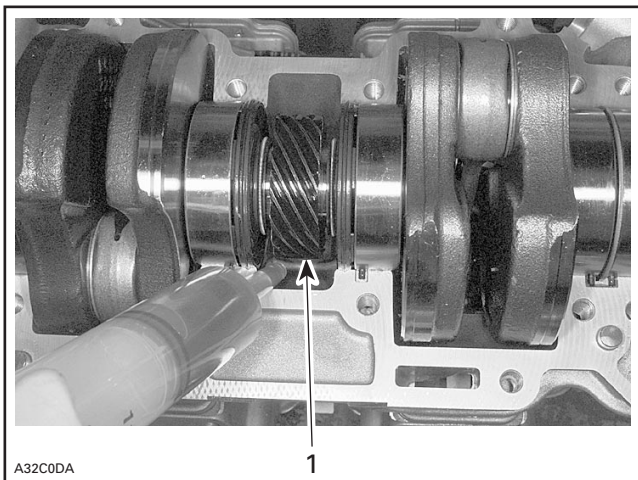


1. Fill with grease and set in place

Use the remaining grease to coat the inner side of the ball bearing.



Drop 50 mL of injection oil in the pan under central gear to lubricate pump gearing as per photo.

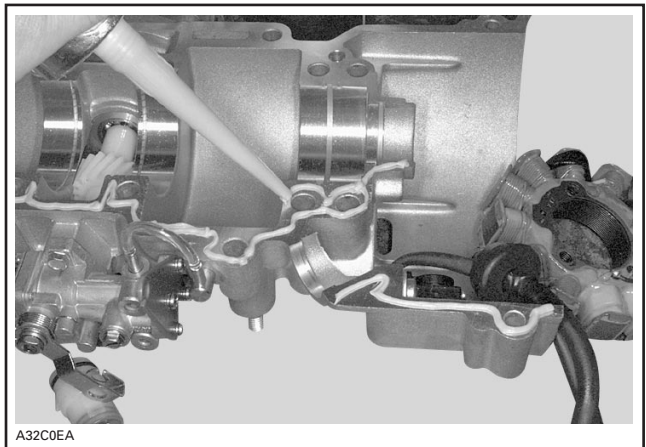


1. Oil bath

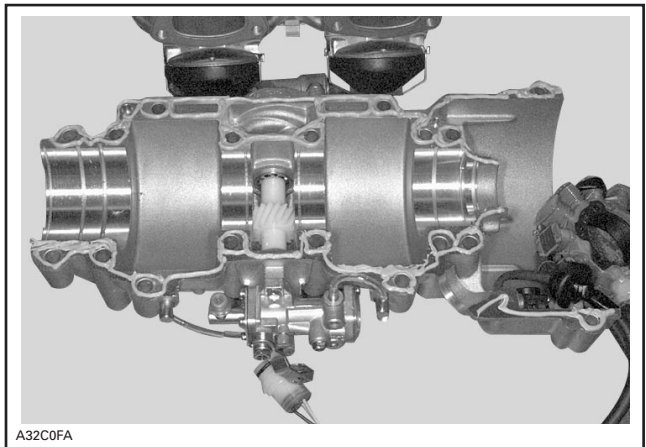
Crankcase Assembly

Before screwing both parts of crankcase, seal it with a silicon sealing compound (P/N 420 297 905). Make sure surfaces are clean and degreased before applying silicon sealing compound.

Spread a seam of 1.2 mm (1/16 in) maximum in diameter on the surface of the crankcase.



As far as possible, silicon compound must be applied in one run to avoid any risks of leaking through the crankcase.

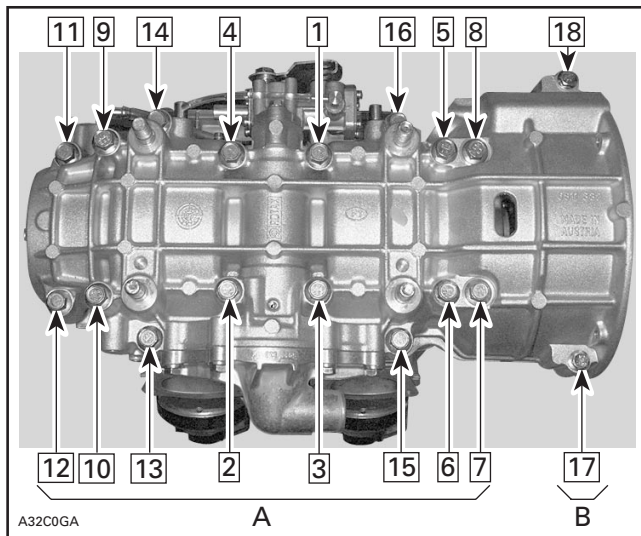


SEAMING COMPLETED — CONTACT SURFACES COVERED AND SCREW HOLES SURROUNDED

Screw the 4 central bolts to squeeze compound between crankcase halves before it starts to dry.

NOTE: Sealing compound spreading plus screwing of engine central four bolts must be performed within 2 minutes to ensure a good sealing and avoid linking.

Screw all crankcase bolts in place in the following sequence and to the appropriate torque through a two steps torquing: first, screw bolts up to 60% of the final torque (18 N•m (13.5 lbf•ft) for most of the bolts), then, secure to the required torque (i.e. between 28 and 30 N•m (21 and 22 lbf•ft)).



A. Torque bolts 1 through 16 to 28-30 N•m (21-22 lbf•ft)
 B. Torque bolts 17 and 18 to 8-10 N•m (6-8 lbf•ft)

NOTE: The total assembly sequence, including sealing compound spreading, screwing and torquing of bolts according to the proper sequence must be performed within 10 minutes.

Oil Pump

Identification

Different engines use different pumps. See identification on lever.

▼ CAUTION	
Always mount proper pump on engine.	

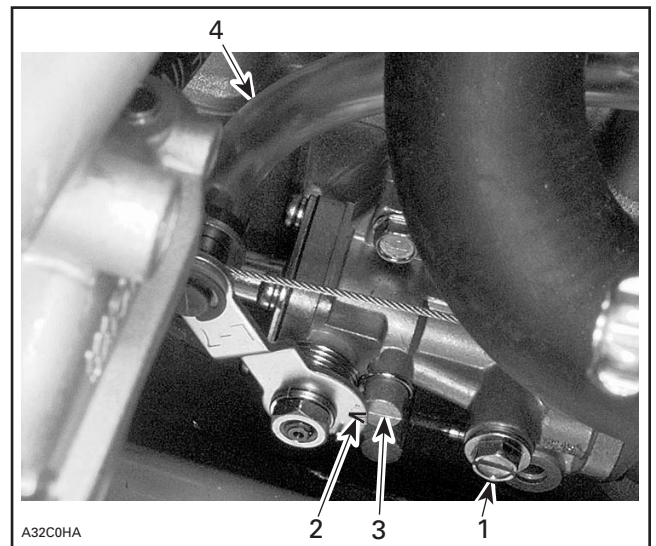
ENGINE TYPE	OIL PUMP IDENTIFICATION
693	L-8
593	L-7
453	No oil pump

Bleeding and Adjustment

All Models Except MX Zx 440 LC

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Mark on pump body must be set from 0 to 1 mm (0 to 1/32 in) farther than second mark on lever. **Do not take cable play by pressing throttle lever.**



TYPICAL (FUEL PUMP IS REMOVED)

1. Bleeder screw
2. Marks on pump lever
3. Mark on pump body
4. Main line

Reinstall all parts.

Bleed the small oil line by running engine at idle while holding the pump lever in fully open position.

NOTE: Make a J hook out of mechanical wire to reach the lever from magneto side and pull it in open position.

Oil System Leak Test

All Models Except MX Zx 440 LC

Install a hose pincher on hose going to crankcase for lubrication of coolant and oil shaft gears.

When performing leak test, pressurize oil system to 20 kPa (2.9 PSI). Pressure must not drop within 3 minutes.

Never use a hammer to install oil seals. These pieces must be installed on shaft using a press and appropriate pushers.

Rave System

MX Z 600 Only

There is a O-ring under red adjustment screw.

All Models

Remove spring clip, cover and spring and unscrew valve piston. Remove cylindrical screws then valve rod housing. Remove bellows and spring. Pull out exhaust valve.

Check valve rod housing and cylinder for clogged passages.

NOTE: Oil dripping from draining hole indicates a loosen spring or damaged bellows.

Check for cracked, dried or perforated bellows.

Spring

ENGINE TYPE	SPRING P/N	WIRE DIA. mm (in)	FREE LENGTH mm (in)	PRELOAD IN N (LBF) AT COMPRESSED LENGTH OF 14.7 mm (.579 in)
693 on MX Z 700	420 239 947	1.1 (.043)	42.0 (1.65)	30.0 (6.7)
693 on Summit 700	420 239 944	0.9 (.031)	48.5 (1.91)	16.9 (3.8)
593	420 239 946	1.00 (.039)	42.0 (1.65)	16.4 (3.7)
453	420 239 945	1.00 (.039)	48.5 (1.91)	20.3 (4.5)

Digital Performance Management (DPM)

Summit 600/700 and MX Z 700

These models are equipped of a DPM to manage air/fuel mixture according to temperature and atmospheric pressure. However, this DPM features only a compensation mode. Only one solenoid is mounted on DPM manifold. There is no air pump nor DPM engine coolant sensor because no enrichment mode exists on this DPM version. See *Ski-Doo 1999 Shop Manual*, volume 2 for further details.

Carburetor

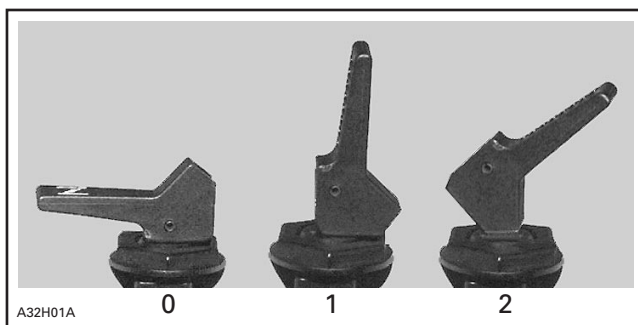
All Models Except MX Zx 440 LC

These models are equipped with a new three-position choke.

Cold Engine Starting

When temperature is below -10°C (+15°F), set the choke lever to the second position.

When temperature is -10°C or over (+15°F or over), set the choke lever to the first position.



0. OFF
1. Position 1
2. Position 2

After the engine is started, close off choke to ensure proper air-fuel mix when speed drops below 2000 RPM.

Warm Engine Starting

Start the engine without any choke.

◆ WARNING

Do not apply throttle while starting.

Choke Plunger Adjustment

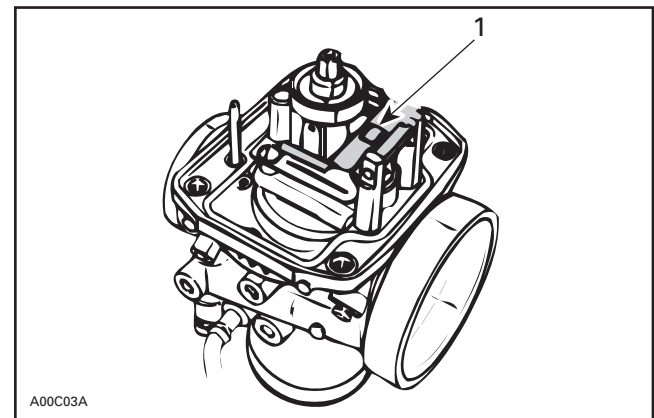
A new tool is developed for choke adjustment (P/N is not available at time of printing).

Float Level Adjustment

CARBURETOR MODEL	FLOAT HEIGHT H	
	± 1 mm	(± .040 in)
MX Zx 440 LC	N.A.	N.A.
MX Z 600/700	22.9	(.902)
Summit 600/700	22.9	(.902)

To Adjust Height H

- Bend the contact tab of float arm until the specified height is reached.



1. Contact tab

Throttle Slide Height

Adjust throttle slide height (see following table) by turning idle speed screw. Throttle slide height is measured on outlet side of carburetor (engine side).

NOTE: Make sure that throttle cable does not hold throttle slide. Loosen cable adjuster accordingly. Throttle cable adjustment will be done during adjustment of throttle-slide-to-cover free play.

Final idle speed adjustment (engine running at idle speed) should be within 1/2 turn of idle speed screw from preliminary adjustment.

MODELS	THROTTLE SLIDE HEIGHT mm (in)
MX Zx 440 LC	1.8 (0.071)
MX Z 600	1.3 (0.051)
MX Z 700	1.5 (0.059)
Summit 600	1.7 (0.067)
Summit 700	1.9 (0.075)

MX Zx 440 LC

Primer

This model is equipped with a primer instead of a choke.

Jet Needle

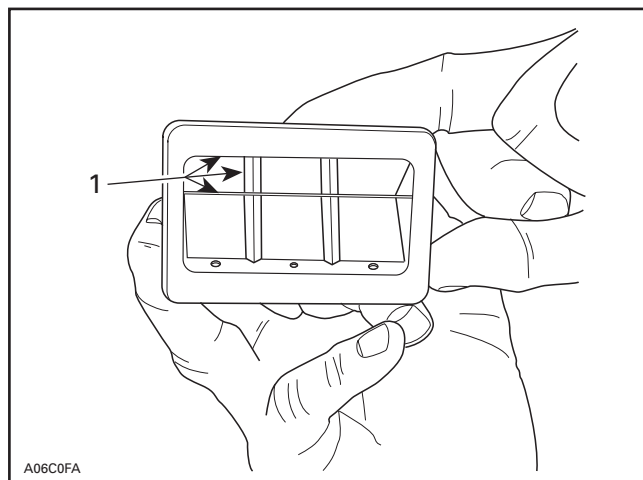
MX Zx 440 LC features a new TMX-34 carburetor. On this model, needle jets are press fit mounted and cannot be sold separately. Otherwise, servicing is similar to other Mikuni carburetors.

Reed Valve

Engines concerned with this bulletin are equipped with reed valves. Perform reed valves inspection as per following.

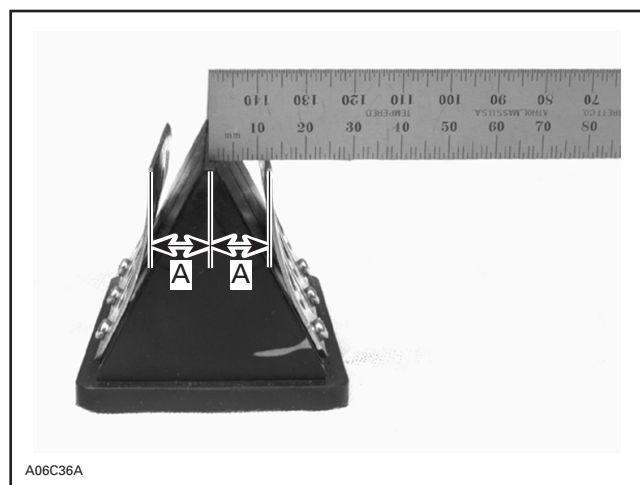
With blade stopper removed, check reed valve for proper tightness. There must be no play between blade and valve body when exerting a finger pressure on blade at blade stopper location.

In case of a play, turn blade upside down and re-check. If there is still a play, replace blade and/or valve body.



1. No play

Check blade stopper distance from center of reed valve block.



TYPICAL

- A. 693 Engine: 13 ± 0.25 mm (.512 \pm .010 in)
- 593 Engine: 14 ± 0.25 mm (.551 \pm .010 in)
- 453 Engine: 12 ± 0.25 mm (.472 \pm .010 in)

Bent blade stopper as required to obtain the proper distance.

Cooling System

The new ZX platform features a new cooling system. As S-series, a cold engine circuitry stands beside a hot engine circuitry. Cooling liquid routing is managed through a thermostat.

The difference consists in a new hot engine circuitry with a front radiator on firewall and only one rear radiator.

For inspection and servicing, refer to *Ski-Doo 1999 Shop Manual*, volume 2 (Liquid Cooling system and Coolant pump).

Recommended Fuel

All Models Except MX Zx 440 LC

Use regular unleaded fuel with minimum octane number of 87.

MX Zx 440 LC

Use regular unleaded fuel with minimum octane number of 87 premixed 40:1 with Bombardier synthetic injection oil (P/N 413 710 500, 12 x 1 liter).

Racers who will install high compression cylinder inserts provided with this vehicle **must** use racing fuel with a minimum octane of 112. Refer to instruction sheet for further details.

04 — TRANSMISSION

Refer to *Ski-Doo 1999 Shop Manual*, volume 2 for inspection and servicing procedures on transmission and brake systems.

Drive Belt

MODEL	PART NUMBER	WIDTH (NEW) ± 0.25 mm (.010 in)	MINIMUM WIDTH (WEAR LIMIT)
Summit 600, MX Z 600 and MX Zx 440 LC	414 860 700	35.30 mm (1.390 in)	32.30 mm (1.272 in)
Summit 700, MX Z 700	417 300 067	35.10 mm (1.382 in)	32.10 mm (1.264 in)

05 — ELECTRICAL SYSTEM

Refer to *Ski-Doo 1999 Shop Manual*, volume 2 for inspection and servicing.

Models involved with this bulletin feature no battery and no electric starter.

Changing Timing

Timing can only be changed using the programmer (P/N 529 035 589).

Start engine. Turn on programmer then enter password.

Increase engine speed to 2500 RPM.

From main menu select INFO VEHICLE.

Engine will misfire during vehicle information is transferred from MPEM to programmer. If engine stalls, restart it, keep engine speed at 2500 RPM and select VEHICLE INFO again.

NOTE: In fact the programmer takes a **copy** of all vehicle parameters scribed in MPEM. This copy will be modified within the programmer then transferred to the MPEM.

Select ENGINE PARAMETER.

Select TIMING ADJUSTMENT.

Press ENTER.

Now the display shows the engine timing correction factor that is programmed in the MPEM. In the following example timing correction factor is 4.

Press any key.

Select YES using the key **↔**.

Press ENTER.

Select a timing correction factor corresponding to correction needed.

Example: Timing mark as verified with a timing light at 3500 RPM was too early by 2°. The correction factor programmed is no. 4.

Select correction factor no. 5. This will retard the timing by 2° because the difference between correction factor no. 4 and no. 5 is - 2° (passing from 1° to - 1°).

IGNITION CORRECTION FACTOR	
CORRECTION FACTOR PROGRAMMED IN MPEM	IGNITION TIMING CORRECTION
2	3°
3	2°
4	1°
1	0°
5	- 1°
6	- 2°
7	- 3°
8	- 4°

Press ENTER twice.

The display confirms that correction factor has been changed to no. 5.

Press any key.

If the new correction factor selected above is the good one select NO. Otherwise select YES to choose an other correction factor.

Press MENU.

Scroll to SAVE AND QUIT.

Press ENTER.

Increase engine speed to 2500 RPM.

Press ENTER.

Engine will misfire during vehicle information is transferred from programmer to MPEM. If engine stalls, restart it, keep engine speed at 2500 RPM and select SAVE AND QUIT again.

Digital Encoded Security System (DESS)

MX Zx 440 LC only

This model is equipped with a mechanical tether switch. Its function is similar to the emergency cut-off switch. To allow snowmobile to start, tether cap must be installed on post.

NOTE: Never allows transmission to be engaged (and even snowmobile to be started) if tether cord is not tied to yourself.

A cap covers a hole designed to allow electronic DESS to be installed. DESS switch is already installed under console and may be drawn out from console, if needed.

DESS is active as input terminal for programming but cut-off function is disabled.

06 — REAR SUSPENSION

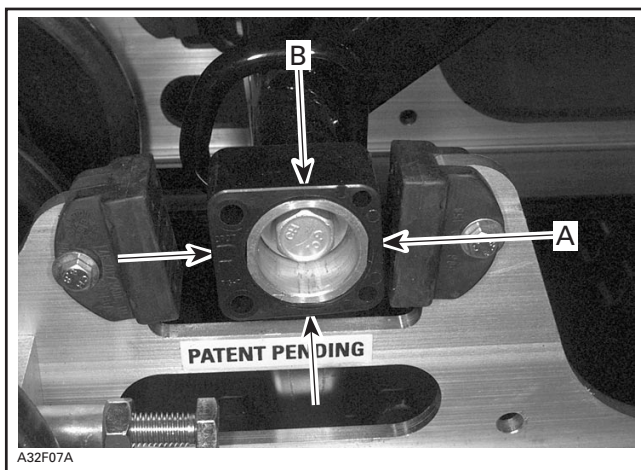
All Models Except MX Zx 440 LC

Refer to *Ski-Doo 1999 Shop Manual*, volume 2 for most of inspection and servicing procedures.

MX Zx 440 LC

Suspension Adjustment

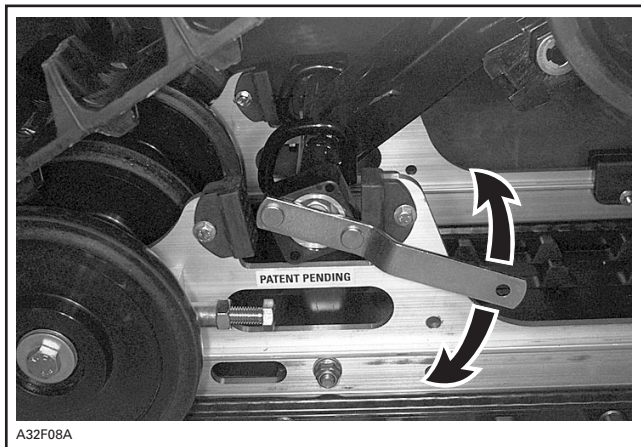
This model is equipped with a new two-position anti-transfer system. To adjust to the preferred position, turn both left and right blocks by steps of 90°.



ANTI-TRANSFER BLOCK — RIGHT SIDE VIEW
("R" — RIGHT — EMBOSSED ON BLOCK)

- A. Wider side — less track grip and more skis steering
- B. Narrower side — more track grip and less skis steering

Use tool provided in tool bag to adjust anti-transfer blocks.



TURN BOTH BLOCKS BY STEPS OF 90°

▼ CAUTION

Both blocks must be set at the same position. Otherwise, vehicle behavior will be impaired and suspension may be warped.

Track Tension Adjustment

Refer to *Ski-Doo 1999 shop Manual*, volume 2 for track tension adjustment except for the following:

Loosen lock nuts on adjustment screws before proceeding to adjustment and secure when track adjustment is done.

07 — FRONT SUSPENSION AND STEERING SYSTEM

Models concerned with this bulletin are equipped with an Advanced Direct Shock Action suspension system. For most of the servicing and inspections procedures, refer to *Ski-Doo 1999 Shop Manual*, volume 2. The following items only state the differences between the snowmobiles listed in heading and the ones described in volume 2.

Shock Absorber Servicing

MX Zx 440 LC only

Reservoir Disassembly and Reassembly

Remove air valve cap from air valve on reservoir.

Using air valve cap, release pressure from reservoir as shown on the next photo.



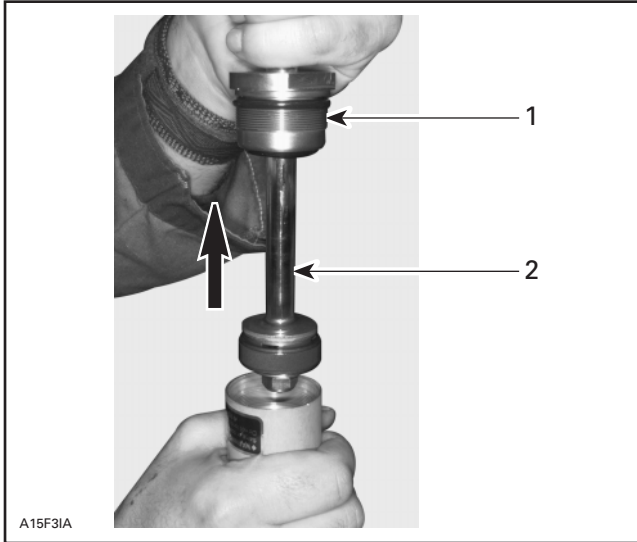
RELEASING PRESSURE FROM RESERVOIR

Damper Disassembly

◆ WARNING

Never perform any maintenance onto damper and reservoir assemblies until pressure is completely released from reservoir.

Remove seal carrier assembly from damper body. Slide out the damper rod assembly. Refer to *Shop Manual* or *Racing Handbook* to change damper valving.



1. Seal carrier assembly
2. Damper rod assembly

Discard used oil into storage container. Never re-use old oil during damper rework.

Reservoir Disassembly

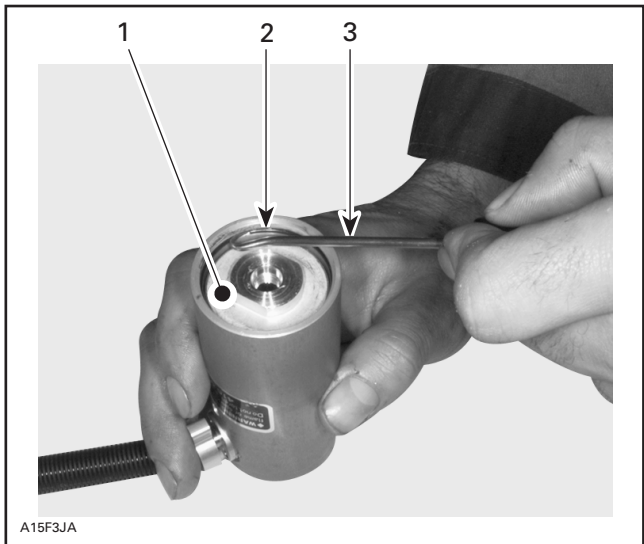
Remove air valve from reservoir cap assembly on the remote reservoir.

Using both thumbs, press on the reservoir cap assembly.

Remove circlip with Snap-on 3ASH special tool.

▼ CAUTION

Ensure not to scratch any inner parts of the cylinder.



1. Reservoir cap assembly
2. Circlip
3. Snap-on 3ASH special tool

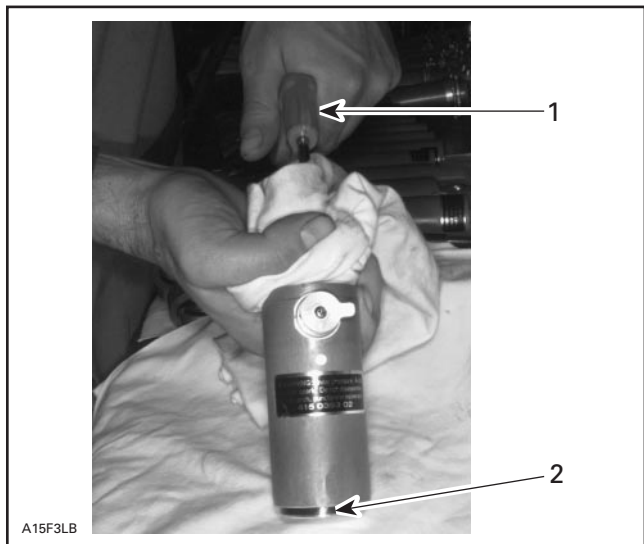
Using a M8 (pitch 1.0 mm) bolt, pull out reservoir cap assembly.

Hold reservoir in hand, then use compressed air pressure and carefully remove floating piston from reservoir body.

NOTE: Shock oil will leak from reservoir. Use shop cloth to catch excess oil.

◆ WARNING

Use extreme caution when removing piston with compressed air. Protective eye wear should be used.



TYPICAL

1. Compressed air
2. Floating piston

Reservoir Assembly

Fill reservoir with 150 mL of Bombardier HPG shock oil (P/N 413 709 400).

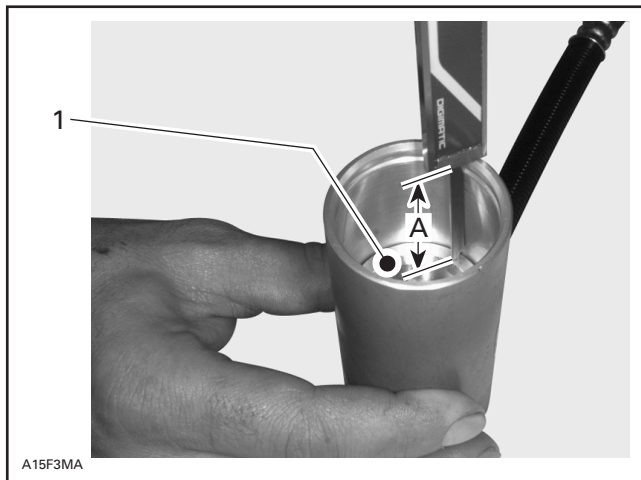
Reinstall floating piston into reservoir body. Concave side of piston must be facing outside. Use oil to ease O-ring pass reservoir body groove.

Invert reservoir. Using both thumbs apply pressure on floating piston to position floating piston to a depth of 44.5 ± 1 mm ($1\text{-}3/4 \pm 1/32$ in). Measure from the top edge of reservoir body.

▼ CAUTION

When positioning floating piston turn damper with reservoir facing down. This will allow air to exit from reservoir. Oil transferring from reservoir to damper body indicates that no more air remains in reservoir.

NOTE: If the floating piston is installed too far into reservoir body, wait for damper rod assembly installation to adjust floating piston position.

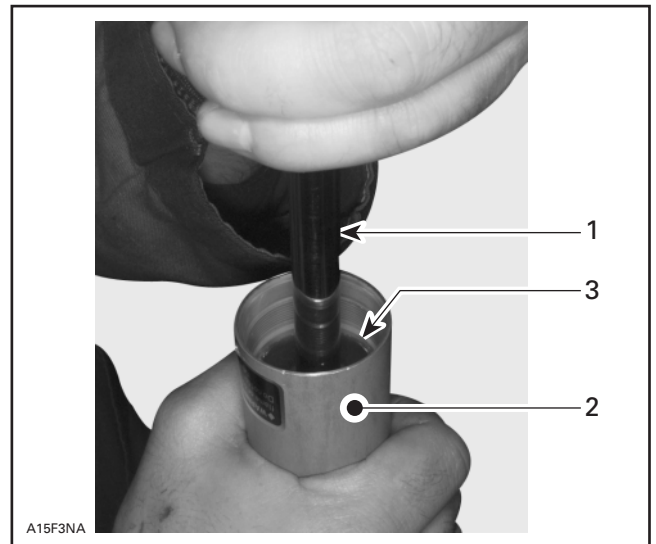


RESERVOIR TURNED UPSIDE DOWN TO SHOW HOW TO MEASURE

1. Concave side of piston facing upward
- A. 44.5 ± 1 mm ($1\text{-}3/4 \pm 1/32$ in)

Damper Assembly

Refill damper with Bombardier HPG shock oil (P/N 413 709 400) up to lowest threads of damper seal carrier.



1. Damper rod assembly
2. Damper body
3. Oil level

Install damper rod assembly into the damper body. Lightly oil damper piston seal ring with shock oil to ease installation.

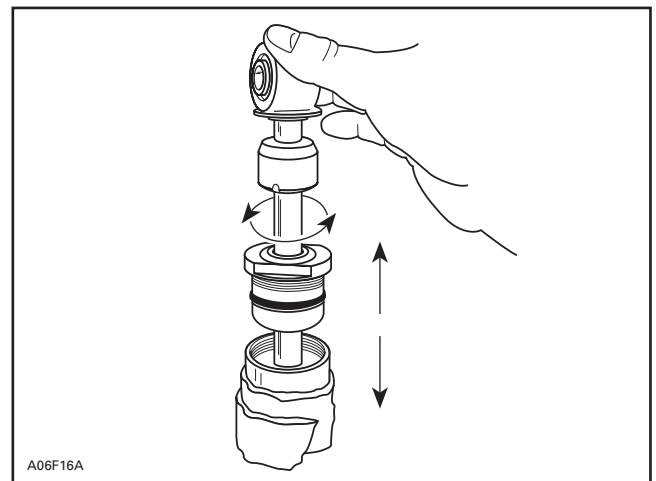
NOTE: Some shock oil may overflow when installing damper rod assembly. Wrap damper with shop cloth to catch possible oil overflow.

▼ CAUTION

Use care when passing piston into damper body at damper body threads.

Slight oscillation of damper rod may be required to allow piston to enter damper body bore.

Slowly push piston into damper body. Slight up and down movement may be required to allow all air to pass through piston assembly.



NOTE: Fast installation of the damper rod may displace the floating piston from its original position. Do not allow this to occur.

Reservoir Floating Piston Final Check (before damper seal carrier installation)

Perform a final check of the floating piston position (44.5 ± 1 mm ($1\text{-}3/4 \pm 1/32$ in)):

- If floating piston is positioned 43 mm and less, apply pressure on floating piston to position floating piston to a depth of 44.5 mm ($1\text{-}3/4$ in).
- If floating piston is too far (45 mm and more). Move damper rod with fast movement to allow oil to transfer from damper body to reservoir. Floating piston will move back.

Damper Final Assembly

With damper rod piston into oil volume, re-top damper oil volume. Oil level should be to damper body thread base.

Seal carrier assembly can now be threaded into damper body. This should be done slowly to allow weepage of shock oil from body while installing.

NOTE: When reinstalling seal carrier, oil must overflow. This overflow indicates that damper is full of oil.

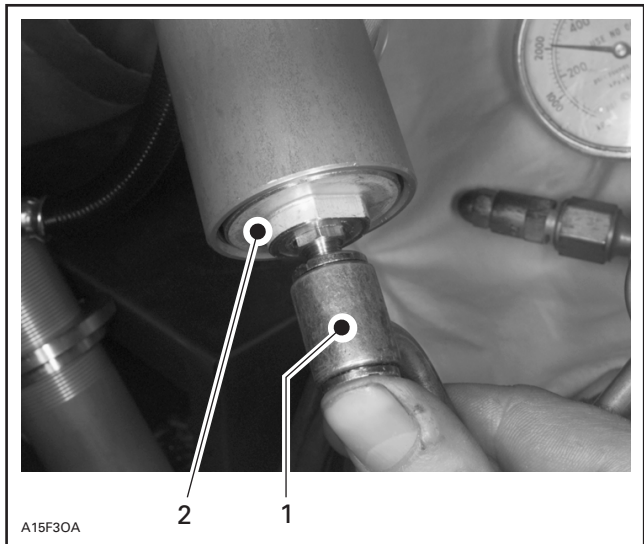
Reservoir Final Assembly

NOTE: If all previous procedures have been properly performed, **final floating piston position must be 41 ± 2 mm ($1\text{-}5/8 \pm 5/64$ in)**. Final floating piston position must be measured after damper seal carrier assembly has been completely threaded.

Reinstall reservoir cap assembly with circlip then install air valve.

Gas Pressure Adjustment

Nitrogen (N_2) can now be added to reservoir body. Preset pressure regulator to 2070 kPa (300 PSI), this gas pressure will restore the correct pressure for the damper.



1. Valve tip (Nitrogen)
2. Reservoir cap assembly

▼ CAUTION

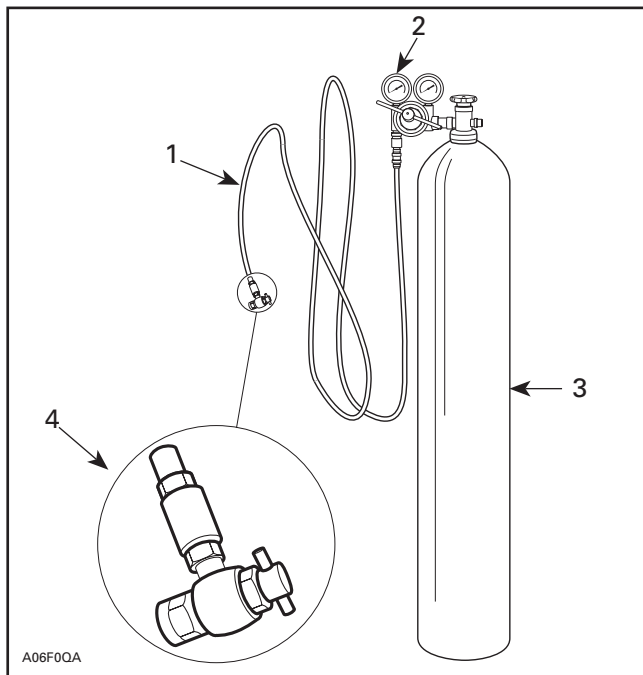
Do not exceed the recommended pressure value.

◆ WARNING

Whenever working with high pressure gas, use eyewear protection. Never direct gas pressure toward anybody.

NOTE: Carefully inspect damper for gas or oil leaks. Any leaks must be corrected before continuing.

Damper gas pressure can be confirmed by using a pressure gauge available through your local industrial gas supplier.



1. Automotive type air pressure hose
2. Two stage regulator, delivery pressure range 2070 kPa (300 PSI)
3. High pressure cylinder filled with industrial grade nitrogen
4. Valve tip

Front Suspension Springs Preload Adjustment

Lift snowmobile to remove tension from front springs.

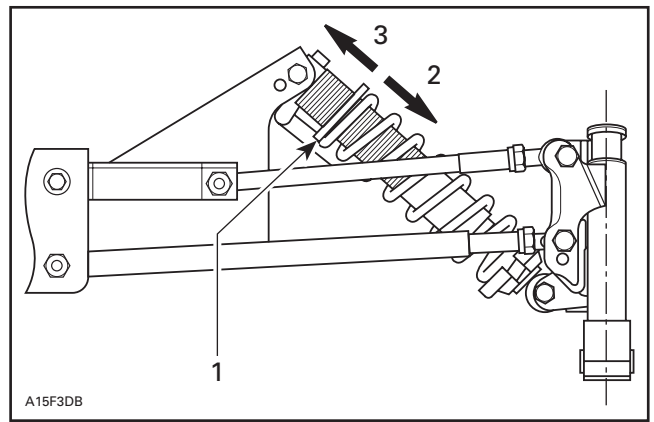
NOTE: Always set preload to the same value (or the same number of turns) on both shocks.

MX Z 600/700 and MX Zx 440 LC

Perform preload adjustment on HPG shock absorber by setting adjusting nut upward (remove preload) or downward (add preload) by hand.

▼ CAUTION

Ensure that shock absorber is extended when adjusting preload and make sure that tension remains on spring when removing preload.



TYPICAL — FRONT HPG SHOCK ABSORBER

1. Adjusting nut
2. Add preload
3. Remove preload

Summit 600/700

Perform preload adjustment on Motion Control shock absorber by setting adjusting cam upward (add preload) or downward (remove preload). Use provided tool to set preload.

Steering Adjustments

Steering adjustment must be performed in the following sequence:

- Center pivot arm.
- Set camber angle.
- Check for a handlebar perpendicular to skis.
- Set toe-out.

For most of procedures (i.e. handlebar levelling and adjustments and lubrication), refer to *Ski-Doo 1999 Shop Manual*, volume 2. Following are items which differ.

Pivot Arm Centering

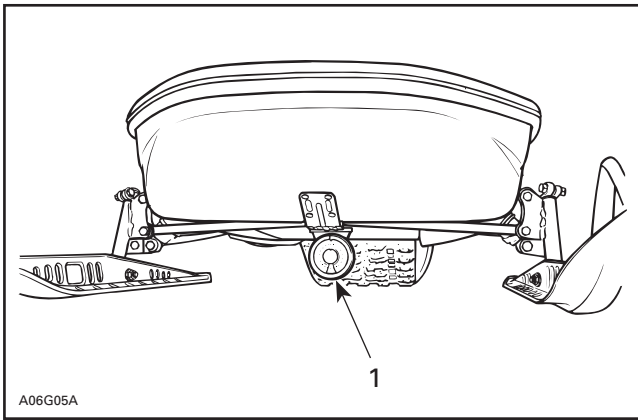
Pivot arm should be midstroke when handlebar and skis are straight ahead.

NOTE: If servicing is needed, torque pivot arm bolt between 37 and 45 N•m (28 and 33 lbf•ft) when reassembling.

Camber Angle Setting

NOTE: Identical adjustments are required on both sides of the vehicle.

- Make sure the vehicle is leveled by placing an angle finder under the main frame member as shown on the following illustration.



TYPICAL

1. Angle finder

Using special tool (P/N 529 021 600) mounted to the ski leg, position the angle finder on the tool as shown in the following illustration. An alternative location for the angle finder, if the special tool is not available, is the outside of the ski leg housing.

Camber should be set as follows (with shock completely stretched):

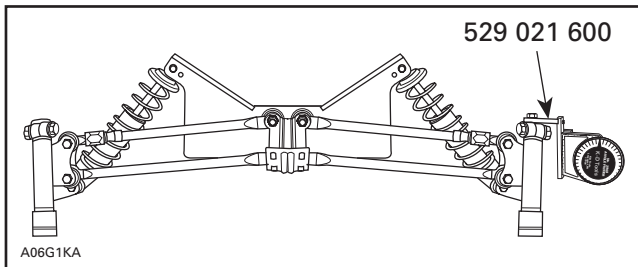
MX Z 600/700: $1^\circ \pm 1^\circ$

MX Zx 440 LC: $2^\circ \pm 1^\circ$

Summit 600/700: (no adjustment on these models).

▼ CAUTION

Angle finder must sit square against swing arm. Positioning angle finder against weld bead or decal may result in false reading.



TYPICAL — ADSA CAMBER ADJUSTMENT SET-UP

Adjusting

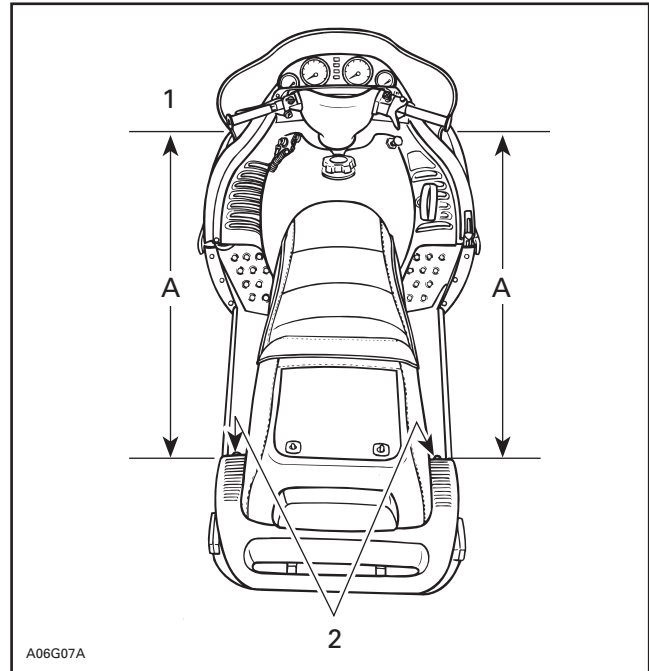
- Loosen lock nut on both upper control arms.
- Unbolt both upper control arms at ski leg housing. Turn ball joint of tie rod half a turn at a time to obtain right camber value. Bolt upper control arms.

NOTE: Always use new elastic nuts when retightening control arms.

HANDLEBAR AND SKI TOE-OUT

Check that handlebar is horizontal when skis are in straight-ahead position by measuring from the extremities of the grips to the rearmost edge of the tunnel, as shown.

NOTE: The reference point must be the same relative to each side.



TYPICAL

1. Equal distance A on each side
2. Same reference point (rivet)

Adjustment is performed by adjusting length of left and right tie rods.

◆ WARNING

Do not attempt to adjust skis straight-ahead position by turning ball joint on tie rod between steering column and pivot arm.

Procedure:

- Apply a slight tension to close skis using an rubber cord.
- Lift snowmobile high enough to stretch completely front suspension and unload skis.
- Lay a straight edge alongside track (make sure track is perfectly aligned).
- Check for snowmobile toe-out
 - Measure distance between edge and runner rearmost stud.
 - Measure distance between edge and runner frontmost stud.
 - Difference between both measures must be **half** of the following specifications:

MX Z 600/700: 8 ± 3 mm ($5/16 \pm 1/8$ in);

MX Zx 440 LC: 0 ± 3 mm ($0 \pm 1/8$ in);

Summit 600/700: 8 ± 3 mm ($5/16 \pm 1/8$ in).

Perform toe-out check on the other ski. If measures are out of specifications:

- Loosen jam nuts of both ends of tie rods.
- Turn the tie rod to adjust its length.
- Tighten jam nuts to $18 \text{ N}\cdot\text{m}$ ($159 \text{ lbf}\cdot\text{in}$).
- Measure distance between both runners rear-most studs.
- Measure distance between both runners front-most studs.
- Difference between both measures must be according to the previous specifications. If not, adjust tie rod length as described high above.

◆ WARNING

Never lengthen tie rod making threaded portion of ball joint exceed 20 mm ($25/32$ in).

Handlebar Levelling

Handlebar can be adjusted for the driver's comfort and driving preferences.

Remove steering pad and foam padding.

Unscrew the four bolts and adjust handlebar height. Lock the handlebar in place by tightening the 4 nuts to $25 \text{ N}\cdot\text{m}$ ($19 \text{ lbf}\cdot\text{ft}$).

NOTE: When levelling handlebar, make sure brake oil reservoir is level too.

◆ WARNING

Avoid contact between the brake handle and the windshield by NOT adjusting the handlebar too high.

◆ WARNING

Make sure that the steering pad and all controls are properly fixed to their normal location on the handlebar.

Reinstall foam padding and steering pad.

Skis Installation and Torquing

On ZX platform, ski stoppers must be installed with higher side in front and ski bolts must be torqued to $32 \text{ N}\cdot\text{m}$ ($24 \text{ lbf}\cdot\text{ft}$).

08 — BODY/FRAME

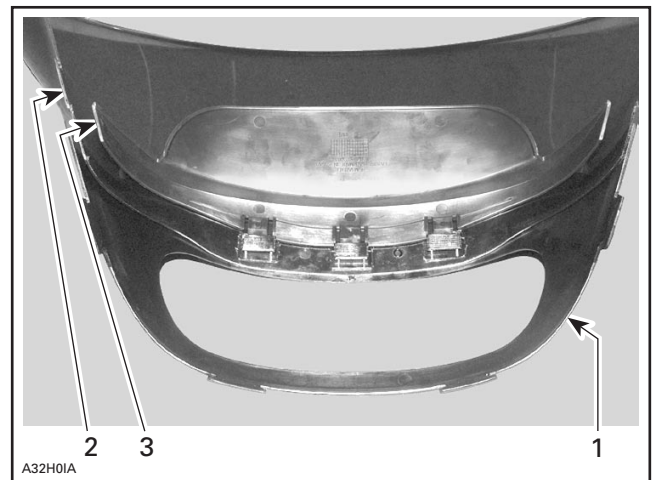
Refer to *Ski-Doo 1999 Shop Manual*, volume 2 for inspection and servicing. Body and frame materials on ZX platform and S-series are the same.

Windshield Installation

Insert tabs of headlamp protector in windshield square holes.

Clip inner protector in place.

Secure windshield assembly on hood using latches.



1. Headlamp Protector
2. Windshield
3. Inner Protector

09 — TECHNICAL DATA

See following pages.






10 — WIRING DIAGRAMS

See last pages.

IMPORTANT: Use the MX Z 600 and Summit 600 wiring diagram for MX Z 700 and Summit 700.





ENGINE SPECIFICATIONS

VEHICLE MODEL		MX Zx 440 LC	MX Z 600	MX Z 700	
ENGINE TYPE		453	593	693	
Number of Cylinders		2	2	2	
Bore mm (in)		65.00 (2.57)	76.00 (2.99)	78.00 (3.0709)	
Stroke mm (in)		65.80 (2.59)	65.80 (2.59)	73.00 (2.874)	
Displacement cm ³ (in ³)		436.7 (26.65)	597.00 (36.43)	697.64 (42.573)	
Compression Ratio (corrected)		7.2	6.7	6.7	
Maximum Power Engine Speed ① ± 100 RPM		8500	8000	8000	
Piston Ring Type		Semi-trapez	Semi-trapez	Semi-trapez	
Ring End Gap	(new) mm (in)	0.200 (0.008)	0.400 (0.016)	0.400 (0.016)	
	(wear limit) mm (in)	1.0 (.039)	1.0 (.039)	1.0 (.039)	
Ring/Piston Groove Clearance	(new) mm (in)	0.040 (0.002)	0.040 (0.002)	0.040 (0.002)	
	(wear limit) mm (in)	0.2 (.008)	0.2 (.008)	0.2 (.008)	
Piston/Cylinder Wall Clearance	(new) mm (in)	0.113 (0.004)	0.110 (.0043)	0.070 (.0028)	
	(wear limit) mm (in)	0.15 (0.006)	0.2 (.008)	0.150 (.0059)	
Connecting Rod Big End Axial Play	(new) mm (in)	0.390 (0.015)	0.390 (0.015)	0.390 (0.015)	
	(wear limit) mm (in)	1.2 (0.047)	1.2 (0.047)	1.2 (0.047)	
Maximum Crankshaft End-Play ② mm (in)		0.3 (.0118)	0.3 (.0118)	0.3 (.0118)	
Maximum Crankshaft Deflection Measured at Center mm (in)		0.08 (.0031)	0.08 (.0031)	0.08 (.0031)	
Rotary Valve Timing					
		Opening			
		Closing			
Magneto Generator Output W		290	290	290	
Ignition Type		CDI	CDI	CDI	
Spark Plug Make and Type		NGK BR9ES	NGK BR9ES	NGK BR9ES	
Spark Plug Gap ± 0.05 mm (± 0.002 in)		0.45 (.018)	0.45 (.018)	0.45 (.018)	
Ignition Timing BTDC ③ mm (in)		3.14 (0.124)	3.0 (0.118)	3.36 (0.132)	
Trigger Coil Air Gap mm (in)		0.55 - 1.45 (0.22 - 0.57)	0.55 - 1.45 (0.22 - 0.57)	0.55 - 1.45 (0.22 - 0.57)	
Trigger Coil ④ Ω		190 - 300	190 - 300	190 - 300	
Generating Coil ④ Ω		11.6 - 21.6	11.6 - 21.6	11.6 - 21.6	
Lighting Coil ④ Ω		0.1 - 0.4	0.1 - 0.4	0.1 - 0.4	
High Tension Coil ④		Primary Ω			
		Secondary kΩ			
Carburetor Type PTO/MAG		TMX-34 1/1	VM 40-107/107	VM 40-117/117	
Main Jet PTO/MAG		290/290	280/280	310/310	
Needle Jet		Q-6	224 Z-9	224 Z-5	
Pilot Jet		25	37.5	40	
Needle Identification — Clip Position		6FIY5-58 - 3	7DFY1-3	7DHY6-4	
Slide Cut-Away		4.0	2.5	2.5	
Float Adjustment ± 1 mm (± .04 in)		N.A.	22.9 (.90)	22.9 (.90)	
Air Screw Adjustment ± 1/16 turn		1	1/2	1	
Idle Speed RPM ± 200 RPM		1600	1600	1600	
Gas Type/Pump Octane Number		Unleaded/87	Unleaded/87	Unleaded/87	
Gas/Oil Ratio		40:1	Injection	Injection	
Type		Liquid cooled	Liquid cooled	Liquid cooled	
Axial Fan Belt Adjustment		Deflection mm (in)	N.A.	N.A.	
		Force ⑤ kg (lbf)	N.A.	N.A.	
Thermostat Opening Temperature °C (°F)		42 (108)	42 (108)	42 (108)	
Radiator Cap Opening Pressure kPa (PSI)		90 (13)	90 (13)	90 (13)	
ENGINE COLD N·m (lb·ft)		Drive Pulley Retaining Screw ⑥	95 (70)	95 (70)	95 (70)
		Exhaust Manifold Nuts or Bolts	23 (17)	23 (17)	23 (17)
		Magneto Ring Nut	125 (92)	125 (92)	125 (92)
		Crankcase Nuts or Screws M6	9 (6.5)	9 (6.5)	9 (6.5)
		Crankcase/Engine Support Nuts or Screws M8	29 (21)	29 (21)	29 (21)
		Cylinder Head Nuts	40 (29.5)	40 (29.5)	40 (29.5)
		Crankcase/Cylinder Nuts or Screws	29 (21)	29 (21)	29 (21)
Axial Fan Shaft Nut		N.A.	N.A.	N.A.	

VEHICLE MODEL		SUMMIT 600	SUMMIT 700
ENGINE TYPE		593	693
	Number of Cylinders	2	2
	Bore	mm (in) 76.00 (2.9921)	78.00 (3.0709)
	Stroke	mm (in) 65.80 (2.59)	73.00 (2.874)
	Displacement	cm ³ (in ³) 597.00 (36.43)	697.64 (42.573)
	Compression Ratio (corrected)	6.7	6.7
	Maximum Power Engine Speed ①	± 100 RPM 8000	8000
	Piston Ring Type	Semi-trapez	Semi-trapez
	Ring End Gap	(new) mm (in) 0.400 (0.016) (wear limit) mm (in) 1.0 (.039)	0.400 (0.016) 1.0 (.039)
	Ring/Piston Groove Clearance	(new) mm (in) 0.040 (0.002) (wear limit) mm (in) 0.2 (.008)	0.040 (0.002) 0.2 (.008)
	Piston/Cylinder Wall Clearance	(new) mm (in) 0.110 (.0043) (wear limit) mm (in) 0.2 (.008)	0.070 (.0028) 0.150 (.0059)
	Connecting Rod Big End Axial Play	(new) mm (in) 0.390 (0.015) (wear limit) mm (in) 1.2 (0.047)	0.390 (0.015) 1.2 (0.047)
	Maximum Crankshaft End-Play ②	mm (in) 0.3 (.0118)	0.3 (.0118)
	Maximum Crankshaft Deflection Measured at Center	mm (in) 0.08 (.0031)	0.08 (.0031)
	Rotary Valve Timing	Opening Closing N.A.	N.A.
	Magneto Generator Output	W 290	290
	Ignition Type	CDI	CDI
	Spark Plug Make and Type	NGK BR9ES	NGK BR9ES
	Spark Plug Gap	± 0.05 mm (± 0.002 in) 0.45 (.018)	0.45 (.018)
	Ignition Timing BTDC ③	mm (in) 3.0 (0.118)	3.36 (0.132)
	Trigger Coil Air Gap	mm (in) 0.55 - 1.45 (0.22 - 0.57)	0.55 - 1.45 (0.22 - 0.57)
	Trigger Coil ④	Ω 190 - 300	190 - 300
	Generating Coil ④	Ω 11.6 - 21.6	11.6 - 21.6
	Lighting Coil ④	Ω 0.1 - 0.4	0.1 - 0.4
	High Tension Coil ④	Primary Ω Secondary kΩ	
	Carburetor Type	PTO/MAG VM 40 113/113	VM 40 121/121
	Main Jet	PTO/MAG 280/280	310/310
	Needle Jet	224 Z-9	224 Z-5
	Pilot Jet	37.5	40
	Needle Identification — Clip Position	7DFY1-3	7DHY6-4
	Slide Cut-Away	2.5	2.5
	Float Adjustment	± 1 mm (± .04 in) 22.9 (.90)	22.9 (.90)
	Air Screw Adjustment	± 1/16 turn 1/2	1
	Idle Speed RPM	± 200 RPM 1600	1600
	Gas Type/Pump Octane Number	Unleaded/87	Unleaded/87
Gas/Oil Ratio	Injection	Injection	
	Type	Liquid cooled	Liquid cooled
	Axial Fan Belt Adjustment	Deflection mm (in) N.A. Force ⑤ kg (lbf) N.A.	N.A. N.A.
	Thermostat Opening Temperature	°C (°F) 42 (108)	42 (108)
	Radiator Cap Opening Pressure	kPa (PSI) 90 (13)	90 (13)
	ENGINE COLD N _{om} (lb•ft)		
	Drive Pulley Retaining Screw ⑥	95 (70)	95 (70)
	Exhaust Manifold Nuts or Bolts	23 (17)	23 (17)
	Magneto Ring Nut	125 (92)	125 (92)
	Crankcase Nuts or Screws	M6 9 (6.5) M8 29 (21)	9 (6.5) 29 (21)
	Crankcase/Engine Support Nuts or Screws	40 (29.5)	40 (29.5)
	Cylinder Head Nuts	29 (21)	29 (21)
Crankcase/Cylinder Nuts or Screws	29 (21)	29 (21)	
Axial Fan Shaft Nut	N.A.	N.A.	

VEHICLE SPECIFICATIONS

VEHICLE MODEL		MX Zx 440 LC	MX Z 600	MX Z 700	
ENGINE TYPE		453	593	693	
Chain Drive Ratio		21/43	24/43	25/43	
Chain	Pitch in	3/8	3/8	3/8	
	Type/Links Qty/Plates Qty	Silent/74/13	Silent/74/13	Silent/76/13	
Drive Pulley	Type of Drive Pulley	TRA	TRA	TRA	
	Ramp Identification	296 ③	281 ①	297 ①	
	Calibration Screw Position or Calibration Part	3	3	3	
	Spring Color	White/Silver	Violet/Yellow	Violet/Yellow	
	Spring Length ± 1.5 mm (± .060 in)	127.6 (5.0)	157.9 (6.22)	157.9 (6.22)	
	Clutch Engagement ± 100 RPM	5300	3800	3800	
Driven Pulley	Type of Driven Pulley	Formula	Formula	Formula	
	Spring Preload ± 0.7 kg (± 1.5 lb)	7.0 (15.4)	7.0 (15.4)	7.0 (15.4)	
	Cam Angle degree	44	50	47	
Pulley Distance Z mm (in)		16.5 ± 0.5 (.650 ± .020)	16.5 ± 0.5 (.650 ± .020)	16.5 ± 0.5 (.650 ± .020)	
Offset	X mm (in)	35.5 ± 0.5 (1.398 ± .020)	35.5 ± 0.5 (1.398 ± .020)	35.5 ± 0.5 (1.398 ± .020)	
	Y - X MIN. MAX.	+ 1 (+ .040) + 2 (+ .080)	+ 1 (+ .040) + 2 (+ .080)	+ 1 (+ .040) + 2 (+ .080)	
Drive Belt Part Number (P/N)		414 860 700	414 860 700	417 300 067	
Drive Belt Width (new) ④ mm (in)		35.3 (1.398)	35.3 (1.398)	35.1 (1.382)	
Drive Belt Adjustment	Deflection ± 5 mm (± 13/64 in)	38 (1-1/2)	38 (1-1/2)	38 (1-1/2)	
	Force ⑤ kg (lbf)	11.3 (25)	11.3 (25)	11.3 (25)	
Track	Width cm (in)	38.1 (15)	38.1 (15)	38.1 (15)	
	Length cm (in)	307.4 (121)	307.4 (121)	307.4 (121)	
	Profile Height mm (in)	31.8 (1.25)	22.3 (.878)	22.3 (.878)	
	Adjustment	Deflection mm (in)	30 - 35 (1-3/16 - 1-3/8)	30 - 35 (1-3/16 - 1-3/8)	30 - 35 (1-3/16 - 1-3/8)
		Force ⑥ kg (lbf)	7.3 (16)	7.3 (16)	7.3 (16)
Suspension Type	Track	SC-10 Cross-Country	SC-10 Cross-Country	SC-10 Cross-Country	
	Ski	ADSA	ADSA	ADSA	
Length cm (in)		275 (108.3)	275 (108.3)	275 (108.3)	
Width cm (in)		117.4 (46.2)	121.25 (47.75)	121.25 (47.75)	
Height cm (in)		95.0 (37.4)	100 (39.4)	100 (39.4)	
Ski Stance cm (in)		104.1 (41)	108 (42.5)	108 (42.5)	
Mass (dry) kg (lb)		210 (463)	216 (475)	221 (487)	
Ground Contact Area cm ² (in ²)		6671 (1034)	6671 (1034)	6671 (1034)	
Ground Contact Pressure kPa (PSI)		3.09 (.448)	3.18 (.461)	3.25 (.471)	
Frame Material		Aluminum	Aluminum	Aluminum	
Bottom Pan Material		Impact Copolymer	Impact Copolymer	Impact Copolymer	
Hood Material		RRIM Polyurethane	RRIM Polyurethane	RRIM Polyurethane	
Battery V (A•h)		N.A.	N.A.	N.A.	
Headlight W		H4 60/55	H4 60/55	H4 60/55	
Taillight and Stoplight W		8/27	8/27	8/27	
Tachometer and Speedometer Bulb W		2 x 3	2 x 3	2 x 3	
Fuel and Temperature Gauge Bulb W		N.A.	N.A.	N.A.	
Fuse	Starter Solenoid A	N.A.	N.A.	N.A.	
	Tachometer A	N.A.	N.A.	N.A.	
Fuel Tank L (U.S. gal)		40 (10.6)	40 (10.6)	40 (10.6)	
Chaincase Gearbox mL (U.S. oz)		250 (8.5)	250 (8.5)	250 (8.5)	
Cooling System ⑦ L (U.S. oz)		3.3 (111.6)	3.8 (128.5)	3.8 (128.5)	
Injection Oil Reservoir L (U.S. oz)		N.A.	3.5 (118)	3.5 (118)	

VEHICLE MODEL		SUMMIT 600	SUMMIT 700	
ENGINE TYPE		593	693	
	Chain Drive Ratio	21/43	23/43	
	Chain	Pitch in	3/8	3/8
		Type/Links Qty/Plates Qty	Silent/74/13	Silent/74/13
	Drive Pulley	Type of Drive Pulley	TRA	TRA
		Ramp Identification	294 ②	297 ②
		Calibration Screw Position or Calibration Part	5	4
		Spring Color	Green/Blue	Violet/Yellow
		Spring Length ± 1.5 mm (± .060 in)	147.4 (5.80)	157.9 (6.22)
		Clutch Engagement ± 100 RPM	4200	4100
	Driven Pulley	Type of Driven Pulley	Formula	Formula
		Spring Preload ± 0.7 kg (± 1.5 lb)	7.0 (15.4)	7.0 (15.4)
		Cam Angle degree	47	47
	Pulley Distance Z mm (in)		16.5 ± 0.5 (1.65 ± .020)	16.5 ± 0.5 (1.65 ± .020)
	Offset	X mm (in)	35.5 ± 0.5 (1.398 ± .020)	35.5 ± 0.5 (1.398 ± .020)
		Y - X MIN. MAX.	+ 1 (+ .040) + 2 (+ .080)	+ 1 (+ .040) + 2 (+ .080)
	Drive Belt Part Number (P/N)		414 860 700	417 300 067
	Drive Belt Width (new) ④ mm (in)		35.3 (1.398)	35.1 (1.382)
	Drive Belt Adjustment	Deflection ± 5 mm (± 13/64 in)	38 (1-1/2)	38 (1-1/2)
		Force ⑤ kg (lbf)	11.3 (25)	11.3 (25)
	Track	Width cm (in)	38.1 (15)	38.1 (15)
		Length cm (in)	345 (136)	345 (136)
		Profile Height mm (in)	44.5 (1.752)	44.5 (1.752)
		Adjustment	Deflection mm (in)	30 - 35 (1-3/16 - 1-3/8)
Force ⑥ kg (lbf)			7.3 (16)	7.3 (16)
Suspension Type	Track	SC-10 Mountain	SC-10 Mountain	
	Ski	ADSA	ADSA	
	Length cm (in)	294 (115.7)	294 (115.7)	
	Width cm (in)	107.3 (42.25)	107.3 (42.25)	
	Height cm (in)	113 (44.5)	113 (44.5)	
	Ski Stance cm (in)	94.0 (37.0)	94.0 (37.0)	
	Mass (dry) kg (lb)	226 (497)	226 (497)	
	Ground Contact Area cm² (in²)	7357 (1140)	7357 (1140)	
	Ground Contact Pressure kPa (PSI)	3.01 (0.436)	3.01 (.436)	
	Frame Material	Aluminum	Aluminum	
	Bottom Pan Material	Impact Copolymer	Impact Copolymer	
	Hood Material	RRIM Polyurethane	RRIM Polyurethane	
	Battery V (A•h)	N.A.	N.A.	
	Headlight W	H4 60/55	H4 60/55	
	Taillight and Stoplight W	8/27	8/27	
	Tachometer and Speedometer Bulb W	2 x 3	2 x 3	
	Fuel and Temperature Gauge Bulb W	N.A.	N.A.	
	Fuse	Starter Solenoid A	N.A.	N.A.
		Tachometer A	N.A.	N.A.
	Fuel Tank L (U.S. gal)	40 (10.6)	40 (10.6)	
	Chaincase Gearbox mL (U.S. oz)	250 (8.5)	250 (8.5)	
	Cooling System ⑦ L (U.S. oz)	4.0 (135)	4.0 (135)	
	Injection Oil Reservoir L (U.S. oz)	3.5 (118)	3.5 (118)	

ENGINE LEGEND

BTDC: Before Top Dead Center

CDI: Capacitor Discharge Ignition

CTR: Center

K: Kilo (× 1000)

MAG: Magneto Side

N.A.: Not Applicable

PTO: Power Take Off Side

- ① The maximum horsepower RPM applicable on the vehicle. It may be different under certain circumstances and **BOMBARDIER INC.** reserves the right to modify it without obligation.
- ② Crankshaft end-play is not adjustable on these models. Specification is given for verification purposes only.
- ③ At 3500 RPM with headlamp turned on.
- ④ All resistance measurements must be performed with parts at room temperature (approx. 20°C (68°F)). Temperature greatly affects resistance measurements.
- ⑤ Drive pulley retaining screw: torque to 90 to 100 N•m (66 to 74 lbf•ft), install drive belt, accelerate the vehicle at low speed (maximum 30 km/h (20 MPH)) and apply the brake; repeat 5 times. Recheck the torque of 90 to 100 N•m (66 to 74 lbf•ft).

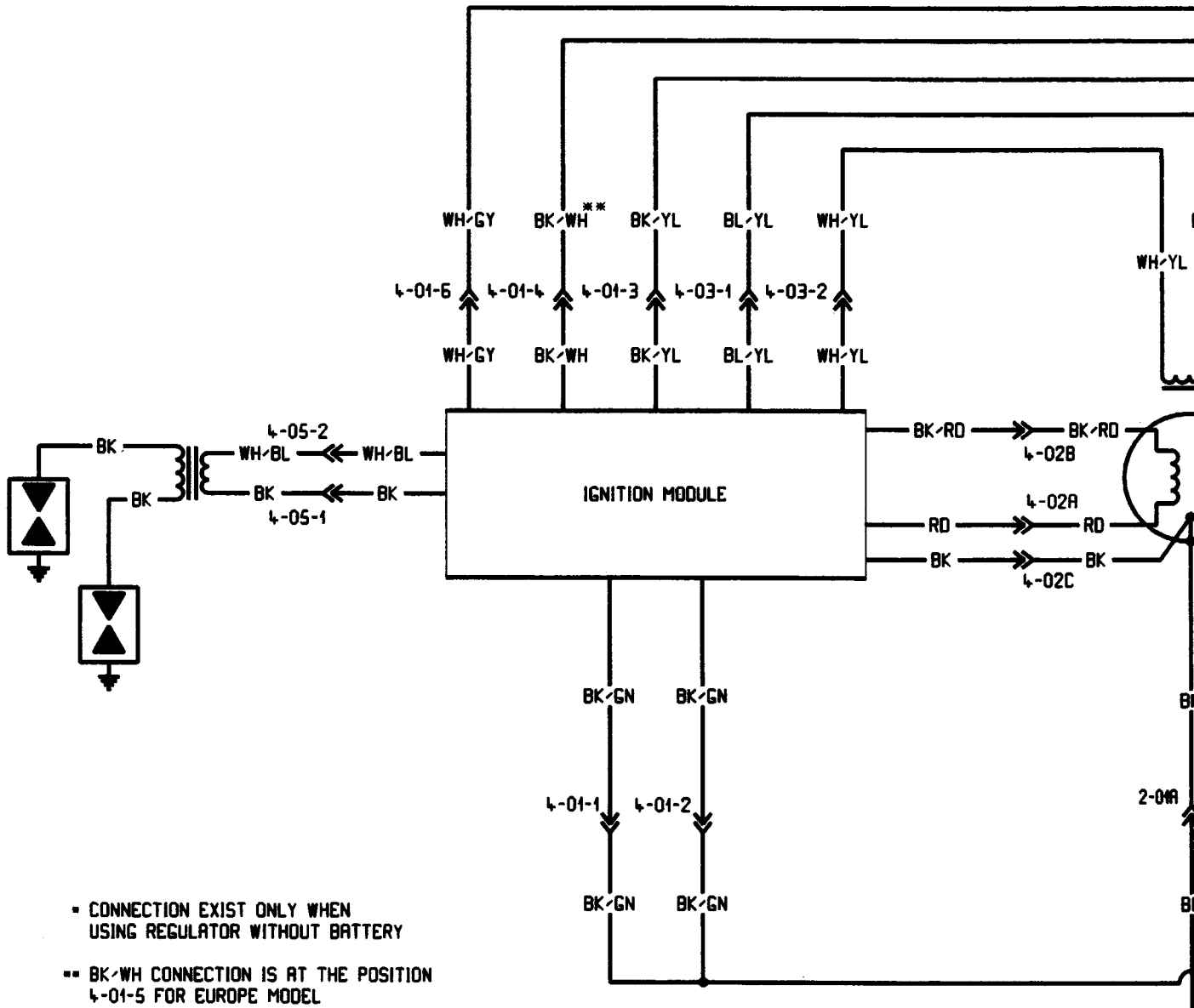
VEHICLE LEGEND

ADSA: Advanced Direct Shock Action

TRA: Total Range Adjustable

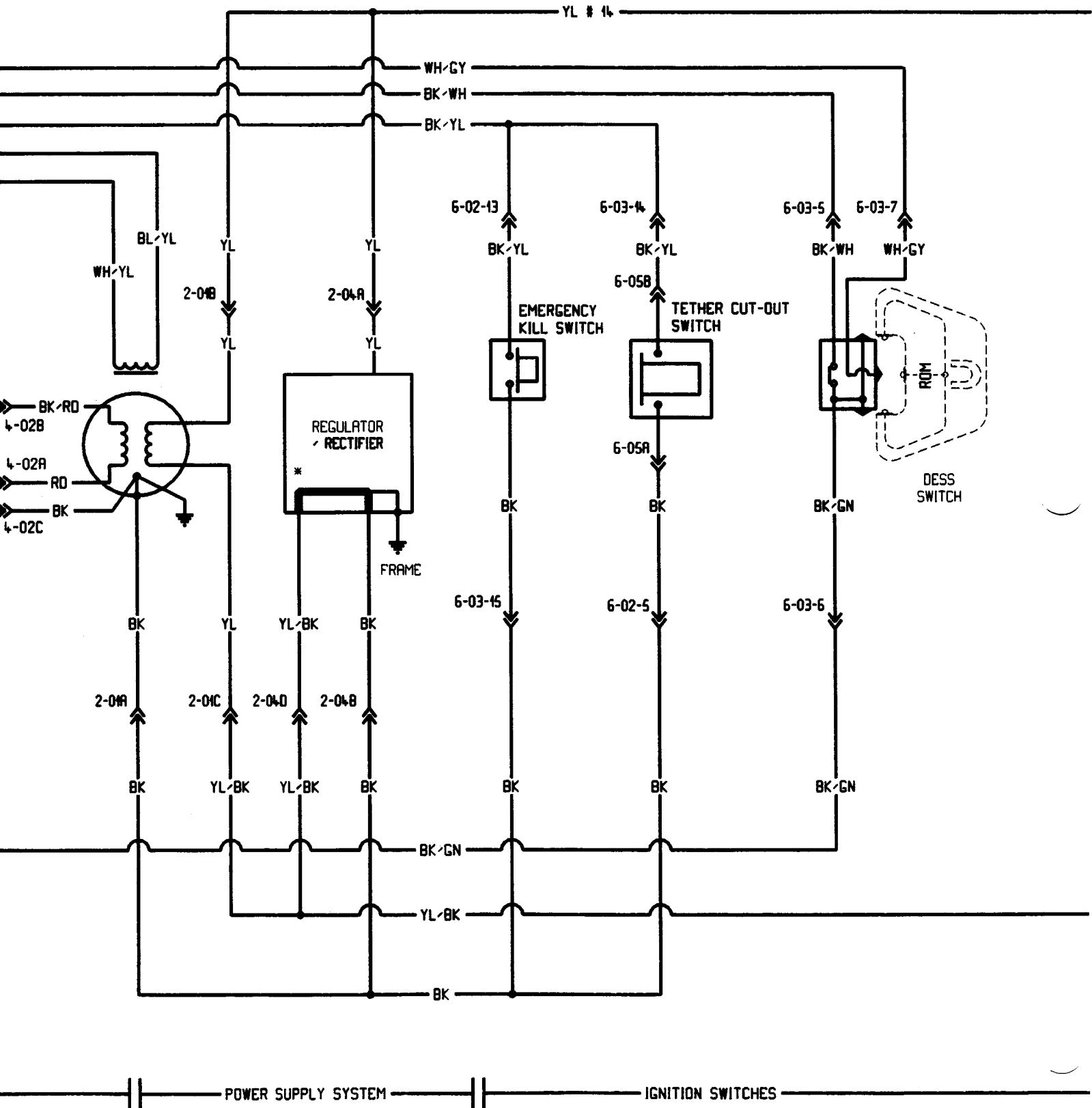
N.A.: Not Applicable

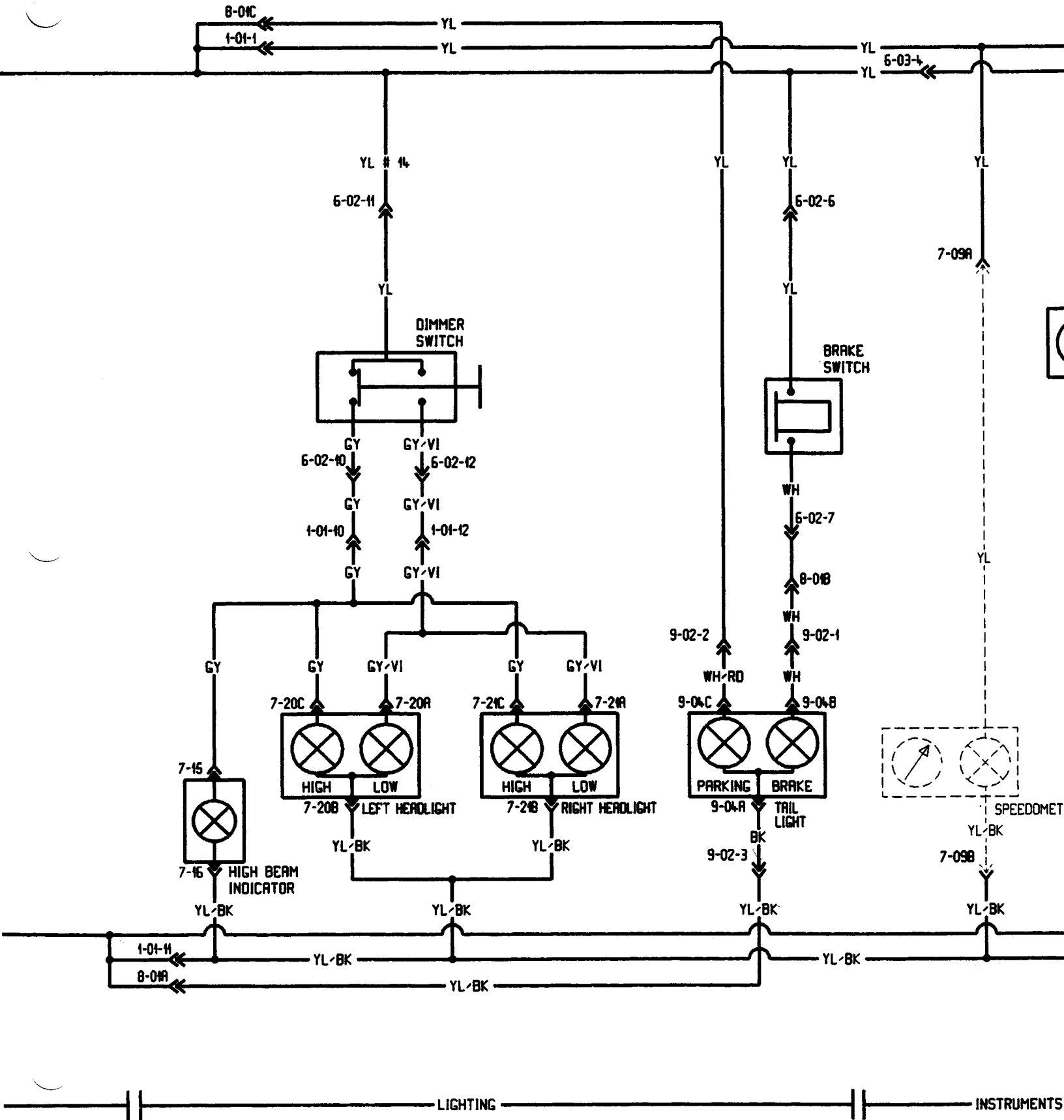
- ① Lever with solid roller pin (P/N 417 004 308).
- ② Lever with hollow roller pin (P/N 417 004 309).
- ③ Lever with threaded hollow roller pin (P/N 504 151 700) with 10.3 g.
- ④ Minimum allowable width may not be less than 3.0 mm (1/8 in) of new drive belt.
- ⑤ Force applied midway between pulleys to obtain specified tension deflection.
- ⑥ Force or downward pull applied to track to obtain specified tension deflection.
- ⑦ Coolant mixture: 60% antifreeze/40% water.

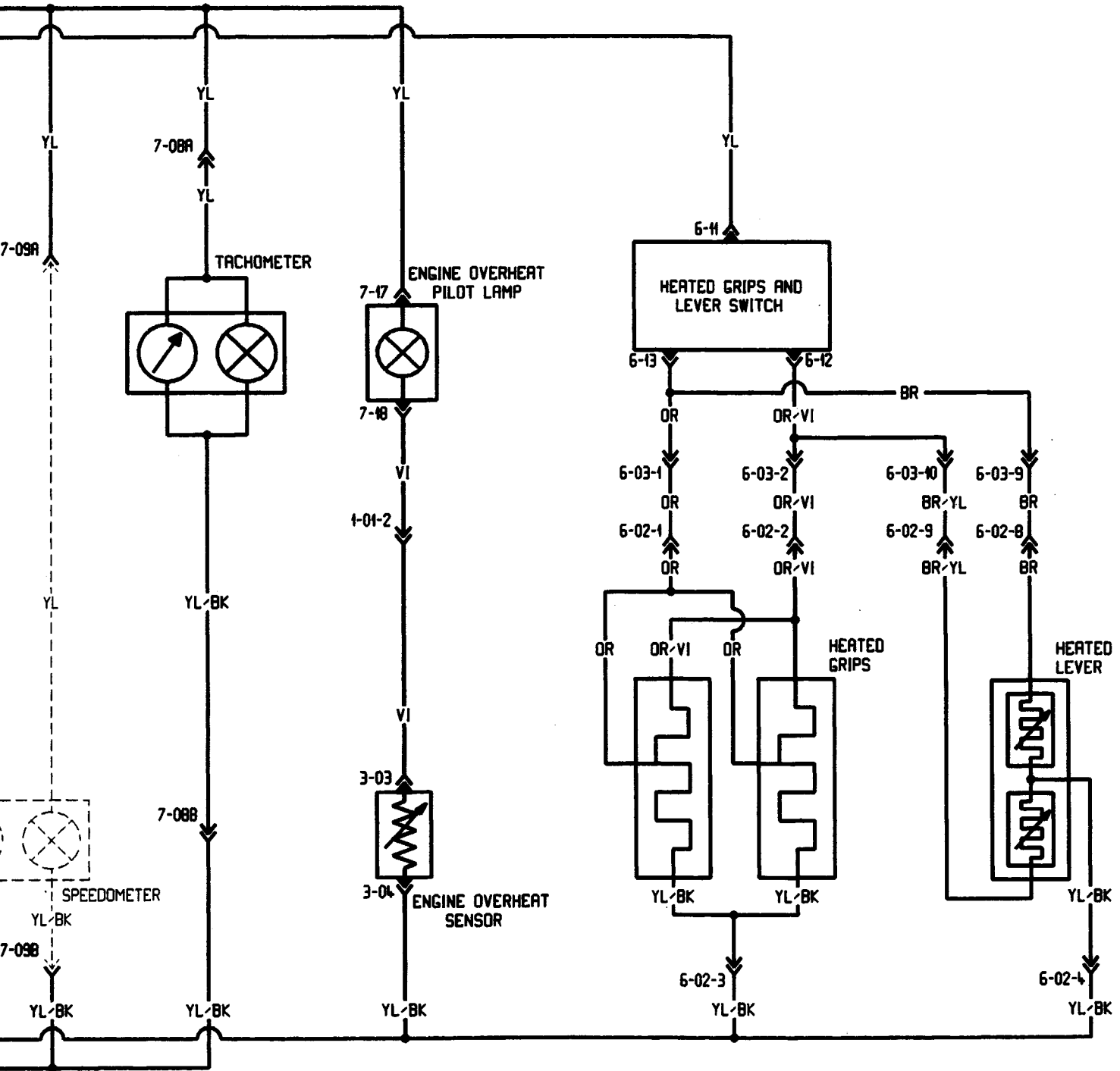


- CONNECTION EXIST ONLY WHEN USING REGULATOR WITHOUT BATTERY
- BK-WH CONNECTION IS AT THE POSITION 4-01-5 FOR EUROPE MODEL

IGNITION MODULE

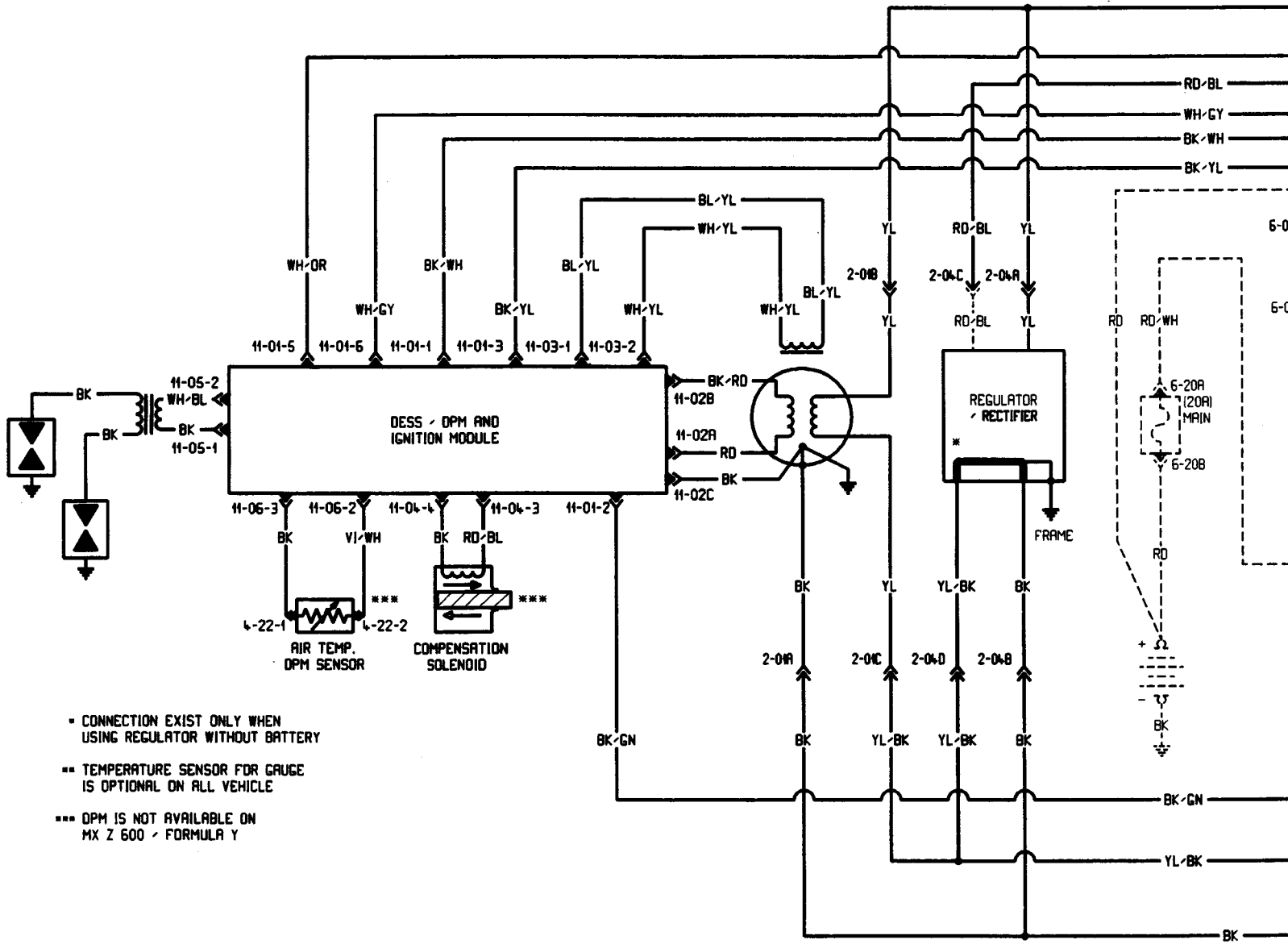






INSTRUMENTS

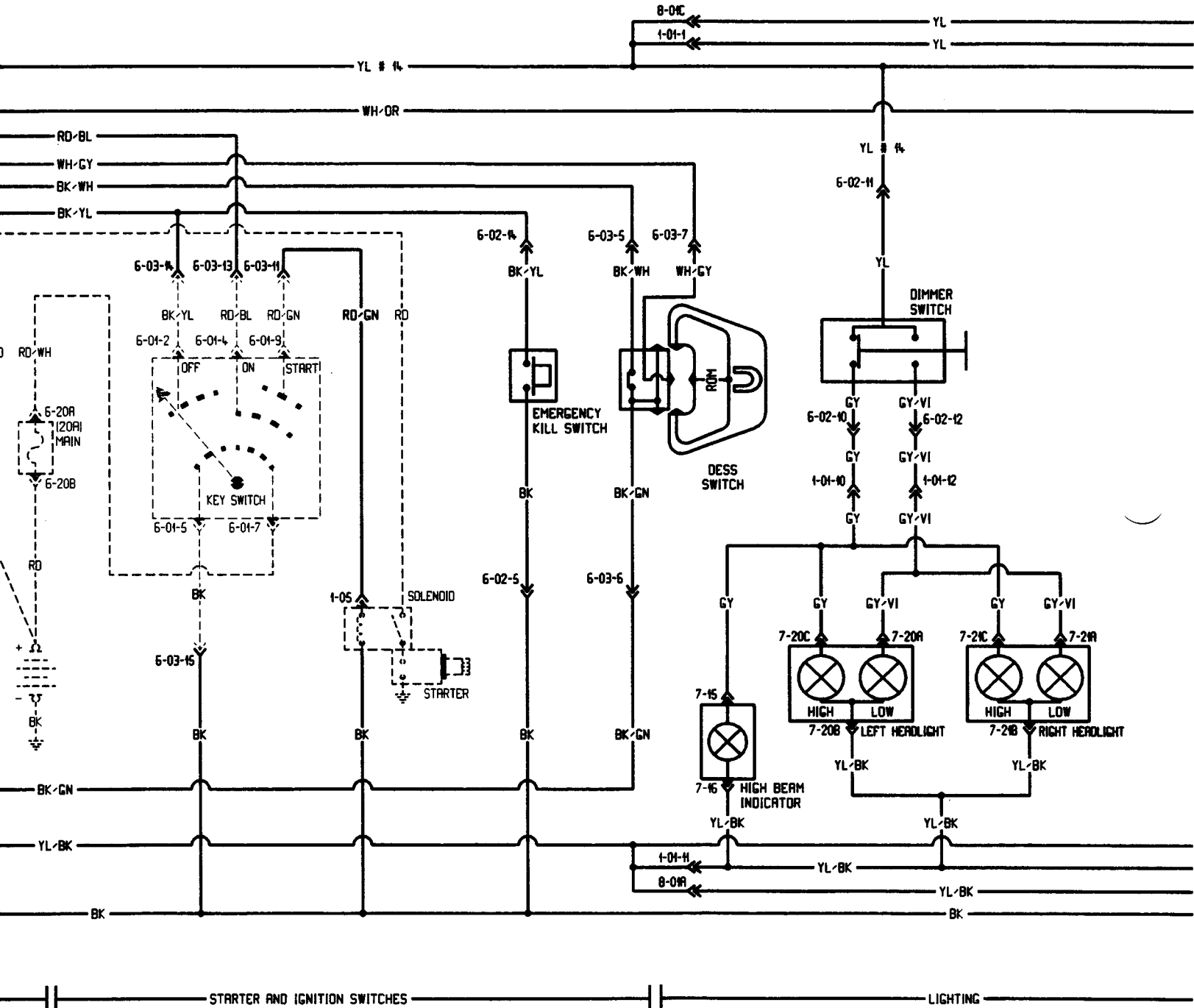
HEATING ELEMENTS

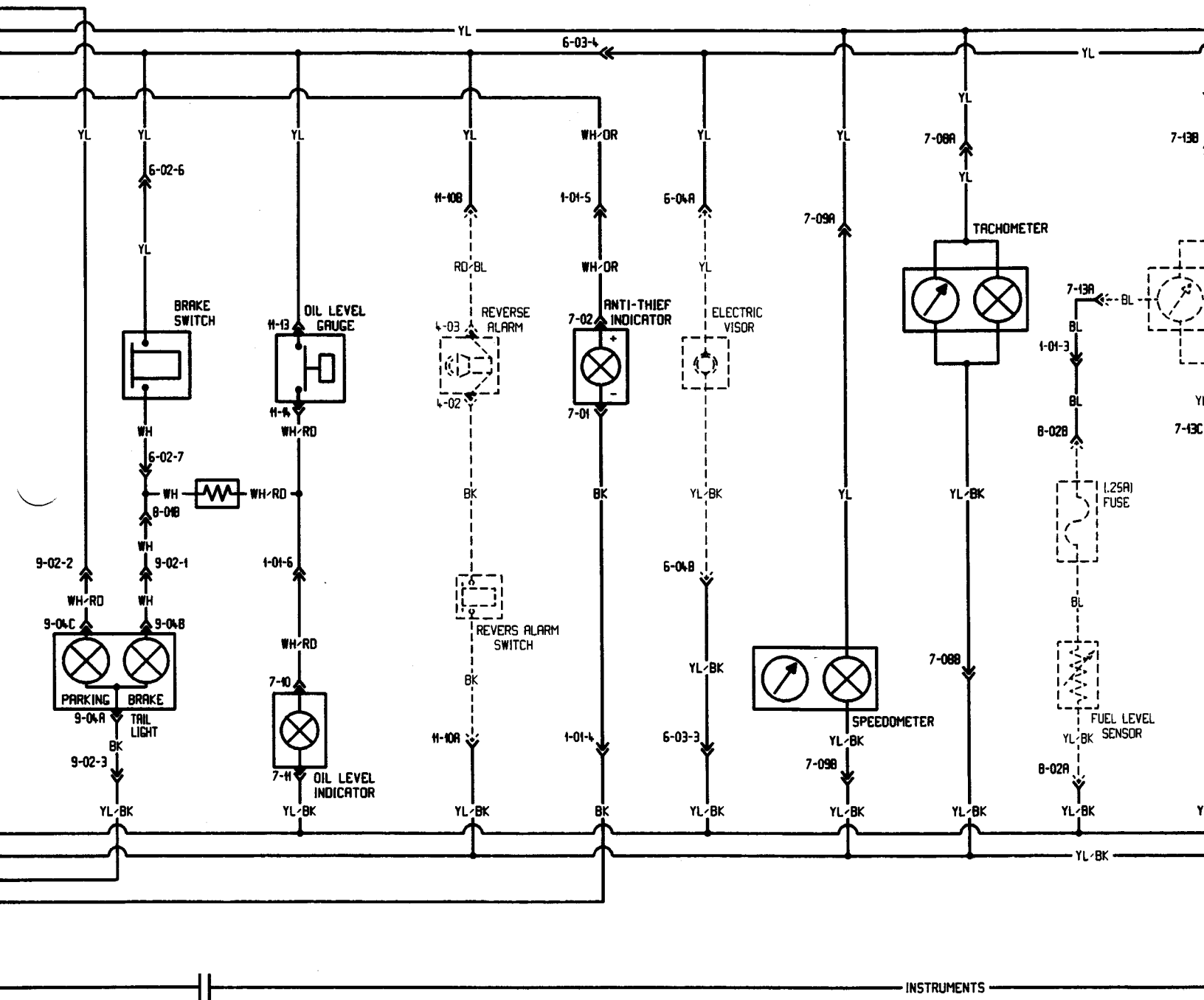


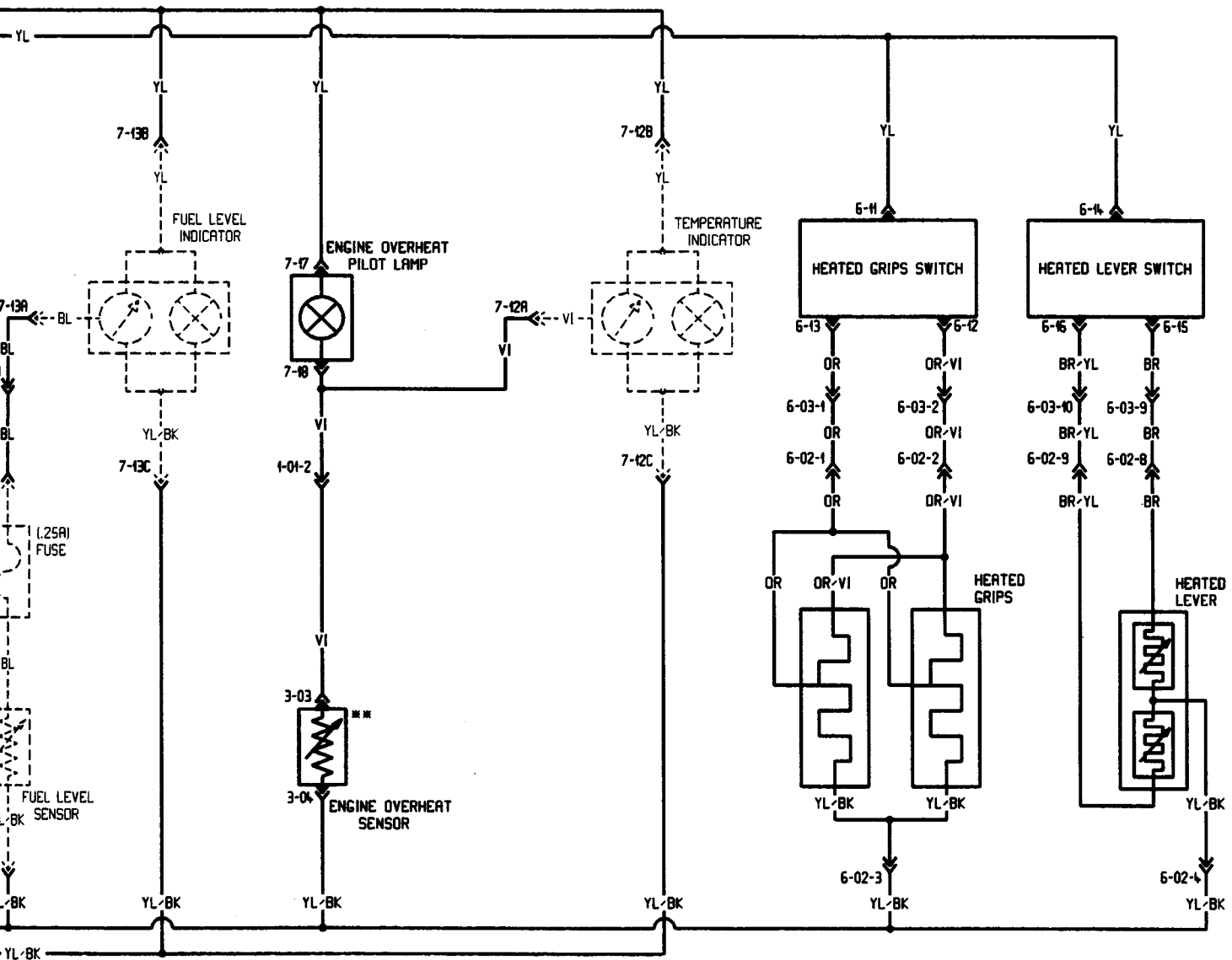
- CONNECTION EXIST ONLY WHEN USING REGULATOR WITHOUT BATTERY
- TEMPERATURE SENSOR FOR GAUGE IS OPTIONAL ON ALL VEHICLE
- OPM IS NOT AVAILABLE ON MX Z 600 / FORMULA Y

DESS / OPM AND IGNITION MODULE

POWER SUPPLY SYSTEM







HEATING ELEMENTS

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-9**

Date: December 30, 1998

SUBJECT: Sea Level Kits

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Summit* 500/600	1403/1404/1405/1345/1346/1461	All
	Summit* X 670	1406/1407/1408	
	Summit* 700	1467/1468	

When above mentioned units are to be used at sea level, at an altitude of 600 m (2000 ft) or less, it is of the utmost importance to install the appropriate sea level kits.

▼ CAUTION

To avoid severe engine damage, the sea level kit must be installed when the vehicle is used at sea level, at an altitude of 600 m (2000 ft) or less.

Kit P/N 861 770 800 consists of:

DESCRIPTION	P/N	QTY
Spring (Violet/Violet)	414 817 900	1
Ramp	417 005 286	3
Pin	417 004 308	3

Kit P/N 861 770 900 and
Kit P/N 861 771 500 consist of:

DESCRIPTION	P/N	QTY
Pin	417 004 308	3

PART INFORMATION

MODEL	KIT P/N
Summit X 670	861 770 800
Summit 500/600	861 770 900
Summit 700	861 771 500

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-10**
REVISION 1 ←

Date: February 25, 2000

SUBJECT: Ski-Doo Paint Codes

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1991 to 1999	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 component colors.

It is divided in 4 sections:

- 1997 — 1999 Ski-Doo paint codes.
- 1991 to 1996 Ski-Doo hood paint codes.
- Corresponding paint codes: List all Ski-Doo equivalents paint codes with B.A.S.F., P.P.G. and spray can.
- New Ski-Doo paint codes.

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

1999 SKI-DOO PAINT CODES

DESCRIPTION	MODEL NUMBER	HOOD PAINT CODE	FRAME PAINT CODE	CYLINDER HEAD/COVER PAINTCODE	SUSPENSION COMPONENT PAINT CODE		
					WHEEL	SWING ARM	SPRING
Tundra	3274	B-152	B-160	N.A.	AL	N.A.	B-160
Tundra R	3272/3273	B-152	B-160	N.A.	B-160	N.A.	B-160
Skandic 380	1364/1365	B-188	AL	N.A.	B-160	B-160	B-160
Skandic 500	1361/1362/ 1363	B-188	AL	N.A.	B-160	B-160	B-160
Skandic WT	1429/1430	B-188	B-160	N.A.	AL	N.A.	B-160
Skandic WT LC	1427/1428	B-188	B-160	B-152	AL	N.A.	B-160
Skandic SWT	1431/1432	B-188	B-160	N.A.	AL	N.A.	B-160
Touring E	1359/1434/ 1360	B-179	AL	N.A.	B-160	B-160	B-160
Touring LE	1357/1358	B-179	AL	N.A.	B-160	B-160	B-160
Touring SLE	1354/1355/ 1356	B-179	AL	N.A.	B-160	B-160	B-160
Formula S	1351/1353	B-192	AL	N.A.	B-190	B-190	B-190
Formula SL	1348/1349/ 1350	B-192	B-160	N.A.	B-190	B-190	B-190
Grand Touring 500	1367/1368/ 1369	B-167	B-184	B-190	B-195	B-184	B-195
Grand Touring 583	1370/1371/ 1372	B-167	B-184	B-176	B-195	B-184	B-195
Grand Touring 700	1373/1374	B-167	B-184	B-168	B-195	B-184	B-195
Grand Touring SE	1375/1376	B-196	B-199	B-181	B-196	B-196	B-196
Summit 500	1403/1404/ 1405	B-179	AL	B-190	<u>B-190</u>	<u>B-190</u>	<u>B-190</u>
Summit 600	1345/1346/ 1461	B-179	AL	B-205 R	<u>B-190</u>	<u>B-190</u>	<u>B-190</u>
Summit X 670	1406/1407/ 1408	B-190	AL	B-168	<u>B-190</u>	B-170	<u>B-190</u>
MX Z 440	1409/1410/ 1411/1448/ 1449	B-190	B-190	N.A.	B-190	B-190	B-190
MX Z x 440 LC	1342/1343/ 1344	B-190	B-190	B-190	B-190	B-190	B-190
MX Z 500	1412/1413/ 1414/1450/ 1451	B-190	B-190	B-190	B-190	B-190	B-190



1999 SKI-DOO PAINT CODES (CONTINUED)

DESCRIPTION	MODEL NUMBER	HOOD PAINT CODE	FRAME PAINT CODE	CYLINDER HEAD/COVER PAINTCODE	SUSPENSION COMPONENT PAINT CODE		
					WHEEL	SWING ARM	SPRING
MX Z 600	1336/1337/ 1338	B-190	AL	B-205 R	B-190	B-170	B-190
MX Z 670 HO	1415/1416/ 1417/1452/ 1453/1466	B-190	B-190	B-168	B-190	B-190	B-190
Formula III 600	1396/1397/ 1398	B-192	B-198	B-155	B-190	B-190	B-190
Formula III 700	1399/1400	B-192	B-198	B-168	B-190	B-190	B-190
Formula III 800	1401/1402	B-192	B-198	B-181	B-190	B-190	B-190
Formula Deluxe 380	1384/1385	B-203	AL	N.A.	B-190	B-190	B-190
Formula Deluxe 500 LC	1377/1378/ 1379	B-203	B-160	B-190	B-190	B-190	B-190
Formula 500 De Luxe	1386/1387	B-203	B-160	N.A.	B-190	B-190	B-190
Formula 583 De Luxe	1380/1381	B-203	B-160	B-176	B-190	B-190	B-190
Formula Deluxe 670	1382/1383	B-203	B-160	B-168	B-190	B-190	B-190
Formula Z 500	1388/1389/ 1458	B-192	B-198	B-190	B-190	B-190	B-190
Formula Z 583	1391/1392	B-192	B198	B-176	B-190	B-190	B-190
Formula Z 670	1393/1394/ 1395	B-192	B198	B-168	B-190	B-190	B-190
Mach 1	1422/1437/ 1423	B-160	B-160	B-168	B-176	B-176	B-176
Mach 1 (R)	1442/1443/ 1444	B-160	B-160	B-168	B-176	B-176	B-176
Mach Z	1418/1435/ 1419/1462	B-160	B-160	B-181	B-190	B-190	B-190
Mach Z (R)	1439/1440/ 1441	B-160	B-160	B-181	B-190	B-190	B-190
Mach Z LT	1420/1436	B-160	B-160	B-181	B-190	B-190	B-190
Mach Z LT (R)	1445/1446/ 1447	B-160	B-160	B-181	B-190	B-190	B-190
Mini Z	1424	B-190	B-190	N.A.	B-190	B-190	N.A.

AL: Aluminum (no paint).

N.A.: Not Applicable.

1998 SKI-DOO PAINT CODES

DESCRIPTION	MODEL NUMBER	HOOD PAINT CODE	FRAME PAINT CODE	CYLINDER HEAD/COVER PAINTCODE	SUSPENSION COMPONENT PAINT CODE		
					WHEEL	SWING ARM	SPRING
Tundra R	3268/3269	B152	B160	N.A.	AL	N.A.	B160
Tundra II LT	3270/3271	B152	B160	N.A.	AL	N.A.	B160
Skandic 380	1240/1241/ 1242	B188	AL	N.A.	B160	B160	B160
Skandic 500	1237/1238/ 1239	B188	AL	N.A.	B160	B160	B160
Skandic WT	1286/1287	B188 W	B160	N.A.	AL	N.A.	B160
Skandic WT LC	1284/1285	B188 W	B160	B190 R	AL	N.A.	B160
Skandic SWT	1288/1289	B188 W	B160	N.A.	AL	N.A.	B160
Touring E	1234/1236	B189	A	N.A.	B160	B160	B160
Touring LE	1232/1233 1305	B189	AL	N.A.	B160	B160	B160
Touring SLE	1229/1230/ 1231	B189	AL	N.A.	B160	B160	B160
Formula S	1226/1227	B176	AL	N.A.	B176	B160	B176
Formula SL	1224/1225	B176	B160	N.A.	B176	B160	B176
Grand Touring 500	1218/1219/ 1220	B179	B184	B190 R	B186	B184	B186
Grand Touring 583	1221/1222/ 1223	B179	B184	B176 R	B186	B184	B186
Grand Touring 700	1211/1318/ 1212	B179	B184	B168 R	B186	B184	B186
Grand Touring SE	1210/1319/ 1217	B167	B184	B168 R	B188	B184	B188
Summit 500	1256/1257/ 1258	B179	B160	B190 R	B190	B160	B190
Summit 583	1259/1260	B179	B160	B176 R	B190	B160	B190
Summit 670	1261/1262/ 1263	B179	B160	B168 R	B190	B160	B190
Summit X 670	1307/1310	B179	B160	B168 R	B190	B160	B190
MX Z 440	1264/1265/ 1266	B190	B190	N.A.	B190	B190	B190
MX Z x 440 LC	1269/1270/ 1271	B190	AL	B190 R	B190	B190	B190
MX Z 500	1272/1273/ 1274	B190	B190	B152 R	B190	B190	B190

1998 SKI-DOO PAINT CODES (CONTINUED)

DESCRIPTION	MODEL NUMBER	HOOD PAINT CODE	FRAME PAINT CODE	CYLINDER HEAD/COVER PAINTCODE	SUSPENSION COMPONENT PAINT CODE		
					WHEEL	SWING ARM	SPRING
MX Z 583	1275/1276/ 1277	B190	B190	B176 R	B190	B190	B190
MX Z 670	1278/1279/ 1280	B190	B190	B168 R	B190	B190	B190
Formula III 600	1255/1334/ 1335	B175	B183	B155 R	B190	B183	B190
Formula III 600 LT	1206/1207	B175	B183	B155 R	B190	B183	B190
Formula III 600 (R)	1332/1333	B175	B183	B155 R	B190	B183	B190
Formula III 700	1208/1209	B175	B183	B168 R	B190	B183	B190
Formula III 700 (R)	1296/1297	B175	B183	B168 R	B190	B183	B190
Formula S Electric	1228	B176	AL	N.A.	B176	B160	B176
Formula 500	1243/1244/ 1245	B176	B176	B152 R	B176	B176	B176
Formula 500 De Luxe	1246/1247/ 1248	B176	B176	B152 R	B176	B176	B176
Formula 583 De Luxe	1249/1250	B175	B183	B176 R	B190	B183	B190
Formula Z 583	1251/1252	B175	B183	B176 R	B190	B183	B190
Formula Z 670	1253/1254/ 1306	B175	B183	B168 R	B190	B183	B190
Mach 1	1202/1311/ 1203	B160	B160	B168 R	B176	B160	B176
Mach 1 (R)	1295/1314	B160	B160	B168 R	B176	B160	B176
Mach Z	1200/1312/ 1290	B160	B160	B181 R	B190	B160	B190
Mach Z (R)	1294/1313	B160	B160	B181 R	B190	B160	B190
Mach Z LT	1302/1315/ 1308	B160	B160	B181 R	B190	B160	B190
Mach Z LT (SV track)	1303/1316	B160	B160	B181 R	B190	B160	B190
Mach Z LT (R)	1304/1317	B160	B160	B181 R	B190	B160	B190
Mini Z	1213	B190	B190	N.A.	B190	B190	N.A.

AL: Aluminum (no paint).

N.A.: Not Available.

1997 SKI-DOO PAINT CODES

DESCRIPTION	MODEL NUMBER	HOOD PAINT CODE	FRAME PAINT CODE	CYLINDER HEAD/COVER PAINT CODE	SUSPENSION COMPONENT PAINT CODE		
					WHEEL	SWING ARM	SPRING
Tundra II LT	3266	B152	B160	N.A.	AL	N.A.	B160
Tundra II LT (Europe)	3267	B152	B160	N.A.	AL	N.A.	B160
Skandic 380 (Canada)	1120	B160	AL	N.A.	B160	B160	B160
Skandic 380 (U.S.)	1121	B160	AL	N.A.	B160	B160	B160
Skandic 380 (Europe)	1122	B160	AL	N.A.	B160	B160	B160
Skandic 500 (Canada)	1117	B160	AL	N.A.	B160	B160	B160
Skandic 500 (U.S.)	1118	B160	AL	N.A.	B160	B160	B160
Skandic 500 (Europe)	1119	B160	AL	N.A.	B160	B160	B160
Skandic WT	1134	B160	B160	N.A.	AL	N.A.	B160
Skandic WT (U.S.)	1135	B160	B160	N.A.	AL	N.A.	B160
Skandic WT LC	1132	B160	B160	N.A.	AL	N.A.	B160
Skandic WT LC (U.S.)	1133	B160	B160	N.A.	AL	N.A.	B160
Skandic SWT	1136	B160	B160	N.A.	AL	N.A.	B160
Skandic SWT (U.S.)	1137	B160	B160	N.A.	AL	N.A.	B160
Touring E (Canada)	1115	B177	AL	N.A.	B160	B160	B160
Touring ELT (Canada)	1116	B177	AL	N.A.	B160	B160	B160
Touring ELT (Europe)	1186	B177	AL	N.A.	B160	B160	B160
Touring LE (Canada)	1112	B177	AL	N.A.	B160	B160	B160
Touring LE (U.S.)	1113	B177	AL	N.A.	B160	B160	B160
Touring LE (Europe)	1114	B177	AL	N.A.	B160	B160	B160
Touring SLE (Canada)	1110	B177	AL	N.A.	B160	B160	B160
Touring SLE (U.S.)	1111	B177	AL	N.A.	B160	B160	B160
Formula S (Canada)	1108	B176	AL	N.A.	B176	B160	B176
Formula S (Europe)	1109	B176	AL	N.A.	B176	B160	B176
Formula SL (Canada)	1106	B176	B160	N.A.	B176	B160	B176
Formula SL (U.S.)	1107	B176	B160	N.A.	B176	B160	B176
Grand Touring 500 (Canada)	1123	B177	B160	B152	B185	B160	B185
Grand Touring 500 (U.S.)	1124	B177	B160	B152	B185	B160	B185
Grand Touring 500 (Europe)	1125	B177	B160	B152	B185	B160	B185

1997 SKI-DOO PAINT CODES (CONTINUED)

DESCRIPTION	MODEL NUMBER	HOOD PAINT CODE	FRAME PAINT CODE	CYLINDER HEAD/COVER PAINT CODE	SUSPENSION COMPONENT PAINT CODE		
					WHEEL	SWING ARM	SPRING
Grand Touring 583 (Canada)	1126	B177	B160	B176	B185	B160	B185
Grand Touring 583 (U.S.)	1127	B177	B160	B176	B185	B160	B185
Grand Touring 583 (Europe)	1128	B177	B160	B176	B185	B160	B185
Grand Touring SE (Canada)	1129	B167	B184	B168	B182	B184	B182
Grand Touring SE (U.S.)	1130	B167	B184	B168	B182	B184	B182
Grand Touring SE (Europe)	1131	B167	B184	B168	B182	B184	B182
Summit 500 (Canada)	1157	B179	B160	B152	B186	B160	B186
Summit 500 (U.S.)	1158	B179	B160	B152	B186	B160	B186
Summit 583 (Canada)	1159	B179	B160	B176	B186	B160	B186
Summit 583 (U.S.)	1160	B179	B160	B176	B186	B160	B186
Summit 583 (Europe)	1161	B179	B160	B176	B186	B160	B186
Summit 670 (Canada)	1162	B179	B160	B168	B186	B160	B186
Summit 670 (U.S.)	1163	B179	B160	B168	B186	B160	B186
MX Z 440 (Canada)	1171	B152	B152	N.A.	B152	B152	B152
MX Z 440 (U.S.)	1172	B152	B152	N.A.	B152	B152	B152
MX Z 440 (Europe)	1173	B152	B152	N.A.	B152	B152	B152
MX Z 440 LC (Canada)	1168	B152	B152	B152	B152	B152	B152
MX Z 440 LC (U.S.)	1169	B152	B152	B152	B152	B152	B152
MX Z 440 LC (Europe)	1170	B152	B152	B152	B152	B152	B152
MX Z 583 (Canada)	1174	B152	B152	B176	B152	B152	B152
MX Z 583 (Europe)	1175	B152	B152	B176	B152	B152	B152
MX Z 583 (U.S.)	1176	B152	B152	B176	B152	B152	B152
MX Z 670 (Canada)	1193	B152	B152	B168	B152	B152	B152
MX Z 670 (U.S.)	1194	B152	B152	B168	B152	B152	B152
MX Z 670 (Europe)	1195	B152	B152	B168	B152	B152	B152
Formula III (Canada)	1148	B175	B183	B155	B176	B183	B176
Formula III (U.S.)	1149	B175	B183	B155	B176	B183	B176
Formula III (Europe)	1150	B175	B183	B155	B176	B183	B176
Formula III LT (Canada)	1151	B175	B183	B155	B176	B183	B176

1997 SKI-DOO PAINT CODES (CONTINUED)

DESCRIPTION	MODEL NUMBER	HOOD PAINT CODE	FRAME PAINT CODE	CYLINDER HEAD/COVER PAINT CODE	SUSPENSION COMPONENT PAINT CODE		
					WHEEL	SWING ARM	SPRING
Formula III LT (U.S.)	1152	B175	B183	B155	B176	B183	B176
Formula III LT (Europe)	1153	B175	B183	B155	B176	B183	B176
Formula 500 (Canada)	1138	B176	B176	B152	B176	B176	B176
Formula 500 (U.S.)	1139	B176	B176	B152	B176	B176	B176
Formula 500 (Europe)	1140	B176	B176	B152	B176	B176	B176
Formula 500 De Luxe (Canada)	1191	B176	B176	B152	B176	B176	B176
Formula 500 De Luxe (U.S.)	1192	B176	B176	B152	B176	B176	B176
Formula 583 (Canada)	1141	B176	B160	B176	B176	B160	B176
Formula 583 (U.S.)	1142	B176	B160	B176	B176	B160	B176
Formula Z (Canada)	1145	B175	B183	B176	B176	B183	B176
Formula Z (U.S.)	1146	B175	B183	B176	B176	B183	B176
Mach 1 (Canada)	1177	B160	B160	B168	B152	B160	B152
Mach 1 (U.S.)	1178	B160	B160	B168	B152	B160	B152
Mach 1 (Europe)	1179	B160	B160	B168	B152	B160	B152
Mach Z (Canada)	1180	B160	B160	B181	B152	B160	B152
Mach Z (U.S.)	1181	B160	B160	B181	B152	B160	B152
Mach Z (Europe)	1182	B160	B160	B181	B152	B160	B152
Mach Z LT (Canada)	1183	B160	B160	B181	B152	B160	B152
Mach Z LT (U.S.)	1184	B160	B160	B181	B152	B160	B152
Mach Z LT (Europe)	1185	B160	B160	B181	B152	B160	B152

AL: Aluminum (no paint).

N.A.: Not Available.

HOOD PAINT CODES

DESCRIPTION	MODEL NUMBER	BOMBARDIER HOOD PAINT CODE
1996		
Élan	3053	B-160
Tundra II LT	3264	B-152
Tundra II LT (Europe)	3265	B-152
Skandic 380 (Canada)	1534	B-160
Skandic 380 (U.S.)	1535	B-160
Skandic 380 (Europe)	1536	B-160
Skandic 500 (Canada)	1531	B-160
Skandic 500 (U.S.)	1532	B-160
Skandic 500 (Europe)	1533	B-160
Skandic WT	1537	B-160
Skandic WT (U.S.)	1539	B-160
Touring E (Canada)	1530	B-177A
Touring ELT 2 (Canada)	1542	B-177A
Touring LE (Canada)	1527	B-177A
Touring LE (U.S.)	1528	B-177A
Touring LE (Europe)	1529	B-177A
Touring SLE (Canada)	1524	B-177A
Touring SLE (U.S.)	1525	B-177A
Formula S (Canada)	1523	B-176
Formula S (Europe)	1541	B-176
Formula SL (Canada)	1521	B-176
Formula SL (U.S.)	1522	B-176
Grand Touring 500 (Canada)	1067	B-177
Grand Touring 500 (U.S.)	1068	B-177
Grand Touring 500 (Europe)	1069	B-177
Grand Touring 580 (Canada)	1070	B-177
Grand Touring 580 (U.S.)	1071	B-177
Grand Touring 580 (Europe)	1072	B-177
Grand Touring SE (Canada)	1073	B-177
Grand Touring SE (U.S.)	1074	B-177
Grand Touring SE (Europe)	1075	B-177
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 (Europe)	1066	B-169
Summit 670 (Canada)	1061	B-169
Summit 670 (U.S.)	1062	B-169
Summit 670 (Europe)	1063	B-169
MX Z 440 (Canada)	1051	B-152
MX Z 440 (U.S.)	1052	B-152
MX Z 440 (Europe)	1053	B-152
MX Z 583 (Canada)	1094	B-152
MX Z 583 (Europe)	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 (Europe)	1093	B-175
Formula III LT (Canada)	1100	B-175
Formula III LT (U.S.)	1101	B-175
Formula III LT (Europe)	1102	B-175
Formula SLS (Canada)	1049	B-176
Formula SLS (U.S.)	1050	B-176
Formula SLS (Europe)	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 (Europe)	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 (Europe)	1083	B-160
Mach Z (Canada)	1084	B-160
Mach Z (U.S.)	1085	B-160
Mach Z (Europe)	1086	B-160
Mach Z LT (Canada)	1087	B-160
Mach Z LT (U.S.)	1088	B-160
Mach Z LT (Europe)	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 (Europe)	3263	B-152
Skandic 380 (Canada)	1505	B-160
Skandic 380 (Europe)	1507	B-160
Skandic 380 (U.S.)	1518	B-160
Skandic 500 (Canada)	1504	B-160
Skandic 500 (Europe)	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 (Europe)	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 (Europe)	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 (Europe)	1046	B-163
Grand Touring 580 (Canada)	1024	B-163
Grand Touring 580 (U.S.)	1025	B-163
Grand Touring 580 (Europe)	1026	B-163
Grand Touring SE 670 (Canada)	1027	B-163
Grand Touring SE 670 (U.S.)	1028	B-167
Grand Touring SE 670 (Europe)	1029	B-167
Summit 583 (Canada)	1013	B-169
Summit 583 (U.S.)	1014	B-169
Summit 583 (Europe)	1015	B-169
Summit 670 1 st series (Canada)	3838	B-169

DESCRIPTION	MODEL NUMBER	BOMBARDIER HOOD PAINT CODE
1995		
Summit 670 1 st series (U.S.)	3839	B-169
Summit 670 2 nd series (Canada)	1016	B-169
Summit 670 2 nd series (U.S.)	1017	B-169
Summit 670 2 nd series (Europe)	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 (Europe)	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 (Europe)	1032	B-145
Formula SS (Canada)	1033	B-145
Formula SS (U.S.)	1034	B-145
Formula SS (Europe)	1047	B-145
Mach 1 670 (Canada)	1043	B-160
Mach 1 670 (U.S.)	1044	B-160
Mach 1 (Europe)	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 (Europe)	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 (Europe)	3694	B-172
Safari Rally E	3689	B-172
Skandic II 377	3685	B-160
Skandic II 377 R	3686	B-160
Skandic II 377 R (Europe)	3690	B-160
Skandic II 503 R	3687	B-160
Skandic II 503 R (Europe)	3691	B-160
Skandic II 503 R SLT	3688	B-160
Skandic II 503 R SLT (Europe)	3692	B-160
Formula MX (Canada)	3868	B-152
Formula MX (U.S.)	3883	B-152
Formula MX (Europe)	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) (Europe)	3890	B-169
Formula STX (Canada)	3873	B-145
Formula STX (U.S.)	3893	B-145
Formula STX (Europe)	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 (Europe)	3879	B-163
Grand Touring XTC	3864	B-163

DESCRIPTION	MODEL NUMBER	BOMBARDIER HOOD PAINT CODE
1994		
Grand Touring XTC (Europe)	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 (Europe)	3896	B-145
Mach 1	3863	B-160
Mach 1 (Europe)	3880	B-160
Mach Z (Canada)	3877	B-160
Mach Z (Europe)	3898	B-160
Mach Z (U.S.)	3899	B-160

DESCRIPTION	MODEL NUMBER	BOMBARDIER HOOD PAINT CODE
1993		
Élan	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 (Europe)	3678	B-160
Skandic 503 R (Europe)	3679	B-160
Skandic 377 R (Europe)	3680	B-160
Safari DL (Europe)	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

DESCRIPTION	MODEL NUMBER	BOMBARDIER HOOD PAINT CODE
1993		
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 (Europe)	3854	B-154
Formula Plus (Europe)	3855	B-145
Formula Plus XTC (Europe)	3856	B-145
Grand Touring (Europe)	3857	B-163
Formula Plus EFI (Europe)	3858	B-145
Formula Mach 1 (Europe)	3859	B-160
Formula Mach 1 XTC (Europe)	3860	B-160
Formula MX Z (Europe)	3861	B-152
Formula Mach Z (Europe)	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

DESCRIPTION	MODEL NUMBER	BOMBARDIER HOOD PAINT CODE
1992		
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

CORRESPONDING PAINT CODES

BOMBARDIER		B.A.S.F. R-M	PPG	SPRAY CAN
B101	CAN-AM RED	N.A.	DCC 69917	N.A.
B102	SKI-DOO YELLOW 80	RM 79044	DCC 88208	N.A.
B103	PERFORMANCE ORANGE	RM 79046	DCC 69918	N.A.
B104	ICE ORANGE	RM 87764	DCC 69919	N.A.
B105	MIDNIGHT BLUE	RM 85003	DCC 17876	413 403 300
B106	EBONY BLACK	RM 84976	DCC 9553 DBU 9568	N.A.
B108	M-S ORANGE 81	RM 85363	DCC 69920	N.A.
B109	SAFARI RED	RM 84977 ①	DCC 78185 ②	N.A.
B111	SILVER	N.A.	DBU 38261	413 406 000
B114	POLAR WHITE	RM 86001	DCC 98197	N.A.
B121	SKI-DOO YELLOW 84	RM 84978	DCC 88209	413 407 800
B122	SPECIAL WHITE	N.A.	DCC 98198	N.A.
B123	SILVER GRAY	RM 84979	DBU 38260 ②	413 404 000
B136	SUNSET ORANGE	RM 84980	DCC 69921	N.A.
B137	BLUE STRATOSPHERE	RM 84981	DBU 17877	N.A.
B142	MAPLE RED	RM 84982	DBU 59965 ②	N.A.
B144	GUNMETAL GRAY	RM 84983	DBU 38257	413 409 200
B145	METALLIC RED	RM 84066 ①	DBU 78186 ①	413 408 400
B146	METALLIC BLACK	RM 84984	DBC 95065 DBU 9552 ②	413 408 500
B147	DARK GRAY	RM 84985	DBU 38258	N.A.
B148	SAND GRAY	RM 84986	DBU 38259	413 409 300
B151	WILD BERRIES	RM 84987	DBU 78187 ① ②	N.A.
B152C B152 B152F	SUNFLOWER YELLOW (HOOD) SUNFLOWER YELLOW (WHEEL) SUNFLOWER YELLOW (FRAME)	RM 84988-0 RM 84988-7 DFM 84988	DCC 88255 89901	413 408 700
B153	SNOW WHITE	RM 80470	DBU 98199	N.A.
B154	PEARL WHITE	N.A.	DBU 98200 ① ②	413 408 800
B155	MAGENTA	RM 85000	DBC - BC 59817	N.A.
B156	MEDITERRANEAN BLUE	RM 79810	DBU 17878 ①	N.A.
B158	MULBERRY	RM 79888	DBU 59966	N.A.
B160	DEEP BLACK	RM 85366	DCC 95066 DBU 9554	413 409 100
B161	QUARTZ PINK	RM 85176 ①	DBU 78188 ① ②	N.A.
B162	PEACOCK BLUE	N.A.	DBU 49688 DBC 19027 ① ②	413 410 200
B163	PEARL BLUE	RM 85017 ①	85017	413 408 900
B164	AQUA BLUE	Refer to paint codes on last page		N.A.
B165	VIOLET	88162		413 409 000
B166	FLAME RED	Refer to paint codes on last page		N.A.
B167	BAVARIAN BLUE	89500	DBC - BC 190086	N.A.

CORRESPONDING PAINT CODES (CONTINUED)

BOMBARDIER		B.A.S.F. R-M	PPG	SPRAY CAN
B168	PLUM	RM 80348	BC - DBC 59816	N.A.
B169	FOREST GREEN	RM 79833-4 ③	DBU - DBC 49591 - DBU 49540	413 409 600
B170	METALLIC QUARTZ	RM 80262 ①	DBU 36590 - 39002	N.A.
B172	TEAL BLUE	RM 87929 ①	DBU 18910 DCC 190728	413 410 300
B173	RASBERRY	RM 87365 ①	SICO: ID 3289	N.A.
B174	METALLIC FIREFLY GREEN	RM 80369-46 ③	DBU 48029	N.A.
B175	METALLIC ROYAL VIOLET	RM 87151	DBC - DBU 19532	413 410 400
B175A	NON-METALLIC ROYAL VIOLET	RM 87930-9 ③	DCC - DG 59813	413 410 400
B176	VIPER RED	DFM 87960	DCC - DG 74790	N.A.
B176 R	VIPER RED	87960-5	N.A.	413 413 600
B177	METALLIC OCEAN GREEN (HOOD)	RM 88482	DBU - DBC 48024	N.A.
	METALLIC OCEAN GREEN (FRAME)	RM 88481	DBU - DBC 48025 DBU 49537	N.A.
B177A	NON-METALLIC OCEAN GREEN	RM 88480	DBU 49536	413 410 900
B178	NEON GREEN	RM 87961	DBU 49539	N.A.
B179	SAPHIR BLUE	RM 93031	DBU - DBC 19821	N.A.
B181	ANTHRACITE	RM 94817	DBU 39072	N.A.
B182	JAY BLUE	RM 79227	DCC - DG 19818	N.A.
B183	AFRICAN VIOLET	FM 88792	DCC - DG 59815	413 413 500
B184	VELVET BLUE	93032	DCC - DG 190085	413 413 400
B185	FIR GREEN	94816	DCC - DG 48020	N.A.
B186	FRENCH BLUE	94601	DCC - DG 19817	N.A.
B188	PLATINUM (HOOD)	89848	DBU 36585	N.A.
B188 W	PLATINUM (HOOD)	89833	DBU 36586	N.A.
B189	PINE GREEN	89867	DBU 48710	N.A.
B190	YELLOW 2000 (HOOD)	89849F	DBU 88272	413 413 000
B-192	PURPLE PEARL METAL	94812	DBC 59829	N.A.
B-193	COPPER MOUNTAIN METALLIC	Refer to paint codes on last page		
B-195	GOLDEN WHEAT METALLIC	94809	N.A.	N.A.
B-196	GRAND CANYON RED METALLIC	94808	N.A.	N.A.
B-197	SOLID COPPER	Refer to paint codes on last page		
B-198	SOLID PURPLE	94806	DCC 59830	413 413 608
B-199	SOLID CANYON RED	94805	DCC 74906	413 413 609
B-203	RUBY RED	94802	N.A.	N.A.
B-205 R	DIAMOND	Refer to paint codes on last page		

① A white undercoat must be applied: B.A.S.F. = 54-M25, R-M = BC 190 or 285-100, PPG = DMD 663.

② Approximate match.

③ 1996 models.

N.A.: Not Available.

NEW SKI-DOO PAINT CODE

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

B-197	SOLID COPPER	①
BASF		
	55A372 =	350.0
	55A390 =	396.0
	55A257 =	416.0
	55A143 =	436.0

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

B205R	DIAMOND	①
BASF		
	M2 =	157.4
	M99/12 =	593.4
	M99/10 =	807.9
	A125 =	820.8
	A926 =	833.8
	A098 =	845.9
	A5563 =	857.2
	M1 =	865.0

B-193	COPPER MOUNTAIN METALLIC	①
BASF		
	55M2 =	166.2
	55A335 =	663.8
	55M801 =	842.6
	55A372 =	1101.0

① Total mixed quantity does not equal 1 liter.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-11**

Date: February 3, 1999

SUBJECT: Gas Line Antifreeze

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
All	All	All	All

When snowmobile is used in powder snow condition and/or at temperatures from and below - 10°C (14°F), we highly recommend the use of gas line antifreeze in a proportion of 150 ml (5 US on) of gas line antifreeze added to 40 liters (10-1/2 US gal) of gas.

This precaution is in order to reduce the risk of frozen carburetor(s) which may lead, in certain cases, to high fuel consumption or severe damage to engine.

NOTE: Use only **methylhydrate free** gas line antifreeze, Kleen-Flo™ or equivalent.

Please notify your customers accordingly.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-12**

Date: April 9, 1999

SUBJECT: Vehicle Storage Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999 and previous	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.

NOTE: "Lubrication and Maintenance Estimate" form, (P/N 484 300 128 (pad)), STORAGE column, should be used jointly with the present storage procedure *Bulletin* in order to cover each and every aspect of the snowmobile storage procedure.

GENERAL INSPECTION

Visually inspect the entire vehicle. Open the hood, and remove any loose objects or accumulation of dirt inside bottom pan and under engine.

NOTE: To facilitate the inspection and ensure adequate lubrication of components, it is recommended to clean the entire vehicle.

Any parts found to be worn, broken or damaged, while performing these storage procedures, should be replaced.

LUBRICATION

WARNING

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

Steering and Front Suspension

Lubricate the steering mechanism. Inspect all components for tightness.

Apply BOMBARDIER LUBE (P/N 293 600 016) on all ball joints.

Apply synthetic grease (P/N 413 711 500) on stabilizer sliders, if so equipped.

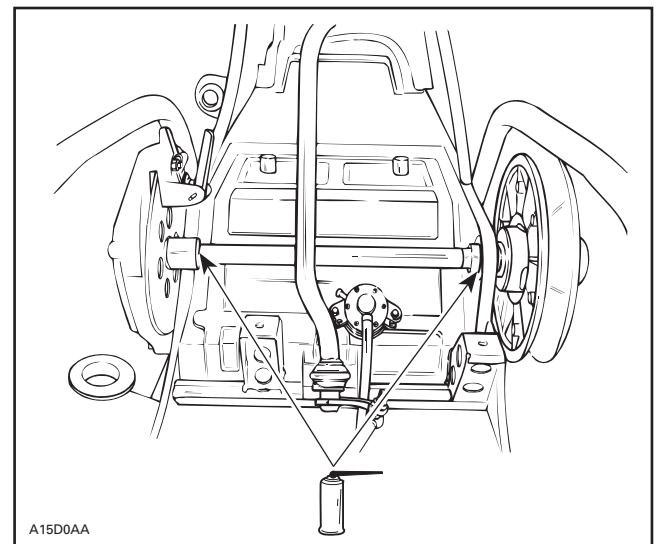
Lubricate front suspension posts and pivot arms at grease fittings.

WARNING

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

Countershaft and Brake System

For proper operation, if so equipped, brake disc and driven pulley must slide freely on countershaft. Lubricate sparingly using anti-seize lubricant (P/N 413 701 000).



TYPICAL

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

Rear Suspension and Drive Axle

Lubricate front and rear arms at grease fittings using synthetic grease (P/N 413 711 500).

Lubricate end housing bearing on drive axle with low temperature grease (P/N 413 706 100).

Lubricate remaining recommended lubrication points. Refer to the appropriate *1999 Shop Manual*, section 01.

Coat all electrical connections and switches with silicone dielectric grease (P/N 413 701 700). If unavailable, use petroleum jelly.

TRACK

Lift rear of vehicle until track is cleared 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 413 408 600) (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 lubrication 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.

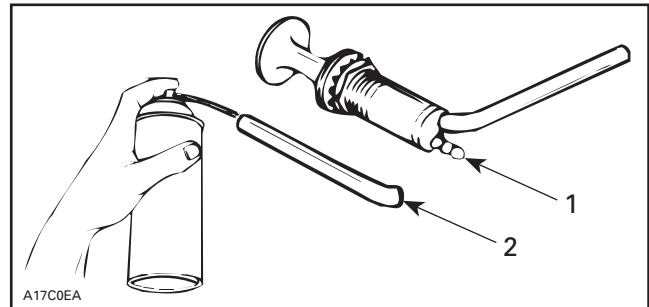
⚠ WARNING

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

- 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).



1. Straight coupling
2. To intake manifold

- Insert storage oil (P/N 496 014 100) container nozzle into primer outlet hose.

Models Equipped with a Choke

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

Refer to the appropriate *1999 Shop Manual*, section 01.

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 cylinder(s).
- Crank slowly 2 or 3 revolutions to lubricate cylinder(s).
- Reinstall the spark plug(s).

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

Mini Z Model

Drain oil from engine. Refill crankcase with SAE 5W/30 engine oil.

Refer to *1999 MINI Z Shop Manual* (P/N 484 200 007) for proper oil change procedure.

⚠ 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 (BOMBARDIER LUBE (P/N 293 600 016)).

LIQUID COOLING SYSTEM

Check coolant level in coolant tank.

Check for leaks, loose clamps and general condition of hoses.

BATTERY (IF APPLICABLE)

The battery must 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 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/hour.

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 silicone dielectric grease (P/N 413 701 700) 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 413 803 300) (12 x 355 mL)	BOMBARDIER MINERAL OIL (P/N 413 801 900) (16 x 250 mL)
All models with liquid cooled engine and all Skandic WT models.	All models with fan cooled engine, except Skandic WT models.

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 "Kimmtowels®" wipers no. 58-380 from Kimberly-Clark.

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

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

Cleaning Products

UTILITY	COMPONENT	PRODUCT	AVAILABLE AT
To clean THIN coats of grease.	Entire snowmobile including metallic parts.	Endust , from Bristol Myers.	Hardware stores or supermarkets.
To clean THICK 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.	Automotive parts retailers.
To clean/repair DEEP 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.

Lift rear of vehicle until track is cleared of the ground and support with a brace or trestle.

Do not release track tension.

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

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



SNOWMOBILES



SERVICE
Bulletin

No. **99-13**

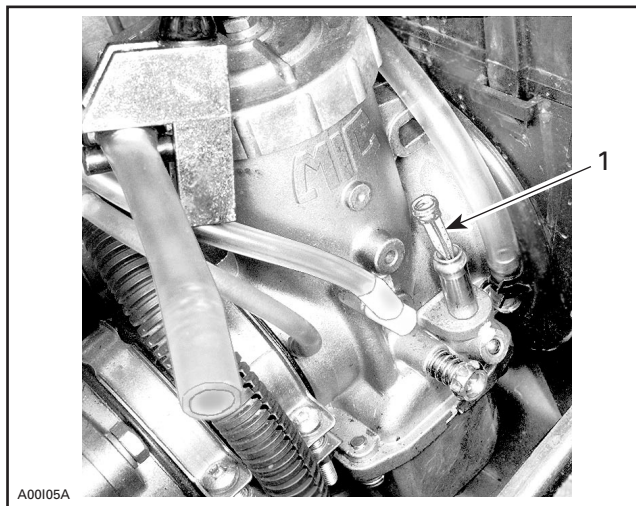
Date: April 9, 1999

SUBJECT: Carburetor Fuel Filter Clogging

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	All except Mini Z	All	All

While performing 10-hours, pre-season, storage or any other inspection, make sure to remove carburetor inlet fuel filter.

This filter is factory installed for break-in period. A flow restriction may occur if filter is left in place.



1. Remove filter in carburetor inlet

NOTE: This procedure should also be performed on previous year vehicles.

Refer to *1999 Ski-Doo Shop Manual*, section ENGINE, subsection CARBURETOR AND FUEL PUMP for carburetor cleaning and inspection.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-15**

Date: May 21, 1999

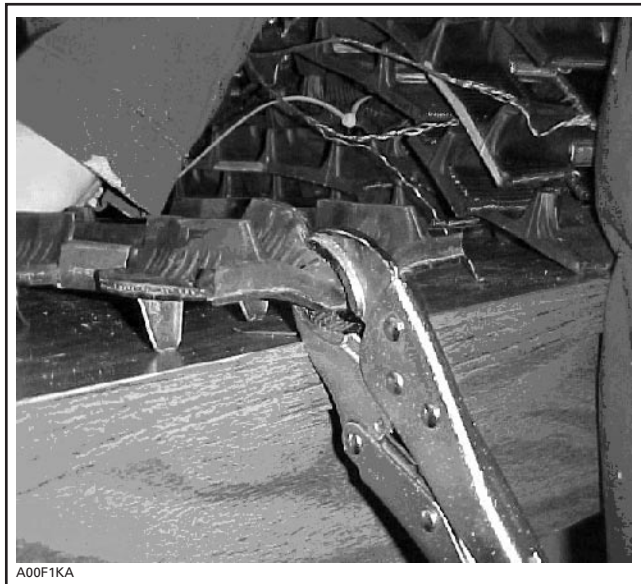
SUBJECT: Track Warranty Guidelines

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	All	All	All

Failures may occur on certain snowmobile tracks. Some may be due to manufacturing problems or alterations due to wear or misuse of the snowmobile.

Prior to the replacement of a misfunctional track, technicians must detect the nature of the problem to know whether warranty coverage is applicable or not. Below are some problems encountered with tracks along with recommendations to avoid the occurrence of these problems.

MANUFACTURING PROBLEMS:

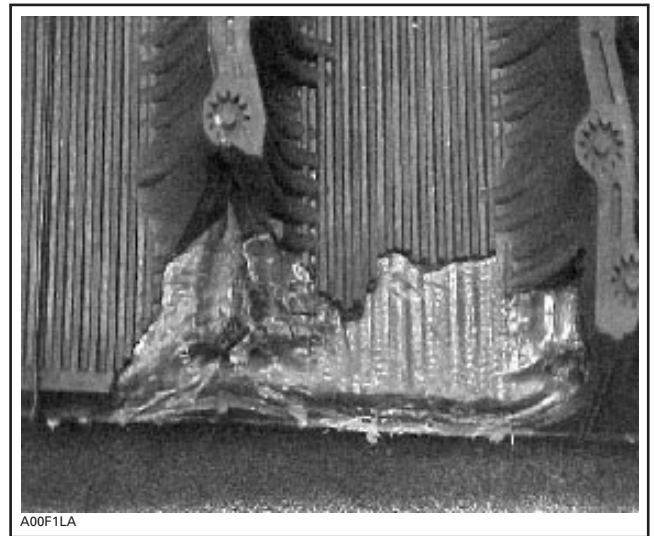


Nature of Problem:

Rods missing in tracks.

Warranty:

Limited warranty coverage applicable, if valid.



Nature of Problem:

Plastic sheets between rubber layers.

Warranty:

Limited warranty coverage applicable, if valid.

Nature of Problem:

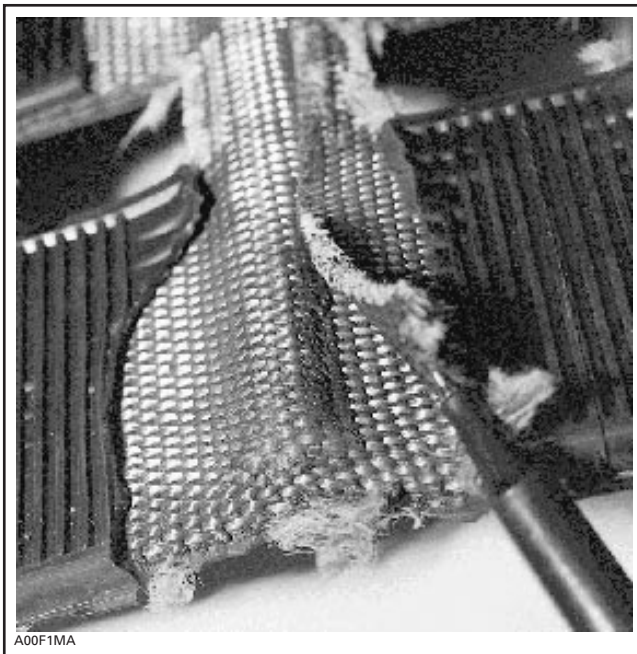
Air bubbles between rubber layers cause delamination of track.

NOTE: Do not confuse this type of air bubbles with problems occurring because of a track overheating due to bad adjustment or excessive rubbing (see p. 3).

Warranty:

Air bubbles: Limited warranty coverage applicable, if valid.

Overheating: Limited warranty coverage non-applicable.

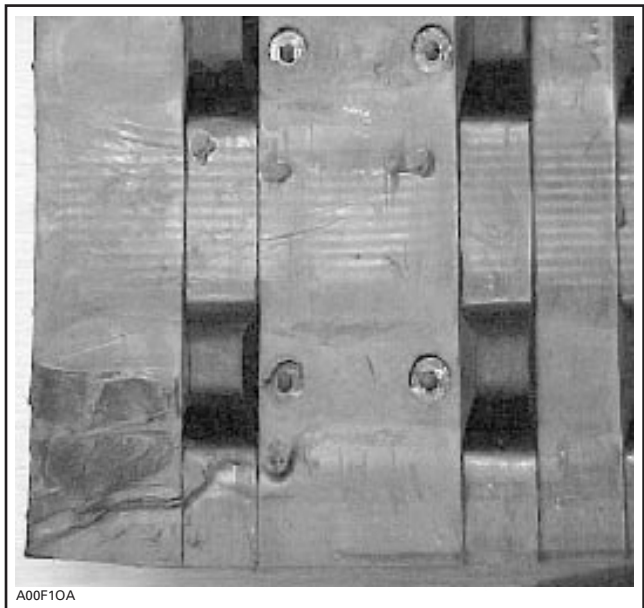


Nature of Problem:

Broken canvas ends or canvas ends appear between two profiles.

Warranty:

Limited warranty coverage applicable, if valid.

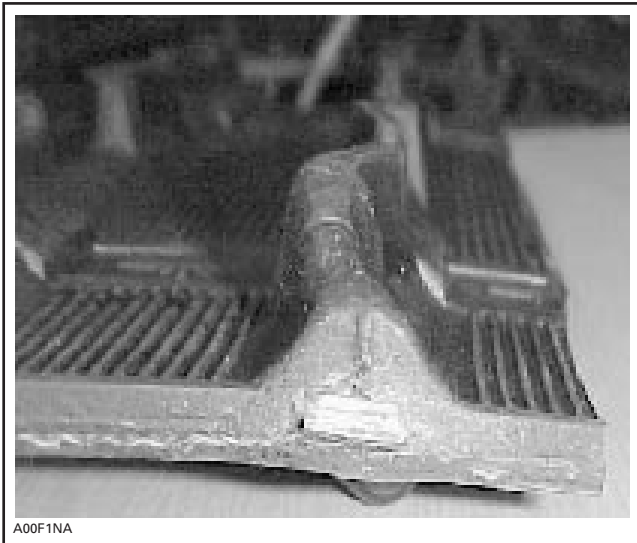


Nature of Problem:

Improper vulcanization of track can be detected when a black deposit remains on finger after rubbing soft spots of rubber.

Warranty:

Limited warranty coverage applicable, if valid.



Nature of Problem:

Rods can be seen from side of track.

Warranty:

Limited warranty coverage applicable, if valid.



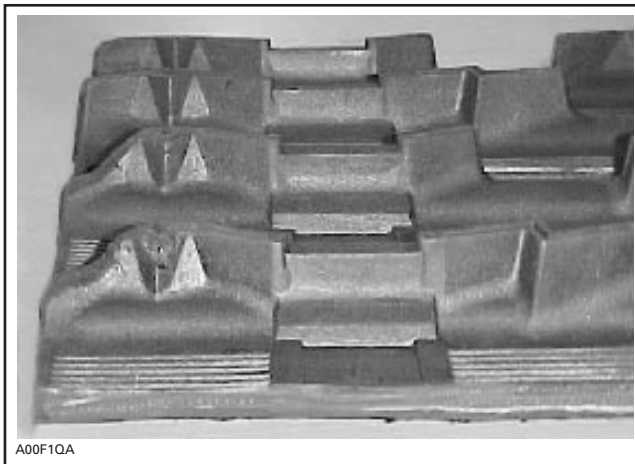
Nature of Problem:

Gills are located on sides of profile.

NOTE: Do not confuse this problem with track misuse (flat finish of rubber) or cutting by a sharp object (one scratch instead of gills).

Warranty:

Limited warranty coverage non-applicable.



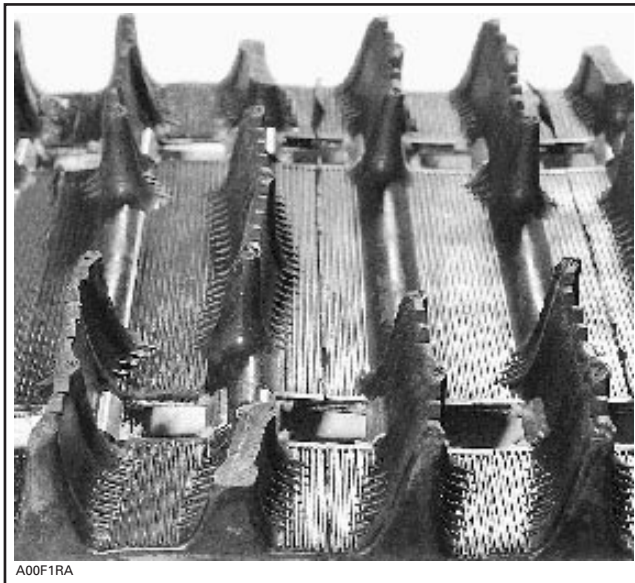
Nature of Problem:

A part of the track is missing, generally a driving rod.

Warranty:

Limited warranty coverage applicable, if valid.

NON MANUFACTURING PROBLEMS:

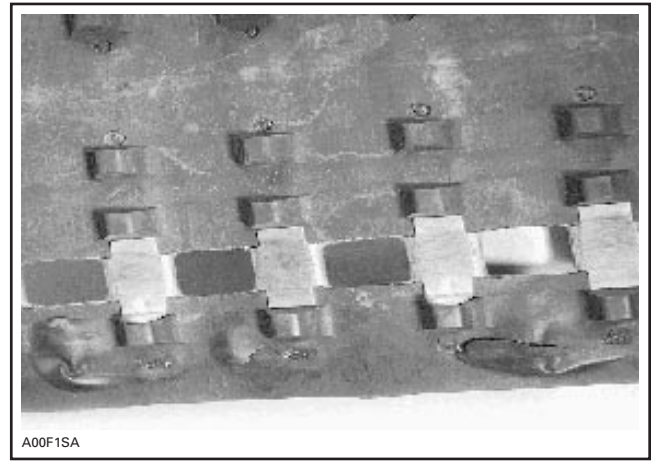


Nature of Problem:

Track is modified (studs, spikes, etc.) or interior track profile may be cut.

Warranty:

Limited warranty coverage non-applicable.



Nature of Problem:

Suspension damages track.

Diagnostic:

Air bubbles appear in track and water may fill them.

Rubber seems to be sandblasted between rods.

Cause:

Track overheating due to bad track adjustment, slider rubbing, bad wheel adjustment or defective ball bearing.

Recommendation:

Check suspension.

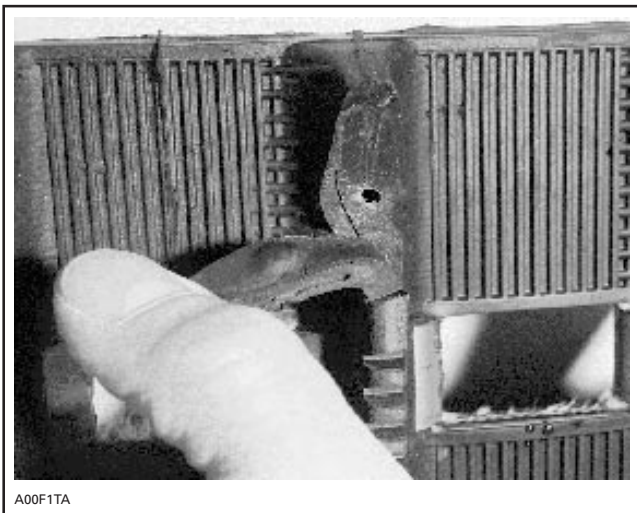
Check track tension.

Check bearings.

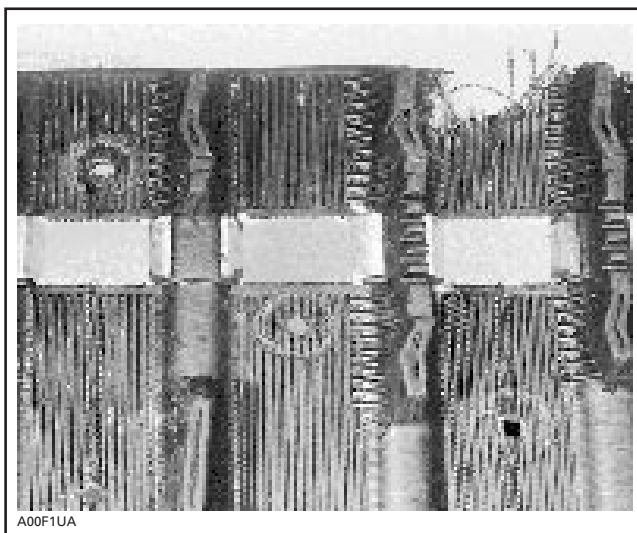
Warranty:

Damage due to suspension wheel defect: Limited warranty applicable, if valid.

Damage due to incorrect adjustment: Limited warranty coverage non-applicable.



A00F1TA



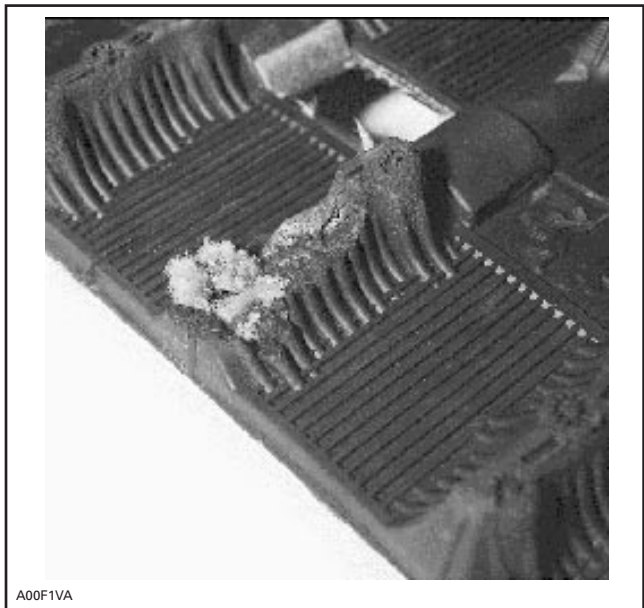
A00F1UA

Nature of Problem:

Broken track due to installation of studs, spikes, etc.

Warranty:

Limited warranty coverage non-applicable as per *Administrative Bulletin 99-3*.



A00F1VA

Nature of Problem:

Worn profile.

Diagnostic:

Profiles wear out or tear off from track. At the foot of some profiles, rippings can be found. Rubber may become flat finished or rough.

Cause:

Snowmobile operated on gravel or on hard surface or it spinned on ice. Track bumped on rocks, bushes or hard sharp objects.

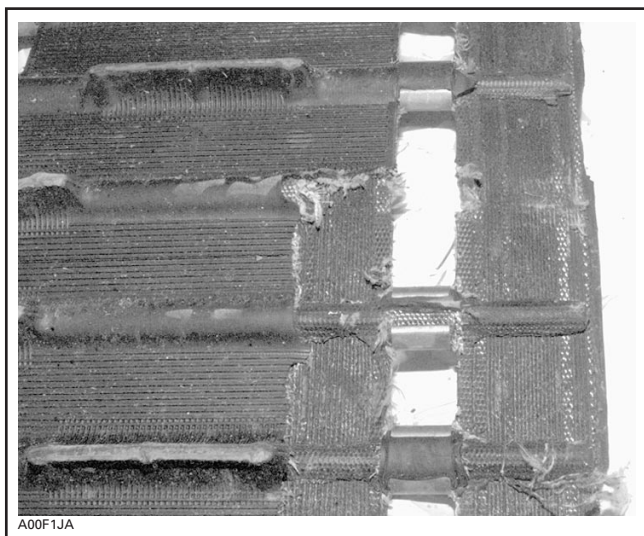
Recommendation:

Do not make track operate on surfaces other than snow, including abrasive surfaces and avoid rubbing on hard, rough or sharp surfaces.

Do not make track overheat while running at a high speed for long time.

Warranty:

Limited warranty coverage non-applicable.



Nature of Problem:

Broken rod.

Diagnostic:

Composite rod is broken and may have drilled out the track.

Cause:

- Track bumped on rock, bushes or sharp objects.
- Rod broken due to a traction product tear off.
- Rod broken due to traction product installation.
- Rod broken due to suspension break.

Recommendation:

Avoid operating in trails containing a lot of obstructions, on surfaces other than snow or when snow level is low.

Do not install studs.

Check suspension periodically.

Warranty:

Damage due to suspension defect: Limited warranty coverage applicable, if valid.

Damage due to abusive use, surfaces other than snow, debris in track, incorrect alignment, traction products: Limited warranty coverage non-applicable.



Nature of Problem:

Broken track due to friction on snowmobile radiator.

Diagnostic:

Rubber bitten off from profile.

Cause:

- Track touches radiator (or radiators) due to a bad adjustment.
- Problems with radiator protector, if present.

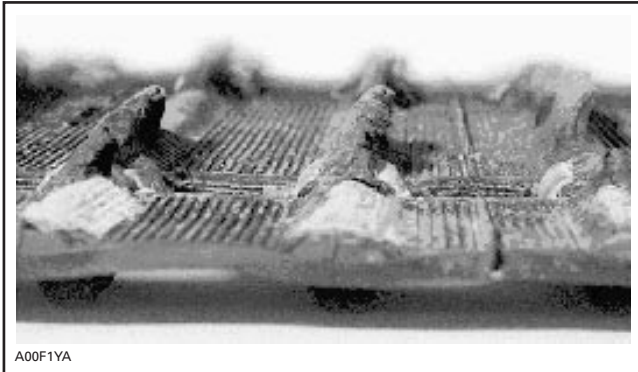
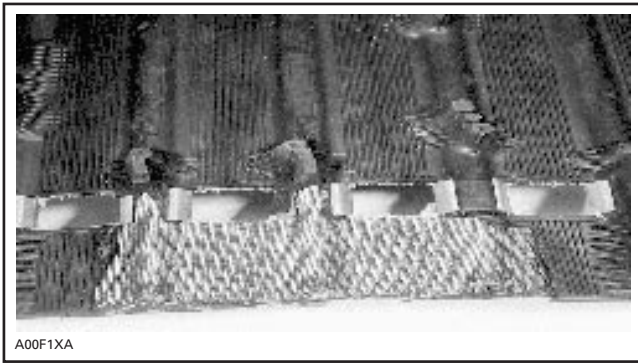
Recommendation:

Adjust track tension according to *Operator's Guide*.

Check radiator protectors.

Warranty:

Damage due to incorrect track alignment, improper track tension, track profile higher than OEM without installation of protectors or suspension relocation: Limited warranty coverage non-applicable.



Nature of Problem:

Abuse of track.

Diagnostic:

Track profiles are torn off and rods can be seen or they are bent because of a high pressure or canvas is visible due to track overheating or presence of melted plastic is found, coming from overheated slider shoe.

Cause:

Snowmobile operated on surfaces other than snow, including gravel, ice or hard surface.

Track bumped on rock, bushes or sharp objects.

Track has been used for speed racing on a surface other than snow.

Track has been used at a high speed for a long period.

Recommendation:

Do not make track slip or slide on ice or abrasive surface.

Warranty:

Limited warranty coverage non-applicable.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-18**

Date: June 4, 1999

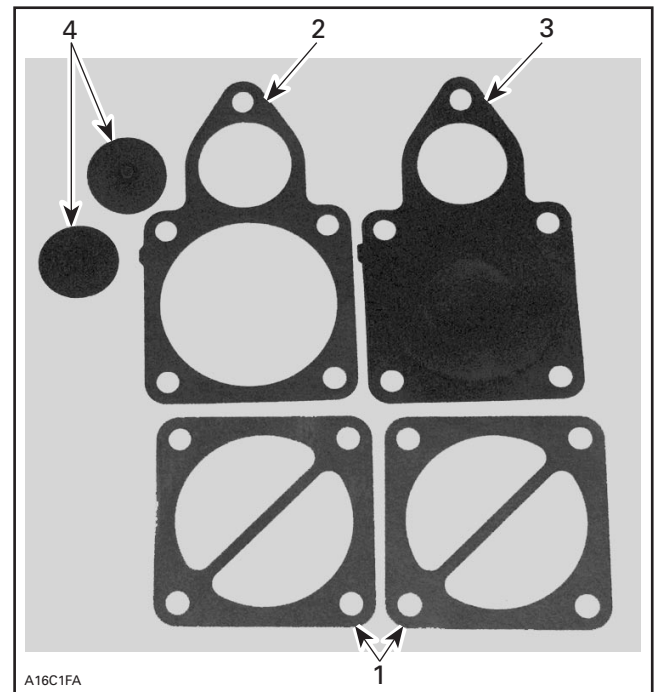
**SUBJECT: A) Air Pump Overhaul Kit
B) Steering Pad Rubbing
C) Reed Valve Blade Stopper**

YEAR	MODEL	MODEL NUMBER	SUBJECT REFERENCE	SERIAL NUMBER
1999	GRAND TOURING* SE	1375/1376	A/B/C	All
	GRAND TOURING* 700	1373/1374	B/C	
	MACH* Z	1418/1419/1420/1435/1436/1439 1440/1441/1445/1446/1447/1462	B/C	
	MACH* 1	1422/1423/1437/1442/1443/1444	B/C	
	FORMULA* III 600/700/800	1396/1397/1398/1399/1400/1401/1402	B/C	

AIR PUMP OVERHAUL KIT (A)

Grand Touring* SE Only

In the event that air pump becomes inoperative, following bending of inlet/outlet rubber doors, it is now possible to overhaul same by using kit (P/N 404 161 878). Following illustration shows what kit consists of.

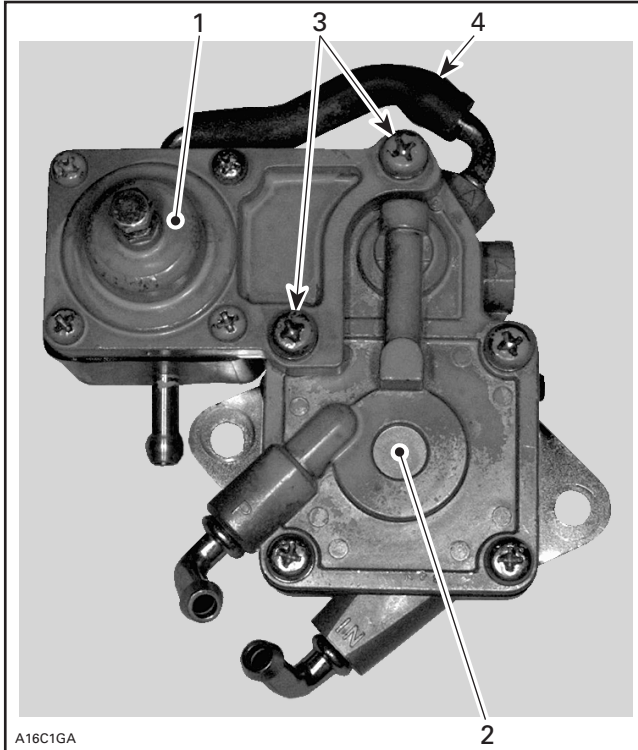


KIT CONSISTS OF:

1. Base-to-body gasket (2)
2. Body-to-cover gasket
3. Diaphragm
4. Inlet/outlet door (2)

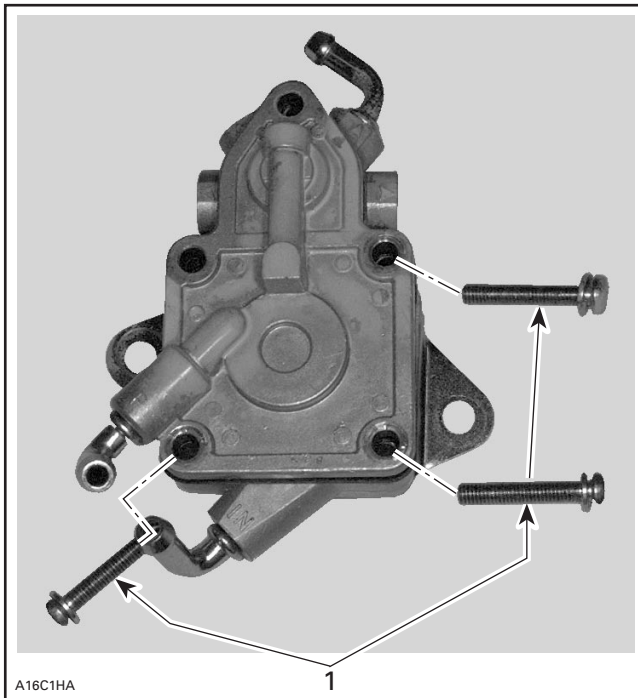
Order kit through regular channel.

Following illustrations show on-bench overhauling procedure.



SEPARATING REGULATOR FROM PUMP

1. Regulator
2. Pump
3. Remove these 2 screws
4. Disconnect this end of hose

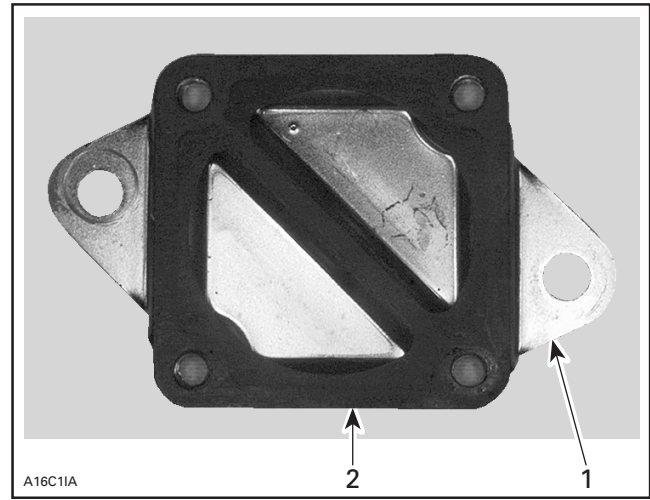


OPENING PUMP

1. Remove these 3 screws

Set cover aside than set pump body aside.

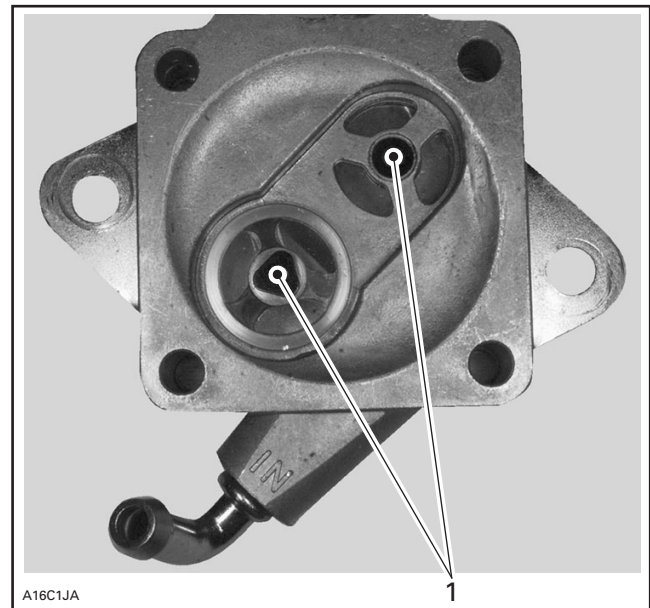
Remove old gasket from base, wipe surface with a clean rag and align both square gaskets (from kit).



1. Base
2. Both gaskets aligned

Change both inlet/outlet doors from pump body using the new transparent layer only.

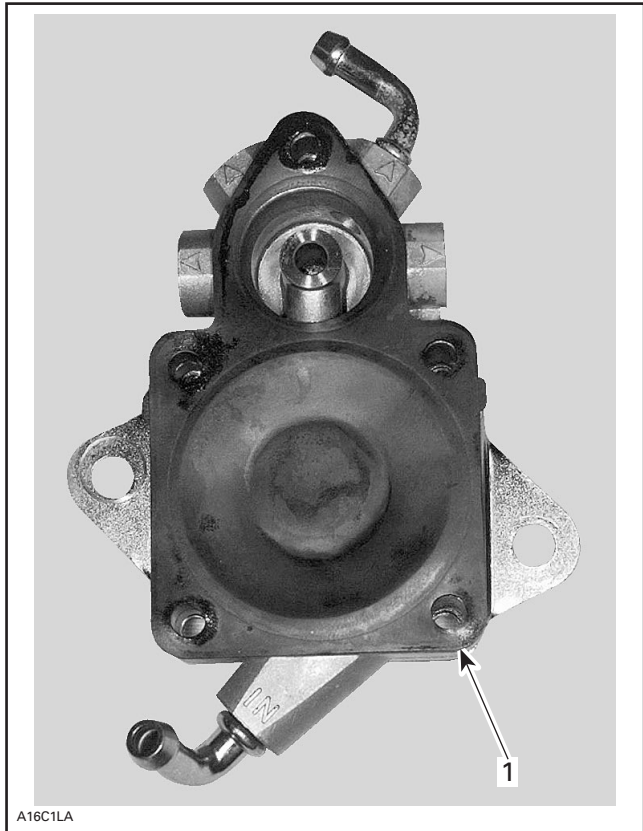
NOTE: One easy way to secure doors is by pushing them with the plastic tip of a regular ball point pen.



1. Inlet/outlet doors

Wipe both surfaces of pump body with a clean rag and align it on the base.

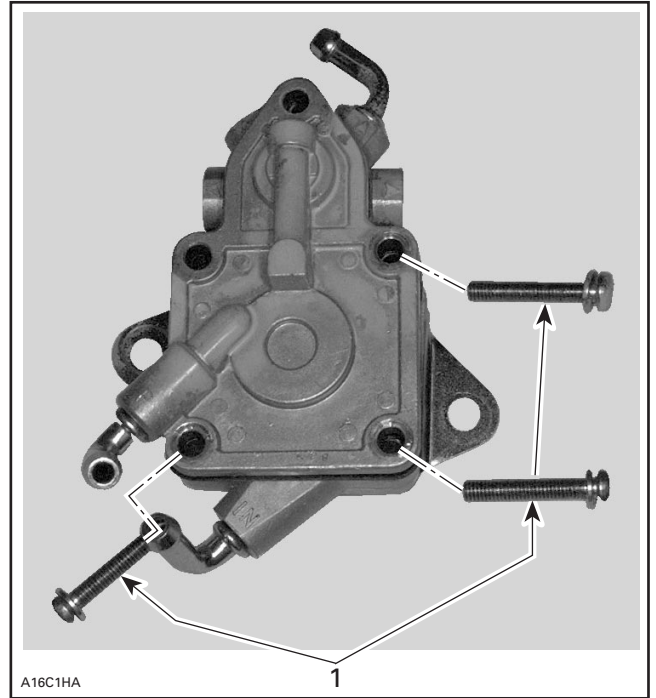
Align diaphragm on pump body and than body gasket.



A16C1LA

1. Diaphragm aligned

Clean pump cover surface with a clean rag.
Align pump cover and secure loosely with the three shorter screws; make sure all gaskets are properly aligned and not torn nor pleated and tighten screws.

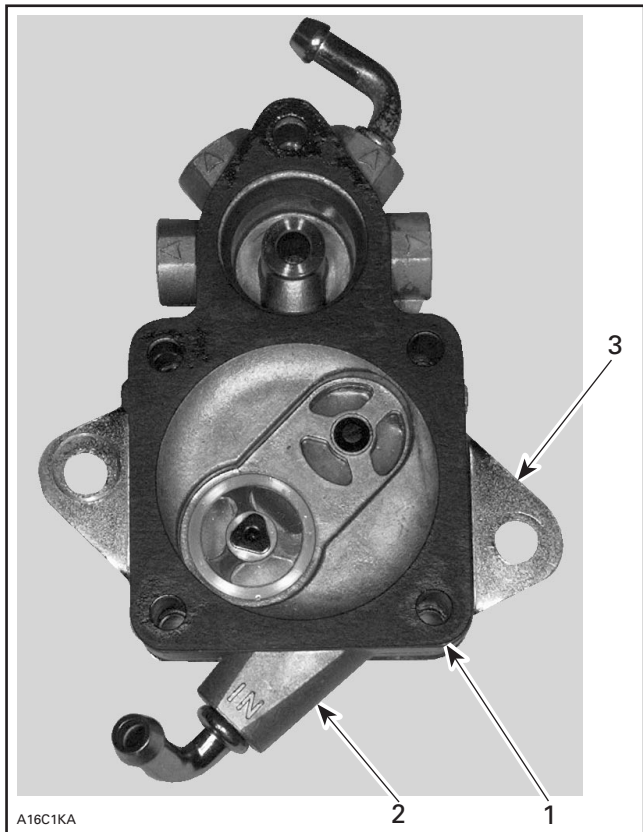


A16C1HA

COVER ALIGNED

1. Start securing with these screws

Connect regulator hose to pump, align regulator and secure to pump with the two longer screws.



A16C1KA

BODY ALIGNED ON BASE

- 1. Gasket aligned
- 2. Body
- 3. Base

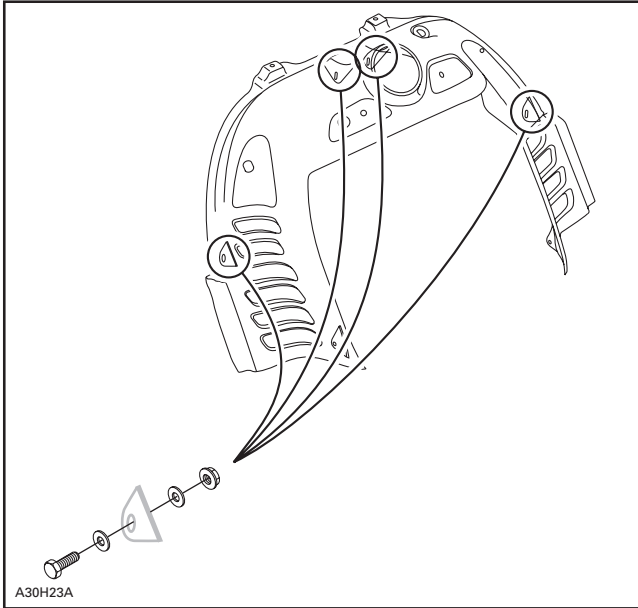
STEERING PAD RUBBING (B)

All CK3 Models

In order to avoid steering pad from rubbing against console proceed as follows.

Loosen console retaining screws (4), move console forward, it will exert a downward movement, and tighten all 4 console retaining screws.

Following illustration shows screws positioning.



SCREWS POSITIONING

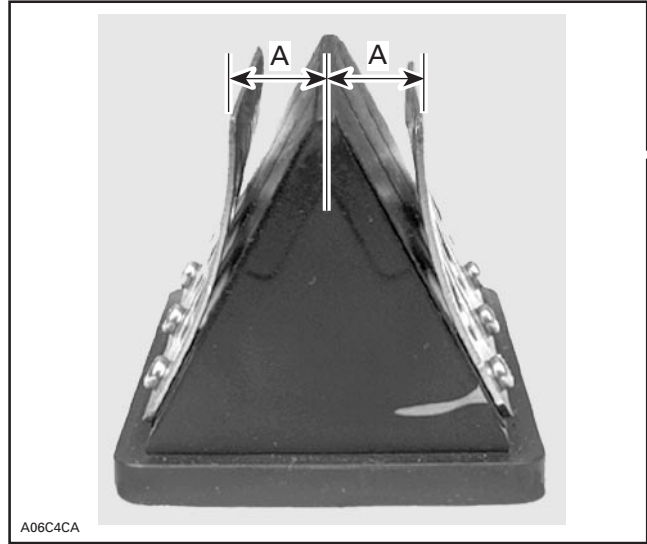
REED VALVE BLADE STOPPER (C)

All 599, 699 and 809 Engine Models

Refer to the 1999 Shop Manual, (P/N 484 200 005), volume 3, section 04, sub section 02, page 12.

For all engine models involved, blade stopper distance from center of reed valve block should read $17\text{ mm} \pm 0.25\text{ mm}$ ($0.669\text{ in} \pm 0.010\text{ in}$). Point of arrow should show outer surface of blade stopper.

Refer to following illustration.



TYPICAL

A. $17\text{ mm} \pm 0.25\text{ mm}$ ($0.669\text{ in} \pm 0.010\text{ in}$)

Please make sure to update involved Shop Manual accordingly.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-17**

Date: June 4, 1999

**SUBJECT: A) Coolant Temperature Warning Light Coming On
B) Engine Misfiring**

YEAR	MODEL	MODEL NUMBER	SUBJECT REFERENCE	SERIAL NUMBER
1999	GRAND TOURING* SE/700	1373/1374/1375/1376	A	All
	MX* Z 670 H.O.	1416/1465/1466	B	
	MX* Z 600/500	1336/1338/1412/1414/1450		
	SUMMIT* X 670	1406/1407/1408		
	SUMMIT* 600/500	1345/1403/1404/1405		
	FORMULA* DELUXE 670/583/500LC	1377/1378/1379/1380/1381/1382/1383		
	FORMULA* Z 670/583/500	1388/1389/1392/1393/1394/1395/1458		
	GRAND TOURING* 583/500	1367/1368/1369/1370/1371/1372		
	SKANDIC* WT LC	1427/1428		

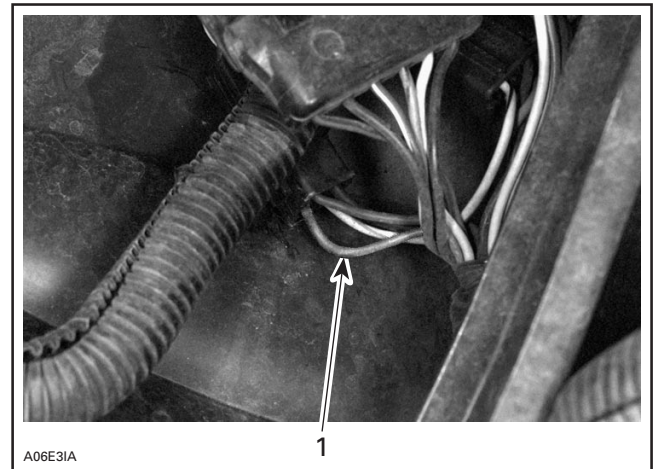
A) COOLANT TEMPERATURE WARNING LIGHT COMING ON

On above subject A involved snowmobiles, customer could complain about coolant temperature warning light coming on without coolant being really hot; in fact, within normal operating temperature range.

To correct this condition, add a 4.7 ohm resistance on **GREEN** wire located at front, where hood harness and main harness connectors are.

CAUTION: Use dark **GREEN** and not GREEN/WHITE wire.

Refer to following photo.



1. GREEN wire to use

NOTE: Part available through local supplier.

B) ENGINE MISFIRING

When experiencing engine misfiring condition on above subject B involved snowmobiles, check.

1. **Spark plug type**; make sure plugs are of the resistor type; if not, install proper type.
2. If **black powder** is present on top of original spark plugs; if so, arcing has been created between spark plug tip and cap; in this case, replace spark plug and caps.
3. **Resistance** between both spark plug caps;
 - Use a multimeter, install probe in each spark plug cap;
 - If resistance reads higher than normal value of 19.5 to 26.5 K ohms, replace spark plug caps, *if not already replaced*.
 - If resistance persists in reading higher than prescribed, replace coil assembly (coil with high tension wires).

CAUTION: Do not attempt to clean coil tip; instead, proceed with replacement of coil and high tension wires.

Refer to appropriate *1999 Parts Catalog* for proper part numbers.

Order parts, if needed, through regular channel.

Refer to *1999 Shop Manual, Volume 2*, (P/N 484 200 003), for proper replacement procedure.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-16**

Date: June 4, 1999

SUBJECT: Cylinder Base Gasket

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	MX* Z 600	1336/1337/1338	All
	MX* Z 440 LC	1342/1343/1344	
	SUMMIT* 600	1345/1346/1461	
	MX* Z 700	1339/1340/1341	
	SUMMIT* 700	1467/1468	

When performing repairs that would require replacement of cylinder base gasket on above mentioned units, please proceed as per following service tip, comes the reassembly procedure.

Carefully clean surfaces with Bombardier gasket remover (P/N 413 708 500).

Apply Loctite Primer N (P/N 293 800 041) on both gasket surfaces and **set aside for a minimum of 5 minutes**; make sure gasket doesn't get in contact with any foreign material.

NOTE: Curing time with the use of Loctite Primer N reveals itself a very important element:

- without Primer N — 4 hours to 24 hours,
- with Primer N — 30 minutes to 4 hours.

Apply a light and equal coat of Loctite 518 (P/N 293 800 038) on crankcase and engine cylinder surfaces.

Reassemble parts.

⚠ WARNING

Torque wrench tightening specifications must be strictly adhered to.

Refer to appropriate *Shop Manual* for proper torque specifications.

Wait **one hour** before starting engine or before proceeding with an engine leak test as per procedure found in appropriate *Shop Manual*.

REQUIRED PARTS

DESCRIPTION	PART NUMBER	QTY
Loctite* 518 (50 mL)	293 800 038	1
Loctite Primer N* (128 gr)	293 800 041	1

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-14**
REVISION 2

Date: July 9, 1999

**SUBJECT: New Tool for Rotary Valve/
Water Pump Shaft Seal**

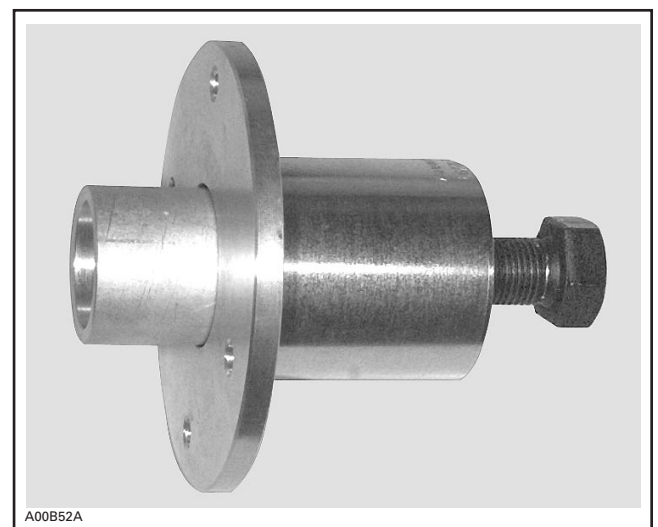
YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	MX* Z x 440 LC	1342/1343/1344	All
	FORMULA* Z 500	1388/1389/1458	
	SUMMIT* 500	1403/1404/1405	
	MX* Z 500	1412/1413/1414/1450/1451	
	GRAND TOURING* 500	1367/1368/1369	
	FORMULA* DELUXE 500	1377/1378/1379	
	SKANDIC* WT	1427/1428	
	MX* Z 670 HO	1415/1416/1417/1452/1453/1466	
	FORMULA* DELUXE 670	1382/1383	
	FORMULA* Z 670	1393/1394/1395	
	SUMMIT* X 670	1406/1407/1408	

When performing repairs involving replacement of water pump shaft ceramic seal on all above mentioned snowmobiles, it is of the utmost importance to use this tool to install new seal.

DESCRIPTION	PART NUMBER	QUANTITY
Seal Pusher	420 877 820	1

Do not order this tool since one will be auto-shipped to all Ski-Doo* dealers.

NOTE: Procedure is shown on next page.



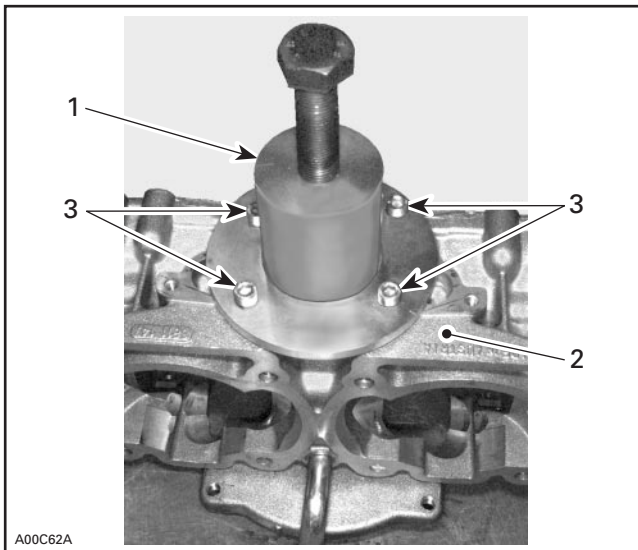
This revision is to remove MX* Z x 440 LC model from listing.

PROCEDURE

CAUTION: Never use a hammer to install seal since damage may occur to seal and antifreeze may start leaking causing major damage to engine.

Working with crankcase upper half only (crankshaft, pistons and cylinders removed), after having installed other seals/bearings as per procedure in *1999 Shop Manual, Volume 2*, (P/N 484 200 003), align ceramic seal, (P/N 420 650 370) in its hole.

Align seal pusher (tool P/N 420 877 820) holes with coolant pump housing holes and secure seal pusher to crankcase with four M6 x 20 bolts (not supplied), as shown in next photo.



1. Seal pusher (tool)
2. Crankcase upper half
3. Four M6 x 20 bolts

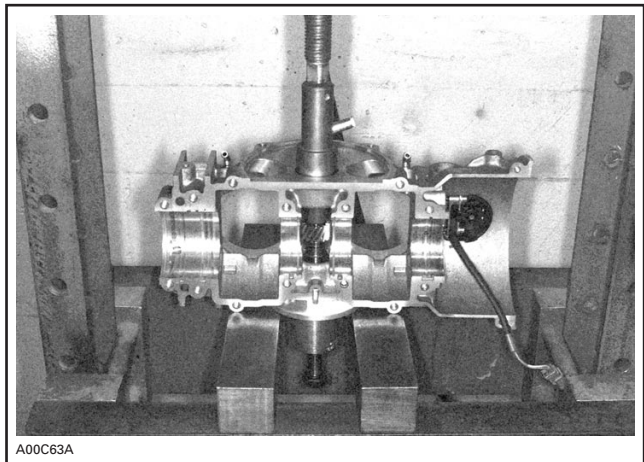
CAUTION: Insure not to apply pressure on the ceramic seal while tightening seal pusher retaining screws. Release center bolt tension to be sure.

Gently turn seal pusher center bolt clockwise till resistance is felt.

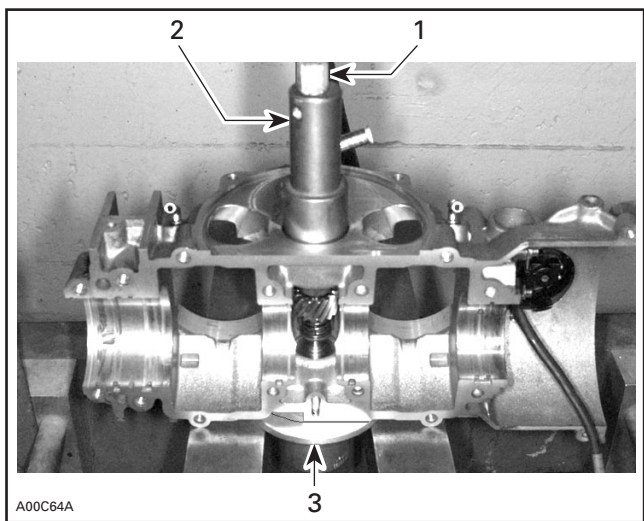
Leave seal pusher installed as is.

Screw seal protector sleeve (tool P/N 420 876 980) on rotary valve shaft tip.

Insert rotary valve shaft from valve side; align on a press as shown in following photo.



INSTALLED ON A PRESS



1. Press shaft pushing on tool
2. Rotary valve seal/shaft pusher, tool (P/N 420 876 607)
3. Ceramic seal pusher (P/N 420 877 820)

With rotary valve seal/shaft pusher, (tool P/N 420 876 607), slowly press shaft in position till you feel it sits properly.

Remove seal pusher.

Unscrew seal protector sleeve (tool P/N 420 876 890) from tip of rotary valve shaft and check seal positioning.

Ceramic seal installation is now complete.

Please advise all involved personnel.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-19**

Date: September 10, 1999

**SUBJECT: A) Rear Suspension Front Arm Stopper Strap
B) Drive Belt Under Hood Storage
C) Injection Oil Pump Identification for 809 Engines**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER	REFERENCE
1999	Summit* 500/600	1345/1346/1403/1404 1405/1461	All	A/B
	Summit* 700	1467/1468	All	A
	Summit* X 670	1406/1407/1408	All	A/B
1998 and 1999	All equipped with a 809 Engine	All equipped with a 809 Engine	All equipped with a 809 Engine	C
All	Fan Cooled S-2000 Series	All Fan Cooled S-2000 Series	All	B

A) Rear Suspension Front Arm Stopper Strap

A new kit, (P/N 860 305 900) is now available, comes the time to replace rear suspension front arm stopper strap.

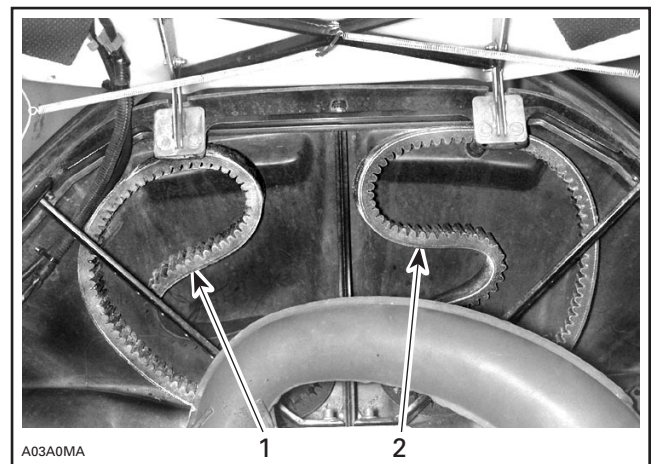
Rubber type instead of nylon, this new strap will provide greater strength.

Order through regular channel.

All orders received for nylon strap, (P/N 503 189 208 or P/N 503 166 400) will automatically be switched to new kit, (P/N 860 305 900).

B) Drive Belt Under Hood Storage

Refer to following photo for recommended/unrecommended drive belt positioning.



1. Not recommended
2. Recommended

Left side positioning is not recommended because belt leans against speedometer cable and severely bends same when hood is closed.

This could cause speedometer cable to break.

Right side positioning is recommended though it is important to avoid contact with muffler.

Replacement belt could also be placed in sled's rear storage compartment.

C) Injection Oil Pump Identification for 809 Engines

Refer to and correct the *1998 Shop Manual* (P/N 484 068 400) and the *1999 Shop Manual* (P/N 484 200 005), section 04-05.

Injection oil pump identification (stamped on oil pump lever) for the 809 engine should read 15 instead of 13 in the *Shop Manuals*.

Please update *Shop Manuals* and notify involved personnel accordingly.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-20**

Date: February 11, 2000

**SUBJECT: 3.3 Version Programmer Update
1999 Grand Touring SE MPEM**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Grand Touring* SE	1375/1376	All

IMPORTANT NOTICE

Refer to *Warranty Bulletin 99-8, Revision 1, dated January 18, 2000.*

It is possible to update MPEM using the 3.3 version diskette; **DO NOT RETURN MPEM.**

NEW VERSION DISKETTE

Prior to this *Service Bulletin*, with the 3.2 diskette version, programmer did not allow calibration updating if it had been performed once.

To correct this situation, programmer has to be updated using the 3.3 version diskette.

Part Required

DESCRIPTION	PART NUMBER	QTY
3.3 version diskette	529 035 717	1

Diskette will be auto-shipped to all dealers starting February 11, 2000.

Procedure

Start by updating programmer using supplied 3.3 version diskette.

Then follow procedure described in *Warranty Bulletin 99-8, Revision 1, dated January 18, 2000*, starting with step **C) Re-Calibration (MPEM)**.

This new version will allow MPEM updating where a first trial failed.

Please route to :

	Init.
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No. **99-21**

Date: March 17, 2000

SUBJECT: Tuned Pipe Shell Cracking

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Summit* X 670/MX* Z 670	1406/1407/1408/1415/1416/1417	All
	Summit* 600/MX* Z 600	1336/1337/1338/1345/1346/1461	

On above mentioned models, tuned pipe shell cracks.

In order to correct this condition, a collar type clamp has to be installed. To avoid collar movement, **welding spots must be performed on tuned pipe**, for new and existing collar clamps. Removal and reinstallation of existing collar clamp is required to perform spot welding.

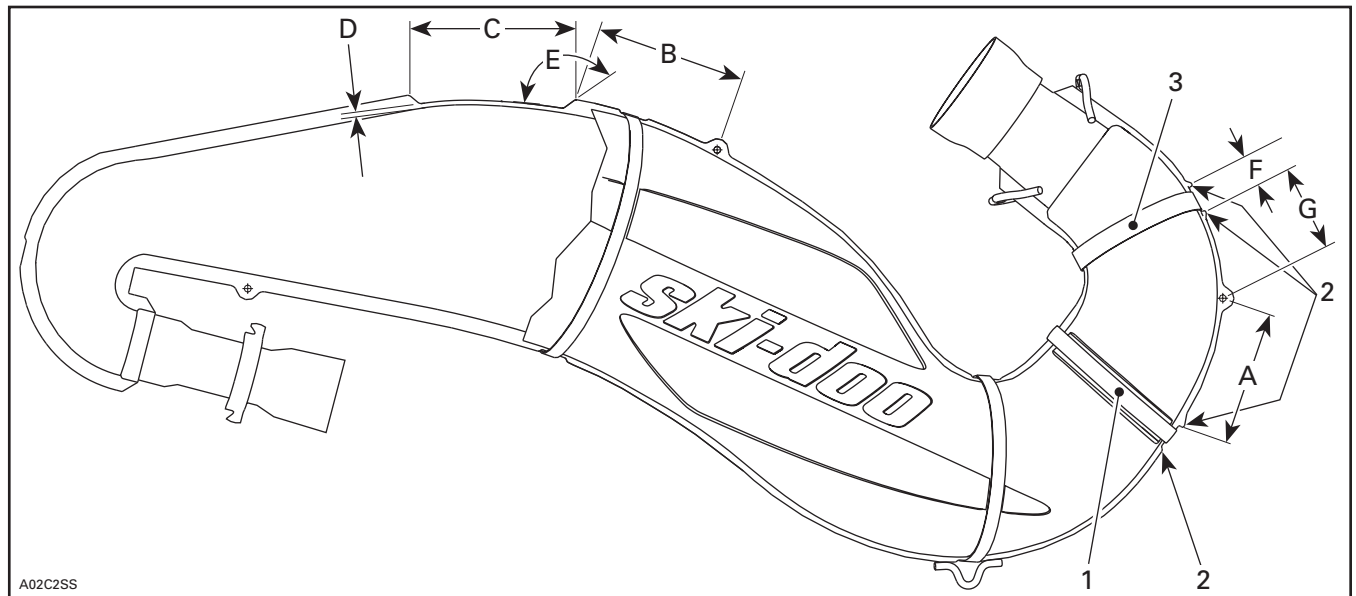
CAUTION: Spot welding without removing existing collar clamp will cause damage to collar clamp.

Part Required

DESCRIPTION	PART NUMBER	QTY
Collar Clamp	514 052 983	1

Order part through regular channel.

Furthermore, to give more space between anti-freeze container and tuned pipe edge, section of tuned pipe edge has to be grinded off and edge rewelded (C-D). Refer to following illustration.



- 1. New collar clamp
- 2. Spot weld
- 3. Existing clamp
- A. 90 mm (3-1/2 in)
- B. 100 mm (3-29/32 in)

- C. 110 mm (4-19/64 in) — Length to be grinded off
- D. 3 mm (1/8 in)
- E. 135°
- F. 15 mm (19/32 in) — Distance between spot welding
- G. 60 mm (2-3/8 in)