

CHAPTER 9

SUSPENSIONS

General Specifications

1985-1987	9.1
1988-1989	9.2
1990-1991	9.3
1992	9.4
1993	9.5
1994	9.6
1995	9.7
Suspension Operation	9.8
Track Tension Specification	9.9
Track Tension and Alignment	9.10-9.11
Type XI, XV, XVI, and XVIII Tunnel Adjustments	9.12
Hi-Fax and Rubber Track Clip Replacement	9.13
Direct Drive Track and Front Drive Shaft Removal and Installation	9.14-9.15
Track Removal - Two Sprocket Drive Shaft	9.16-9.17
Track Removal - Four Sprocket Drive Shaft	9.18
Track, Transmission and Suspension Removal/Reassembly - WideTrak	9.19-9.22
Type IX Extruded Aluminum Exploded View and Adjustments	9.23
Type XI Exploded View and Adjustments	9.24
Type XII Exploded View and Adjustments	9.25
Type XIII Exploded View and Adjustments	9.26
Type XIV Exploded View and Adjustments	9.27
Type XV Exploded View and Adjustments	9.28
Type XVI Exploded View and Adjustments	9.29
Type XVII Extruded Aluminum Exploded View and Adjustments	9.30

Type XVIII Extruded Aluminum Exploded View and Adjustments	9.31
Type XIX Exploded View and Adjustments	9.32
Type XX Extruded Aluminum Exploded View and Adjustments	9.33-9.35
Type XXII Exploded View and Adjustments	9.36-9.37
Type ITS Exploded View and Adjustments (Type I and II)	9.38-9.41
Type XXIII Exploded View	9.42
Type XC-100 Exploded View	9.43
Deep Snow Adjustments	9.44-9.45
XC-100 Adjustments	9.46
Type XTRA Suspension Exploded View	9.47
XTRA Suspension Adjustments	9.48-9.49
XTRA Suspension Shock Removal	9.50
XTRA Suspension Shock Reassembly	9.51
1995 IFS Shock Spring Chart	9.52
Optional Suspension Springs	9.53
1994 Rear Suspension Center Shock Spring Chart	9.54
1995 Rear Suspension Center Shock Spring Chart	9.55
1994 Rear Suspension Rear Shock Spring Chart	9.56
1995 Rear Suspension Rear Shock Spring Chart	9.57
Troubleshooting	9.58
Fox Shocks - Maintenance 1992	9.59-9.64
Fox Shocks - Maintenance 1993	9.65-9.68
Fox IFP XTRA Shock Rebuild (1994-1995)	9.69-9.72
Fox IFP XTRA Shock Oil Change (1994-1995)	9.73-9.75
Fox Shocks Valving Charts	9.76-9.86
Additional Fox Shock Hardware	9.87

SUSPENSIONS General Specifications

1985 Models

Model	Model Number	Suspension Type	Track Type	Track Width	Track Length Overall	Track Length on Ground	Bogie Wheel Dia.	Rear Idler Wheel Dia.	Drive Sprkt. Dia.	Ice Studs
Star	0850927	Extruded Aluminum Type VIII	Molded Rubber	15"	108"	40.5"	5.625"	6.38"	3.01"	Cannot Be Used
SS	0851349	Extruded Aluminum Type XII	Molded Rubber	15"	120"	45.25"	5.625"	6.38"	3.69"	Cannot Be Used
Indy Trail	0850743	Extruded Aluminum Type XI	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
Indy 400	0850759	Extruded Aluminum Type XI	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
Indy 600 Indy 600 LE	0850757 0850857	Extruded Aluminum Type XI	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
LongTrak	0851449	Extruded Aluminum Type IX	Molded Rubber	15"	148"	59.5"	5.625"	6.38"	5.03"	Cannot Be Used

*Requires addition of tunnel wear strips.

1986 Models

Model	Model Number	Suspension Type	Track Type	Track Width	Track Length Overall	Track Length on Ground	Bogie Wheel Dia.	Rear Idler Wheel Dia.	Drive Sprkt. Dia.	Ice Studs
Star	0860927	Extruded Aluminum Type XIII	Molded Rubber	15"	108"	40.5"	5.625"	6.38"	3.01"	Cannot Be Used
Sprint Sprint ES	0860933 0860931	Extruded Aluminum Type XIII	Molded Rubber	15"	108"	40.5"	5.625"	6.38"	3.69"	Cannot Be Used
SS	0861349	Extruded Aluminum Type XIV	Molded Rubber	15"	120"	45.25"	5.625"	6.38"	3.69"	Cannot Be Used
Indy Trail	0860761	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
Indy 400	0860759	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
Indy 600 Indy 600 LE	0860757 0860857	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
LongTrak	0861449	Extruded Aluminum Type IX	Molded Rubber	15"	148"	59.5"	5.625"	6.38"	5.03"	Cannot Be Used

*Requires addition of tunnel wear strips.

1987 Models

Model	Model Number	Suspension Type	Track Type	Track Width	Track Length Overall	Track Length on Ground	Bogie Wheel Dia.	Rear Idler Wheel Dia.	Drive Sprkt. Dia.	Ice Studs
Star	0870927	Extruded Aluminum Type XIII	Molded Rubber	15"	108"	40.5"	5.625"	6.38"	3.01"	Cannot Be Used
StarTrak	0871027	Extruded Aluminum Type XVI	Molded Rubber	15"	133"	54.3"	5.625"	6.38"	5.45"	Cannot Be Used
Sprint Sprint ES	0870933 0870931	Extruded Aluminum Type XIII	Molded Rubber	15"	120"	40.5"	5.625"	6.38"	3.69"	Cannot Be Used
Sport	0870433	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.625"	6.38"	7.06"	Cannot Be Used
Trail	0870761	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
400	0870759	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
Trail Indy 400 133" SKS	0870561 0870559	Extruded Aluminum Type XVI	Molded Rubber	15"	133"	54.3"	5.350"	6.38"	7.06"	Cannot Be Used
Indy 600	0870757	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
LongTrak (RLR)	0871449 0871549	Extruded Aluminum Type XVII	Molded Rubber	15"	148"	59.5"	5.625"	6.38"	5.03"	Cannot Be Used

*Requires addition of tunnel wear strips.

SUSPENSIONS

General Specifications

1988 Models

Model	Model Number	Suspension Type	Track Type	Track Width	Track Length Overall	Track Length on Ground	Bogie Wheel Dia.	Rear Idle Wheel Dia.	Drive Sprkt. Dia.	Ice Studs
Star	0880927	Extruded Aluminum Type XIII	Molded Rubber	15"	108"	40.5"	5.625"	6.38"	3.01"	Cannot Be Used
StarTrak	0881027	Extruded Aluminum Type XVI	Molded Rubber	15"	133"	54.3"	5.625"	6.38"	5.45"	Cannot Be Used
Sprint ES	0880931	Extruded Aluminum Type XIII	Molded Rubber	15"	120"	40.5"	5.625"	6.38"	3.69"	Cannot Be Used
Sport	0880433	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.625"	6.38"	7.06"	Cannot Be Used
Trail SP Deluxe Trail Trail ES	0880661 0880262 0880761 0880762	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
400 Classic	0880759 0880859	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
133" SKS Trail Indy 400 Indy 650	0880561 0880559 0880558	Extruded Aluminum Type XVI	Molded Rubber	15"	133"	54.3"	5.350"	6.38"	7.06"	Cannot Be Used
Indy 650	0880757	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	*Traction Studs Optional
LongTrak (RLR)	0881549	Extruded Aluminum Type XVII	Molded Rubber	15"	148"	59.5"	5.625"	6.38"	5.03"	Cannot Be Used

*Requires addition of tunnel wear strips.

1989 Models

Model	Model Number	Suspension Type	Track Type	Track Width	Track Length Overall	Track Length on Ground	Bogie Wheel Dia.	Rear Idle Wheel Dia.	Drive Sprkt. Dia.	Ice Studs
Star	0890927	Extruded Aluminum Type XIII	Molded Rubber	15"	108"	40.5"	5.625"	6.38"	3.01"	Cannot Be Used
StarTrak	0891027	Extruded Aluminum Type XVI	Molded Rubber	15"	133"	54.3"	5.625"	6.38"	5.45"	Cannot Be Used
Sprint ES	0890931	Extruded Aluminum Type XIII	Molded Rubber	15"	120"	40.5"	5.625"	6.38"	3.69"	Cannot Be Used
Sport	0890443	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.625"	6.38"	7.06"	Optional
Sport GT	0892443	Extruded Aluminum Type XVI	Molded Rubber	15"	141"	54.3"	5.350"	6.38"	7.06"	Optional
Trail SP Deluxe Trail Trail ES	0890661 0890262 0890761 0890762	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	Optional
400	0890759	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	Optional
133" SKS Trail Indy 500 Indy 650	0890561 0890564 0890558	Extruded Aluminum Type XVI	Molded Rubber	15"	133"	54.3"	5.350"	6.38"	7.06"	Cannot Be Used
500 Classic	0890764 0890865	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	Optional
Indy 650	0890758	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.350"	6.38"	7.06"	Optional
Trail SuperTrak	0890161	Extruded Aluminum Type XVIII	Molded Rubber	15"	156"	65.5"	5.350"	6.38"	7.06"	Optional
LongTrak (RLR)	0891549	Extruded Aluminum Type XVII	Molded Rubber	15"	148"	59.5"	5.625"	6.38"	5.03"	Cannot Be Used

SUSPENSIONS General Specifications

1990 Models

Model	Model Number	Suspension Type	Track Type	Track Width	Track Length Overall	Track Length on Ground	Bogie Wheel Dia.	Rear Idler Wheel Dia.	Spring Wire Dia.	Ice Studs
Star	0900927	Extruded Aluminum Type XIII	Molded Rubber	15"	108"	40.5"	5.625"	6.38"	Std.	Cannot Be Used
StarTrak	0901027	Extruded Aluminum Type XVI	Molded Rubber	15"	133"	54.3"	5.625"	6.38"	Std.	Cannot Be Used
Sprint ES	0900931	Extruded Aluminum Type XIII	Molded Rubber	15"	120"	40.5"	5.625"	6.38"	Std.	Cannot Be Used
Sport	0900433	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.625"	6.38"	Std.	Optional
Sport GT	0902433	Extruded Aluminum Type XVI	Molded Rubber	15"	141"	54.3"	5.350"	6.38"	Std.	Optional
Trail Deluxe	0900761 0900262	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.437"	Optional
400	0900759	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.437"	Optional
133" SKS Indy 500 Indy 650	0900564 0900558	Extruded Aluminum Type XX	Molded Rubber	15"	133"	54.3"	5.350"	6.38"	.437"	Cannot Be Used
500 Classic	0900764 0900865	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.437"	Optional
Indy 650	0900758	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.437"	Optional
Trail SuperTrak	0900161	Extruded Aluminum Type XVIII	Molded Rubber	15"	156"	66"	5.350"	6.38"	.437"	Optional
WideTrak	0902064	Extruded Aluminum Type XIX	Molded Rubber	20"	156"	66"	5.625"	6.38"	Std.	Optional

1991 Models

Model	Model Number	Suspension Type	Track Type	Track Width	Track Length Overall	Track Length on Ground	Bogie Wheel Dia.	Rear Idler Wheel Dia.	Spring Wire Dia.	Ice Studs
StarLite	0913027	Extruded Aluminum Type XIII	Molded Rubber	15"	116"	30"	5.625"	6.38"	Std.	Optional
Lite	0913033	Extruded Aluminum Type XVI	Molded Rubber	15"	116"	30"	5.625"	6.38"	Std.	Optional
Sport	0910443	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.625"	6.38"	Std.	Optional
Sport GT	0912443	Extruded Aluminum Type XVI	Molded Rubber	15"	141"	54.3"	5.350"	6.38"	Std.	Optional
Trail	0910761	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.406"	Optional
400	0910759	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.406"	Optional
133" SKS 500 Deluxe	0910564 0910764 0910262	Extruded Aluminum Type XX	Molded Rubber	15"	133"	54.3"	5.350"	6.38"	.421" .406" .437"	Cannot Be Used
500 Classic	0910865	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.406"	Optional
Indy 650 RXL	0910758 0910768	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.421"	Optional
Trail SuperTrak	0910161	Extruded Aluminum Type XVIII	Molded Rubber	15"	156"	66"	5.350"	6.38"	Std.	Optional
WideTrak	0912064	Extruded Aluminum Type XIX	Molded Rubber	20"	156"	66"	5.625"	6.38"	Std.	Optional

SUSPENSIONS

General Specifications

1992 Models

Model	Model Number	Suspension Type	Track Type	Track Width	Track Length Overall	Track Length on Ground	Bogie Wheel Dia.	Rear Idler Wheel Dia.	Spring Wire Dia.	Ice Studs
StarLite	0923027	Extruded Aluminum Type XIII	Molded Rubber	15"	116"	30"	5.625"	6.38"	Std.	Optional
Lite Lite Deluxe	0923033 0923231	Extruded Aluminum Type XVI	Molded Rubber	15"	116"	30"	5.625"	6.38"	Std.	Optional
Lite GT	0923133	Extruded Aluminum Type XVI	Molded Rubber	15"	133.5"	55"	5.625"	6.38"	Std.	Cannot Be Used
Sport	0920443	Extruded Aluminum Type XV	Molded Rubber	15"	121"	49"	5.625"	6.38"	Std.	Optional
Sport GT	0922443	Extruded Aluminum Type XVI	Molded Rubber	15"	141"	54.3"	5.350"	6.38"	Std.	Optional
Trail	0920761	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.406"	Optional
440	0920760	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.421"	Optional
440 XCR	0921760	Extruded Aluminum Type XXII	Molded Rubber	15"	121"	49"	5.350"	6.38"	.421"	Optional
500 500 SP	0920764 0920674	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.421"	Optional
500 SKS Classic	0920574 0920865	Extruded Aluminum Type XX	Molded Rubber	15"	133"	54.3"	5.350"	6.38"	.421"	Cannot Be Used
Trail Deluxe RXL SKS	0920262 0920568	Extruded Aluminum Type XX	Molded Rubber	15"	133"	54.3"	5.350"	6.38"	.421"	Cannot Be Used
Indy 650 RXL	0920758 0920768	Extruded Aluminum Type XX	Molded Rubber	15"	121"	49"	5.350"	6.38"	.421"	Optional
Trail SuperTrak	0920161	Extruded Aluminum Type XVIII	Molded Rubber	15"	156"	66"	5.350"	6.38"	Std.	Cannot Be Used
WideTrak	0922064	Extruded Aluminum Type XIX	Molded Rubber	20"	156"	66"	5.625"	6.38"	Std.	Cannot Be Used

SUSPENSIONS General Specifications

1993 Models

Model	Model Number	Suspension Type	Track Type	Track Width	Track Length (Overall)	Track Length on Ground	Wheels Bogies () Idler ()	IFS Spg. Rate (lbs./in.)	Rear Spg. Wire Diameter	Hi-Fax Width
StarLite	0933427	Ext. Aluminum Type XV	Block	15"	121"	44"	6 3	105	.393	1 ¼
StarLite GT	0933127	Ext. Aluminum Type XVI	Inline Block	15"	133.5"	48"	6 3	105	.393	1 ¼
Lite	0933433	Ext. Aluminum Type XV	Block	15"	121"	44"	6 3	105	.393	1 ¼
Lite Deluxe	0933431	Ext. Aluminum Type XV	Block	15"	121"	44"	6 3	105	.393	1 ¼
Lite GT	0933133	Ext. Aluminum Type XVI	Inline Block	15"	133.5"	48"	6 3	105	.393	1 ¼
Sport	0930443	Ext. Aluminum Type XV	Block	15"	121"	44"	6 3	105	.393	1 ¼
Trail	0930761	ITS Type I	Block	15"	121"	46"	6 3	105	.406	1 ¼
Trail Deluxe	0930243	ITS Type II	Wiper	15"	133.5"	50"	6 4	105	.421	1 ¼
440	0930760	ITS Type I	Block	15"	121"	46"	6 3	105	.421	1 ¼
440 SKS	0930560	ITS Type II	Wiper	15"	133.5"	50"	6 3	105	.421	1 ¼
XCR	0931760	Ext. Aluminum Type XXII	Block	15"	121"	44"	6 4	120	.421	1 ¼
WideTrak GT	X932061	Ext. Aluminum Type XXI	Deep Wiper	Acc.	141"	51"	6 4	150	.468	1 ¼
WideTrak	0932064	Ext. Aluminum Type XIX	Block	20"	156"	59"	6 6	105	.421	1 ¼
Classic	0930864	ITS Type I	Block	15"	121"	46"	6 3	105	.421	1 ¼
Classic Touring	0930865	ITS Type II	Wiper	15"	133.5"	50"	6 3	105	.421	1 ¼
500 EFI	0930674	ITS Type I	Block	15"	121"	46"	6 3	105	.421	1 ¼
500 EFI SKS	0930574	ITS Type II	Wiper	15"	133.5"	50"	6 3	105	.421	1 ¼
XLT	0930767	ITS Type I	Block	15"	121"	46"	6 3	105	.421	1 ¼
XLT SKS	0930667	ITS Type II	Inline Block	15"	133.5"	50"	6 3	105	.421	1 ¼
XLT Special	0930567	ITS Type I	Block	15"	121"	46"	6 4	120	.421	1 ¼
RXL	0930768	ITS Type I	Block	15"	121"	46"	6 4	105	.421	1 ¼
RXL SKS	0930568	ITS Type II	Inline Block	15"	133.5"	50"	6 4	105	.421	1 ¼
Storm	0932770	ITS Type I	Block	15"	121"	46"	10 4	160	.421	1 ½
Storm SKS	0932570	ITS Type II	Deep Wiper	15"	133.5"	50"	10 4	160	.421	1 ½

NOTE: All models using ITS suspensions may use 1 1/2" (3.8 cm) wide hi-fax if track guide clips are installed. All models have 15" wide track except WideTrak and WideTrak GT, which are 20".

SUSPENSIONS

General Specifications

1994 Models

Model	Model Number	Suspension Type	Track Type	Wear Strips	Track Length (Overall)	Track Length on Ground	Wheels Bogies/ Idler	Center Spring Dia./Length	Rear Spg. Wire Diameter	Hi-Fax Width
StarLite	0943427	Ext. Aluminum Type XV	Block	N/A	121"	44"	6 3	.312/6.88	.393	1 ¼
StarLite GT	0943127	Ext. Aluminum Type XVI	Inline Block	N/A	133.5"	48"	6 3	.312/6.88	.393	1 ¼
Lite	0943433	Ext. Aluminum Type XV	Block	N/A	121"	44"	6 3	.312/6.88	.393	1 ¼
Lite Deluxe	0943431	Ext. Aluminum Type XV	Block	N/A	121"	44"	6 3	.312/6.88	.393	1 ¼
Lite GT	0943133	Ext. Aluminum Type XVI	Inline Block	N/A	133.5"	48"	6 3	.312/6.88	.393	1 ¼
Sport	0940443	Ext. Aluminum Type XV	Block	Acc.	121"	44"	6 3	.312/6.88	.393	1 ¼
Sport SKS Rental	0940443	ITS Type I	Wiper	Acc.	133.5"	50"	6 3	.312/7.50	.421	1 ¼
Super Sport	0940743	XC-100	Block	Acc.	121"	44"	6 3	.312/7.50	.421	1 ¼
Trail	0940761	ITS Type I	Block	Acc.	121"	46"	6 3	.312/7.50	.406	1 ¼
Trail Deluxe	0940262	ITS Type II	Wiper	Acc.	133.5"	50"	6 3	.312/7.50	.421	1 ¼
440	0942760	ITS Type I	Block	Acc.	121"	46"	6 3	.312/7.50	.421	1 ¼
440 SKS	0942560	ITS Type II	Deep Wiper	Acc.	133.5"	50"	6 3	.312/7.50	.421	1 ¼
XCR	0941760	XC-100	Block	Std.	121"	44"	6 4	.331/7.50	.421	1 ¼
440 XCR SP	0941760	XC-101	Block	Std.	121"	44"	6 4	.312/7.50	.421	1 ½
600 XCR	0941667	XC-101	Block	Std.	121"	44"	6 4	.312/7.50	.421	1 ½
WideTrak GT	0942061	Ext. Aluminum Type XXI	Deep Wiper	Acc.	141"	51"	6 4	.312/7.50	.468	1 ¼
WideTrak LX	0942064	Ext. Aluminum Type XXIII	Block	Acc.	156"	59"	6 4	.312/7.50	.468	1 ¼
Classic	0942865	ITS Type I	Block	Acc.	121"	46"	6 3	.312/7.50	.421	1 ¼
Classic Touring	0942875	ITS Type II	Wiper	Acc.	133.5"	50"	6 3	.312/7.50	.421	1 ¼
500 EFI	0942774	ITS Type I	Block	Acc.	121"	46"	6 3	.312/7.50	.421	1 ¼
500 EFI SKS	0942574	ITS Type II	Deep Wiper	Acc.	133.5"	50"	6 3	.312/7.50	.421	1 ¼
XLT	0940767	XC-100	Block	Std.	121"	44"	6 3	.312/7.50	.421	1 ¼
XLT SKS	0940567	XC-100	Deep Wiper	Acc.	133.5"	50"	6 3	.312/7.50	.421	1 ¼
XLT Special	0940667	XC-100	Block	Std.	121"	44"	6 4	.331/7.50	.421	1 ¼
XLT Special Xtra	0946767	Xtra	Deep Wiper	Std.	121"	43.5"	6 4	.312/7.50	.421	1 ½
RXL	0940768	XC-100	Block	Std.	121"	44"	6 4	.312/7.50	.421	1 ¼
RXL Touring	0940869	ITS Type II	Wiper	Std.	133.5"	50"	6 4	.331/7.50	.421	1 ¼
Storm	0940782	XC-100	Deep Wiper	Std.	121"	46"	10 4	.312/7.50	.421	1 ½
Storm SKS	0940582	XC-100	Deep Wiper	Std.	133.5"	50"	10 4	.312/7.50	.421	1 ½

NOTE: All models using ITS suspensions may use 1 1/2" (3.8 cm) wide hi-fax if track guide clips are installed. All models have 15" wide track except WideTrak LX and WideTrak GT, which are 20".

SUSPENSIONS General Specifications

1995 Models

Model	Model Number	Suspension Type	Track Type	Wear Strips	Track Length (Overall)	Track Length on Ground	Wheels Bogies/ Idler	Hi-Fax Width
StarLite	0953427	Ext. Aluminum Type XV	Block	N/A	121"	44"	6 3	1 ¼
Lite	0953433	Ext. Aluminum Type XV	Block	N/A	121"	44"	6 3	1 ¼
Lite Deluxe	0953431	Ext. Aluminum Type XV	Block	N/A	121"	44"	6 3	1 ¼
Lite GT	0953133	Ext. Aluminum Type XVI	Wiper	N/A	133.5"	48"	6 3	1 ¼
Sport	0950443	Ext. Aluminum Type XV	Block	Acc.	121"	44"	6 3	1 ¼
Sport Touring	0950243	XC-100	Wiper	Acc.	133.5"	50"	6 3	1 ¼
Super Sport	0950743	XC-100	Block	Acc.	121"	44"	6 3	1 ¼
Trail	0952761	XC-100	Block	Acc.	121"	46"	6 3	1 ¼
Trail Deluxe	0952262	XC-100	Wiper	Acc.	133.5"	50"	6 3	1 ¼
440 LC	0952760	XC-100	Block	Acc.	121"	46"	6 3	1 ¼
440 SKS	0952560	XC-100	Deep Wiper	Acc.	133.5"	50"	6 3	1 ¼
440 XCR	0951660	XC-101	Block	Std.	121"	44"	6 4	1 ½
600 XCR	0951676	XC-101	Block	Std.	121"	44"	6 4	1 ½
WideTrak GT	0952061	Ext. Aluminum Type XXI	Deep Wiper	N/A	141"	51"	6 4	1 ¼
WideTrak LX	0952064	Ext. Aluminum Type XXIII	Block	N/A	156"	59"	6 4	1 ¼
Classic	0952865	XC-100	Block	Acc.	121"	46"	6 3	1 ¼
500 Carb	0952764	XC-100	Block	Acc.	121"	46"	6 3	1 ¼
500 EFI	0952774	XC-100	Block	Acc.	121"	46"	6 3	1 ¼
500 EFI SKS	0952574	XC-100	Deep Wiper	Acc.	133.5"	50"	6 3	1 ¼
500 EFI SKS PT	0952874	XC-100	Paddle	N/A	133.5"	50"	6 3	1 ¼
XLT	0950756	XC-100	Block	Std.	121"	44"	6 3	1 ¼
XLT SKS	0950556	XC-100	Deep Wiper	Acc.	133.5"	50"	6 3	1 ¼
XLT SKS PT	0950956	XC-100	Paddle	N/A	133.5"	50"	6 3	1 ¼
XLT Touring	0952857	XC-100	Wiper	Acc.	133.5"	50"	6 3	1 ¼
XLT SP	0956756	Xtra	Deep Wiper	Std.	121"	43.5"	6 4	1 ½
RXL	0956768	Xtra	Deep Wiper	Std.	121"	43.5"	6 4	1 ½
RXL Touring	0950869	XC-100	Wiper	Std.	133.5"	50"	6 4	1 ¼
Storm	0950782	XC-100	Deep Wiper	Std.	121"	46"	10 4	1 ½
Storm SKS	0950582	XC-100	Deep Wiper	Std.	133.5"	50"	10 4	1 ½
Storm SKS PT	0950982	XC-100	Paddle	N/A	133.5"	50"	10 4	1 ½

NOTE: All models using ITS suspensions may use 1 1/2" (3.8 cm) wide hi-fax if track guide clips are installed. All models have 15" wide track except WideTrak LX and WideTrak GT, which are 20".

SUSPENSIONS

Suspension Operation

The primary function of the rear suspension is to provide a comfortable ride in all type of riding conditions. The rear suspension has many adjustable features for fine tuning to achieve optimum comfort.

The secondary function is to provide superb handling and stability, such as adjustments to vary ski pressure for steering and controlling the snowmobile's center of gravity.

Refer to the suspension type identification chart on page 9.9 to identify your suspension type. For example, 1992 Indy 440 - Type XX. Adjustment procedures for each type are explained on the following pages.

SUSPENSIONS

Track Tension Specifications

TYPE	TOLERANCE
Extruded Aluminum Types XI, XII, XIV, XXII ITS Types I & II, Type XX 121", XC-100	3/8" - 1/2" (1 - 1.3 cm) between track clip and hi-fax with 10 lb. (4.5 kg) weight. See page 9.10.
Extruded Aluminum Types XVI, XXI	1 1/4" - 1 1/2" (3.2 - 3.8 cm) between track clip and hi-fax with 10 lb. (4.5 kg) weight. See page 9.10.
Extruded Aluminum Types IX, XIII, XV, XVII, XVIII, XIX, XXIII Type XX 133"	3/4" - 1" (2 - 2.5 cm) free hanging between track clip and hi-fax; measured at rear of front hi-fax with 10 lb. (4.5 kg) weight. See page 9.10.
Xtra	Elevate machine enough to assure track doesn't contact ground. 1/2" clearance, measure free hanging. See page 9.10.

Suspension Identifications

Extruded Aluminum Type IX	1986 Long Track Models
Extruded Aluminum Type XI	1985 Indy Models
Extruded Aluminum Type XII	1985 SS
Extruded Aluminum Type XIII	1986 - 1990 Star, Sprint (ES), StarLite, Indy Lite
Extruded Aluminum Type XIV	1986 SS
Extruded Aluminum Type XV	1986 - 1992 Indy Models Except 133" SKS; 1993 - Current Standard Lite Models
Extruded Aluminum Type XVI	1987 - 1990 StarTrak; 1993-Current Indy Lite GT, StarLite GT
Extruded Aluminum Type XVII	1987 - 1990 LongTrak RLR
Extruded Aluminum Type XVIII	1990 - 1992 SuperTrak
Extruded Aluminum Type XIX	1990 - 1992 WideTrak
Extruded Aluminum Type XX	1990 - 1992 Indy Models
Extruded Aluminum Type XXI	1990 - 1992 141" Models; 1994 WideTrak GT
Extruded Aluminum Type XXII	1990 - 1993 XC & XCR
ITS Type I	1993 Standard 121" Indy Models; 1994 Trail, 440, Classic, 500 EFI
ITS Type II	1993 Trail Deluxe and all SKS Models; 1994 Trail Deluxe, Sport SKS, 440 SKS, Classic Touring, 500 EFI SKS, RXL Touring
XC-100	1994 Super Sport, XCR, XLT, XLT SKS, XLT Special, Storm, Storm SKS, RXL
XC-101	1994 - Current 440 XCR SP, 600 XCR
Extruded Aluminum Type XXIII	1993 - Current WideTrak LX, Military WideTrak
XTRA-12	1994 XLT Special XTRA; 1995 XLT SP, RXL

SUSPENSIONS

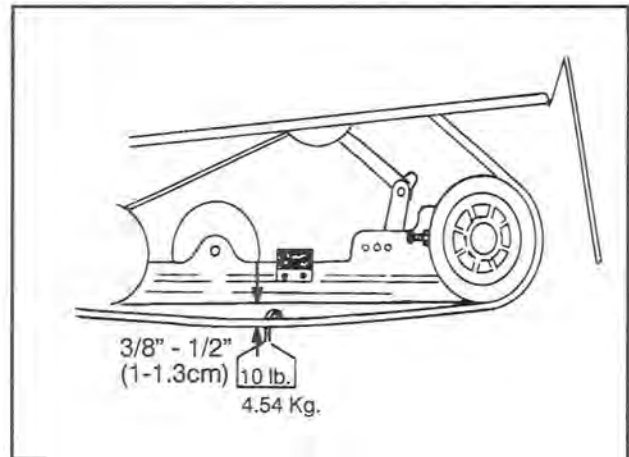
Track Tension

Track Tension

Tension adjustments should be made only after the track is warmed up and limber. Refer to track tension specifications on page 9.9.

1. Turn the machine off.
2. Lift the rear of the machine and safely support it off the ground.
3. Proper track tension is obtained by placing a 10 lb. (4.54 kg) downward pressure on the track at a point approximately 16" (40.6 cm) ahead from the center of the rear idler wheel.

Always align the track after tensioning the track. See page 9.11.



Track Tension - XTRA Suspension

CAUTION: This dimension is critical for prevention of derailing, drive shaft ratcheting and excessive hi-fax wear.

Tension adjustments should be made only after the track is warmed up and limber.

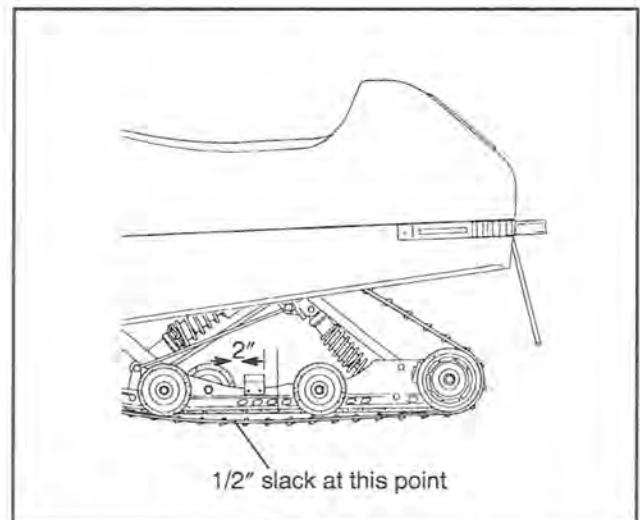
1. Turn the machine off.
2. Lift the rear of the machine and safely support it off the ground.
3. Check track tension 2" (5.1 cm) forward of the rail jounce bumper.

Properly adjusted, slack in track should be 1/2" (1.3 cm) at the point described in step 3, free hanging.

4. Loosen rear idler shaft bolt.
5. Loosen locknuts.
6. Tighten or loosen track adjusting screws as necessary to provide equal adjustment on both side of the track.
7. Rotate track 1/3 of its travel and measure again.

Tension should be checked frequently on new units and in marginal snow or hard packed snow conditions.

Always align the track after tensioning the track. See page 9.11.



SUSPENSIONS

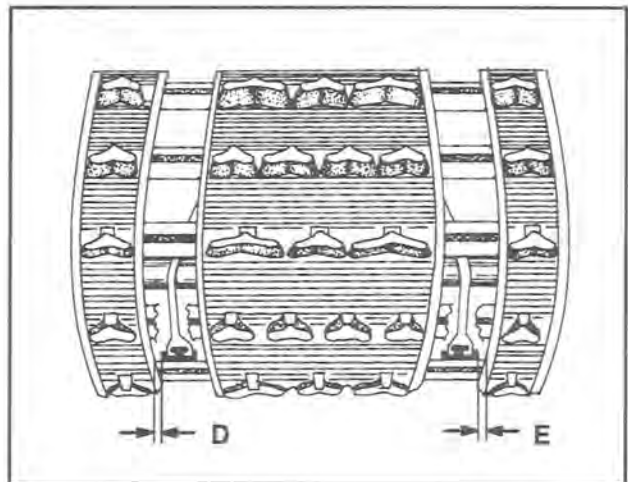
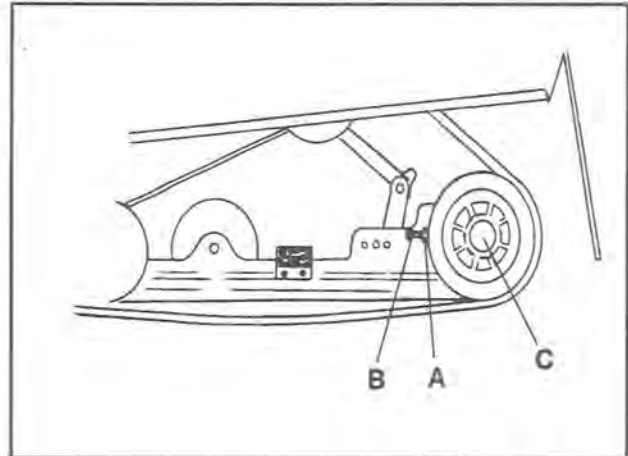
Track Alignment

Track Alignment - All Models

Track alignment affects track tension. Misalignment will cause excessive wear to the track and slide rail. Lift the rear of the machine and safely support it with the track off the ground. Start the engine and accelerate slowly to turn the track.

If the track runs to the left, loosen idler shaft bolt (C); loosen the left locknut (A) and tighten the left adjusting screw (B). If the track runs to the right loosen the right locknut (A) and tighten the right adjusting screw (B). After adjustments are completed, tighten the locknuts. **NOTE:** Be sure to re-tighten lock nuts (A) and idler shaft bolts (C). Tolerances at points (D) and (E) should be as close to the same as possible.

WARNING: When performing above checks/adjustments, stay clear of all moving parts to avoid serious personal injury. Use a shielded jack stand when test running track for alignment check to prevent serious injury.



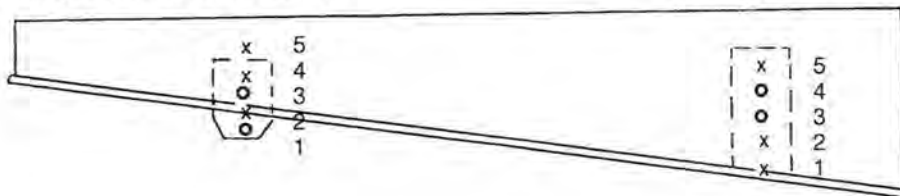
SUSPENSIONS

Type XI, XV, XVI and XVII Tunnel Adjustments

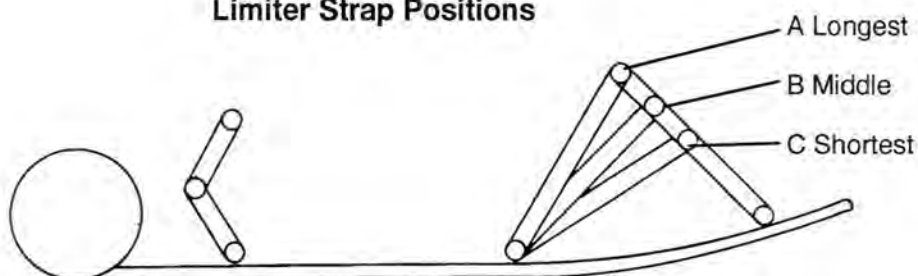
(Does not include Dial Adjust or ITS)

Rear Torque Arm Tunnel Positions

Front Torque Arm Tunnel Positions



Limiter Strap Positions



Production Location

o - Indy 121" Tracks

* - Indy Long Tracks

Rear Torque Arm Tunnel Location	Front Torque Arm Tunnel Location	Limiter Strap Position	Indy 121" Mounting Condition		GT, SKS, SuperTrak Mounting Condition	
			Use	Do Not Use	Use	Do Not Use
o 3	o 4	o A, B, C	X			X
3	3	A, B		X		X
3	3	C	X			X
* 1	* 4	* A, B, C	X		X	
1	3	A		X		X
1	3	B, C	X		X	
5	5	A, B, C		X		X

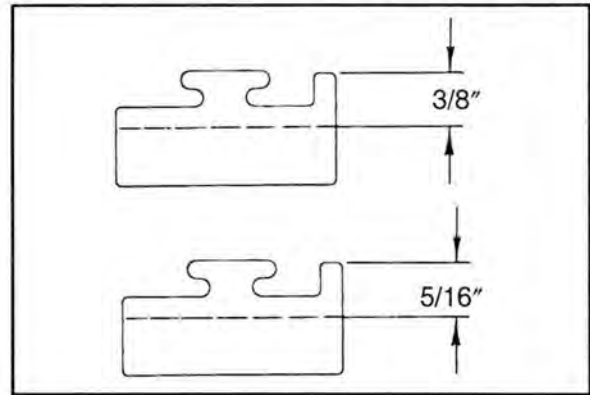
SUSPENSIONS

Hi-Fax Replacement

Slide rail material replacement on all Polaris models is similar. When any area of the slide rail material is worn to 1/8" (.3 cm), it should be replaced. This will save wear on other vital components.

The slide rail is designed to operate in conditions with adequate snow cover to provide sufficient lubrication. Excessive wear may be due to improper alignment or machine operation on surfaces without snow.

Replace Hi-Fax when worn to 3/8" (.95 cm) on conventional suspension; 5/16" (.79 cm) on Xtra Suspension.



Hi-Fax wear patterns are somewhat different on machines equipped with the Xtra Suspension than on conventional models. The rear of the rail will wear rapidly at first. After reaching a certain point, this rapid wear will cease. This area should be checked frequently, however, replacement is not necessary until a thickness of 5/16" (.79 cm) is reached.

New Hi-Fax are best used in deep snow conditions. Marginal snow or hard-pack conditions are better suited to worn Hi-Fax.

1. Remove suspension from machine.
2. Remove front Hi-Fax retaining bolt as shown.



3. Use a block of wood or drift punch and a hammer to drive Hi-Fax rearward off the slide rail.
4. With Hi-Fax material at room temperature, install new Hi-Fax by reversing above procedure.



Rubber Track Clip Replacement

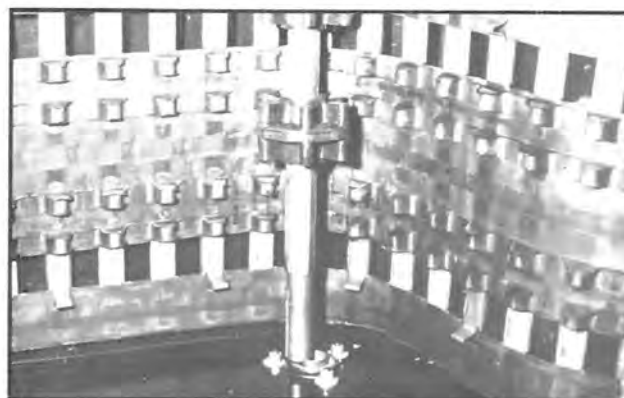
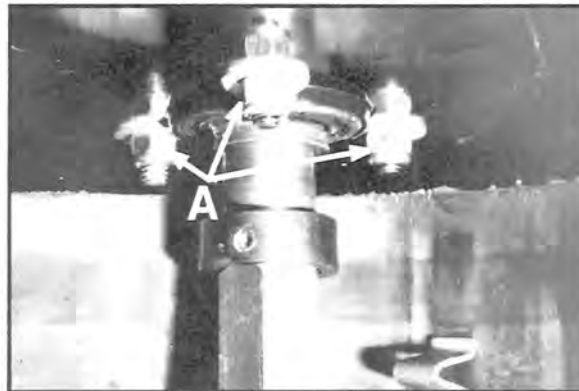
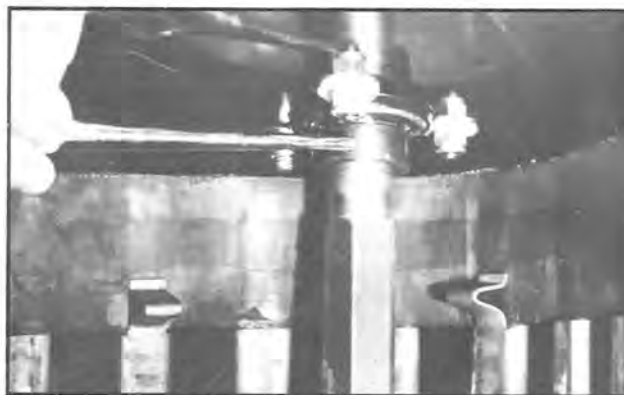
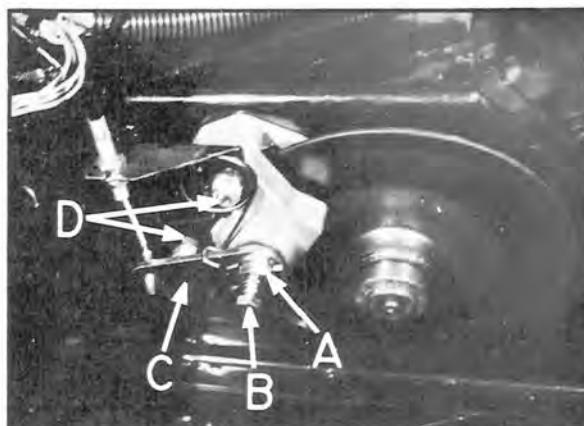
1. Install replacement clip and clipping tool (PN 2870380) as shown. **NOTE:** For ease of operation, the tool may be placed in a vise.
2. Tighten drive bolt against forming die until clip is formed.



SUSPENSIONS

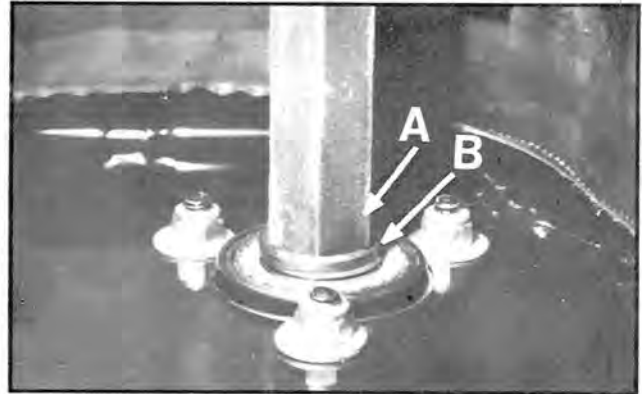
Direct Drive Track and Front Drive Shaft Removal and Installation

1. Remove drive belt, driven clutch, and driven clutch spacer washers.
2. Open adjuster bolt jam nut locking tab (A).
3. Loosen jam nut and remove adjuster bolt (B).
4. Remove actuating lever (C) and return spring.
5. Remove two brake caliper attaching nuts (D).
6. Remove cable bracket and caliper assembly. Check cable condition at both ends. Frayed or binding brake cables must be replaced.
7. Slide brake disc off front drive shaft and remove half moon key.
8. Remove four suspension mounting bolts and suspension. Note placement of two rear torque arm idler wheel thrust spacers for reassembly.
9. Loosen lock collar Allen head set screw.
10. With a punch and hammer, loosen bearing lock collar located on brake end of drive shaft.
11. Remove three flange attaching bolts (A). **NOTE:** The longest of these three bolts attaches the stationary brake pad.
12. Slide drive shaft toward brake side of chassis until driven clutch end is free.
13. Tilt shaft and remove it from brake end bearing.
14. Remove track.



Direct Drive Track and Front Drive Shaft Removal and Installation

15. Before reassembly, check drive shaft, drive shaft sprocket, and drive shaft bearings.
16. Reverse disassembly procedures for reassembly. Note that sprocket or drive shaft centering is controlled by hex portion of drive shaft (A) being bottomed onto driven clutch side bearing (B).
17. Driven clutch must be installed and torqued before lock collar is tightened.
18. Refer to Chapter 8 for proper brake adjustments.



SUSPENSIONS

Track Removal - Two Sprocket Drive Shaft

1. Remove rear suspension bolts.
2. Remove front suspension bolts.
3. Place a protective mat on the floor and tip the machine on its side.
4. Using an Allen wrench, loosen set screw on lock collar on left side drive shaft bearing.
5. Tap lock collar with a hammer and punch to loosen it. Rotate lock collar against the normal direction of rotation to loosen, with normal direction of rotation to tighten.



Track Removal - Two Sprocket Drive Shaft

6. Remove three cap screws holding flange and bearing in place on left side of machine.
7. Remove bearing and lock collar from drive shaft.



8. Remove chaincase cover and remove bottom sprocket.
9. Remove drive shaft by pulling shaft first from chaincase and then from left side of machine.
10. Reverse process for reassembly. Be sure to install and torque lower chaincase sprocket before locking lock collar.



SUSPENSIONS

Track Removal - Four Sprocket Drive Shaft

1. Follow steps 1-7 of Two Sprocket Drive Shaft Removal pages 9.16-9.17.
2. Remove handlebar cover. Remove cable tie on steering post securing throttle cable and brake hose. Remove two phillips screws securing air intake silencer. Taking care not to damage throttle cable, lift silencer out.
3. Remove secondary clutch and loosen jackshaft lock collar set screw. Using a hammer and punch, unlock the lock collar. Remove three cap screws holding jackshaft left hand bearing and flangettes in place. Remove bearing from jackshaft.



4. Remove chaincase cover, loosen chain adjuster and remove lower sprocket and drive chain.



5. Remove three mounting bolts (A, B, C) securing chaincase to chassis. Carefully tip machine on its left side onto a mat. Lift chaincase up until drive shaft is out of lower chaincase bearing. Lift drive shaft up until it clears tunnel on LH side (bottom) and can be pulled out of tunnel. Remove drive shaft and track.

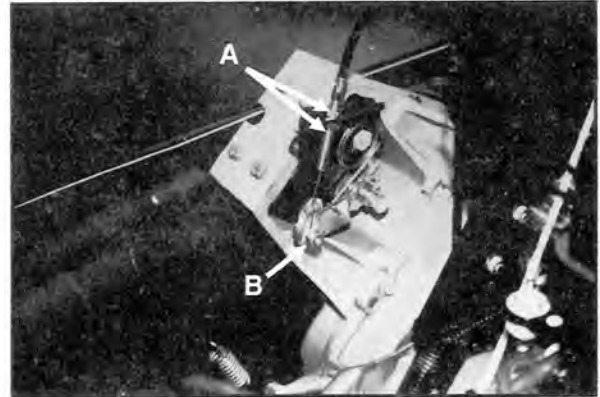
CAUTION: Whenever inspection reveals worn, damaged or defective parts, replacement is necessary in order to avoid serious damage to the machine or injury to the operator.

6. After inspecting all parts, reverse process for reassembly. The lower forward chaincase mount bolt (C) must be in place before installing drive shaft. Drive sprocket interference will not permit installation after drive shaft is installed. The lower chaincase sprocket must be installed and torqued before locking lock collar.

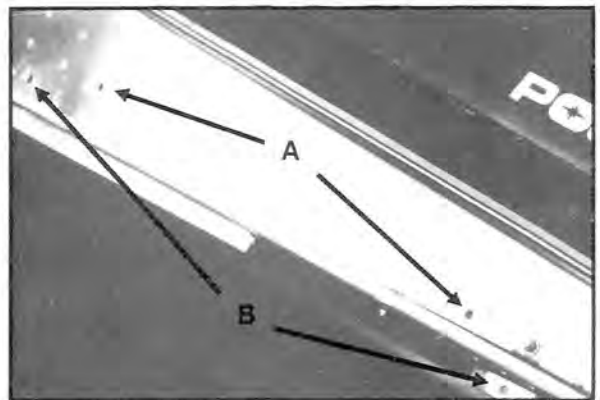
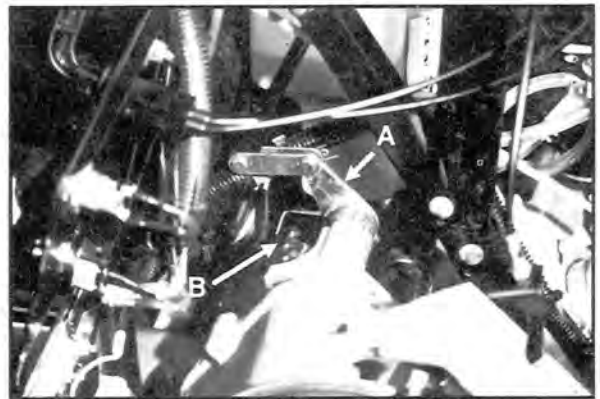


Transmission, Suspension and Track Removal - WideTrak Models

1. Remove hood assembly and set aside to prevent damage.
2. Remove drive belt.
3. Remove driven clutch retaining bolt assembly and drive clutch. Note number of spacers which are behind driven clutch for installation during reassembly procedures.
4. Remove muffler springs and muffler from unit.
5. Loosen brake cable jam nut (A) and remove cable bolt, nut and spacer (B). Use care not to loose spacer.
6. Remove cable from transmission.



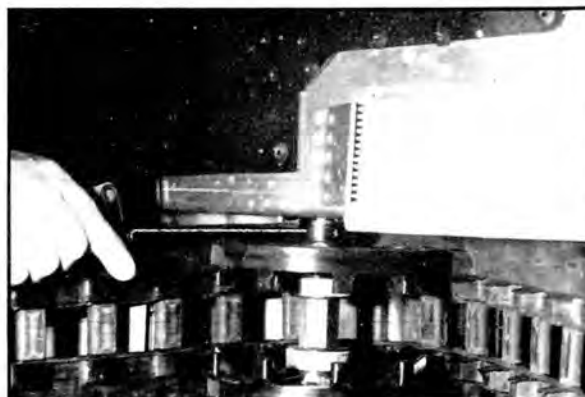
7. Note location of shift linkage on transmission (A) to assure proper location during reassembly. Remove cotter pin, washers, and pin from transmission arm.
8. Remove brake light wire connector from sensor.
9. Loosen rear idler wheels and bolts.
10. Loosen jam nuts on adjustment bolts on both sides. Back out adjustment bolts to allow rear idler assembly to come forward, relieving track tension.
11. Tighten idler wheel bolts so that spacers on shafts do not rotate and lose alignment.
12. Remove front and rear carrier shaft bolts (A), and front and rear suspension bolts from both sides (B).
13. Tip unit onto right side and remove suspension.



SUSPENSIONS

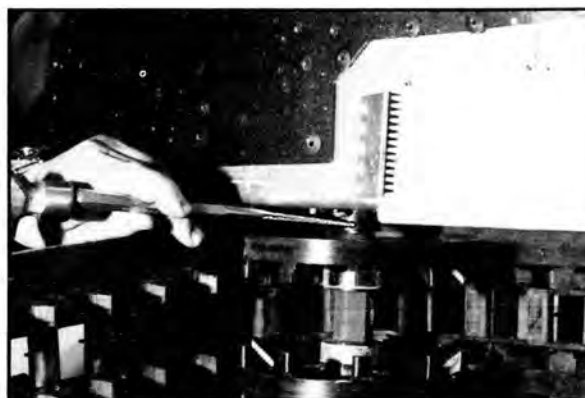
Transmission, Suspension and Track Removal - WideTrak Models

14. Using "T" handle Allen wrench, loosen set screw on lock collar.



15. Tap lock collar with a hammer and punch to loosen.

16. Rotate lock collar *against* normal drive shaft rotation to loosen.



17. Loosen and remove three carriage bolts and nuts retaining angle drive housing and flangettes.

18. Remove angle drive housing, adaptor key, flangettes, bearing, and lock collar from drive shaft and tunnel. **NOTE:** It is not necessary to remove speedometer cable from angle drive. Replace adaptor key any time drive train assembly is serviced.

19. Tip machine back onto floor.



20. Remove right side bumper plug (A).

21. Remove bolt retaining rear of bumper to foot rest.

22. Bend muffler mount out of the way to allow transmission removal.

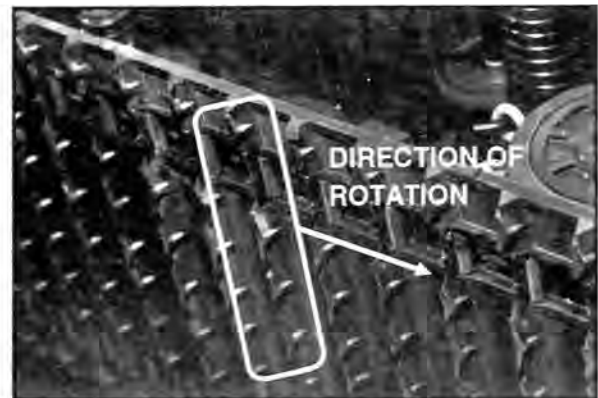


Transmission, Suspension and Track Removal -WideTrak Models

23. Remove three transmission retaining bolts. Note all alignment shim quantities and locations for reassembly. **NOTE:** Retaining bolts have to be held in place from underside while removing nuts. The lower front bolt cannot be removed at this time. It must be lowered to the drive sprocket.
24. Lift and maneuver transmission to free drive shaft coupler.
25. Lower drive shaft and remove lower front bolt.
26. Maneuver transmission until it can be removed from the unit. Use care not to damage coolant lines.
27. With transmission removed, tip unit onto right side. Notice direction of track rotation for reassembly. The arrow in the photo at right indicates track bottom, rear of unit.
28. Remove track.
29. Inspect transmission, brakes, suspension and track for excessive wear. Check bearings for excessive movement or rough feeling. Replace if necessary.

Reassembly

1. Tip unit onto right side.
2. Insert track in unit, making sure direction of rotation is correct.
3. Place drive shaft in unit, aligning drive sprockets and track drive lugs.
4. Install lock collar, flange, bearing and flange on drive shaft, positioning bearing flush with end of drive shaft.
5. Set lock collar lightly to hold in place.
6. Align flange holes with tunnel.
7. Replace adaptor key in drive shaft. Install angle drive housing aligning adaptor key with angle drive.
8. Install nuts and finger tighten.
9. Tip machine onto its left side.



SUSPENSIONS

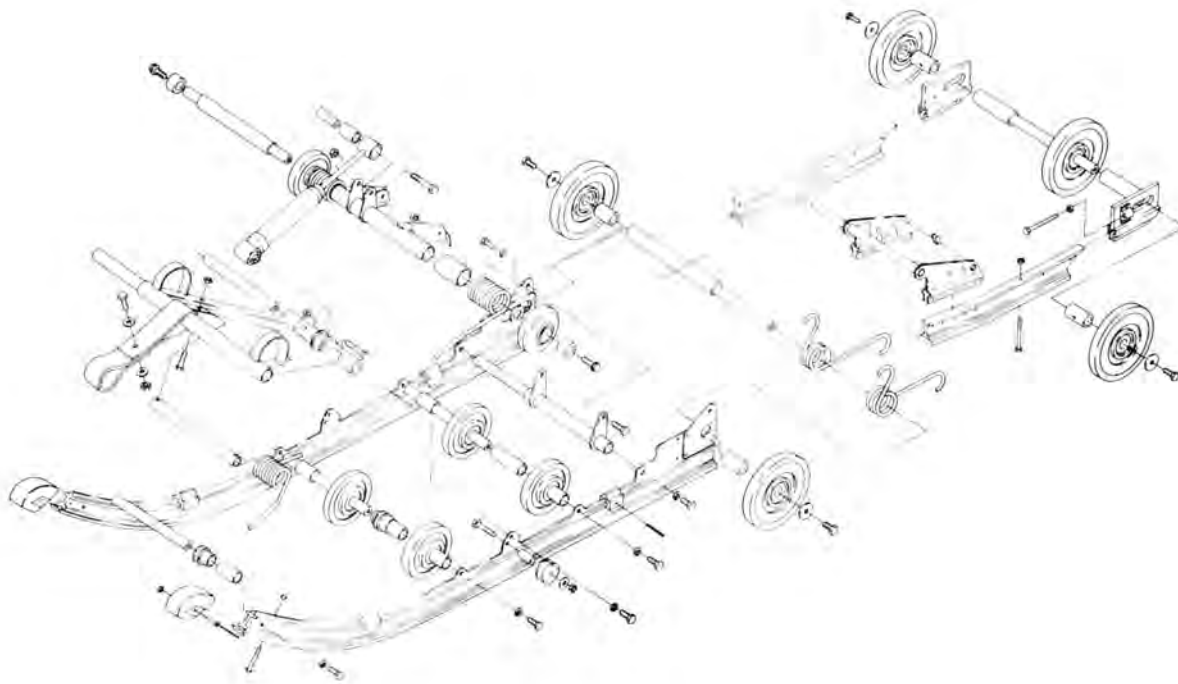
Transmission, Suspension and Track Reassembly - WideTrak Models

10. Reinstall transmission, using care not to damage coolant hoses. Be sure transmission shift linkage is properly located.
11. Install lower front mounting bolt before coupling to shaft. Once bolt is started into transmission housing, align coupling with drive shaft and jack shaft splines. Keep transmission flat and lower gradually to prevent binding of couplers.
12. Tip machine onto its right side.
13. Loosen lock collar and seat drive shaft in transmission coupler stub shaft. For ease of assembly, make sure track has no pressure against drive shaft.
14. Tighten nuts retaining angle drive housing to tunnel.
15. Reinstall lock collar and lock with hammer and punch in *direction of rotation* of drive shaft.
16. Using "T" handle Allen wrench, tighten set screw.
17. Reinstall front of suspension inside track and align with tunnel mounting holes.
18. Install and hand tighten suspension bolts.
19. Install front carrier shaft assembly inside track and mount to tunnel with bolts. Hand tighten bolts.
20. Install rear carrier shaft assembly. Make sure bolts are not cross threaded and hand tighten.
21. Tip machine back onto floor and tighten all suspension bolts to proper torque specs. Refer to pages 10.4-10.5.
22. Reattach transmission shift linkage and brake light connector.
23. Attach brake cable to transmission mounting with bolt, nut and spacer. Refer to Chapter 8 for adjustment specifications.
24. Install bumper onto footrest bolt and tighten.
25. Reinstall bumper plug.
26. Reinstall and secure muffler.
27. Loosen rear idler bolts.
28. Lift and support rear of unit and align track to specifications found on page 9.11. Make sure rear idler wheel spacer location is correct before tightening idler wheels.
29. Reinstall driven clutch and spacers onto jackshaft and tighten.
30. Reinstall hood.



SUSPENSIONS

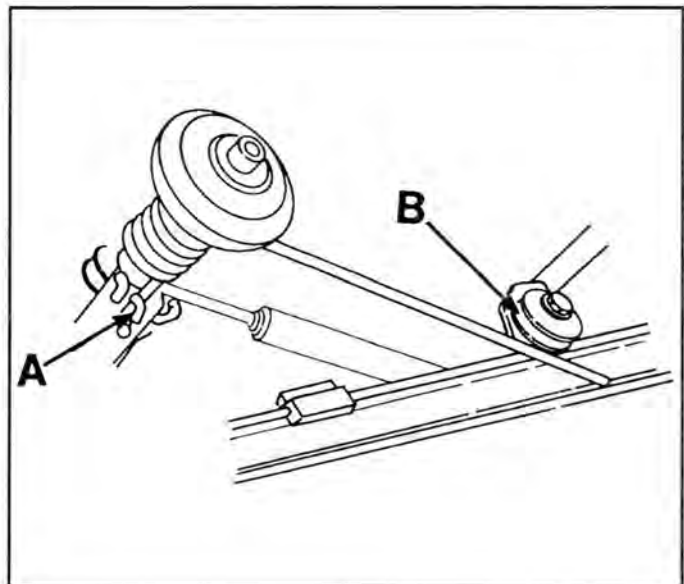
Type IX Extruded Aluminum Exploded View and Adjustments



Type IX Exploded View

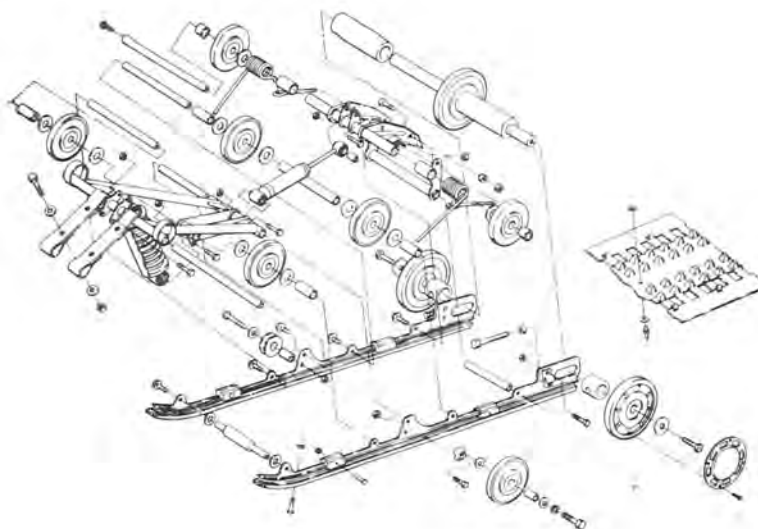
Rear springs are changed or adjusted primarily for different rider weight. To adjust, release front leg from carrier wheel (B), insert screwdriver under spring leg (A), and either raise or lower short spring leg. Raising the spring leg will increase spring preload. Lowering it will decrease preload.

The front torque arm limiter strap can also be altered for varying ski-to-ground pressure. Lengthening the limiter strap will decrease ski-to-ground pressure. Shortening the strap will increase ski-to-ground pressure.



SUSPENSIONS

Type XI Exploded View and Adjustments



Type XI Exploded View

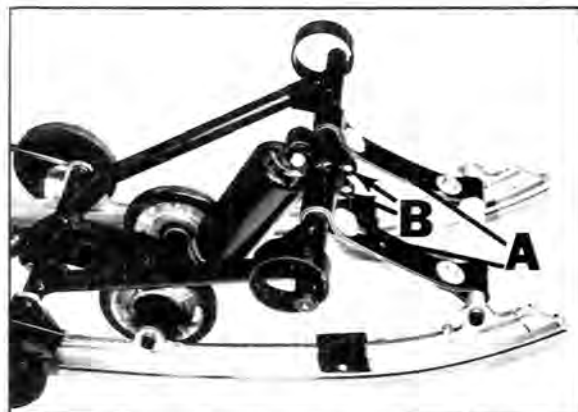
Front Torque Arm Spring and Limiter Strap Adjustments

Ski pressure can be increased or decreased using the following adjustments.

The front torque arm limiter straps (A) can be shortened to increase ski pressure. The front torque arm shock assembly may also be repositioned to either increase or decrease travel firmness.

In the photo at right, the shock and spring assembly are in the most firm position. If a less firm spring is desired, the shock can be mounted in the lower position (B).

On all suspension settings, Polaris has set the machines up for average riding conditions and average rider weight.

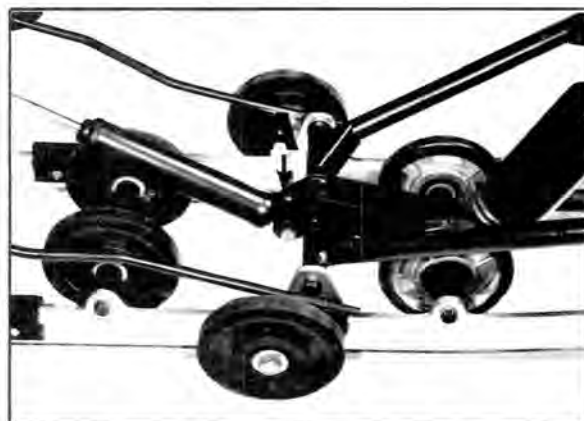


Rear Shock Adjustment

If the ride seems a little firm after making the rear spring adjustments, the rear shock can be moved to the upper mounting hole (A) for a softer ride.

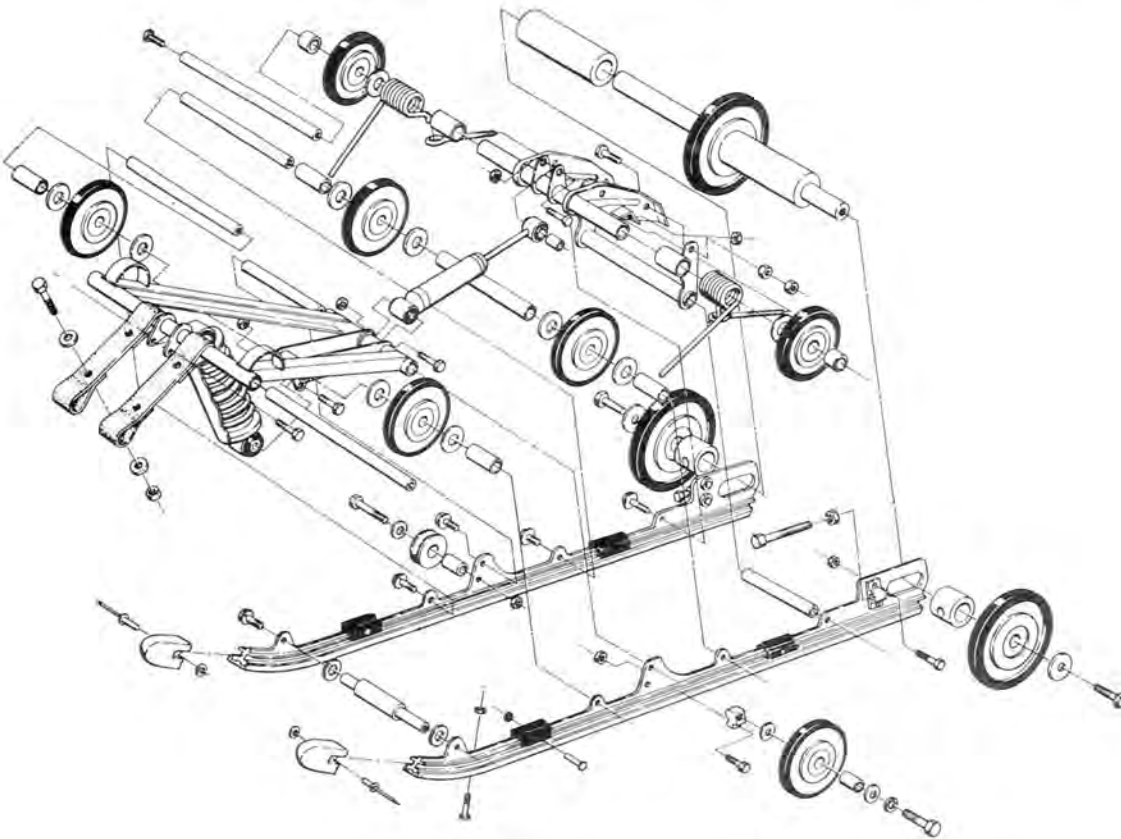
Rear Spring Adjustment

Rear springs are adjusted primarily for rider weight. To check ride in, raise rear of machine to relieve rear springs. Slowly lower the machine and measure the distance from the floor to a mark on the running board. Have the rider carefully mount the machine. Adjust the eye bolts equally so there is approximately a 1 1/2" (3.8 cm) drop as the rider mounts the machine.



SUSPENSIONS

Type XII Exploded View and Adjustments



Type XII Exploded View

Rear Torque Arm Springs

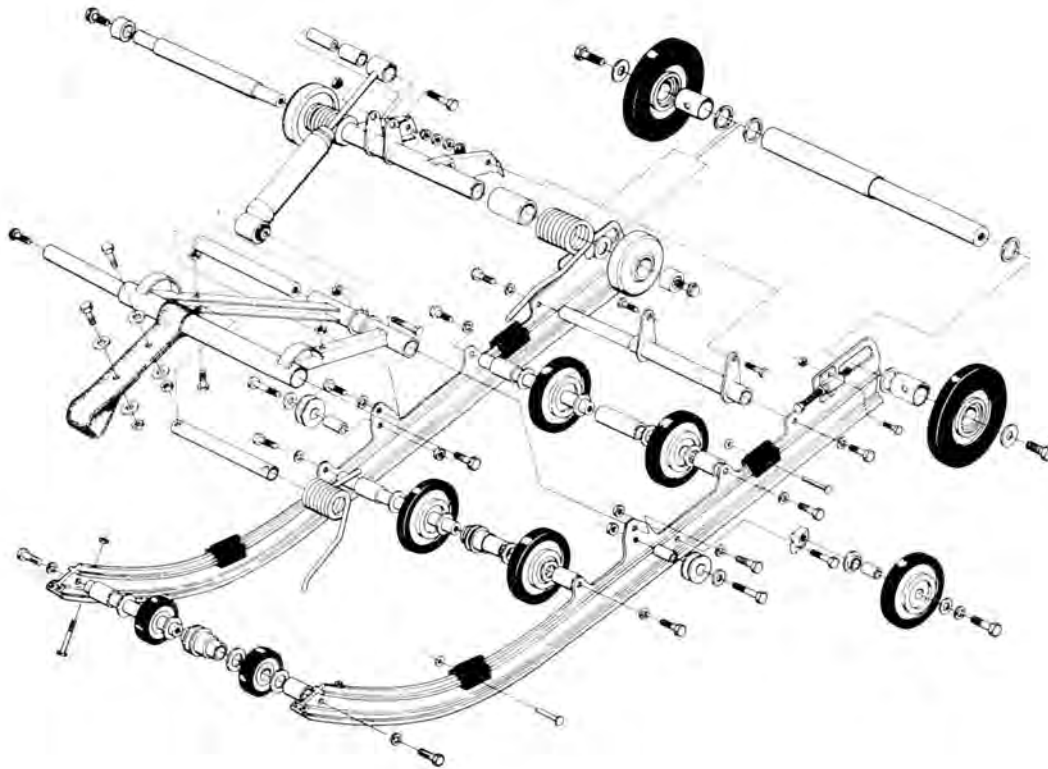
Rear spring adjustment is primarily a control for rider comfort. To check for recommended setting, lift rear of machine to relieve rear springs. Slowly lower the machine and measure the distance from the ground to the running board. Have the rider carefully mount the machine. The difference between the two readings should be approximately 1 1/2" (3.8 cm). If the difference is greater than 1 1/2" (3.8 cm), the rear spring (A) should be adjusted equally on both sides until the desired drop is obtained.

NOTE: Rear spring settings will affect ski-to-ground pressure. If ski pressure is too light, it may be desirable to tighten rear springs for an increase in ski-to-ground pressure.



SUSPENSIONS

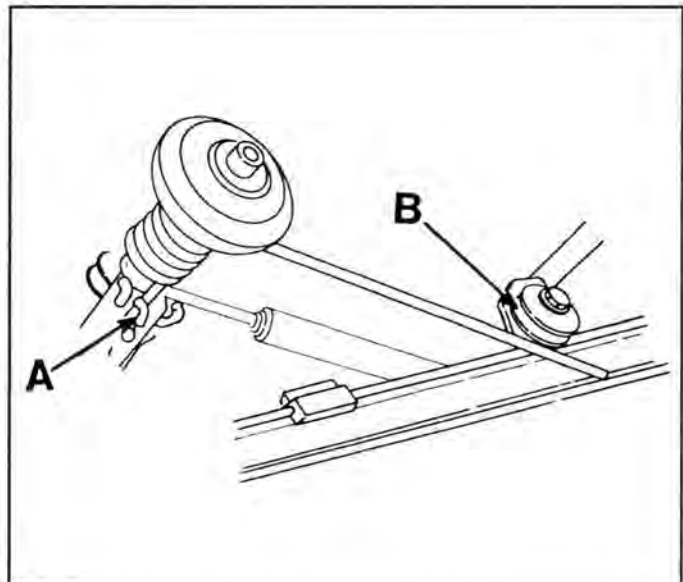
Type XIII Exploded View and Adjustments

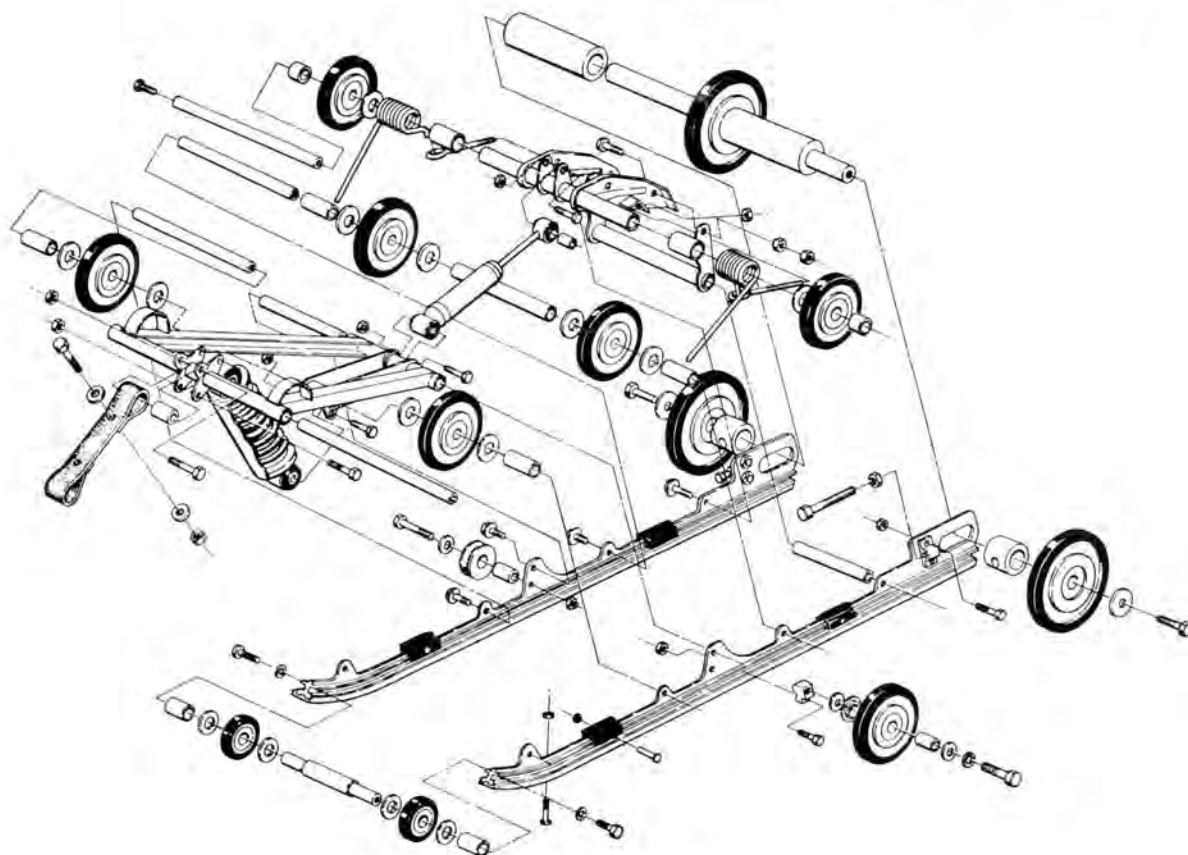


Type XIII Exploded View

Rear springs are changed or adjusted primarily for rider weight. To adjust, release front leg from carrier wheel (B) by inserting a screwdriver under spring leg (A) and either raising or lowering short spring leg. Raising the spring leg will increase spring preload. Lowering the spring leg will decrease preload.

The front torque arm limiter strap may also be adjusted for varying ski-to-ground pressure. Lengthening the strap will decrease ski-to-ground pressure. Shortening the strap will increase ski-to-ground pressure.





Type XIV Exploded View

Rear Torque Arm Springs

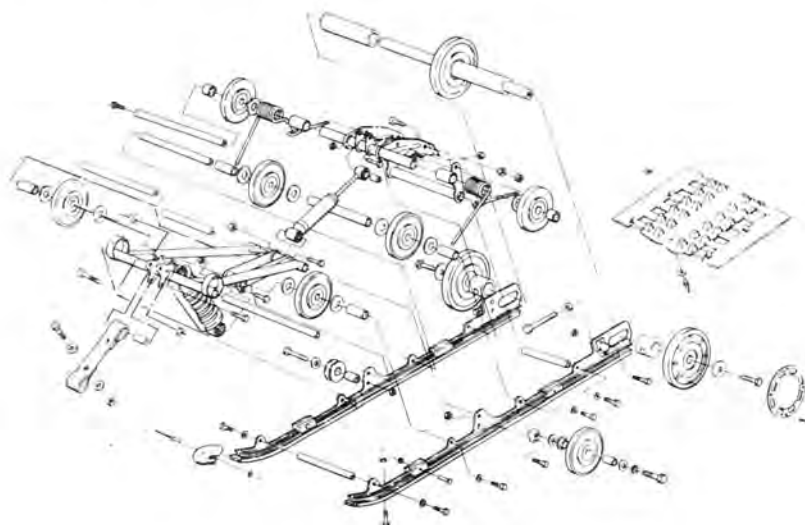
Rear spring adjustment is primarily a control for rider comfort. To check for recommended setting, lift rear of machine to relieve rear springs. Slowly lower the machine and measure the distance from the ground to the running board. Have the rider carefully mount the machine. The difference between the two readings should be approximately 1 1/2" (3.8 cm). If the difference is greater than 1 1/2" (3.8 cm), the rear spring (A) should be adjusted equally on both sides until the desired drop is obtained.

NOTE: Rear spring settings will affect ski-to-ground pressure. If ski pressure is too light, it may be desirable to tighten rear springs for an increase in ski-to-ground pressure.



SUSPENSIONS

Type XV Exploded View and Adjustments



Type XV Exploded View

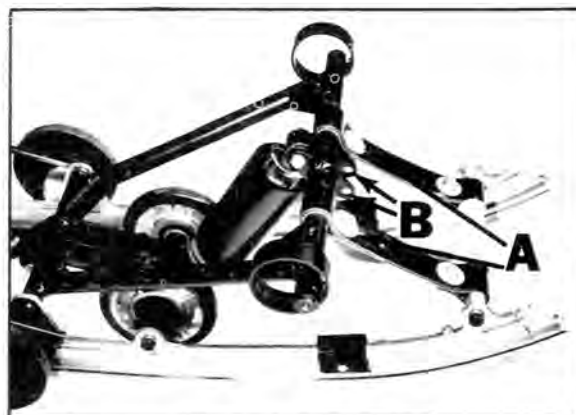
Front Torque Arm Spring and Limiter Strap Adjustments

Ski pressure can be increased or decreased using the following adjustments.

The front torque arm limiter straps (A) can be shortened to increase ski pressure. The front torque arm shock assembly may also be repositioned to either increase or decrease travel firmness.

In the photo at right, the shock and spring assembly are in the most firm position. If a less firm spring is desired, the shock can be mounted in the lower position (B).

On all suspension settings, Polaris has set the machines up for average riding conditions and average rider weight.

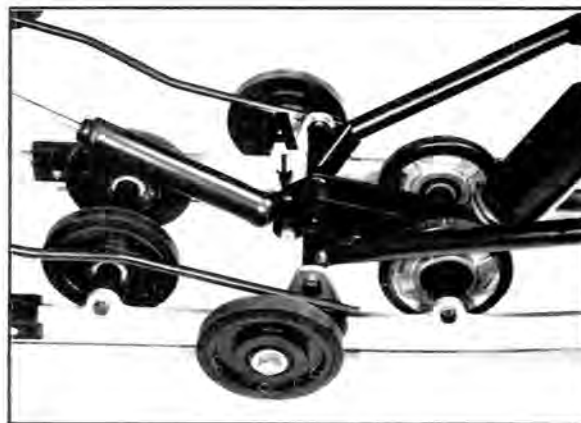


Rear Shock Adjustment

If the ride seems a little firm after making the rear spring adjustments, the rear shock can be moved to the upper mounting hole (A) for a softer ride.

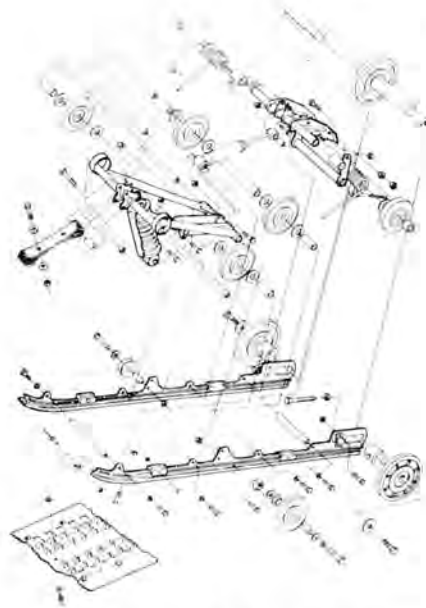
Rear Spring Adjustment

Rear springs are adjusted primarily for rider weight. To check ride in, raise rear of machine to relieve rear springs. Slowly lower the machine and measure the distance from the floor to a mark on the running board. Have the rider carefully mount the machine. Adjust the eye bolts equally so there is approximately a 1 1/2" (3.8 cm) drop as the rider mounts the machine.



SUSPENSIONS

Type XVI Exploded View and Adjustments



Type XVI Exploded View

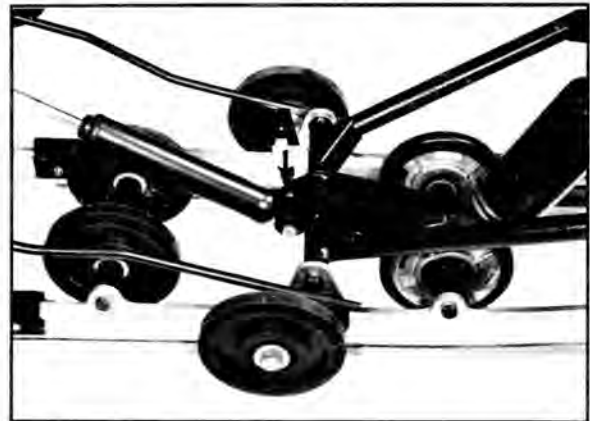
Front Torque Arm Spring and Limiter Strap Adjustments

Ski pressure can be increased or decreased using the following adjustments.

The front torque arm limiter straps (A) can be shortened to increase ski pressure. The front torque arm shock assembly may also be repositioned to either increase or decrease travel firmness.

In the photo at right, the shock and spring assembly are in the most firm position. If a less firm spring is desired, the shock can be mounted in the lower position (B).

On all suspension settings, Polaris has set the machines up for average riding conditions and average rider weight.

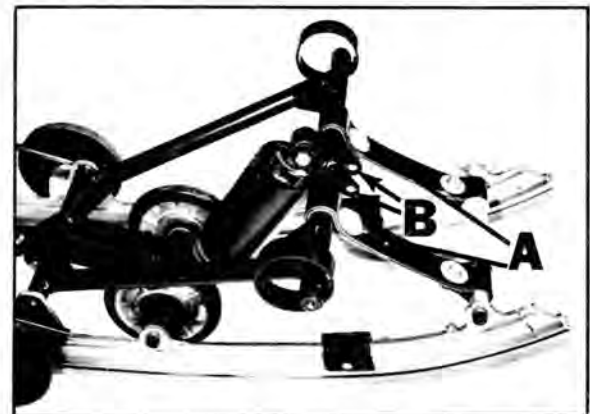


Rear Shock Adjustment

If the ride seems a little firm after making the rear spring adjustments, the rear shock can be moved to the upper mounting hole (A) for a softer ride.

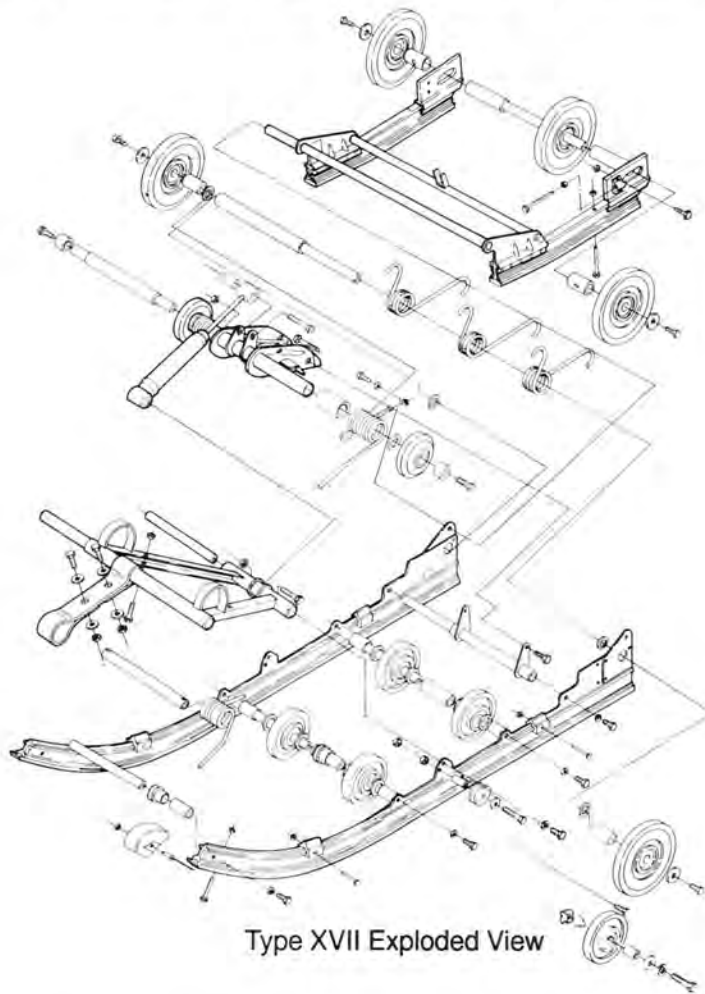
Rear Spring Adjustment

Rear springs are adjusted primarily for rider weight. To check ride in, raise rear of machine to relieve rear springs. Slowly lower the machine and measure the distance from the floor to a mark on the running board. Have the rider carefully mount the machine. Adjust the eye bolts equally so there is approximately a 1 1/2" (3.8 cm) drop as the rider mounts the machine. Adjust springs so there is equal tension on the long leg of each spring.



SUSPENSIONS

Type XVII Extruded Aluminum Exploded View and Adjustments



Type XVII Exploded View

Adjustments

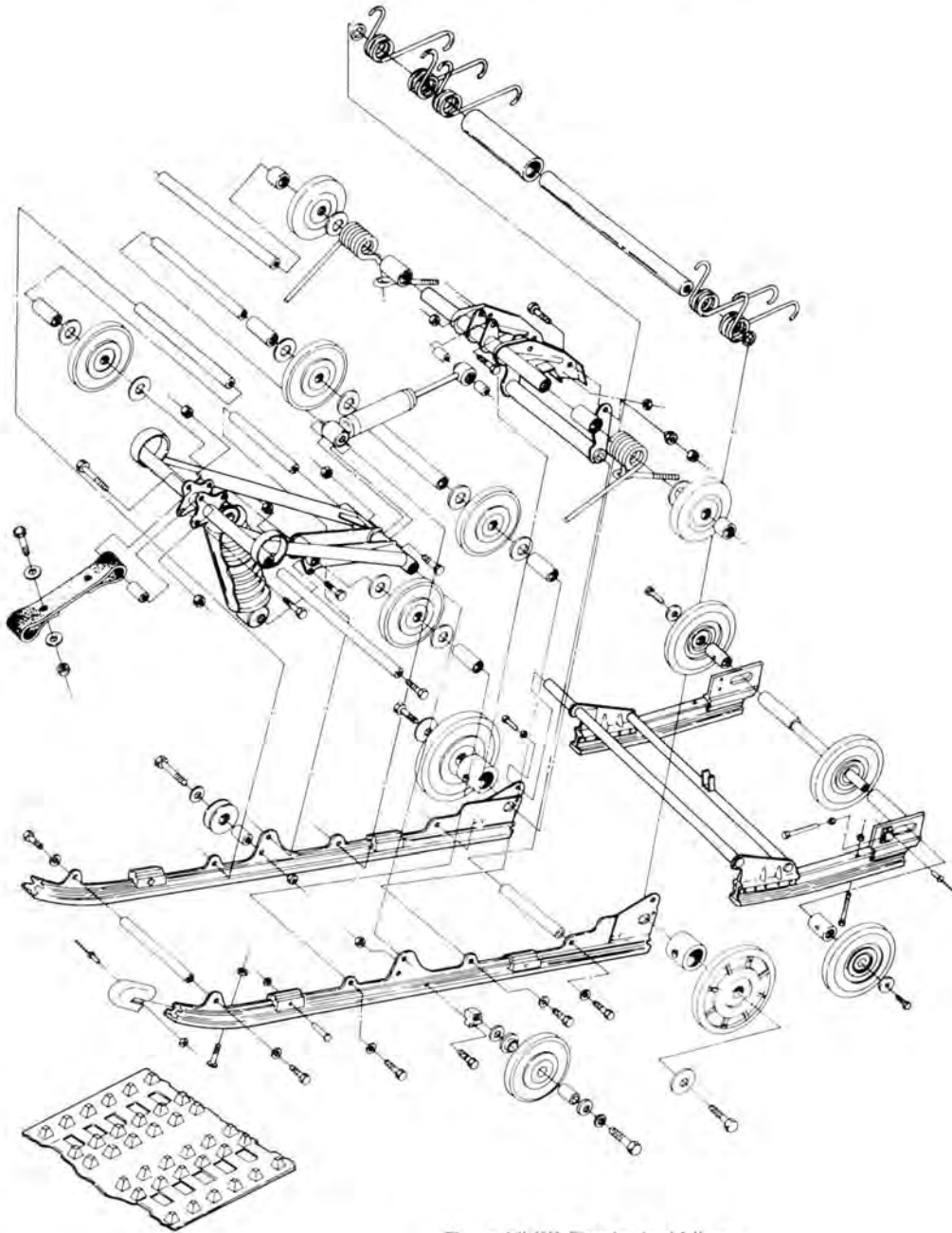
Compensating adjustments for heavy or light drivers or cargo loads can be made by adjusting the rear spring eyebolt length. Rear spring settings also affect ski-to-ground pressure. Increasing spring tension also increases ski pressure. Adjust spring tension so there is equal tension on the long leg of each spring (A).

The front torque arm limiter strap can also be altered for varying ski-to-ground pressure. Lengthening the limiter strap will decrease ski-to-ground pressure. Shortening the limiter strap will increase ski-to-ground pressure.



SUSPENSIONS

Type XVIII Extruded Aluminum Exploded View and Adjustments



Type XVIII Exploded View

Adjustments

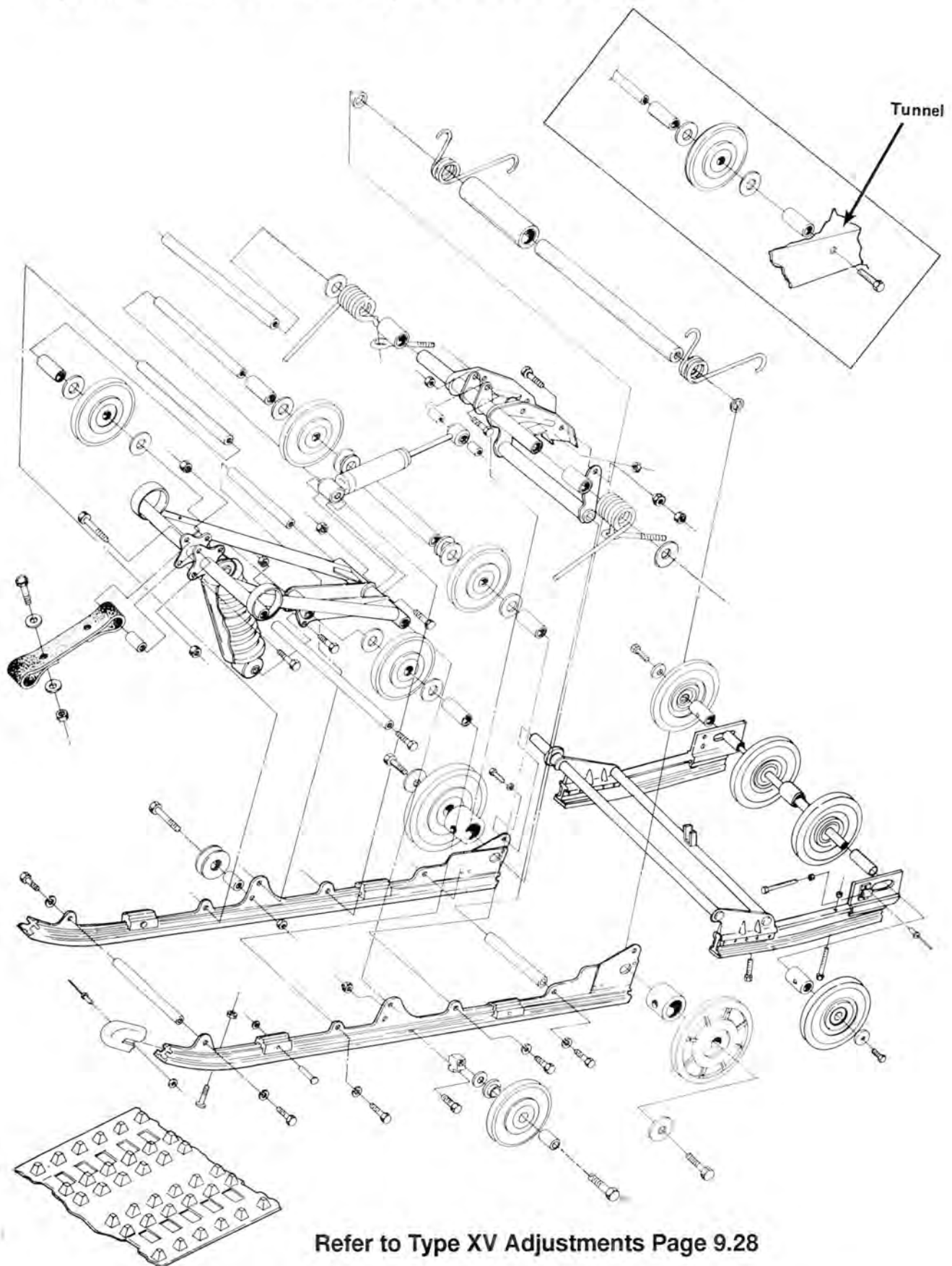
Compensating adjustments for heavy or light drivers or cargo loads can be made by adjusting the rear spring eyebolt length. Rear spring settings also affect ski-to-ground pressure. Increasing spring tension also increases ski pressure. Adjust spring tension so there is equal tension on the long leg of each spring (A).

The front torque arm limiter strap can also be altered for varying ski-to-ground pressure. Lengthening the limiter strap will decrease ski-to-ground pressure. Shortening the limiter strap will increase ski-to-ground pressure.



SUSPENSIONS

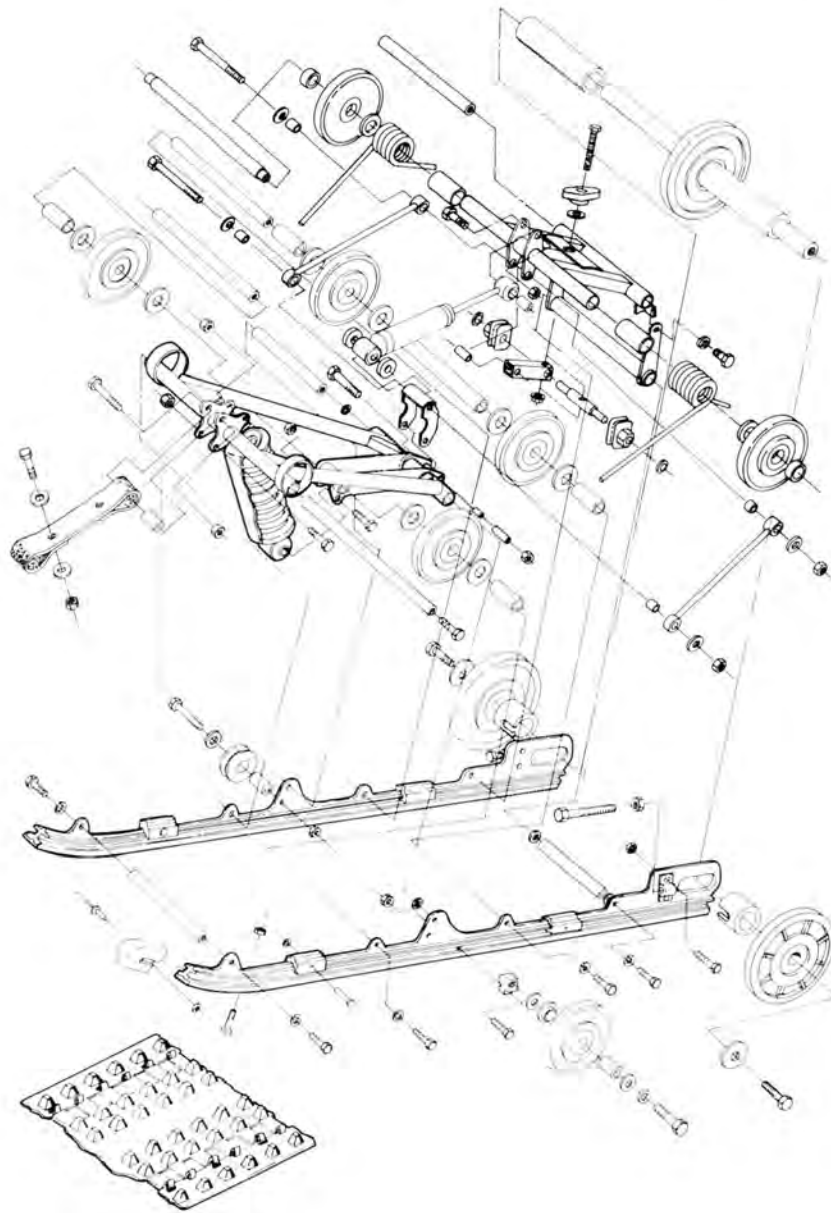
Type XIX Extruded Aluminum Exploded View and Adjustments



Refer to Type XV Adjustments Page 9.28

SUSPENSIONS

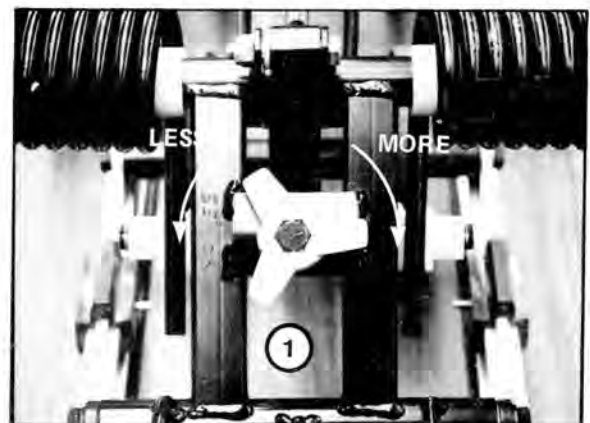
Type XX Extruded Aluminum Exploded View and Adjustments



Rear Suspension Adjustments

In addition to the main eccentric block adjustments, a provision for intermediate adjusting has been provided with the adjusting knob (1).

This feature provides for fine adjustments. To adjust, rotate adjuster knob as shown for spring tension changes.

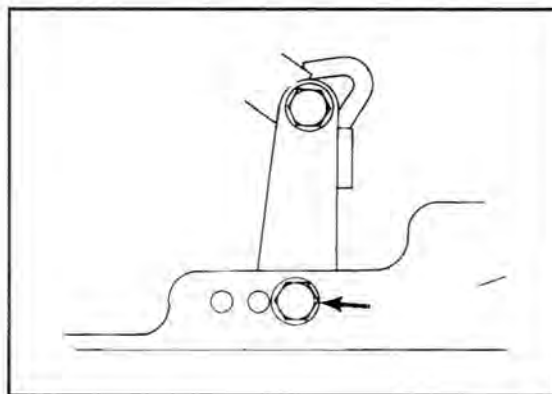


SUSPENSIONS

Type XX Extruded Aluminum Exploded View and Adjustments

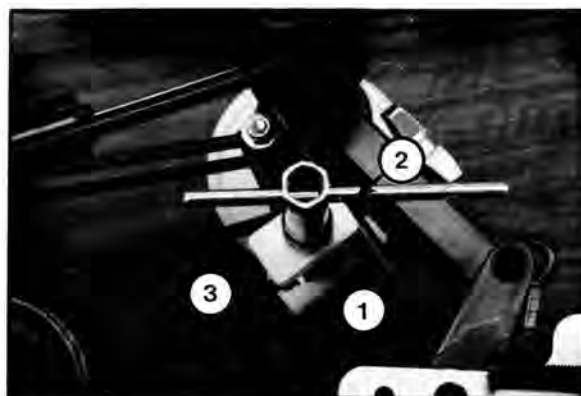
Dial Adjust Slide Rails

The rear torque arm must be mounted in the rear slide rail hole, indicated by the arrow on the illustration at right. **CAUTION:** Never mount in either of the forward holes or suspension damage will result.



Rear spring tension adjustments are made by rotating the eccentric spring block with the engine spark plug tool as shown. The block provides three spring tension positions. This adjustment is easier if the long spring leg is lifted over the roller and replaced after the block is properly positioned.

- 1 Soft
- 2 Short End, Medium
- 3 Long End, Most Firm



Suspension Adjustment Springs for Dial Adjust Suspension Only

AVAILABLE SPRING		WIRE DIAMETER
7041246	Left Hand	.406
7041247	Right Hand	.406
7041248	Left Hand	.421
7041249	Right Hand	.421
7041235	Left Hand	.437
7041236	Right Hand	.437

Lighter



Heavier

Although the snowmobile suspension has the capability of providing the best ride possible, the following accessory springs are available to better suit individual riding preferences.

SUSPENSIONS

Type XX Adjustments - Dial Adjust

Perfecting the Ride

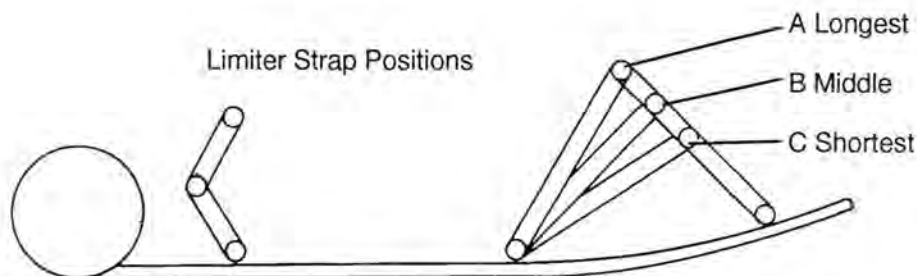
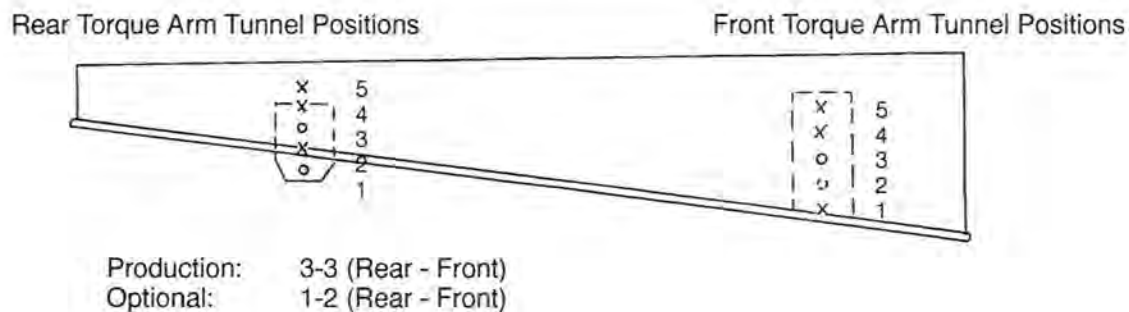
The Polaris long travel Dial Adjust suspension has many adjustment features which many customers are not taking advantage of. This suspension can be individually tailored to a rider's size and riding style for maximum comfort and performance.

The rear suspension springs are the main load carrying part of the rear suspension. they have eccentric blocks which can be turned with a spark plug socket to one of three primary positions: soft, medium, or firm. In addition to the primary adjustment, a secondary adjustment dial is provided to fine tune the rear spring tension to any setting between the steps of the primary adjustment block by turning the dial clockwise to increase spring tension, or counterclockwise to decrease spring tension. The adjustability of the dial adjust suspension will provide proper handling and ride comfort for most Polaris riders.

When changing rear suspension spring rate and/or rear ride height, the amount of downward ski pressure will change. If the pressure too great, the handlebars will be hard to turn. If the pressure is too light, the skis will not dig in and the machine won't turn. The rear suspension front shock top has two mounting positions. The more vertical position provides a stiffer suspension and less ski pressure, while the more "laid down" position provides a smoother ride with more ski pressure.

In addition to the shock, there is a front torque arm limiter strap. This strap controls the amount of downward travel in the front of the suspension rail. If the strap is lengthened, the front of the rail will push down more, lifting some pressure off the skis. Shortening the limiter strap will lift the front of the suspension, increasing downward ski pressure.

Dial adjust suspensions must be adjusted at both the front and rear mounting positions in unison. If you move down a hole in the front, you must do the same in the rear. You may move down one hole in the rear without moving down in the front, but never the reverse.

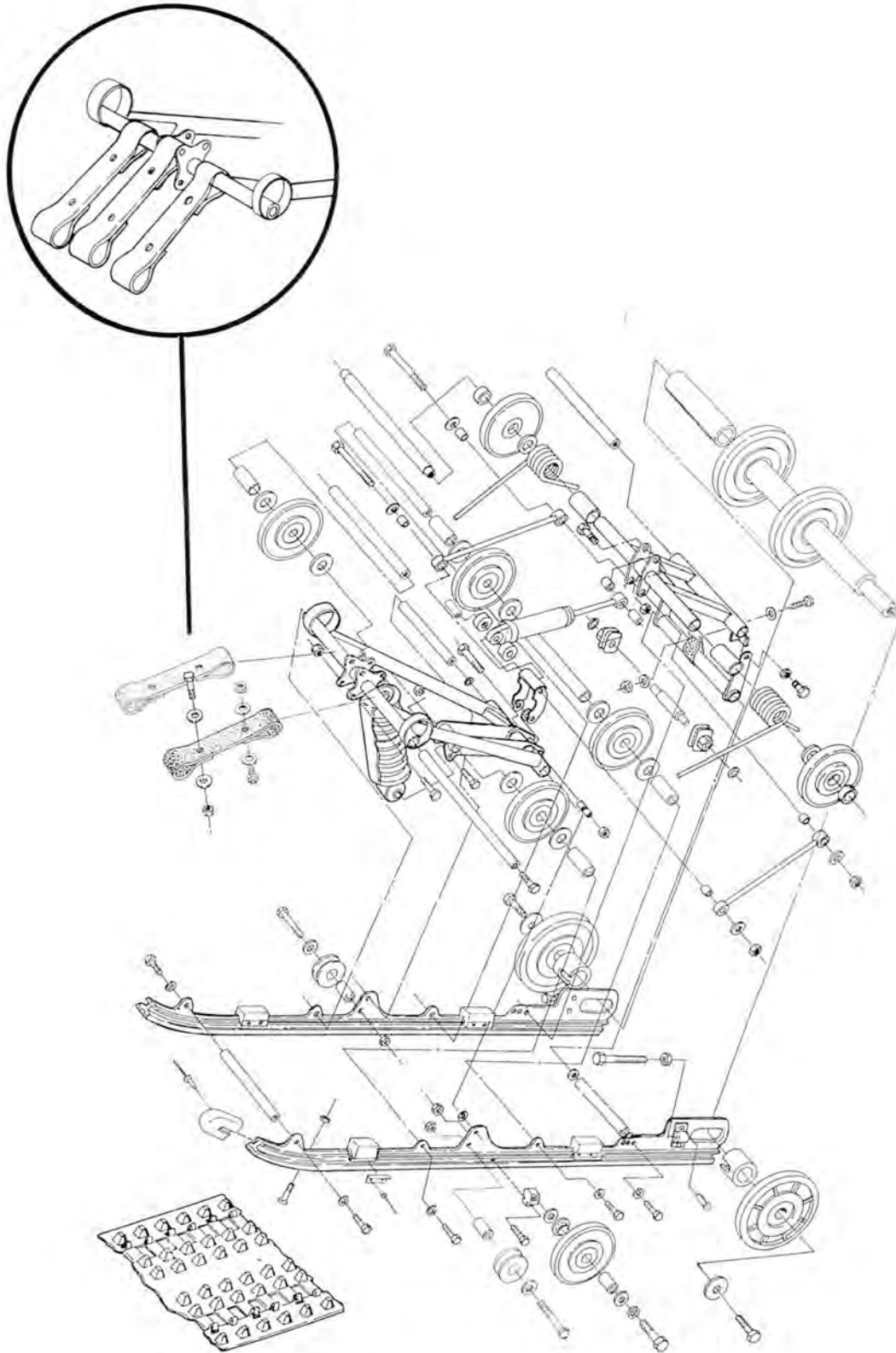


Adjustments are open to driver preference. Remember that limiter strap adjustment will affect steering.

CAUTION: Using any location or track tension other than that recommended will result in severe tunnel and/or drive shaft damage.

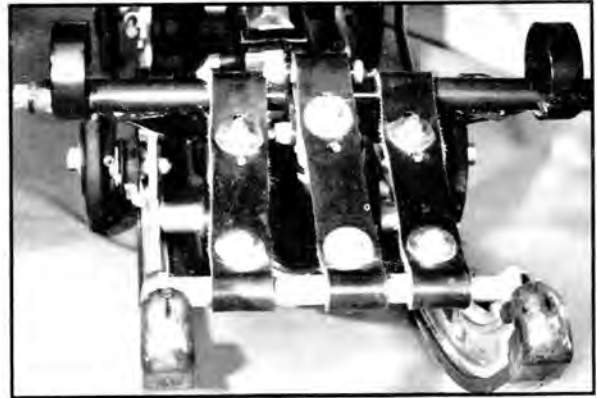
SUSPENSIONS Type XXII Exploded View

1991 - 1992 XCR AS SHOWN HERE



SUSPENSIONS Type XXII Adjustments

This suspension is equipped with Fox Shocks. It has limiter straps on the front and rear torque arms (1991-1992 XCR shown).

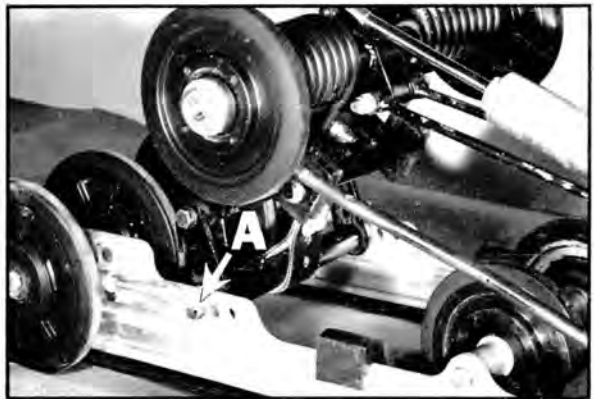


When shortening the front limiter strap you will have more ski pressure and when shortening the rear limiter strap you will have less ski pressure.



There is a three position eccentric block for rear spring tension adjustments. The front torque arm shock and spring is more aggressive when mounted on the back side of the front torque arm.

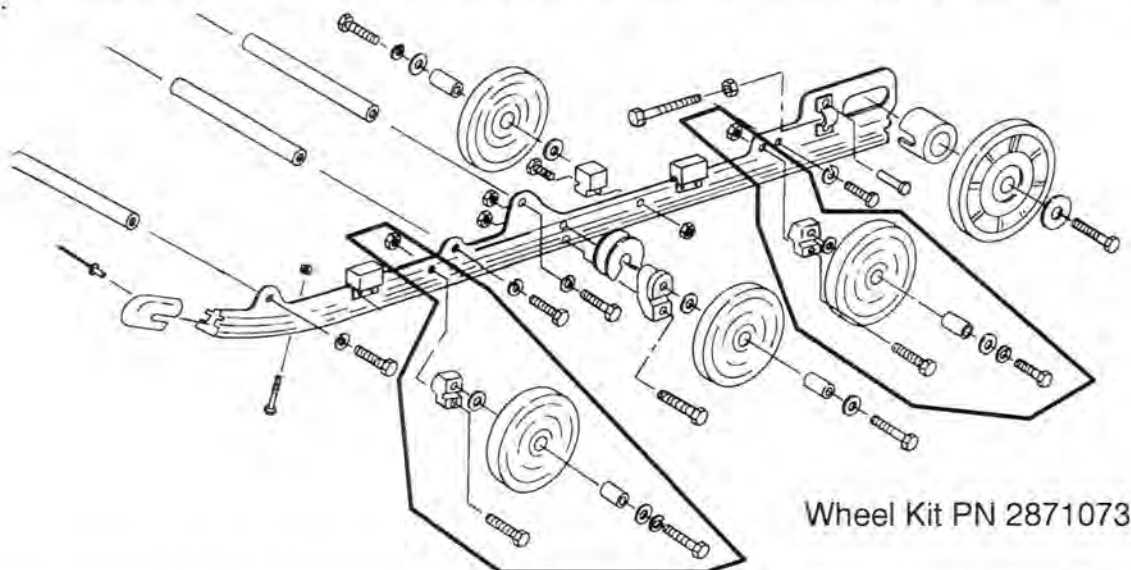
NOTE: On XCR Models it is not recommended that any mount position other than the factory position (A) be used.



SUSPENSIONS

Type ITS - Improved Transfer Suspension

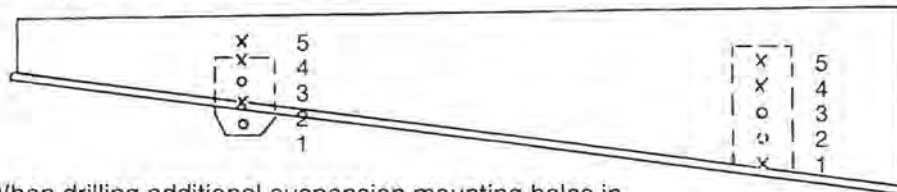
The Improved Transfer Suspension (ITS) is designed to retain less snow, transfer more unit weight to the rear of the suspension for improved performance and hook up more aggressively for a better hole shot. With the ITS there will be more track bearing surface on the ground. The ITS suspension is very responsive to the rider's body shifting forward and aft, increasing or decreasing ski pressure. Additional wheel kits are available (PN 2871073). A complete suspension, front and rear, will require two kits. **NOTE:** These wheels are standard on the Storm model.



The ITS suspension has new design rails, rear springs, rear torque arms and bumper pads. **CAUTION:** The ITS suspension is **not** to be used in previous production models without tunnel modifications. Severe tunnel and/or drive shaft damage will result.

The ITS suspension must be adjusted in unison in the front and rear mounting holes. If you move down a hole in the front, you must do the same in the rear. You can move down one hole in the rear without moving the front, but not the reverse.

Rear Torque Arm Tunnel Positions

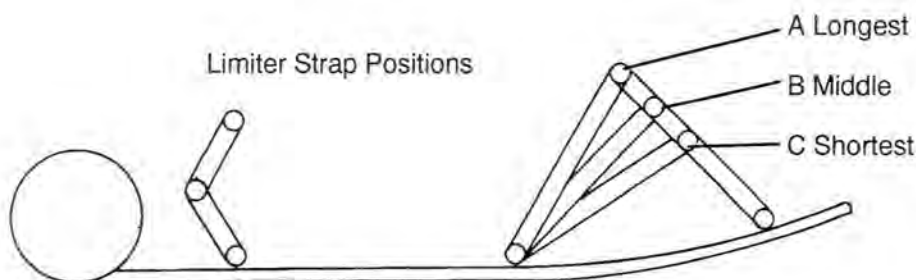


Front Torque Arm Tunnel Positions



NOTE: When drilling additional suspension mounting holes in the tunnel, the unused holes should be secured with a bolt and nut to increase tunnel and pad strength.

Limiter Strap Positions



Adjustments are open to driver preference. Remember that limiter strap adjustments will affect steering.

CAUTION: Using any location or track tension other than recommended will result in severe tunnel and/or drive shaft damage.

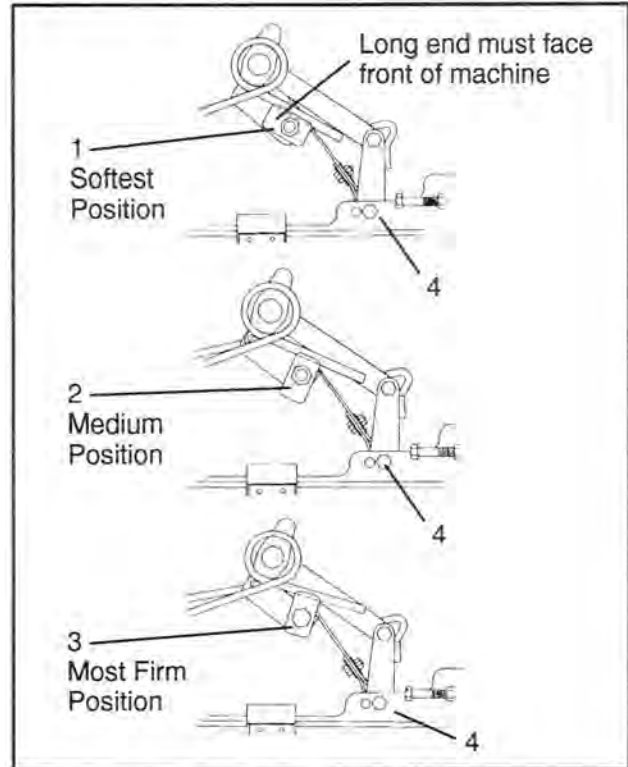
SUSPENSIONS Type ITS Adjustment

Rear spring tension adjustments are made by rotating the eccentric spring block as shown with the engine spark plug tool. The block provides three spring tensions positions. **NOTE:** This adjustment is easier if the long spring leg is lifted over the roller and replaced after the block is properly positioned.

1. Softest position - long end forward
2. Medium position - short end up
3. Most firm position - long end up

CAUTION: The long end of the block must never be positioned facing toward the rear of the machine or the block will break, or the spring may slip off the eccentric and gouge the track.

Rear scissor lower mount (4) should **not** be changed unless the eccentric block is positioned with the long end forward (softest position).



Suspension Adjustment Springs - ITS

Although the snowmobile's suspension has the capability of providing the best ride possible, the following accessory springs are available to better suit individual riding needs. Refer to the specification page in this section to find the spring used as standard equipment and determine from the chart below which spring best suits the individual's needs.

1993

Available Spring	Wire Dia.	Color	
7041276 Left Hand	.406	Tan	Lighter ↑ ↓ Heavier
7041277 Right Hand	.406	Tan	
7041273 Left Hand	.421	Orange	
7041274 Right Hand	.421	Orange	
7041278 Left Hand	.437	Red	
7041279 Right Hand	.437	Red	

1994

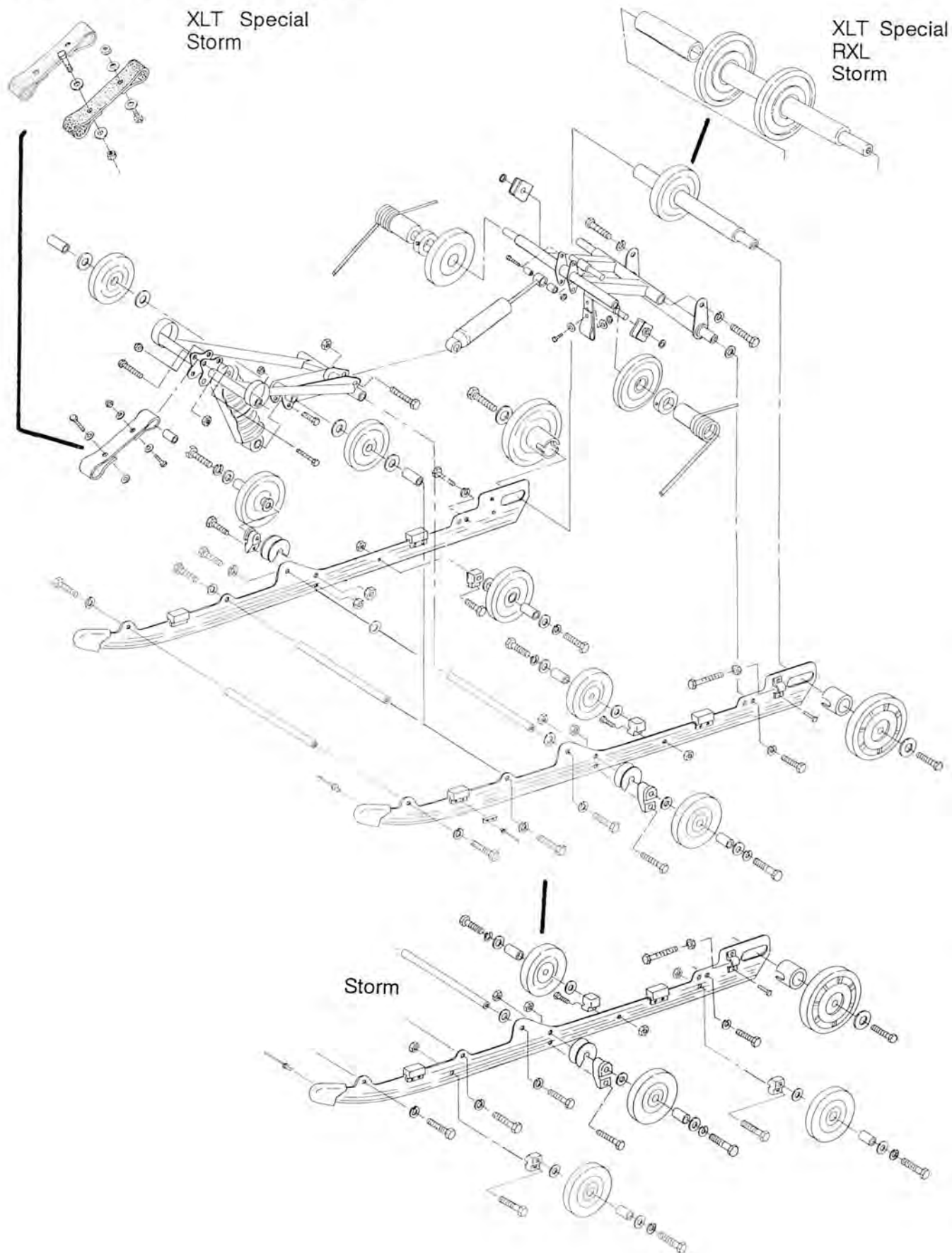
Available Spring	Wire Dia.	Color	
7041335 Left Hand	.406	Gray	Lighter ↑ ↓ Heavier
7041336 Right Hand	.406	Gray	
7041337 Left Hand	.421	Brown	
7041338 Right Hand	.421	Brown	
7041339 Left Hand	.437	Yellow	
7041340 Right Hand	.437	Yellow	

When changing rear suspension spring rate and/or rear ride height, the amount of downward ski pressure will change. If the pressure is too much, the handlebars will be hard to turn. If the pressure is too little, the skis will not dig in and the machine won't turn. The front of the rear suspension provides a number of adjustments so that the right ski pressure can be maintained. The rear suspension front shock top has two mounting positions. The more vertical position provides a stiffer suspension and less ski pressure while the more laid down position provides a smoother ride with more ski pressure. **NOTE:** The lower rear torque arm shock mount cannot be used or the suspension will not pivot.

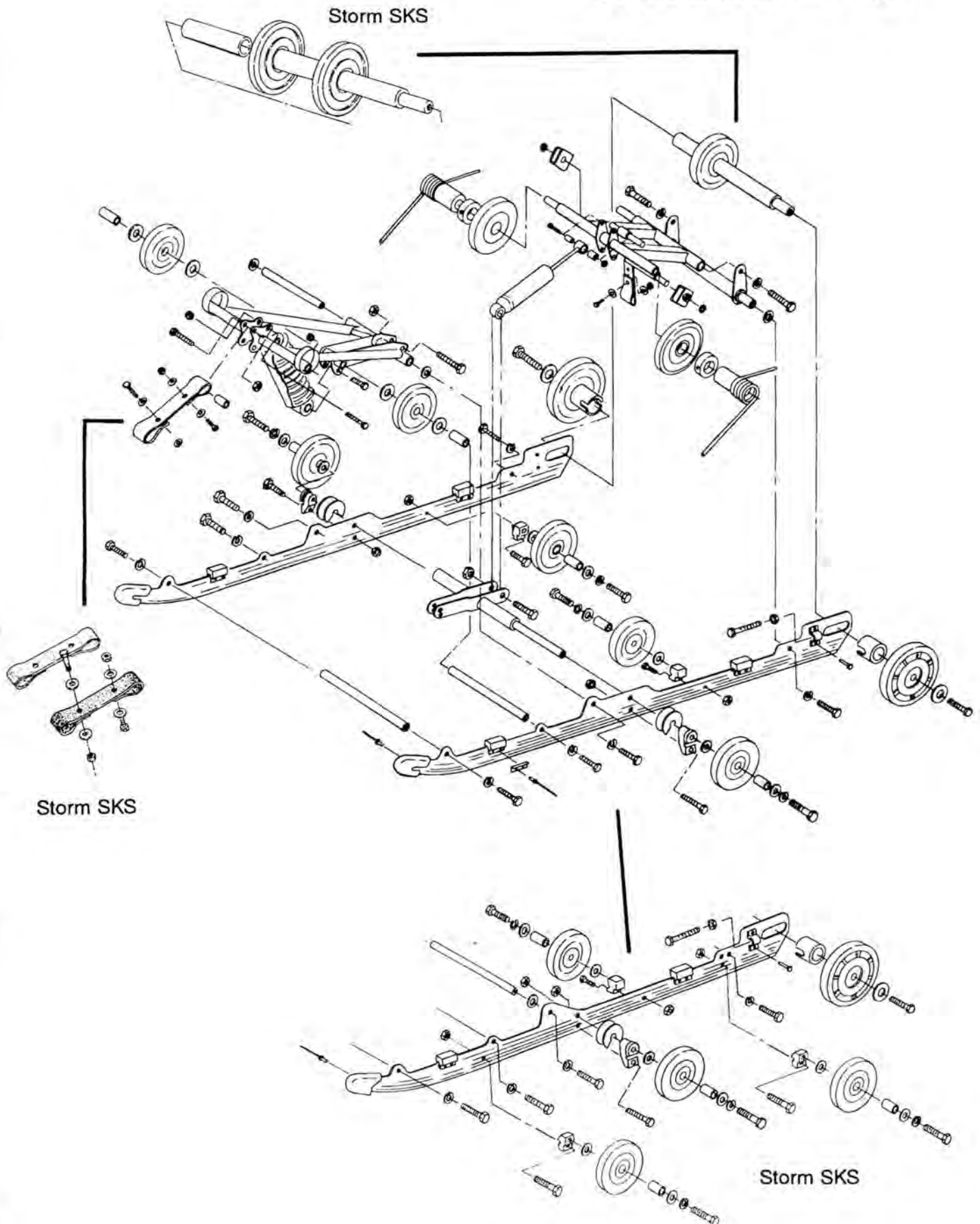
In addition to the shock, there is a front torque arm limiter strap which controls the amount of downward travel in the front of the suspension rail. If the strap is lengthened, the front of the rail will push down more, lifting some pressure off the skis. Shortening the limiter strap will lift the front of the suspension, increasing ski downward pressure.

SUSPENSIONS

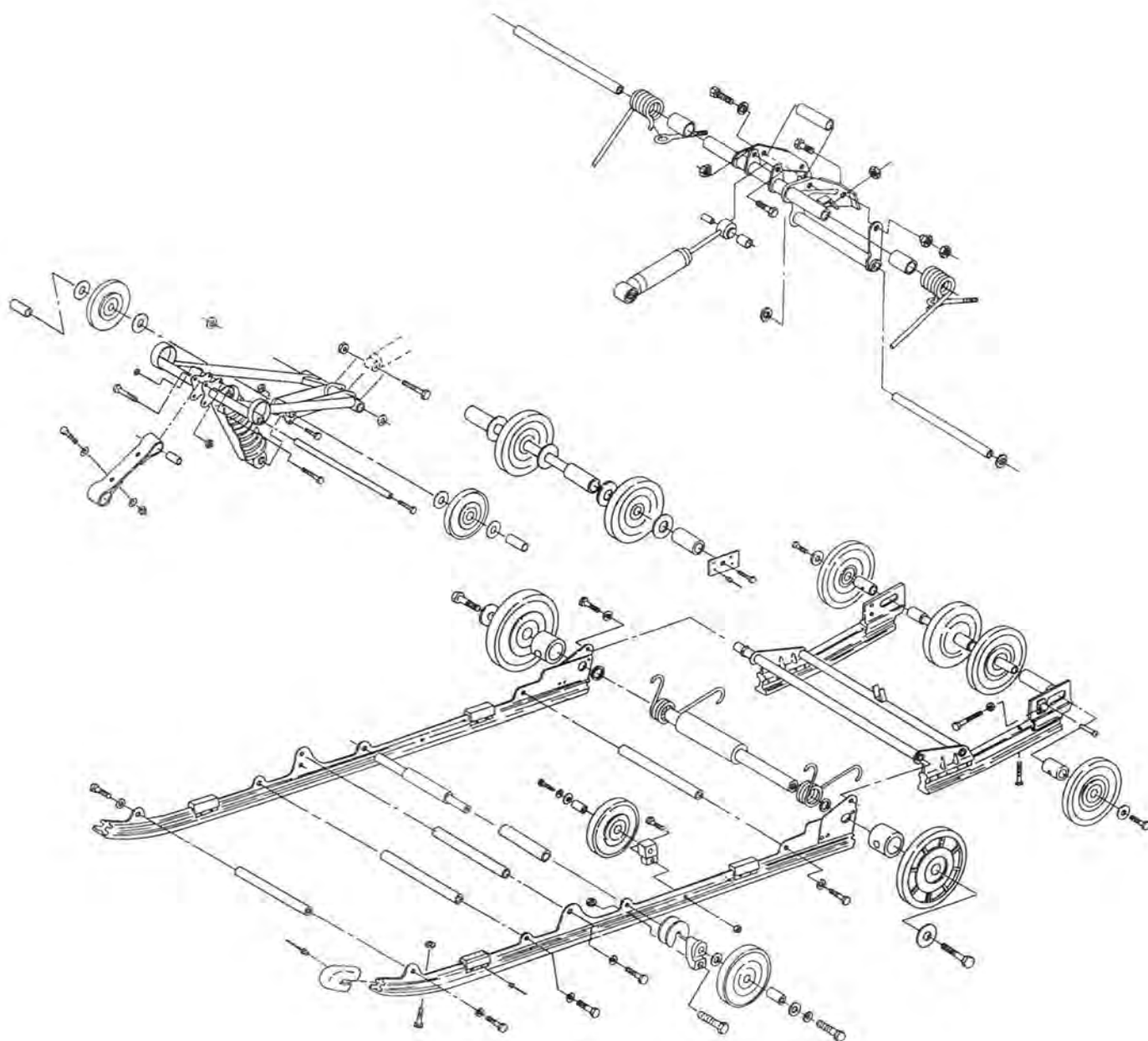
Type ITS Exploded View - Type I



SUSPENSIONS Type ITS Exploded View - Type II



SUSPENSIONS
XXIII - Exploded View

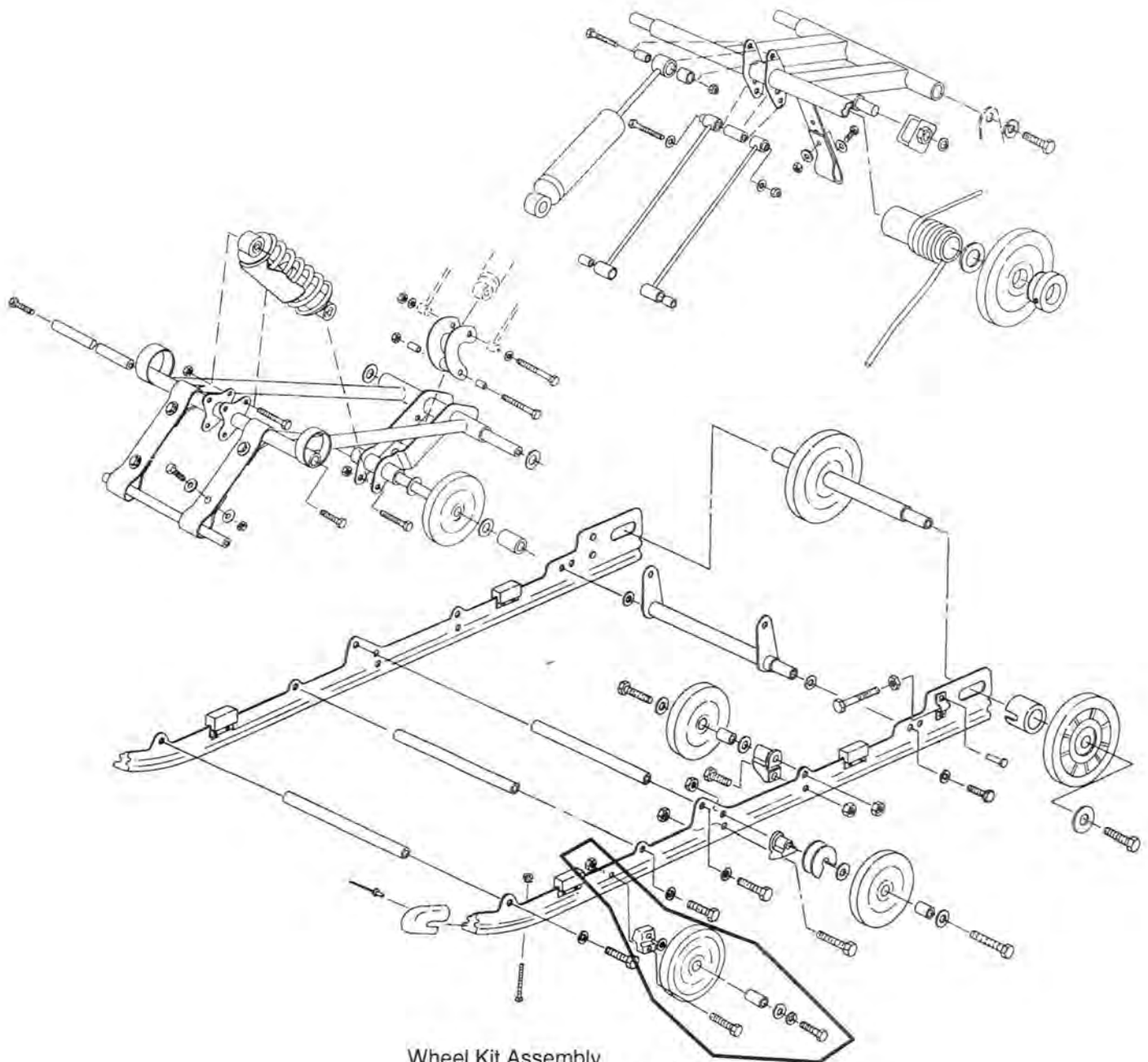


**Reference Type XV Suspension for
Adjustments Page 9.28**

SUSPENSIONS

XC-100 Exploded View

The XC-100 rear suspension combines the best of the ITS and XCR suspensions. It provides improved steering, reduced ski lift for more positive handling in the corners, and improved driveability in deep snow conditions. The front torque arm is longer, with tunnel mounting of the suspension 1" (2.5 cm) further back than the ITS. The XC-100 utilizes rails and rear scissors with shock linkage rods similar to the XCR. The shock linkage rods insure maximum performance of the shock. The XC-100 suspension has the option of changing shock position on the upper rear mount. Repositioning the shock changes its action, having much the same effect as re-valving the shock softer.



Wheel Kit Assembly
PN 2871073 (1 Kit per Suspension)

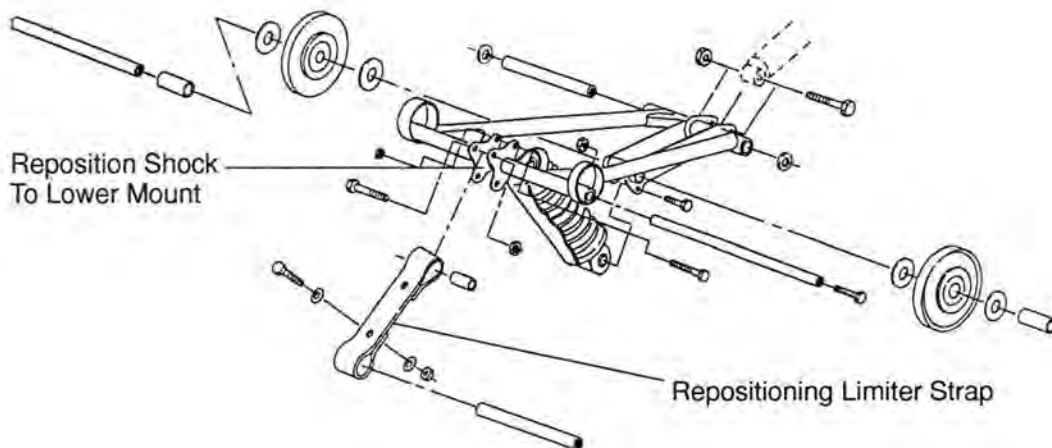
Use of the optional wheel kit is recommended in areas where snow conditions are marginal and snow is hard packed. Occasional snow dipping of the rail is advised for lubrication of hi-fax in hard pack conditions.

SUSPENSIONS

Deep Snow Adjustments

Front Torque Arm

Positioning the limiter strap at its longest length and the center shock in the lower position (see illustration) will improve flotation in deep snow. **NOTE:** Some models will have two limiter straps.



Changing the spring rate of the center spring can improve snowmobility. The lighter the rate of the spring, the more improvement will be noticed. However, there is an adverse effect on ride quality when lighter springs are used. Following are center spring options:

PN 7041127	Light	181 #/in
PN 7041140	↕	181 #/in (longer free length than above)
PN 7041289	Heavy	Variable (stock on Storm model)

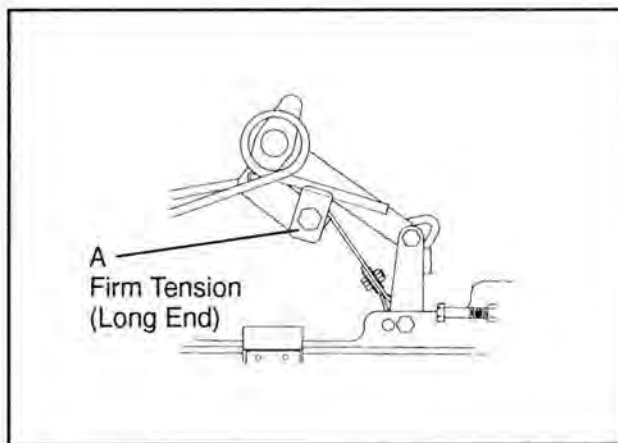
NOTE: Fox shocks can be adjusted without changing the spring.

Rear Torque Arm

Adjusting the rear spring block (A) to its highest position (as illustrated) will increase spring preload, also improving snowmobility.

Rear spring tension adjustments are made by rotating the eccentric spring block (A) as shown with the engine spark plug tool. The block provides three spring tension positions. This adjustment is easier if the long spring leg is lifted over the roller and replaced after the block is properly positioned. Always maintain equal adjustment on both sides.

CAUTION: The long end of the block must never be positioned facing toward the rear of the machine or the block will break.



SUSPENSIONS

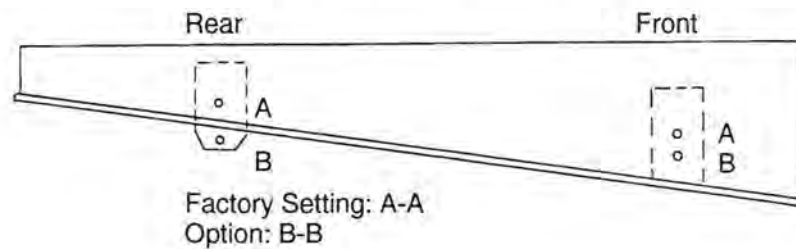
Tunnel Mounting Locations For Deep Snow

There are some suspension adjustments which can be made to help in deep snow, such as lowering front and rear torque arms. (Options are illustrated.) **CAUTION:** Both front and rear torque arms must be moved down or up together to prevent severe tunnel damage.

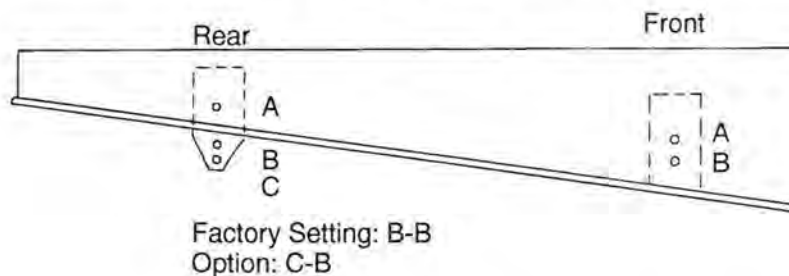
Additional front holes may be transfer drilled into the tunnel from the inside using the suspension pad as a template. **CAUTION:** Do not drill any lower than the middle hole or tunnel damage will occur.

WARNING: *No optional* tunnel mountings are available for the XTRA Suspension. *Any variation from stock positions will damage the tunnel and suspension.*

STANDARD LENGTH TUNNEL



SKS LENGTH TUNNEL



WARNING! Any other combination will result in tunnel damage.

NOTE: When drilling additional suspension mounting holes in the tunnel, the unused holes should be secured with a bolt and nut to increase tunnel and pad strength.

SUSPENSIONS

XC-100 Adjustment

Rear spring tension adjustments are made by rotating the eccentric spring block as shown with the engine spark plug tool. The block provides three spring tensions positions. **NOTE:** This adjustment is easier if the long spring leg is lifted over the roller and replaced after the block is properly positioned.

1. Softest position - long end forward
2. Medium position - short end up
3. Most firm position - long end up

CAUTION: The long end of the block must never be positioned facing toward the rear of the machine or the block will break.

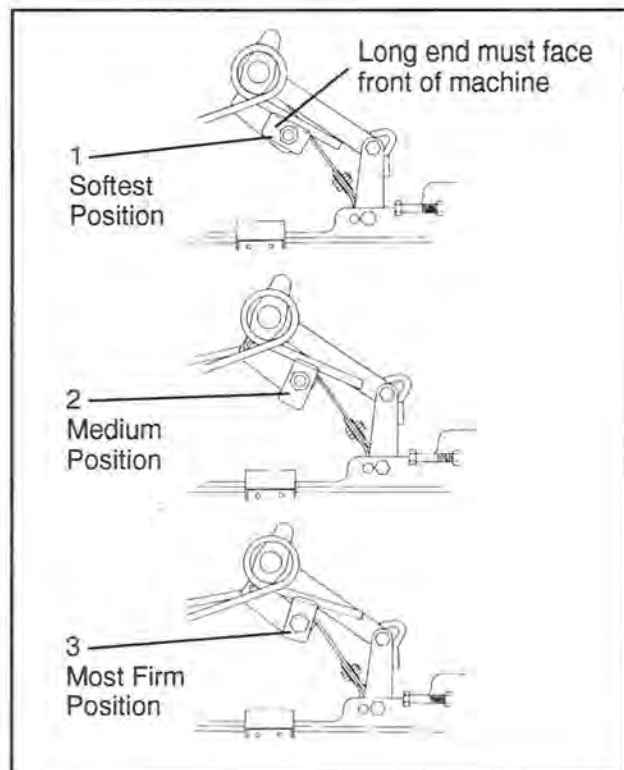
Suspension Adjustment Springs

Although the snowmobile's suspension has the capability of providing the best ride possible, the following accessory springs are available to better suit individual riding needs. Refer to the specification page in this section to find the spring rate.

When changing rear suspension spring rate and/or rear ride height, the amount of downward ski pressure will change. If the pressure is too much, the handlebars will be hard to turn. If the pressure is too little, the skis will not dig in and the machine won't turn.

The front of the rear suspension provides a number of adjustments so that the right ski pressure can be maintained. The rear suspension front shock top has two mounting positions. The more vertical position provides a stiffer suspension and less ski pressure while the more laid down position provides a smoother ride with more ski pressure. **NOTE:** The lower rear torque arm shock mount cannot be used or the suspension will not pivot.

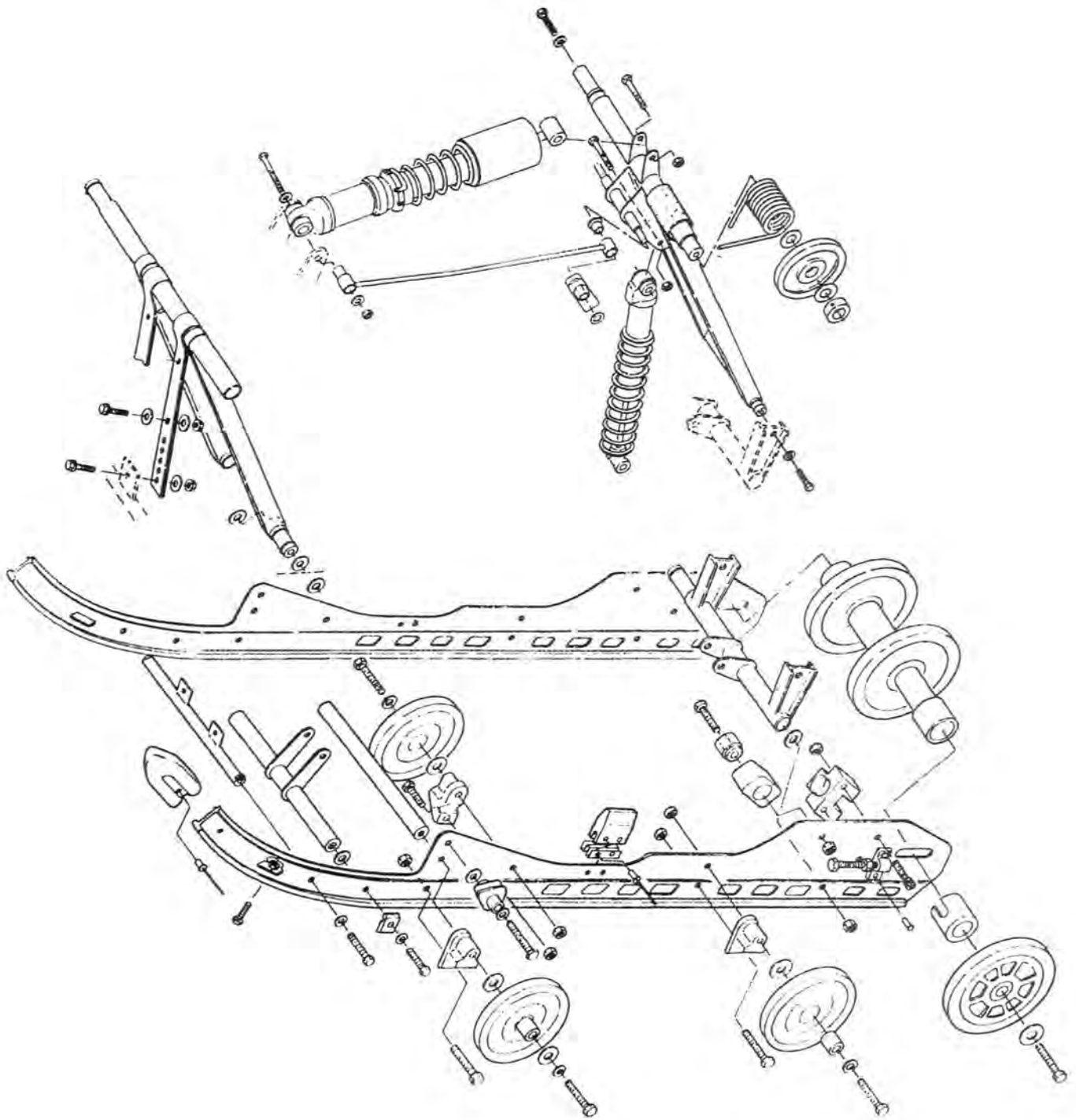
In addition to the shock, there is a front torque arm limiter strap which controls the amount of downward travel in the front of the suspension rail. If the strap is lengthened, the front of the rail will push down more, lifting some pressure off the skis. Shortening the limiter strap will lift the front of the suspension, increasing ski downward pressure.



Available Spring		Wire Dia.	
7041246	Left Hand	.406	Lighter ↑ ↓ Heavier
7041247	Right Hand	.406	
7041248	Left Hand	.421	
7041249	Right Hand	.421	
7041235	Left Hand	.437	
7041236	Right Hand	.437	

SUSPENSIONS

XTRA Suspension Exploded View



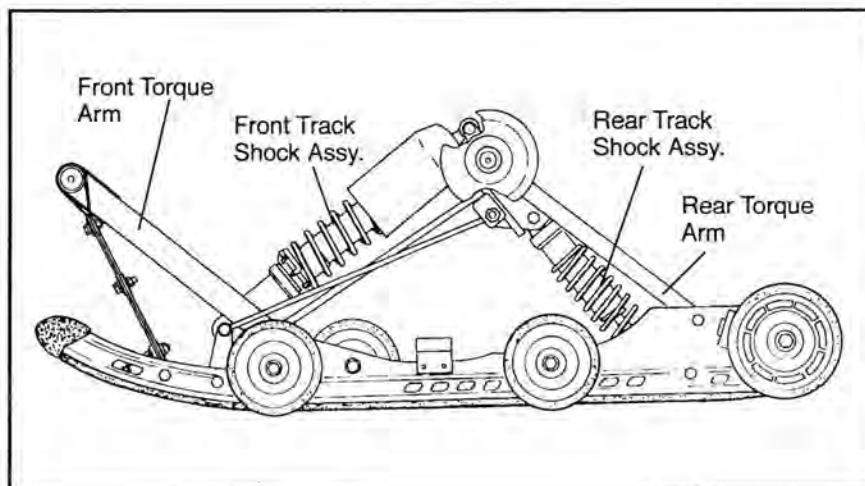
SUSPENSIONS

XTRA Suspension

XTRA Suspension

The XTRA suspension system has been designed to provide the rider with a wide range of adjustment. Polaris also has available many optional springs which will allow the suspension to be customized to any rider weight and riding style. The optional springs and suggested set-up charts are on page 9.49.

The XTRA suspension is also equipped with Fox™ take apart, re-valvable shocks to allow the rider flexibility in complete suspension tuning.



Rear Suspension Adjustment

Rear suspension settings on the XTRA suspension are determined by rider weight, aggressiveness, and terrain conditions.

This suspension is made up of two coil springs, each over a shock absorber, and a pair of torsion springs on the rear torque arm. See suspension illustration above.

The large coil spring on the front track shock has the most effect on ride and handling characteristics. The preload on this spring is adjusted in the same manner as on the front skis. (See chart on page 9.49 for initial setting for rider weight.)

NOTE: Additional wheel kits are available for the XTRA Suspension.

Front Suspension Adjustment

Generally, the softest spring and spring preload give the best ride and also the best traction. The spring preload can be adjusted by grasping the spring and turning in a counterclockwise direction to increase preload.

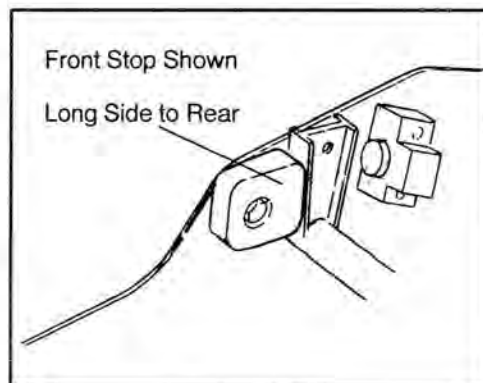
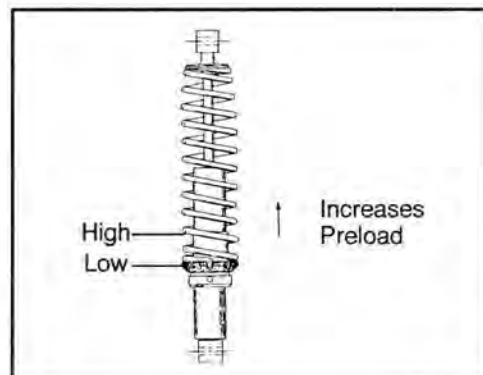
CAUTION: Do not screw the plastic nut off the threaded body or the nut may break. Always maintain full thread engagement.

Rear Torque Arm Stop

The XTRA rear torque arm has both front and rear pivot stops. The front stop is adjustable. The normal position is with the longest side toward the rear. In most conditions this is the preferred position.

For deep snow conditions where more weight transfer is desired, this block should be adjusted with the short side toward the rear.

CAUTION: Be sure both blocks are in the same position or suspension damage may occur.



Suspension Adjustment Springs

Although this snowmobile suspension has the capability of providing the best ride possible, the following accessory rear springs are available to better suit individual riding preference.

Coil Spring Part No.	Spring Wire Dia. x Free Length - Rate
7041396	.283 x 11.88 - 50 #/in. (Stock on XLT SP)
7041405	.283 x 11.88 - 65 #/in. (Stock on RXL)
7041398	.318 x 11.88 - 75 #/in.
7041351	.318 x 11.88 - 75/125 #/in.
7041404	.331 x 11.88 - 90/200 #/in.

Torsion Spring Part No.	Wire Dia./Degrees
7041394 & 7041395	.406/55°
7041406 & 7041407	.421/55°

NOTE: Springs on the front ski shocks and front (center) track shock are interchangeable.

CAUTION: Springs on front skis must be the same rate. Valving in shocks may have to be changed in some cases or loss of control could result. See pages 9.76-9.86, or the suspension wallchart for additional valving information.

Initial Suspension Set Up

The following chart is only a guideline to be used for initial suspension set up. Set up may vary based on desired riding style. * Indicates factory set up.

Rider Weight	Front Track Spring	Torsion Spring	Rear Track Spring
110-160 lbs. (50-73 kg)	75 #/in.	.406 Low Setting	200 Var #/in.
*160-210 lbs. (73-95 kg)	75/125 #/in Low-Med Preload	.406 Low Setting	200 Var #/in.
210-260 lbs. (95-118 kg)	75/125 #/in High Preload	.406 High Setting	200 Var #/in.
260+ lbs. (118+ kg)	90/200 #/in Low Preload	.406 High Setting .421 Low Setting	200 Var #/in.

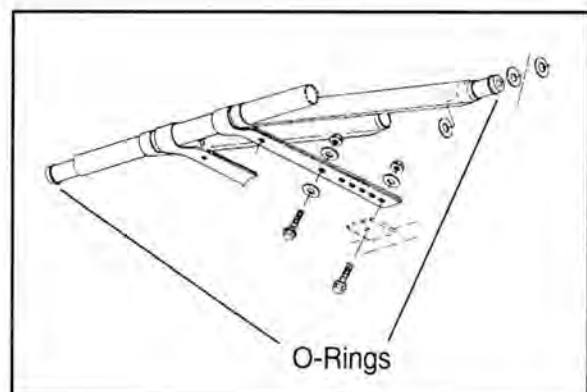
Suspension Shafts

All suspension shafts which are housed in a tubing will have O-Rings installed on either end of the shaft. This will keep moisture out of pivoting areas and help retain lubrication.

Suspension Shaft Maintenance

As suspension shafts are cleaned or replaced, the O-Rings should be inspected and replaced as required.

1. Lubricate shafts and install in pivot tubes without O-Rings. **CAUTION:** If O-Rings are installed first they may be damaged when pushed past the grease fitting. Remember to install O-Rings last.
2. With the shaft in place, extend shaft far enough to allow O-Ring installation on either end.



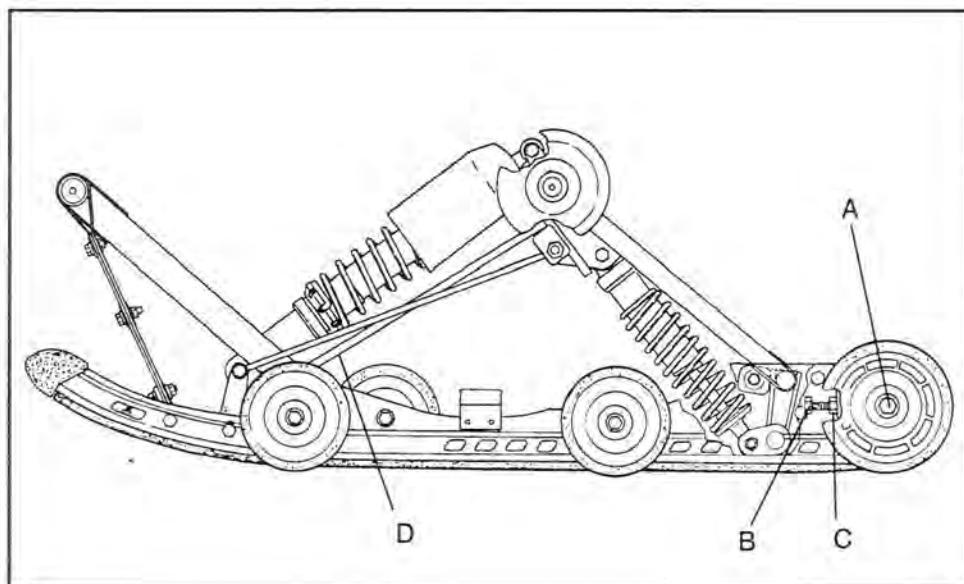
SUSPENSIONS

XTRA Suspension

XTRA Suspension Shock Removal

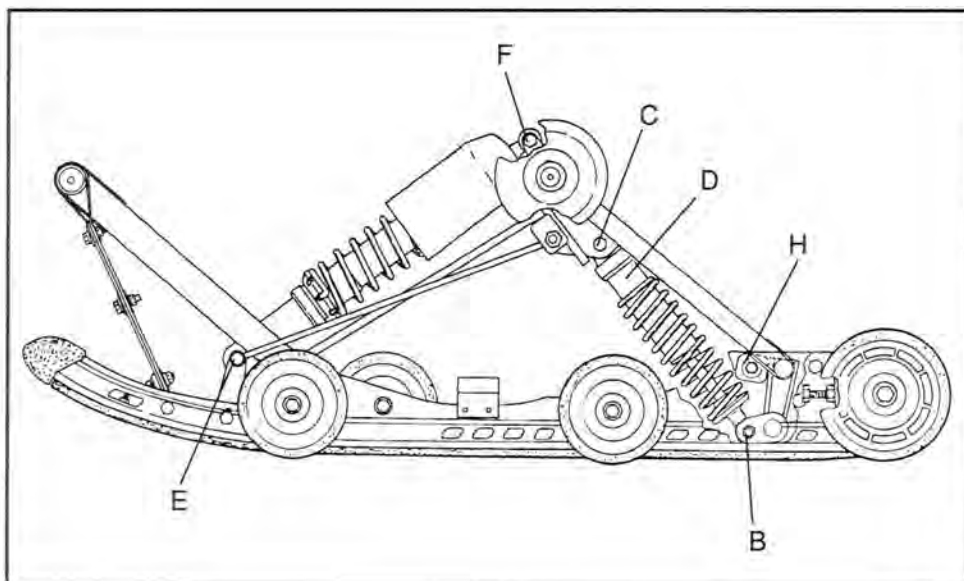
Both front and rear suspension shocks and Hi-Fax can be removed from the rear suspension without removing the suspension from the machine. Steps 1-4 (immediately below) may be used for either front or rear.

1. Turn fuel valve to off position.
2. Lift and securely support rear of machine high enough to assure access to track and suspension.
3. Loosen rear idler bolts (A) and track adjuster bolts (B) with lock nuts (C).
4. Lift rear torsion springs (D) from their lower mounts.



Rear Shock Removal

1. Remove scissor stops from rail in front of rear torque arm. To aid in removal, collapse rear of suspension slightly by applying pressure on rear bumper.
2. Remove retaining bolts, nuts, washers and scissor stop block (H) from both sides.
3. Remove rear lower shock bolt (B).
4. Remove upper shock bolt (C).
5. Remove shock (D).



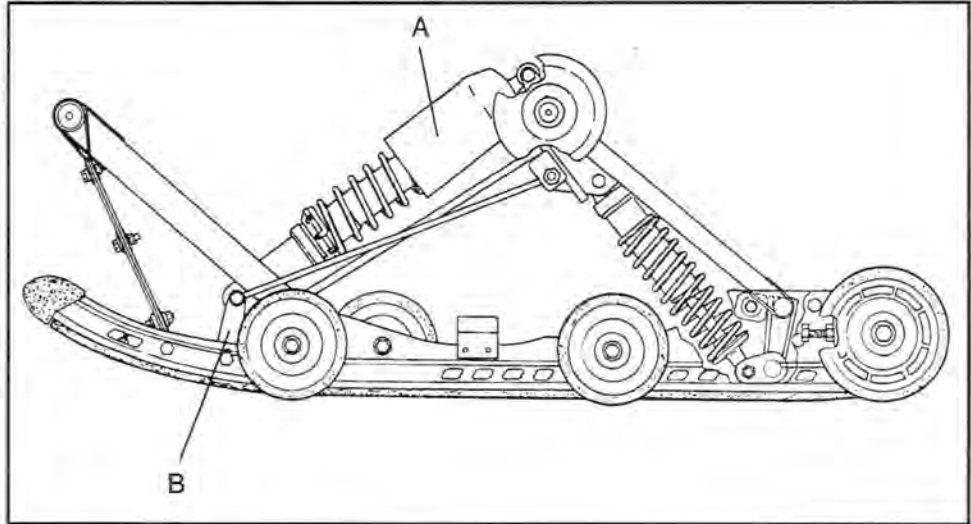
Front Shock Removal

1. Remove lower shock mount bolt (E), noting orientation of parts.
2. Remove upper shock bolt (F).
3. Remove shock (G).

Front Shock Reassembly

To reinstall front shock, the suspension must be fully extended and the track loose.

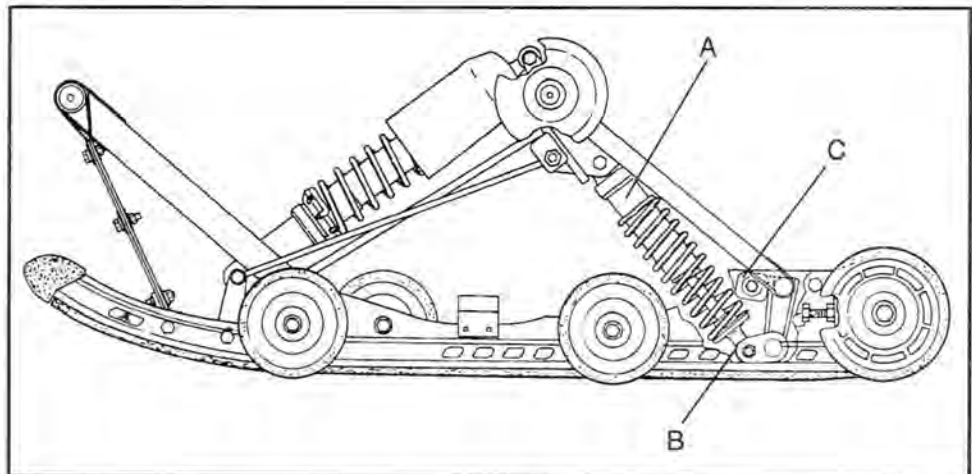
1. Install shock with booted end (A) toward top mount brackets. Using a new FlexLoc™ nut, tighten nut and bolt securely, making sure the shock still pivots and does not bind on spacer. Torque to 15-18 ft. lbs. (2.07-2.48 kg/m).
2. Fully extend shock and align with lower brackets (B). Position shock so valves point downward.
3. Position bolt, washer, bushing, and rod with shock to brackets (B).
4. Install a new FlexLoc™ nut and tighten assembly securely. **CAUTION:** Do not over tighten or shock will not pivot correctly. Torque to 12 ft. lbs. (1.66 kg/m).
5. Secure jam nuts and tighten rear idler bolts.
6. Position torsion springs with top eccentric and lower mount.
7. Readjust and align track. See pages 9.10-9.11.
8. Secure jam nuts and tighten rear idler bolts.



Rear Shock Reassembly

To reinstall rear shock, suspension must be fully extended and track loose.

1. Install shock with body up toward mounts (A), and valve pointing downward.
2. Using a new FlexLoc™ nut, tighten nut and bolt securely, making sure the shock still pivots freely. Torque to 15-18 ft. lbs. (2.07-2.48 kg/m).
3. Position lower shock mount (B) with brackets and insert bolt. Secure using a new FlexLoc™ nut. Torque to 15-18 ft. lbs. (2.07-2.48 kg/m).
4. Reinstall scissor stops (C) and position for rider preference.
5. Install a new FlexLoc™ nut and torque to 22 ft. lbs. (3.03 kg/m).
6. Position torsion springs on top eccentric and lower mount.
7. Readjust and align track. See pages 9.10-9.11.
8. Secure jam nuts and tighten rear idler bolts.



SUSPENSIONS

IFS Shock, Spring Chart

1995 INDEPENDENT FRONT SUSPENSION (IFS) SHOCK

Model Description	Model No.	Shock PN	Shock Description	Shock Maker	Spring Description	Spring PN
StarLite	0953427	7041284	Hyd	Gabriel	105#/in	7041261
Indy Lite	0953433	7041284	Hyd	Gabriel	105#/in	7041261
Indy Lite Deluxe	0953431	7041284	Hyd	Gabriel	105#/in	7041261
Indy Lite GT	0953133	7041284	Hyd	Gabriel	105#/in	7041261
Sport	0950443	7041284	Hyd	Gabriel	105#/in	7041261
Super Sport	0950743	7041388	G. B. Cam	Gabriel	105#/in	7041261
Sport Touring	0950243	7041284	Hyd	Gabriel	105#/in	7041261
Trail	0952761	7041288	G.B. Cam	Gabriel	105#/in	7041261
Trail Deluxe	0952262	7041288	G.B. Cam	Gabriel	120#/in	7041344
440	0952760	7041288	G.B. Cam	Gabriel	105#/in	7041261
440 SKS	0952560	7041282	G.B. Cam	Gabriel	120#/in	7041334
440 XCR	0951660	7041346	Gas IFP	Fox	120#/in	7041252
600 XCR	0951676	7041346	Gas IFP	Fox	120#/in	7041252
Classic	0952865	7041288	G.B. Cam	Gabriel	120#/in	7041334
500 Carb	0952764	7041288	G.B. Cam	Gabriel	120#/in	7041334
WideTrak GT	0952061	7041284	Hyd	Gabriel	105#/in	7041261
WideTrak LX	0952064	7041284	Hyd	Gabriel	105#/in	7041261
500 EFI	0952774	7041288	G.B./Cam	Gabriel	120#/in	7041261
500 EFI SKS	0952574	7041282	G.B. Cam	Gabriel	120#/in	7041334
500 EFI SKS PT	0952974	7041282	G.B. Cam	Gabriel	120#/in	7041334
XLT	0950756	7041285	Gas-Bag	Gabriel	105#/in	7041261
XLT SKS	0950556	7041285	Gas-Bag	Gabriel	105#/in	7041261
XLT SKS PT	0950956	7041285	Gas Bag	Gabriel	105#/in	7041261
XLT SP	0956756	7041385	Gas IFP	Fox	50#/in	7041396
XLT Touring	0952857	7041288	G.B. Cam	Gabriel	120#/in	7041334
RXL	0956768	7041385	Gas IFP	Fox	75#/in	7041398
RXL Touring	0950869	7041282	G.B. Cam	Gabriel	120#/in	7041261
Storm	0950782	7041390	G.B. Cam	Gabriel-Select	160#/in	7041287
Storm SKS	0950582	7041393	G.B. Cam	Gabriel-Select	160#/in	7041287
Storm SKS PT	0950982	7041393	G. B. Cam	Gabriel-Select	160#/in	7041287

KEY: Hyd - Hydraulic Standard Shock Gas IFP - Gas Charged Internal Floating Piston, Fox Shock
Select - Gabriel Select Adjustable Shock

NOTE: All pounds referred to in the spring description column are $\pm 10\%$

OPTIONAL SUSPENSION SPRINGS

Although the snowmobile's suspension has the capability of providing the best ride possible, the following accessory springs are available to better suit individual riding needs.

XC-100 and XC-101 Suspensions:

Spring	Wire Dia.	
7041246	0.406	Lighter   Heavier
7041247	0.406	
7041248	0.421	
7041249	0.421	
7041235	0.437	
7041236	0.437	

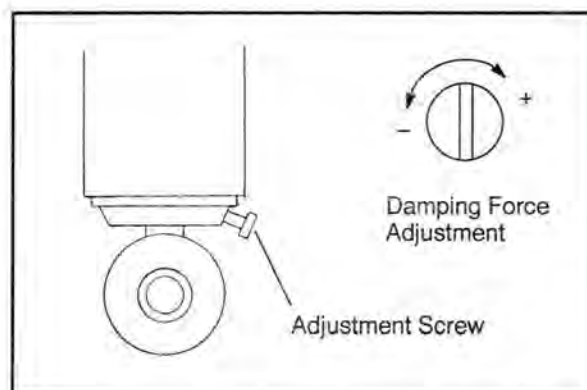
Lite Type Suspensions:

Spring	Wire Dia.	
7041318	0.375	Lighter   Heavier
7041319	0.375	
7041119	0.393	
7041120	0.393	
7041320	0.406	
7041321	0.406	

Compression Adjustable Shocks

Indy Select Shocks are standard equipment on all 1995 Storm models. AFX shocks are standard on the XLT Touring model. Both shocks allow the dealer or consumer the ability to adjust the compression rate. All that is required to adjust compression is a simple turn with a regular screwdriver. Turning the screw clockwise increases compression. Turning the screw counterclockwise decreases compression. Maximum adjustment is 2 1/2 turns.

NOTE: Whenever shocks are replaced or reinstalled for any reason, the adjustment screw should be located toward the forward right side of the suspension. Access to the adjuster is not possible if reversed. Fox™ Shocks should be installed with the charge fitting up.



SUSPENSIONS

Center Shock, Spring Chart

1994 REAR SUSPENSION (CENTER)

Model Description	Model PN	Shock PN	Shock Description	Shock Maker	Spring Description	Spring PN
StarLite	0943427	7041142	Hyd	Gabriel	181#/in	7041127
StarLite GT	0943127	7041142	Hyd	Gabriel	181#/in	7041127
Indy Lite	0943433	7041142	Hyd	Gabriel	181#/in	7041127
Indy Lite Deluxe	0943431	7041142	Hyd	Gabriel	181#/in	7041127
Indy Lite GT	0943133	7041142	Hyd	Gabriel	181#/in	7041127
Sport	0940443	7041142	Hyd	Gabriel	181#/in	7041127
Sport SKS (Rental)	0940243	7041281	Hyd	Gabriel	181#/in	7041140
Super Sport	0940743	7041281	Hyd	Gabriel	181#/in	7041140
Trail	0940761	7041281	Hyd	Gabriel	181#/in	7041140
Trail Deluxe	0940262	7041281	Hyd	Gabriel	181#/in	7041140
440 Liquid Indy	0940760	7041281	Hyd	Gabriel	181#/in	7041140
440 Liquid Indy SKS	0940560	7041281	Hyd	Gabriel	181#/in	7041140
440 XCR	0941760	7041294	Gas IFP	Fox	202#/in	7041253
440 XCR SP	0941660	7041344	Gas IFP	Fox	181#/in	7041253
600 XCR	0941667	7041344	Gas IFP	Fox	181#/in	7041253
Classic	0942865	7041281	Hyd	Gabriel	181#/in	7041140
Classic Touring	0942875	7041281	Hyd	Gabriel	181#/in	7041140
WideTrak GT	0942061	7041281	Hyd	Gabriel	181#/in	7041140
WideTrak LX	0942064	7041281	Hyd	Gabriel	181#/in	7041140
500 EFI	0942774	7041281	Hyd	Gabriel	181#/in	7041140
500 EFI SKS	0942574	7041281	Hyd	Gabriel	181#/in	7041140
XLT	0940767	7041281	Hyd	Gabriel	202#/in	7041289
XLT SKS	0940567	7041281	Hyd	Gabriel	181#/in	7041140
XLT SP	0940667	7041294	Gas IFP	Fox	202#/in	7041253
XLT Special Xtra	0946767	7041386	Gas IFP	Fox	75/125#/in	7041351
RXL	0940768	7041281	Hyd	Gabriel	181#/in	7041140
RXL SKS	0940869	7041294	Gas IFP	Fox	202#/in	7041253
Storm	0940782	7041281	Hyd	Gabriel	202#/in	7041289
Storm SKS	0940582	7041281	Hyd	Gabriel	202#/in	7041289

KEY: Hyd - Hydraulic Standard Shock
Gas IFP - Gas Charged Internal Floating Piston, Fox Shock

NOTE: All pounds referred to in the spring description column are $\pm 10\%$

SUSPENSIONS Center Shock, Spring Chart

1995 REAR SUSPENSION (CENTER)

Model	Model PN	Shock PN	Shock Description	Shock Maker	Spring Description	Spring PN
StarLite	0953427	7041142	Hyd	Gabriel	181#/in	7041127
Indy Lite	0953433	7041142	Hyd	Gabriel	181#/in	7041127
Indy Lite Deluxe	0953431	7041142	Hyd	Gabriel	181#/in	7041127
Indy Lite GT	0953133	7041142	Hyd	Gabriel	181#/in	7041127
Sport	0950443	7041142	Hyd	Gabriel	181#/in	7041127
Sport Touring	0950243	7041142	Hyd	Gabriel	181#/in	7041140
Super Sport	0950743	7041281	Hyd	Gabriel	181#/in	7041140
Trail	0952761	7041281	Hyd	Gabriel	181#/in	7041140
Trail Deluxe	0952262	7041281	Hyd	Gabriel	181#/in	7041140
440	0952760	7041281	Hyd	Gabriel	181#/in	7041140
440 SKS	0952560	7041281	Hyd	Gabriel	181#/in	7041140
440 XCR	0951660	7041344	Gas IFP	Fox	202#/in Var	7041253
600 XCR	0951676	7041344	Gas IFP	Fox	202#/in Var	7041253
Classic	0952865	7041281	Hyd	Gabriel	181#/in	7041140
500	0952764	7041281	Hyd	Gabriel	181#/in	7041140
WideTrak GT	0952061	7041281	Hyd	Gabriel	181#/in	7041140
WideTrak LX	0952064	7041281	Hyd	Gabriel	181#/in	7041140
500 EFI	0952774	7041281	Hyd	Gabriel	181#/in	7041140
500 EFI SKS	0952574	7041281	Hyd	Gabriel	181#/in	7041140
500 EFI SKS PT	0952974	7041281	Hyd	Gabriel	181#/in	7041140
XLT	0950756	7041281	Hyd	Gabriel	181#/in	7041140
XLT SKS	0950556	7041281	Hyd	Gabriel	181#/in	7041140
XLT SKS PT	0950956	7041281	Hyd	Gabriel	181#/in	7041140
XLT SP	0956756	7041386	Gas IFP	Fox	75/125#/in	7041351
XLT Touring	0952857	7041281	Hyd	Gabriel	181#/in	7041140
RXL	0956768	7041386	Gas IFP	Fox	75/125#/in	7041351
RXL Touring	0950869	7041281	Hyd	Gabriel	181#/in	7041140
Storm	0950782	7041281	Hyd	Gabriel	202#/in Var	7041289
Storm SKS	0950582	7041281	Hyd	Gabriel	202#/in Var	7041289
Storm SKS PT	0950982	7041281	Hyd	Gabriel	181#/in	7041140

KEY: Hyd - Hydraulic Standard Shock
 Gas IFP - Gas Charged Internal Floating Piston, Fox Shock
 202#/in Var - 200# variable rate

NOTE: All pounds referred to in the spring description column are $\pm 10\%$

CAUTION: Fox™ Shock orientation should be with the charge fitting in the "up" position. If mounted incorrectly, the fitting will catch the track drive lugs.

SUSPENSIONS

1994 REAR SUSPENSION (REAR SHOCK)

Model Description	Model PN	Shock PN	Shock Description	Shock Maker	Spring Description	Spring PN
StarLite	0943427	7041154	Hyd	Gabriel	0.393	7041120
StarLite GT	0943127	7041154	Hyd	Gabriel	0.393	7041120
Indy Lite	0943433	7041154	Hyd	Gabriel	0.393	7041120
Indy Lite Deluxe	0943431	7041154	Hyd	Gabriel	0.393	7041120
Indy Lite GT	0943133	7041154	Hyd	Gabriel	0.393	7041120
Sport	0940443	7041154	Hyd	Gabriel	0.393	7041120
Sport SKS (Rental)	0940243	7041331	Gas-Bag	Gabriel	0.421	7041337
Super Sport	0940743	7041237	Gas-Bag	Gabriel	0.421	7041249
Trail	0940761	7041331	Gas-Bag	Gabriel	0.406	7041335
Trail Deluxe	0940262	7041331	Gas-Bag	Gabriel	0.421	7041337
440 Liquid Indy	0940760	7041331	Gas-Bag	Gabriel	0.421	7041337
440 Liquid Indy SKS	0940560	7041331	Gas-Bag	Gabriel	0.421	7041337
440 XCR	0941760	7041347	Gas IFP	Fox	0.421	7041249
440 XCR SP	0941660	7041345	Gas IFP	Fox	0.421	7041248 & 249
600 XCR	0941667	7041345	Gas IFP	Fox	0.421	7041248 & 249
Classic	0942865	7041331	Gas-Bag	Gabriel	0.421	7041337
Classic Touring	0942875	7041331	Gas-Bag	Gabriel	0.421	7041337
WideTrak GT	0942061	7041290	Hyd	Gabriel	0.468	7041240
WideTrak LX	0942064	7041232	Hyd	Gabriel	0.468	7041240
500 EFI	0942774	7041331	Gas-Bag	Gabriel	0.421	7041337
500 EFI SKS	0942574	7041331	Gas-Bag	Gabriel	0.421	7041337
XLT	0940767	7041331	Gas-Bag	Gabriel	0.421	7041249
XLT SKS	0940567	7041331	Gas-Bag	Gabriel	0.421	7041337
XLT SP	0940667	7041347	Gas IFP	Fox	0.421	7041249
XLT Special Xtra	0946767	7041387	Gas IFP	Fox	0.406	7041394 & 395
RXL	0940768	7041331	Gas-Bag	Gabriel	0.421	7041337
RXL SKS	0940869	7041293	Gas IFP	Fox	0.421	7041337
Storm	0940782	7041343	Gas-Bag	Gabriel	0.421	7041337
Storm SKS	0940582	7041290	Gas-Bag	Gabriel	0.421	7041337

KEY: Hyd - Hydraulic Standard Shock
 Gas IFP - Gas Charged Internal Floating Piston, Fox Shock
 Gas-Bag - Gas Filled Bag

NOTE: All pounds referred to in the spring description column are $\pm 10\%$

Optional Suspension Springs

Although the snowmobile's suspension has the capability of providing the best ride possible, the following accessory springs are available to better suit individual riding needs.

Dial Adjust and XC-100 Suspensions:

Spring Wire Dia.

7041246 0.406

7041247 0.406

7041248 0.421

7041249 0.421

7041235 0.437

7041236 0.437

ITS Suspensions:

Spring Wire Dia.

7041276 0.406

7041277 0.406

7041273 0.421

7041274 0.421

7041278 0.437

7041279 0.437

Lighter



Heavier



Lighter



Heavier

ITS Suspensions With More Preload:

Spring Wire Dia.

7041335 0.406

7041336 0.406

7041337 0.421

7041338 0.421

7041339 0.437

7041340 0.437

Sport Type Suspensions:

Spring Wire Dia.

7041318 0.375

7041319 0.375

7041119 0.393

7041120 0.393

7041320 0.406

7041321 0.406

Lighter



Heavier



Lighter



Heavier

SUSPENSIONS

Rear Shock, Spring Chart

1995 REAR SUSPENSION (REAR SHOCK)

Model Description	Model PN	Shock PN	Shock Description	Shock Maker	Spring Description	Spring PN
StarLite	0953427	7041154	Hyd	Gabriel	0.393	7041119 & 120
Indy Lite	0953433	7041154	Hyd	Gabriel	0.393	7041119 & 120
Indy Lite Deluxe	0953431	7041154	Hyd	Gabriel	0.393	7041119 & 120
Indy Lite GT	0953133	7041154	Hyd	Gabriel	0.393	7041119 & 120
Sport	0950443	7041154	Hyd	Gabriel	0.393	7041119 & 120
Sport Touring	0950243	7041331	Gas-Bag	Gabriel	0.421	7041248 & 249
Super Sport	0950743	7041237	Gas-Bag	Gabriel	0.421	7041248 & 249
Trail	0952761	7041237	Gas-Bag	Gabriel	0.406	7041246 & 247
Trail Deluxe	0952262	7041331	Gas-Bag	Gabriel	0.421	7041248 & 249
440 Liquid Indy	0952760	7041237	Gas-Bag	Gabriel	0.406	7041246 & 247
440 Liquid Indy SKS	0952560	7041331	Gas-Bag	Gabriel	0.421	7041248 & 249
440 XCR	0951660	7041345	Gas IFP	Fox	0.421	7041248 & 249
600 XCR	0951676	7041345	Gas IFP	Fox	0.421	7041248 & 249
Classic	0952865	7041237	Gas-Bag	Gabriel	0.421	7041248 & 249
500	0952764	7041237	Gas-Bag	Gabriel	0.421	7041248 & 249
WideTrak GT	0952061	7041290	Hyd	Gabriel	0.468	7041239 & 240
WideTrak LX	0952064	7041280	Hyd	Gabriel	0.468	7041239 & 240
500 EFI	0952774	7041237	Gas-Bag	Gabriel	0.421	7041248 & 249
500 EFI SKS	0952574	7041331	Gas-Bag	Gabriel	0.421	7041248 & 249
500 EFI SKS PT	0952974	7041237	Gas-Bag	Gabriel	0.421	7041248 & 249
XLT	0950756	7041331	Gas-Bag	Gabriel	0.421	7041248 & 249
XLT SKS	0950556	7041331	Gas-Bag	Gabriel	0.421	7041248 & 249
XLT SKS PT	0950956	7041331	Gas-Bag	Gabriel	0.421	7041248 & 249
XLT SP	0956756	7041387	Gas IFP	Fox	0.406	7041394 & 395
XLT Touring	0952857	7041392	Gas-Bag AFX	Gabriel	0.421	7041248 & 249
RXL	0956768	7041387	Gas IFP	Fox	0.406	7041394 & 395
RXL Touring	0950869	7041331	Gas-Bag	Gabriel	0.421	7041248 & 249
Storm	0950782	7041391	Gas-Bag Select	Gabriel	0.421	7041248 & 249
Storm SKS	0950582	7041391	Gas-Bag Select	Gabriel	0.421	7041248 & 249
Storm SKS PT	0950243	7041391	Gas-Bag Select	Gabriel	0.421	7041248 & 249

KEY: Hyd - Hydraulic Standard Shock
 Gas IFP - Gas Charged Internal Floating Piston, Fox Shock
 Gas-Bag - Gas Filled Bag
 Select - Gabriel Select Adjustable Shock
 AFX - Gabriel Adjustable Shock

NOTE: All pounds referred to in the spring description column are $\pm 10\%$

SUSPENSIONS

Troubleshooting

Situation	Probable Cause	Remedy
1. Very stiff ride.	1. Spring rate too aggressive. 2. Front torque arm shock in most upright position. 3. Bent or corroded shafts. 4. Suspension shocks froze up.	1. Use a lighter spring setting or step down in wire diameter. 2. Move shock top mounting to forward front torque arm bracket. 3. Remove and inspect shafts. Replace bad shafts, clean and lubricate. 4. Replace if damage and/or remove ice buildup.
2. Top speed down and snowmobile will not free wheel.	1. Incorrect track tension and alignment. 2. Worn hi-fax.	1. Refer to MRM for proper track alignment and tension. 2. Replace if wavy or grooved.
3. Heavy steering.	1. Front torque arm limiter strap too short. 2. Rear suspension springs rate adjusted too high. 3. Incorrect suspension to tunnel mounting locations.	1. Lengthen front limiter strap. 2. Set rear springs at a softer rate. 3. Check MRM chart for proper mounting locations.
4. Will not turn. Too little ski pressure.	1. Worn ski skags. 2. Limiter strap adjusted too long. 3. Rear spring set too soft. 4. Suspension mounted in wrong tunnel location.	1. Inspect and replace if bad. 2. Shorten limiter strap to put more weight on the skis. 3. Set springs at a higher rate. 4. Check MRM chart for proper mounting locations.
5. Track ratcheting.	1. Track too loose. 2. Drive sprockets not timed, incorrectly positioned. 3. Frozen shock (not allowing suspension to travel). 4. Drive lugs worn off (if ratcheting occurs severely, drive lugs of track or sprockets may be ruined). 5. The suspension mounting is too high in the front vs. too low in the rear. 6. Too many studs (track will be too aggressive and spin drive sprockets). 7. 141" track ratcheting in deep snow.	1. Tighten track. See page 9.10. 2. Remove drive shaft assembly and correct sprocket alignment. 3. Bring into heated area, thaw and assure proper working condition. 4. Replace worn parts. 5. Correctly position as recommended only. 6. Remove studs, replace track and/or sprockets if necessary. 7. Tighten front torque arm spring tension.
6. Shock shafts bent, leaky seals, iced up shocks.	1. Shock pivot tubes overtighten.	1. Torque to proper specs. Assure that shocks pivot freely.

Fox™ Shocks (Welded Dome Only) - Maintenance

Changing oil on Fox™ Shocks is recommended annually and must be done when doing your season-end storage preparation. This oil change must be done to avoid any chance of corrosion which could be caused by moisture contamination.

When doing maintenance on Fox™ Shocks, use the Gas Shock Recharging Kit PN 2200421. It consists of the necessary valves, pressure gauge, and fittings to deflate and pressurize the shocks.

WARNING: Extreme caution should be observed while handling and working with high pressure service equipment.

Care should be observed while handling the inflater needle and the pressure gauges. Maintain your equipment and keep it in good condition. If injury should occur, consult your physician immediately.

Extreme cleanliness is of utmost importance during all disassembly and reassembly operations to prevent any dirt or foreign particles from getting in the shocks.

1. Position shock in a vise with the pressure valve at its highest position.
2. Insert inflater needle to de-pressurize. The valve must be at the highest position to avoid oil spraying out.



3. After de-pressurization, unscrew the top and pull shock rod and piston *straight out* to avoid seal or valve damage. Be prepared to catch the piston ring. It may fall off as you do this.
4. Dump oil out and rinse cylinder with a mechanic solvent or equivalent and blow dry with compressed air.



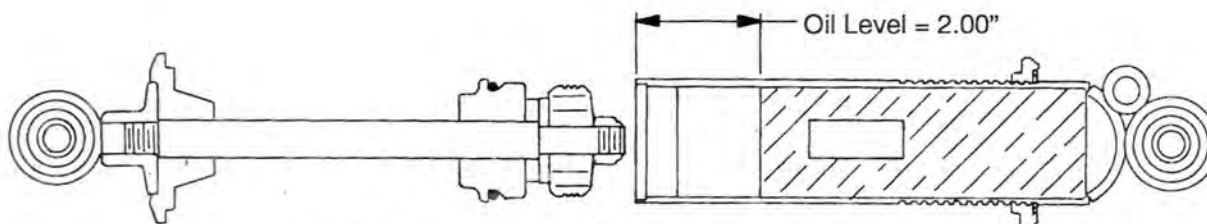
SUSPENSIONS

Fox Shocks (Welded Dome Only) – Maintenance

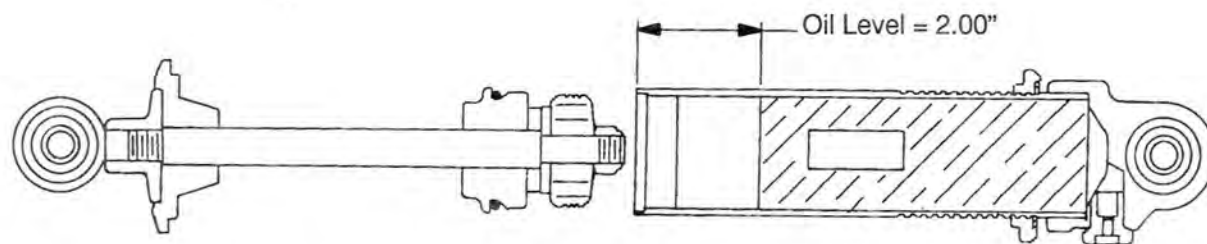
5. Hold the reservoir so it is at about a 15° to 30° angle from vertical. Pour oil (PN 2870995) in slowly against side of reservoir to avoid mixing air into the oil.



6. The oil should be 2" (5 cm) from top of cylinder. Measure with cylinder in straight up position as shown. Position cylinder at 15° to 30°. Insert piston, keeping the three closely spaced valve holes to the high side to allow all air to escape. Gently wiggle piston and rod to help disperse air. Keep sliding piston in until it's submerged in oil.



Welded Dome Front Shock (Emulsion) PN
7041266
Early Version



Threaded Body Cap Front Shock (Emulsion) PN 7041266

SUSPENSIONS

Fox Shocks (Welded Dome Only) – Maintenance

7. Screw top back on shock and position shock with the pressure valve in the highest position. Pressurize shock to 200 psi with nitrogen.



8. As a final check, stroke the shock a full stroke.
CAUTION: Never stroke the shock before it's pressurized. Damage to the shock will occur.
9. When reinstalling shock assemblies onto the machine, torque only to required specifications found in Sections 2 or 10. If the shock is over tightened it will not pivot, resulting in damage to shaft and seals.



SUSPENSIONS

Fox™ Shocks (Welded Dome Only) - Maintenance

Rear Suspension Fox Shocks – IFP (Internal Floating Piston, Welded Dome Type)

1. Insert inflating needle into pressure valve to de-pressurize shock.



2. With bottom of shock secured in a vise, unscrew shaft bearing cap.



3. Using care, remove rod and piston by pulling straight out so as not to damage any seals or valves.



4. Pour oil out.

5. Rinse cylinder with a cleaning solvent and blow dry with compressed air.

6. Check height of IFP as shown. You may need to adjust the height of the piston. If it is too high, insert the inflating needle into the pressure valve. Using a rod, push down on the piston to obtain the proper height. If the piston is too low, screw the top cap back on and add nitrogen to raise the piston.

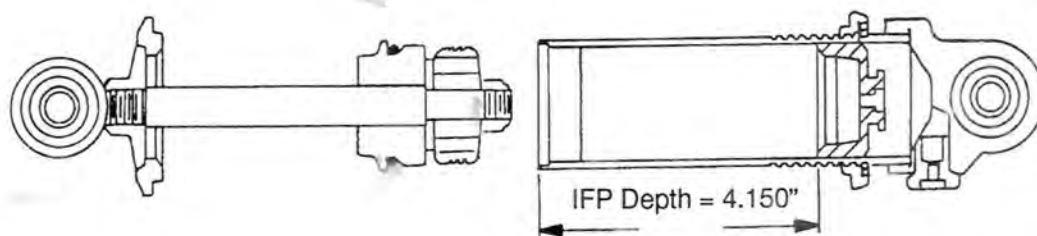
CAUTION: Never add nitrogen without the shaft bearing cap installed.



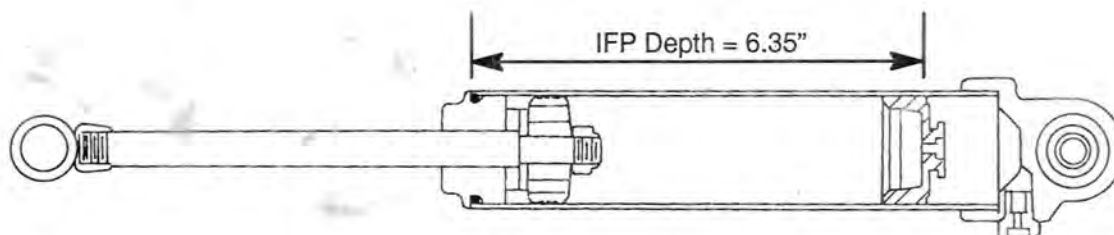
SUSPENSIONS

Fox Shocks - Maintenance

1992 Front Torque Arm (IFP) PN 7041254 and 1993 XCR/XLT Front Torque Arm (IFP) PN 7041294



XCR Rear Shock (IFP) PN 7041267



NOTES:

1. Depths of Internal Floating Piston (IFP) are measured to bottom of inside diameter.
2. Shocks are to be charged with nitrogen to 200 p.s.i.
3. Only approved oil is PN 2870995.

SUSPENSIONS

Fox Shocks - Maintenance

7. With the IFP at its proper height, you can now add the oil (PN 2870995). Position the shock at a 15° to 30° angle and pour oil in slowly against side of reservoir to avoid mixing air into the oil. With oil level at base of threads, insert rod and piston.



8. Keep shock body tilted at 15° to 30° and slide piston in with the three closely spaced valve holes to the high side. The center hole is an air bleed and will allow air to bleed off. Gently wiggle rod and piston to help disperse air. Keep sliding piston in until it's submerged in oil. The oil level should now be to the base of the threads. Have a clean shop cloth handy to catch the oil which will seep out as the shock cap is replaced.



9. Once cap has been tightened, pressurize shock to 200 psi with nitrogen.



10. As a final check, stroke the shock a full stroke to check the IFP depth. **CAUTION:** Never stroke the shock until it has been pressurized. Damage to the shock will occur.

Troubleshooting

Erratic dampening or loss of dampening may be caused by a pressure loss. To detect a leak at the cover O-Ring or pressure valve, pressurize the shock to 200 psi and submerge in water. Bubbles appearing around the cover indicate a pressure leak.

NOTE: Always check for leaks after changing oil.

11. When reinstalling shock assemblies onto the machine, torque only to required specifications found in Chapters 2 or 10. If the shock is over-tightened it will not pivot, resulting in damage to shaft and seals.



SUSPENSIONS

Fox™ IFP Shock Maintenance (1993)

Changing oil on Fox™ Shocks is recommended annually and must be done when performing your season end storage preparation. This oil change is necessary to avoid any chance of corrosion which could be caused by moisture contamination.

When performing maintenance on Fox™ Shocks, use the Gas Shock Recharging Kit (A) PN 2200421. It consists of the necessary valves, pressure gauge, and fittings to deflate and pressurize the shocks. Not included with this kit is the Body Cap Tool (B) PN 2871071, which is needed to hold shock the body when disassembling.

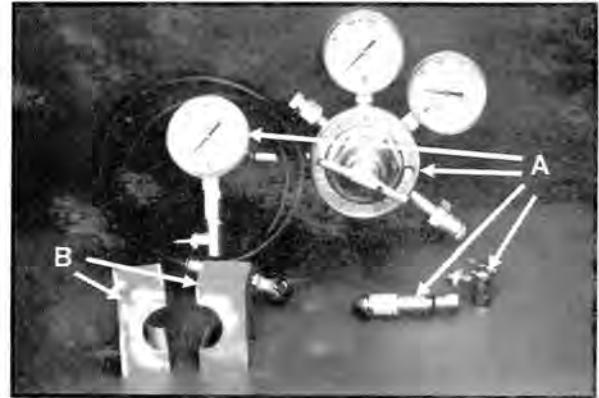
WARNING: Extreme caution should be observed while handling and working with high pressure service equipment. We strongly recommend you wear safety glasses and ear protection during service of these shocks.

Care should be observed while handling the inflater needle and pressure gauges. Maintain your equipment and keep it in good condition. If injury should occur, consult your physician immediately.

Extreme cleanliness is of utmost importance during all disassembly and reassembly operations to prevent any dirt or foreign particles from getting into the shocks.

1. Thoroughly wash shocks in a parts washer or with soap and water. Dry with compressed air to remove sand, dirt, and other debris. Position and clamp body cap of shock in soft jaws (aluminum) of vise.
2. Remove Allen screw from air valve located in body cap. This shock has a needle type air valve. You will need the Fox™ safety needle (Polaris PN 7052069) from the recharging kit to de-pressurize the shock.
3. Install the de-pressurizing valve into the pressure gauge fitting. Turn T-handle valve clockwise to open spring valve.
4. Install safety needle into pressure gauge assembly. With valve outlet pointed in a safe direction, insert safety needle assembly into shock pressure valve. Release nitrogen in a safe direction away from everyone.
5. Depress safety pin and push valve assembly down, inserting needle. When pressure gauge registers zero, shock has been deflated.
6. Extend shock shaft by pulling up on shock eyelet. Using a 1" (25 mm) wrench, unscrew shaft bearing cap.

NOTE: If the body of the shock starts to unscrew from the body cap, tighten and try again. To keep body from turning, it may be necessary to use Body Cap Tool (PN 2871071) clamped lightly around body in soft jaws of vise just above body cap.



SUSPENSIONS

Fox™ IFP Shock Maintenance (1993)

7. Pull shock rod and piston straight out to avoid seal or valve damage. Be prepared to catch piston ring. It may fall off as you do this.
8. Dispose of used oil properly in suitable container.
9. Rinse cylinder and piston assembly with mechanic solvent or equivalent and blow dry with compressed air. Set aside piston assembly for reinstallation.
10. Using Body Cap Tool (PN 2871071), position tool just below body cap and carefully tighten in soft jaws of a vise.

CAUTION: Never apply heat to shock body without first depressurizing shock and removing bearing cap and oil.

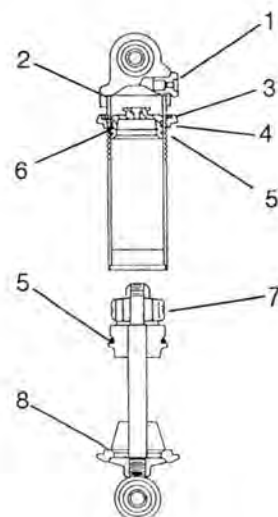


11. Lightly heat threaded area of body cap with a butane torch to loosen Loctite sealant. **CAUTION:** Do not over heat. Damage to internal seals or personal injury could result.
12. Using a large adjustable wrench on the body cap, unscrew the body cap from the body. **CAUTION:** Parts are hot. Use leather gloves to avoid burns.
13. Remove internal floating piston by pushing with handle of hammer against piston toward body cap end (external threaded end). Be prepared to catch piston as it comes out.
14. Note location of Allen screw for reassembly in body tube. Remove Allen screw and O-Ring from center of piston.
15. Carefully clean *all* parts thoroughly in a parts cleaner and dry with compressed air.
16. Inspect seals and shaft surface for any damage. **NOTE:** These parts may be purchased separately.
17. Loosen piston assembly to insure all old oil is removed and flushed from valves to prevent contamination of new oil.

Reassembly

1. Wrap flexible piston ring around dampening piston and reinstall into body. While holding body in your hand, lightly tighten bearing cap into body with 1" (25 mm) wrench until bearing cap and O-Ring are seated.
2. Fully extend shaft.
3. Mount shaft eyelet in soft jaws of vise, body end up.
4. Slowly pour suspension fluid (PN 2870995) into the body of the shock until it comes within 2" (5.1 cm) from the top of the body.
5. Cup hand over open end of body, remove from vise and with a soft face hammer, strike shaft eyelet several times to remove trapped air in piston valves.
6. Continue to fill body with fluid to within 3/4" (1.9 cm) from top of body.

Ref. #	Part No.	Qty.	Description
1	1500005	1	Valve
2	1500004	2	O-Ring
3	7710424	1	Retaining Ring
4	5020617	1	Spring Retainer Body
5	1500003	2	O-Ring
6	1500006	1	Piston Ring (Floating)
7	1500002	1	Piston Ring (Damping)
8	5020618	1	Spring Retainer, Slotted



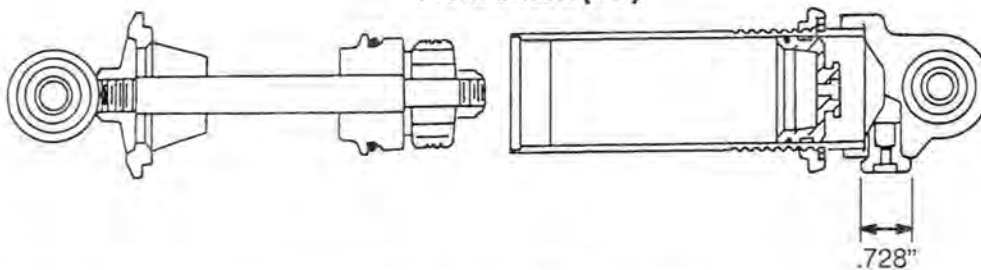
SUSPENSIONS

Fox Shocks - Maintenance (1993)

7. To set the IFP, remove shock from vise, reposition and mount flats of bearing cap in soft jaws of vise with body cap end up. Lightly tighten vise. **CAUTION:** Do not overtighten vise or bearing may be crushed and deformed.
8. Wrap IFP flexible piston ring around internal floating piston and insert piston into body, O-Ring first. Using 1" (2.5 cm) O.D. x .780" (2 cm) minimum I.D. tubing, slowly position IFP to within .050" (.1 cm) of its specified depth. Refer to illustration for IFP depth of appropriate shock.
9. Slowly bleed shock once more by pushing up and pulling down on shaft eyelet to fully extend shock shaft. **NOTE:** Oil should squirt out of IFP bleed hole during this procedure. If oil does not come out bleed hole, add more oil through bleed hole to bring shock to full capacity. Be sure to double check IFP depth after this procedure. The IFP should be completely submerged in fluid at this point.
10. Using an 1/8" (.3 cm) Allen wrench, reinstall screw and O-Ring in center of piston and tighten.
11. No oil should be left on piston top. Pour out excess oil and wipe with a clean, dry, absorbent shop cloth to remove any excess oil. Make sure no lint or other debris is left in piston area after removing excess oil. Again verify IFP depth.

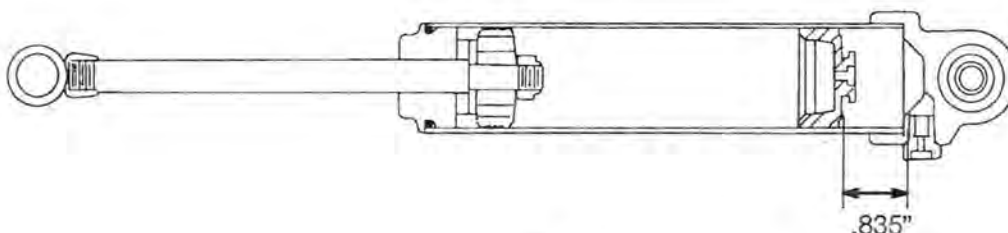
Model Used On	Part Number	IFP Depth
1993 XLT & XCR Front Ski	LH 7041291 RH 7041292	.728" (1.85 cm) from piston surface to body edge
1994-1995 440 XCR SP & 600 XCR	7041346	.728" (1.85 cm) from piston surface to body edge
1995 RXL Touring	7041346	.728" (1.85 cm) from piston surface to body edge

Front Shock (IFP)



Model Used On	Part Number	IFP Depth
1993 XCR Rear Suspension	7041295	.835" (2.12 cm) from piston surface to body edge
1993 XLT Rear Suspension	7041293	.835" (2.12 cm) from piston surface to body edge
1994 440 XCR, XLT SP Rear Suspension	7041347	.835" (2.12 cm) from piston surface to body edge
1995 440 XCR, 600 XCR	7041345	.835" (2.12 cm) from piston surface to body edge

Rear Shock (IFP)



SUSPENSIONS

Fox Shocks - Maintenance

12. Reinstall body cap and tighten by hand. Mount shock with body cap end down in the soft jaws of a vise. Torque bearing cap to 8-10 ft. lbs. (1.10-1.38 kg/m). This will also tighten the body into the body cap. **CAUTION:** Do not over tighten or damage to the bearing may result.
13. Using the Fox safety needle valve installed on the pressure gauge assembly, pressurize with nitrogen gas to 200 psi.
14. To test shock for smooth and consistent dampening, place shock shaft eyelet on a hard surface. Fully compress the shock and let it return. Shock should offer obvious consistent dampening, moving freely through both compression and rebound strokes.

NOTE: The front torque arm shock is of the welded dome type. Refer to 1992 Fox Shock section for maintenance procedure.

15. When reinstalling front IFS shocks, be sure to install and torque top eyelet mounting of shock first. Pivot shock body into lower mount. Determine placement of lower mount spacers (thick or thin) to prevent twist of shock and side load.

NOTE: Do not overtighten shock mounting bolts. Shocks must pivot at mounts. Torque only to required specifications found in Sections 2 or 10.

Troubleshooting

Erratic dampening or loss of dampening may be caused by a pressure loss. To detect a leak at the cover O-Ring or pressure valve, pressurize the shock to 200 psi and submerge in water. Bubbles appearing around the cover indicate a pressure leak.

NOTE: Always check for leaks after changing oil.

16. When reinstalling shock assemblies onto the machine, torque only to required specifications found in Sections 2 or 10. If the shock is over tightened it will not pivot, resulting in damage to shaft and seals.



SUSPENSIONS

Fox™ IFP XTRA Shock - Rebuild (1994-1995)

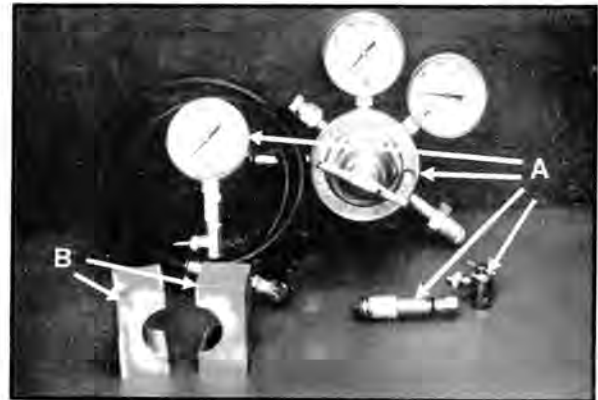
Changing oil on Fox™ Shocks is recommended annually and must be done when performing your season end storage preparation. This oil change is necessary to avoid any chance of corrosion which could be caused by moisture contamination.

When performing maintenance on Fox™ Shocks, use the Gas Shock Recharging Kit (A) PN 2200421. It consists of the necessary valves, pressure gauge, and fittings to deflate and pressurize the shocks. Not included with this kit is the Body Cap Tool (B) PN 2871071, which is needed to hold shock the body when disassembling.

WARNING: Extreme caution should be observed while handling and working with high pressure service equipment. We strongly recommend you wear safety glasses and ear protection during service of these shocks.

Care should be observed while handling the inflater needle and pressure gauges. Maintain your equipment and keep it in good condition. If injury should occur, consult your physician immediately.

Extreme cleanliness is of utmost importance during all disassembly and reassembly operations to prevent any dirt or foreign particles from getting into the shocks.



1. Thoroughly wash shocks in a parts washer or with soap and water. Dry with compressed air to remove sand, dirt, and other debris. Position and clamp body cap of shock in soft jaws (aluminum) of vise.
2. Remove Allen screw from air valve located in body cap. This shock has a needle type air valve. You will need the Fox™ safety needle (Polaris PN 7052069) from the recharging kit to de-pressurize the shock.
3. Install the de-pressurizing valve into the pressure gauge fitting. Turn T-handle valve clockwise to open spring valve.
4. Install safety needle into pressure gauge assembly. With valve outlet pointed in a safe direction, insert safety needle assembly into shock pressure valve. Release nitrogen in a safe direction away from everyone.
5. Depress safety pin and push valve assembly down, inserting needle. When pressure gauge registers zero, shock has been deflated.



SUSPENSIONS

Fox™ IFP XTRA Shock - Rebuild (1994-1995)

6. Extend shock shaft by pulling up on shock eyelet. Using a 1" (25 mm) wrench, unscrew shaft bearing cap.

NOTE: If the body of the shock starts to unscrew from the body cap, tighten and try again. To keep body from turning, it may be necessary to use Body Cap Tool (PN 2871071) clamped lightly around body in soft jaws of vise just above body cap.

7. Pull shock rod and piston straight out to avoid seal or valve damage. **NOTE:** Be prepared to catch piston ring since it may fall off as you do this.
8. Drain oil into a suitable container and dispose of properly.
9. Rinse cylinder and piston assembly with solvent and blow dry with compressed air.
10. Using Body Cap Tool (PN 2871071), position tool just below body cap and carefully tighten in soft jaws of a vise. Using a large adjustable wrench on the body cap, unscrew the body cap from the body.
11. Remove internal floating piston by pushing with handle of hammer against piston toward body cap end (external threaded end). Be prepared to catch piston as it comes out.
12. Note location of Allen screw for reassembly in body tube. Remove Allen screw and O-Ring from center of piston.
13. Carefully clean *all* parts thoroughly in a parts cleaner and dry with compressed air.
14. Inspect seals and shaft surface for any damage. **NOTE:** These parts may be purchased separately.
15. Loosen piston assembly to insure all old oil is removed and flushed from valves to prevent contamination of new oil.

NOTE: Lightly oil flexible piston ring and O-Ring prior to installation.

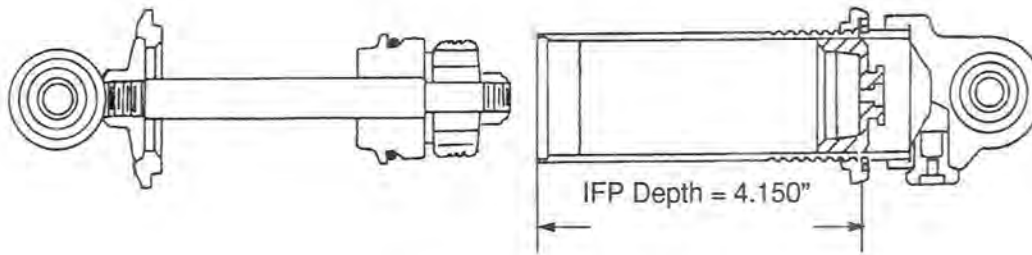
16. Reinstall IFP with flexible piston ring and O-Ring. Position piston into body O-Ring from body cap end first (smooth I.D. of body, *no* internal threads).
17. Reinstall body cap and hand tighten.
18. Place in body clamps and vise, torque to 8-10 ft. lbs. (1.10-1.38 kg/m).
19. To set the IFP, mount body cap in vise and lightly tighten. **CAUTION:** Do not overtighten as bushings may be crushed.
20. Using a caliper or steel rule, check IFP depth. Use a 1" O.D. x .780" I.D. x 12" long piece of tubing positioned in IFP cup to reposition IFP.



SUSPENSIONS

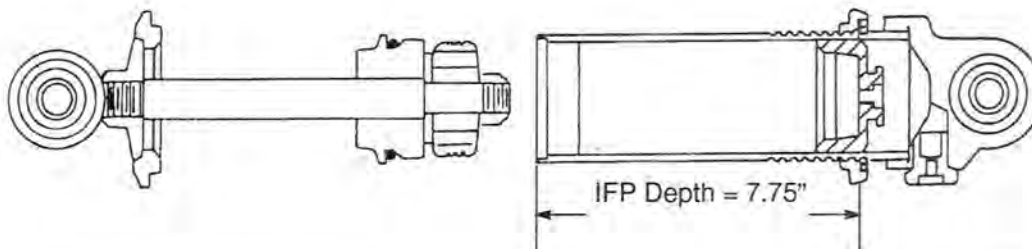
Fox™ IFP XTRA Shock - Rebuild (1994-1995)

Front Shock (IFP)



21. Slowly pour suspension fluid (PN 2870995) into the body of the shock. Refer to table for correct fluid amount.
NOTE: Pour slowly to minimize air bubbles in fluid. Air bubbles will cause shocks to fade over a period of time.
22. Wrap IFP flexible piston ring onto piston and carefully install shaft assembly.
23. Tighten bearing cap end to shock body. Torque to 8-10 ft. lbs. (1.10-1.38 kg/m).
24. Tighten bleed screw on bearing cap.
25. Press shaft into shock body about 1/2 the stroke. At this point strike the eyelet of the shaft with a soft face hammer several times to dislodge any air trapped in piston assembly.
26. Install Fox™ safety needle valve (Polaris PN 2200421) on pressure gauge assembly and pressurize with nitrogen gas to 200 PSI. Shock shaft will extend while you are pressurizing shock.
27. Slowly open bleeder until all air is released and oil starts to appear out of bleeder. Tighten bleeder and re-charge with nitrogen to 200 ft. lbs. (27.6 kg/m).
28. To test shock for smooth and consistent damping, place shock shaft eyelet on a hard surface. Fully compress shock and let it return. Shock should offer obvious consistent damping, moving freely through both compression and rebound strokes.

IFS XTRA and Front Track XTRA Fox™ Shock



Model Used On	Part Number	IFP Depth (Initial)	Suspension Fluid
XTRA IFS (Ski)	7041385	7.75"	165 cc +/- 1 cc
XTRA Front Track	7041386	7.75"	165 cc +/- 1 cc

NOTE: IFP depth is measured from top edge of body housing (A) to inside cup of IFP (B).

SUSPENSIONS

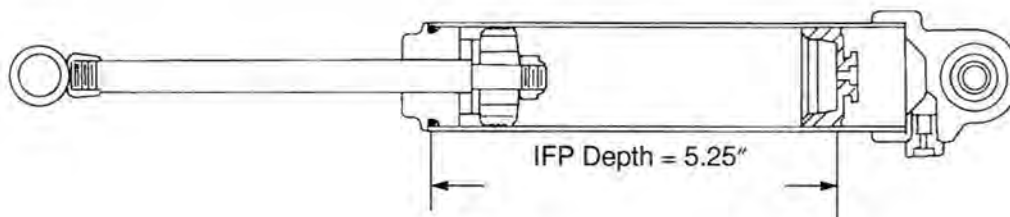
Fox™ IFP XTRA Shock - Rebuild (1994-1995)

Rear XTRA Fox™ Shock

Model Used On	Part Number	IFP Depth (Initial)	Suspension Fluid
XTRA Rear Track	7041387	5.25"	108.2 cc +/- .25 cc

NOTE: To accurately measure cc quantities, we suggest using a syringe, such as may be purchased at a veterinary supply house.

Rear Shock (IFP)



29. When reinstalling front IFS shocks, be sure to install and torque top eyelet mounting of shock first. Pivot shock body into lower mount.

CAUTION: When reinstalling shock assemblies onto the machine, torque only to required specifications found in Chapter 2 or 10. If the shock is over tightened it will not pivot, resulting in damage to shaft and seals.

Troubleshooting

Erratic damping or loss of damping may be caused by a pressure loss. To detect a leak at the cover O-Ring or pressure valve, pressurize the shock to 200 PSI and submerge in water. Bubbles appearing around the cover indicate a pressure leak.

Always check for leaks after changing oil.

SUSPENSIONS

Fox™ IFP XTRA Shock - Oil Change Only (1994-1995)

Changing oil on Fox™ Shocks is recommended annually and must be done when performing your season end storage preparation. This oil change is necessary to avoid any chance of corrosion which could be caused by moisture contamination.

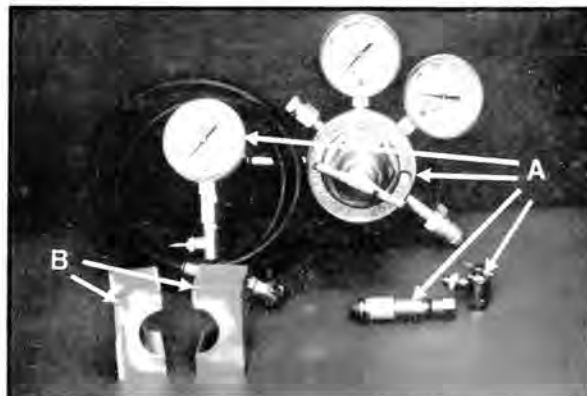
When performing maintenance on Fox™ Shocks, use the Gas Shock Recharging Kit (A) PN 2200421. It consists of the necessary valves, pressure gauge, and fittings to deflate and pressurize the shocks. Not included with this kit is the Body Cap Tool (B) PN 2871071, which is needed to hold shock the body when disassembling.

WARNING: Extreme caution should be observed while handling and working with high pressure service equipment. We strongly recommend you wear safety glasses and ear protection during service of these shocks.

Care should be observed while handling the inflator needle and pressure gauges. Maintain your equipment and keep it in good condition. If injury should occur, consult your physician immediately.

Extreme cleanliness is of utmost importance during all disassembly and reassembly operations to prevent any dirt or foreign particles from getting into the shocks.

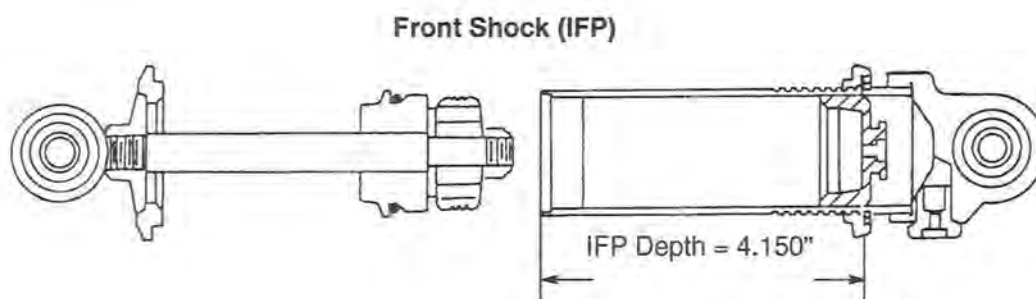
1. Thoroughly wash shocks in a parts washer or with soap and water. Dry with compressed air to remove sand, dirt, and other debris. Position and clamp body cap of shock in soft jaws (aluminum) of vise.
2. Remove Allen screw from air valve located in body cap. This shock has a needle type air valve. You will need the Fox™ safety needle (Polaris PN 7052069) from the recharging kit to de-pressurize the shock.
3. Install the de-pressurizing valve into the pressure gauge fitting. Turn T-handle valve clockwise to open spring valve.
4. Install safety needle into pressure gauge assembly. With valve outlet pointed in a safe direction, insert safety needle assembly into shock pressure valve. Release nitrogen in a safe direction away from everyone.
5. Depress safety pin and push valve assembly down, inserting needle. When pressure gauge registers zero, shock has been deflated.
6. Extend shock shaft by pulling up on shock eyelet. Using a 1" (25 mm) wrench, unscrew shaft bearing cap.



SUSPENSIONS

Fox™ IFP XTRA Shock - Oil Change Only (1994-1995)

7. Pull shock rod and piston straight out to avoid seal or valve damage. **NOTE:** Be prepared to catch piston ring since it may fall off as you do this.
8. Drain oil into a suitable container and dispose of properly.
9. Rinse cylinder and piston assembly with solvent and blow dry with compressed air.
10. To set the IFP, mount body cap in vise and lightly tighten. **CAUTION:** Do not overtighten as bushings may be crushed.
11. Using a caliper or steel rule, check IFP depth. Use a 1" O.D. x .780" I.D. x 12" long piece of tubing positioned in IFP cup to reposition IFP.

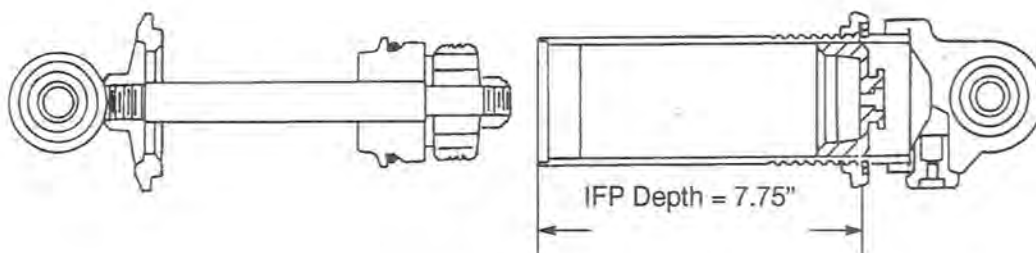


12. Slowly pour suspension fluid (PN 2870995) into the body of the shock. Refer to illustration for correct fluid amount. **NOTE:** Pour slowly to minimize air bubbles in fluid. Air bubbles will cause shocks to fade over a period of time.
13. Wrap IFP flexible piston ring onto piston and carefully install shaft assembly.
14. Tighten bearing cap end to shock body. Torque to 8-10 ft. lbs. (1.10-1.38 kg/m).
15. Tighten bleed screw on bearing cap.
16. Press shaft into shock body about 1/2 the stroke. At this point strike the eyelet of the shaft with a soft face hammer several times to dislodge any air trapped in piston assembly.
17. Install Fox™ safety needle valve (Polaris PN 2200421) on pressure gauge assembly and pressurize with nitrogen gas to 200 PSI. Shock shaft will extend while you are pressurizing shock.
18. Slowly open bleeder until all air is released and oil starts to appear out of bleeder. Tighten bleeder and re-charge with nitrogen to 200 ft. lbs. (27.6 kg/m).
19. To test shock for smooth and consistent damping, place shock shaft eyelet on a hard surface. Fully compress shock and let it return. Shock should offer obvious consistent damping, moving freely through both compression and rebound strokes.

SUSPENSIONS

Fox™ IFP XTRA Shock - Oil Change Only (1994-1995)

IFS XTRA and Front XTRA Fox™ Shock



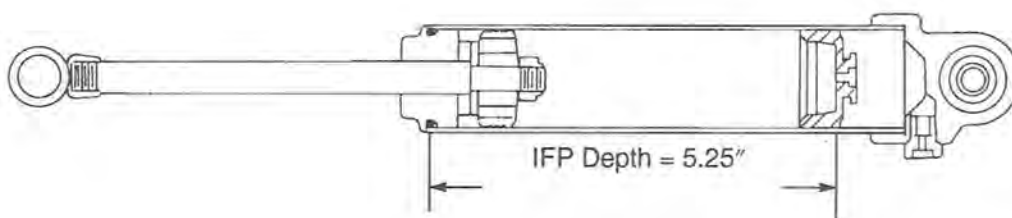
Model Used On	Part Number	IFP Depth (Initial)	Suspension Fluid
XTRA IFS (Ski)	7041385	7.75"	165 cc +/- 1 cc
XTRA Front Track	7041386	7.75"	165 cc +/- 1 cc

NOTE: IFP depth is measured from top edge of body housing (A) to inside cup of IFP (B).

Rear XTRA Fox™ Shock

Model Used On	Part Number	IFP Depth (Initial)	Suspension Fluid
XTRA Rear Track	7041387	5.25"	108.2 cc +/- .25 cc

NOTE: To accurately measure cc quantities, we suggest using a syringe, such as may be purchased at a veterinary supply house.



- When reinstalling front IFS shocks, be sure to install and torque top eyelet mounting of shock first. Pivot shock body into lower mount.

CAUTION: When reinstalling shock assemblies onto the machine, torque only to required specifications found in Chapter 2 or 10. If the shock is over tightened it will not pivot, resulting in damage to shaft and seals.

Troubleshooting

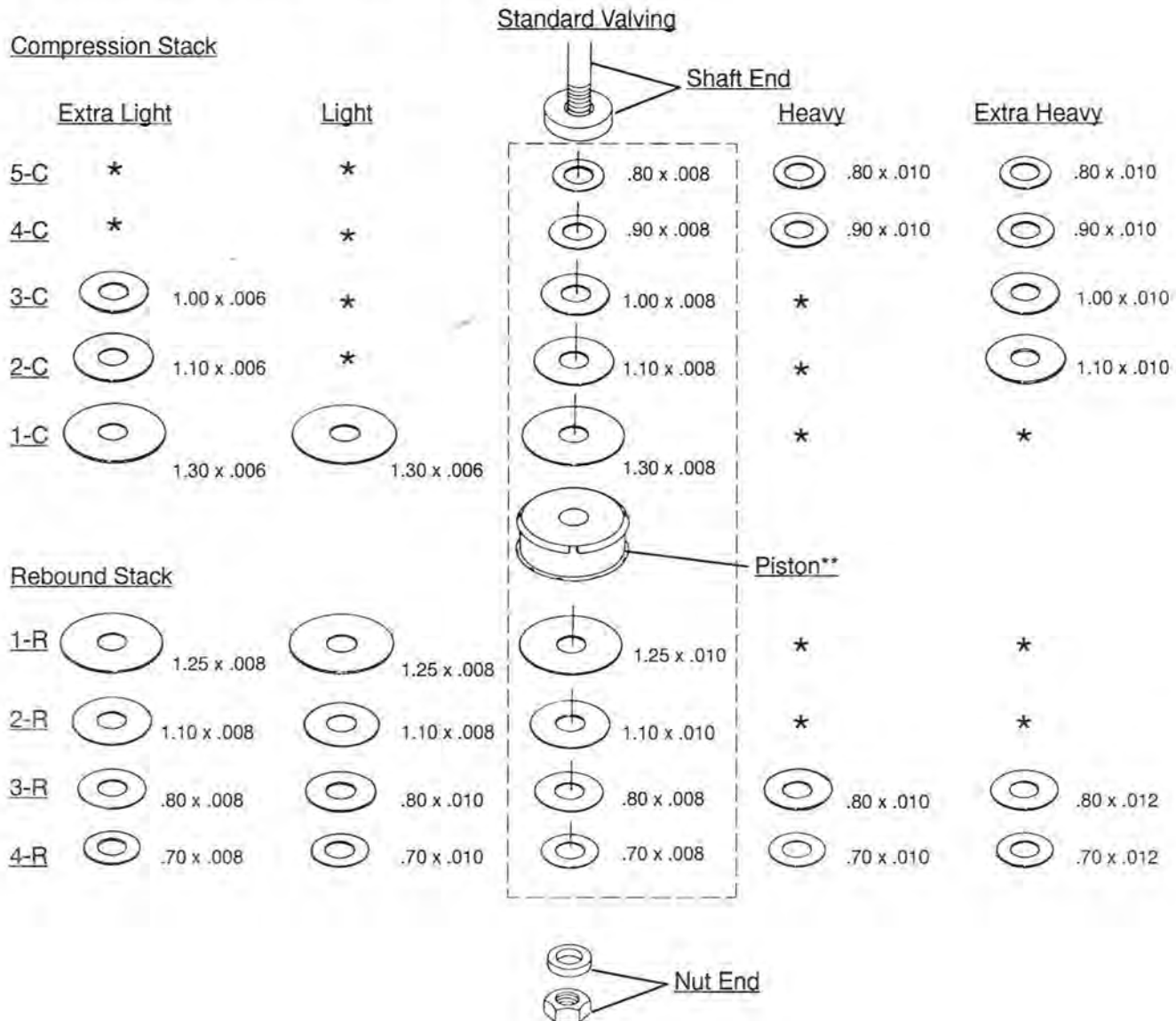
Erratic damping or loss of damping may be caused by a pressure loss. To detect a leak at the cover O-Ring or pressure valve, pressurize the shock to 200 PSI and submerge in water. Bubbles appearing around the cover indicate a pressure leak.

Always check for leaks after changing oil.

SUSPENSIONS

Shock Valving

7041291 & 7041292 - IFS / Front Ski Shocks



Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

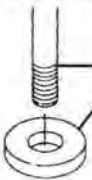
** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

Example: To increase rebound dampening from standard to heavy, remove the Flexloc nut and replace washers 3-R (.80 x .008) with the .80 x .010, and 4-R (.70 x .008) with the .70 x .010 washers. All other washers in the rebound stack would remain the same. Reinstall the washer and Flexloc nut. Torque to 20 to 25 ft. lbs.

NOTE: Remember to add rolling torque. Refer to shock assembly procedures in this section to complete assembly.

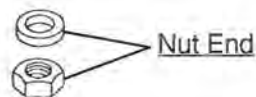
7041293 - Rear Shock

Compression Stack

	Extra Light	Light	Standard Valving	Heavy	Extra Heavy
4-C	*	*			
3-C	 .90 x .006	*	 .80 x .008	 .80 x .010	 .80 x .010
2-C	 1.10 x .006	*	 .90 x .008	 .90 x .010	 .90 x .010
1-C	 1.30 x .006	 1.30 x .006	 1.10 x .008	*	 1.10 x .010
			 1.30 x .008	*	*

Rebound Stack

1-R	 1.30 x .006	 1.30 x .006	 1.30 x .008	*	*
2-R	 1.10 x .006	*	 1.10 x .008	*	 1.10 x .010
3-R	 1.00 x .006	*	 1.00 x .008	 1.0 x .010	 1.00 x .010
4-R	*	*	 .90 x .008	 .90 x .010	 .90 x .010



Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

SUSPENSIONS

Shock Valving

7041294 - Rear Shock

Compression Stack

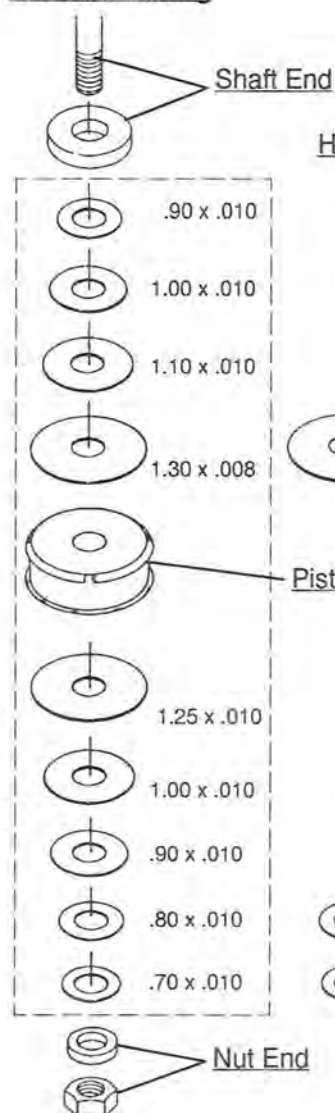
Extra Light

4-C		.90 x .008
3-C		1.00 x .008
2-C		1.10 x .008
1-C		1.30 x .006

Light

*	
	1.00 x .008
	1.10 x .008
*	

Standard Valving



Heavy

*	
*	
*	
	1.30 x .010
*	
*	
*	
	.80 x .012
	.70 x .012

Extra Heavy

	.90 x .012
	1.00 x .012
*	
	1.30 x .010
*	
*	
	1.00 x .012
	.90 x .012
	.80 x .012
	.70 x .012

Rebound Stack

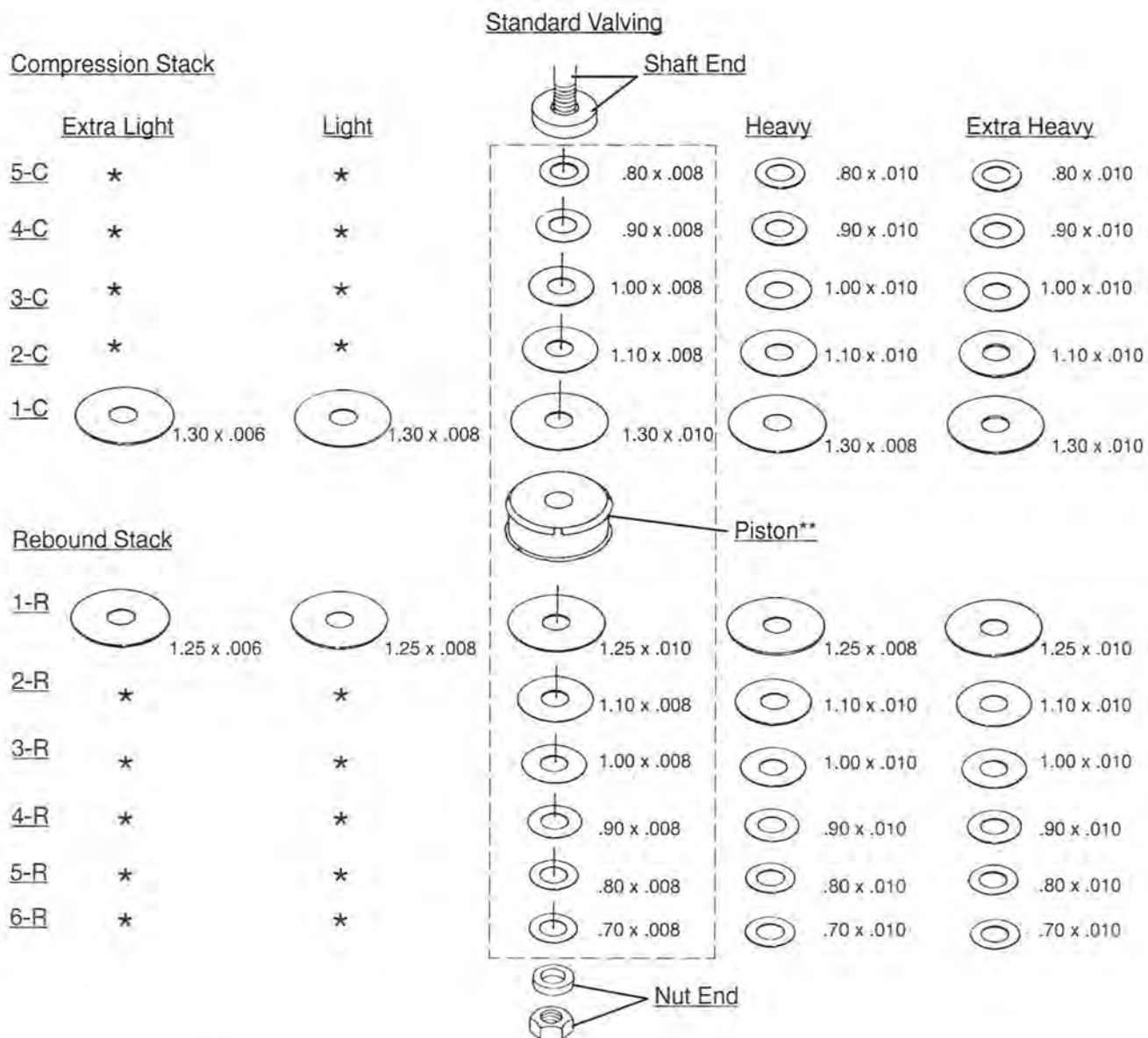
1-R		1.25 x .008		1.25 x .008
2-R		1.00 x .008	*	
3-R		.90 x .008	*	
4-R	*		*	
5-R	*		*	

Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

7041295 - Center Shock



Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

SUSPENSIONS Shock Valving

7041387 - Rear Shock XTRA

Compression Stack

Light Extra Light

6-C

5-C

4-C

3-C

2-C

1-C

.089 Orifice

.081 Orifice

Rebound Stack

1-R

2-R

3-R

4-R

5-R

6-R

Standard Valving

Shaft End

Heavy

Extra Heavy

*

*

*

*

*

.90 x .012

*

1.00 x .012

*

*

1.30 x .010

1.30 x .010

.067 Orifice

.067 Orifice

Piston**

.067 Orifice

*

1.250 x .012

*

1.250 x .012

*

1.10 x .012

1.000 x .012

*

.900 x .012

*

.800 x .012

*

Nut End

Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

XC VALVING

SUSPENSIONS Shock Valving

74 RCR

7041344 - Center Shock

Compression Stack

6-C

5-C

4-C

3-C

2-C

1-C

Rebound Stack

1-R

2-R

3-R

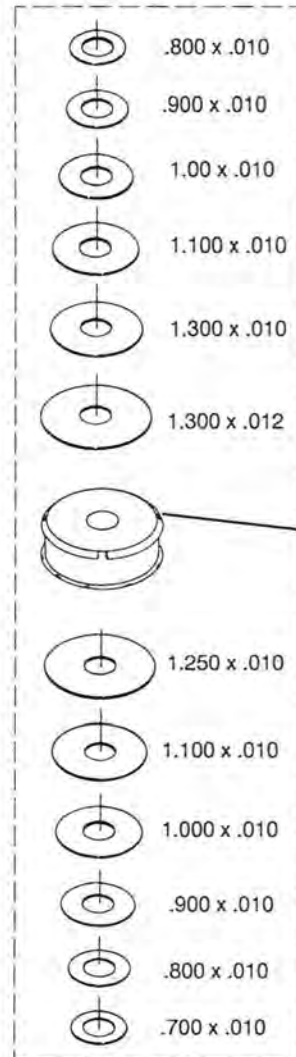
4-R

5-R

6-R

Standard Valving

Shaft End



Piston**

.067 Orifice

Nut End

TRAIL VALVING

1.25 x .010

.9 x .010

1.0 x .010

1.1 x .010

1.3 x .012

.84 x .010

.77 x .010

1.0 x .010

1.1 x .010

1.31 x .008

XC VALVING

TRAIL VALVE

Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

SUSPENSIONS Shock Valving

7041345 - Rear Shock

Compression Stack

6-C

5-C

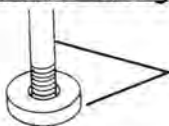
4-C

3-C

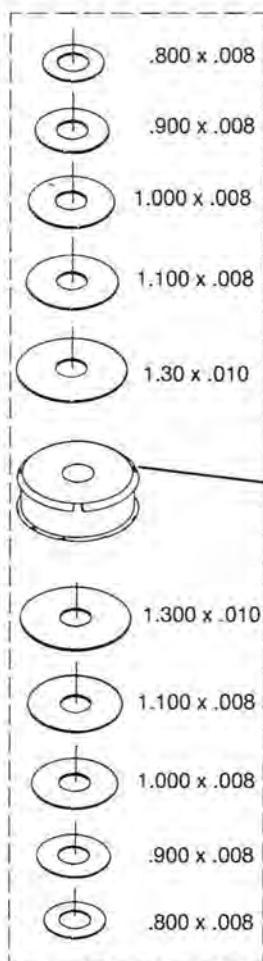
2-C

1-C

Standard Valving



Shaft End



Piston**

Heavy



1.250 x .010

*

.800 x .008



.900 x .010



1.000 x .010



1.100 x .008



1.300 x .010

Extra Heavy

*

1.250 x .010



.800 x .008



.900 x .010



1.000 x .010



1.100 x .010



1.300 x .010

Rebound Stack

1-R

2-R

3-R

4-R

5-R



1.300 x .010



1.100 x .008



1.000 x .008



.900 x .008



.800 x .008



1.250 x .010



1.250 x .010



1.100 x .010



1.100 x .010

*



.900 x .012

*

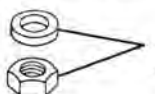
*



.700 x .008



.700 x .008



Nut End

Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

SUSPENSIONS Shock Valving

7041346 - IFS Shock

Compression Stack

	Light		Extra Light		Standard Valving		Heavy		Extra Heavy
6-C		1.250 x .010		1.250 x .010			*		*
5-C	*		*				*		*
4-C	*		*				*		
3-C	*		*				*		
2-C		1.100 x .008		1.100 x .008			*		*
1-C		1.300 x .008	*						

Rebound Stack

	Light		Extra Light		Standard Valving		Heavy		Extra Heavy
1-R		1.250 x .008		1.25 x .008			*		
2-R		1.100 x .008		1.100 x .008			*		
3-R		1.000 x .008		1.000 x .008			*	*	
4-R		.900 x .008		.900 x .008			*		
5-R	*		*						*
6-R	*		*						*

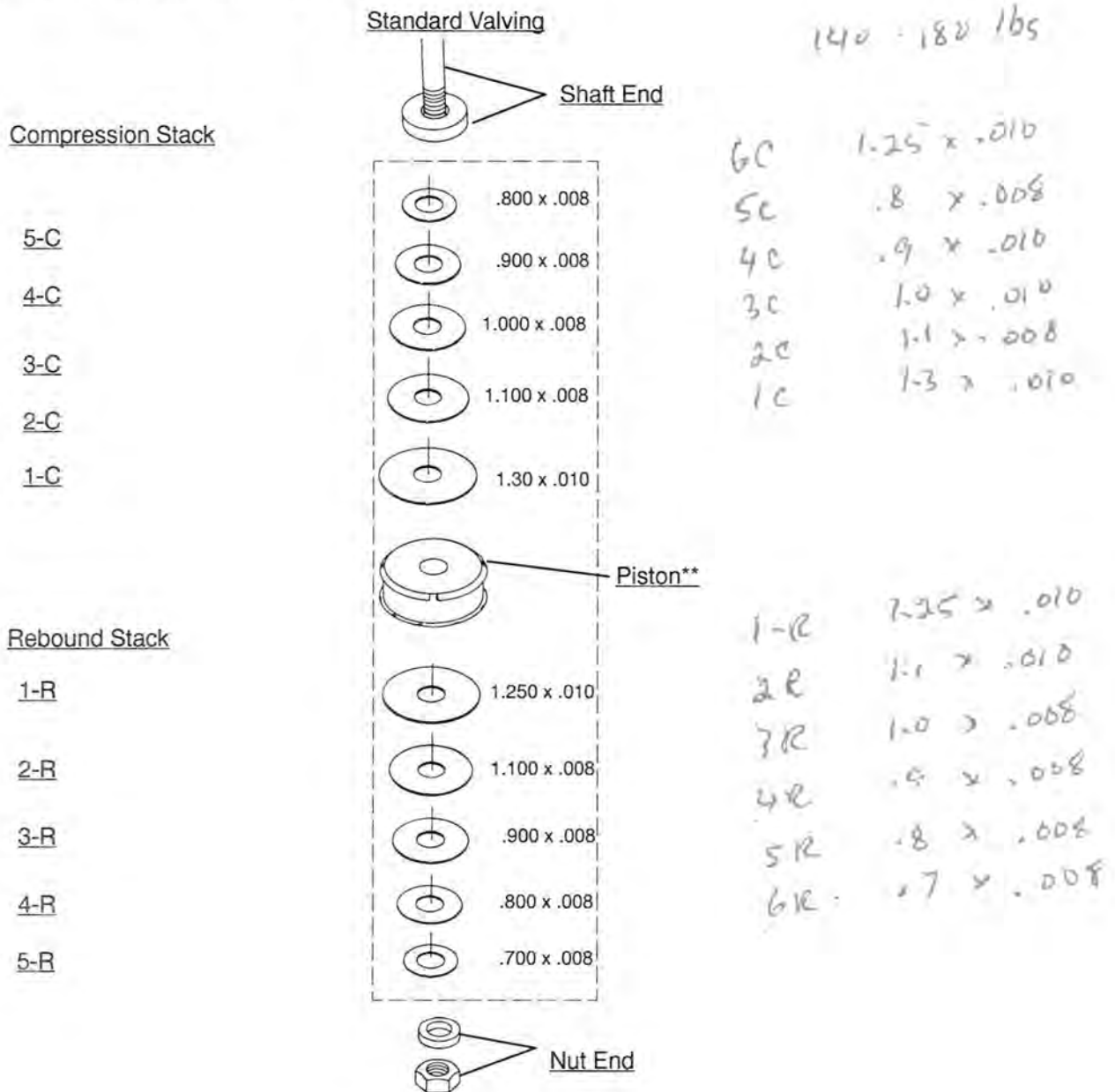
Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

SUSPENSIONS Shock Valving

7041347 - Rear Shock 1994 XCR



Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

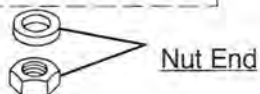
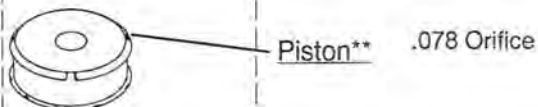
7041385 - IFS Shock XTRA

Compression Stack

	Light		Extra Light		Standard Valving		Heavy		Extra Heavy
6-C	*		*			Shaft End	*		*
5-C		.800 x .006		.800 x .006		.700 x .008	*		*
4-C		.900 x .006		.900 x .006		.800 x .008	*		 .800 x .010
3-C		1.000 x .006		1.000 x .006		.900 x .008	*		 .900 x .010
2-C		1.100 x .006	*			1.000 x .008	*		 1.00 x .010
1-C		1.300 x .006	*			1.100 x .008		1.100 x .010	 1.100 x .010
						1.300 x .008		1.30 x .010	 1.300 x .010

Rebound Stack

1-R		1.250 x .006		1.250 x .008		1.250 x .008	*		 1.250 x .010
2-R		1.100 x .006	*			1.100 x .008		1.100 x .010	 1.100 x .010
3-R		1.000 x .006	*			1.000 x .008	*		*
4-R		.900 x .006	*			.900 x .008	*		*
5-R		.800 x .006	*			.800 x .008	*		*
6-R	*	.700 x .006	*			.700 x .008	*		*



Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

SUSPENSIONS Shock Valving

7041386 - Center Shock XTRA

Compression Stack

	Light	Extra Light	Standard Valving	Heavy	Extra Heavy
6-C			 .700 x .006	*	*
5-C			 .800 x .006	*	 .800 x .010
4-C			 .900 x .006	*	 .900 x .010
3-C			 1.000 x .006	 1.000 x .008	 1.00 x .010
2-C			 1.100 x .006	 1.100 x .008	 1.100 x .010
1-C			 1.300 x .006	 1.300 x .008	 1.300 x .010
	.089 Orifice	.081 Orifice		.078 Orifice	.078 Orifice

Rebound Stack

1-R	 1.250 x .008	 1.25 x .008	 1.250 x .012	*	 1.250 x .015
2-R	 1.100 x .008	 1.100 x .010	 1.250 x .012	*	 1.250 x .015
3-R	 1.000 x .008	*	 1.100 x .010	 1.100 x .012	 1.100 x .012
4-R	 .900 x .008	*	 1.000 x .010	 1.000 x .012	 1.000 x .012
5-R	 .800 x .008	*	 .900 x .010	 .900 x .012	 .900 x .012
6-R	*	*	 .800 x .010	 .800 x .012	 .800 x .010

Standard Valving

Shaft End

Piston**

Nut End

Parts in box are standard valving.

* Indicates the use of the standard valving washer in this position.

** Note the direction of valve piston before disassembly. The side with three slots should face the shaft end.

SUSPENSIONS

Additional Fox Shock Hardware

Part No.	Description
7052069	Charging Needle
5020616	Spacer, Shock, Narrow, .160" (.4 cm)
5020612	Bushing, 1.34" (3.4 cm) Long
5020613	Bushing, 1.16" (2.9 cm) Long
5020615	Spacer, Shock, Wide, .320" (.8 cm)
5020622	Spacer, Shock, .640" (1.6 cm)
5020623	Bushing, Shock, 2.07" (5.3 cm)
7710424	Ring, Retaining, External, 1.625" (4.1 cm)
5020617	Retainer, Spring, Body
5020618	Retainer, Spring, Slotted
1500002	Piston, Ring Dampening, FOX PN 23-6300
1500003	O-Ring, FOX PN 01-2129
1500004	O-Ring, FOX PN 01-2218
1500005	Valve, FOX PN 05-111003A
5020639	Spacer, Shock, .190" (.5 cm) Wide
5020640	Bushing, 1.24" (3.1 cm) Long
1500006	Piston Ring, Floating, FOX PN 23-6200
5431355	Spacer, Shock, 1/2" (1.3 cm) Lowering Kit
5431356	Spacer, Shock, 1/4" (.6 cm) Lowering Kit
7041293	Shock, Gas, Rear, XLT or ITS
7041294	Shock, Gas, Middle
7041291	Shock, Gas, IFS IFP LH
7041292	Shock, Gas, IFS IFP RH
7041295	Shock, Gas, Rear, XCR or Dial Adjust
5431540	Bushing, Shock, .220 Poly/IFS Toward Rear Body End and 2 Rod
5431542	Bushing, Shock, .340 Poly/Rear Shock XLT Body End
5431541	Bushing, Shock, .260 Poly/Center Shock Both Ends
5431543	Bushing, Shock, .400 Poly/IFS Toward Front Body End
5431544	Bushing, Shock, .675 Poly/XCR Rear
1500007	Body, Shock, Fox PN 560-0638-00
1500008	Shaft, Fox PN 650-0680-00
1500009	Bearing, W/DU, Fox PN 812-0511-01
1500010	Piston, PM, Fox PN 213-0314-00
1500011	Piston, IFP, Fox PN 231-3145-00
1500012	Cap, Body, MI #1, Fox PN 335-0701-00
1500013	Eyelet, Fox PN 711-5765-01
1500014	Asm., Air Valve, Fox PN 805-FAV2-00
1500015	Bushing, Backup, Fox PN 218-3620-93
1500016	Nut, Lock, 3/8-24, Fox PN 204-0324-00
1500017	Plate, Top Out, Fox PN 217-3112-93

Part No.	Description
1500018	Screw, #10-24 x 3/8", Fox PN 204-1024-03
1500019	Screw, #8-32 x 1/4", Fox PN 204-0832-25
1500020	O-Ring, Outer, Fox PN 201-2218-00
1500021	O-Ring, Inner, Fox PN 201-2112-00
1500022	O-Ring, Drum, Outer, Fox PN 201-2008-00
1500023	O-Ring, Outer, Fox PN 201-2012-00
1500024	Wiper, Clear, Outer, Fox PN 202-0500-00
1500025	Wiper, Black, Inner, Fox PN 202-0052-00
1500026	Valve, Shock, Fox PN 214-3125-10
1500027	Valve, Shock, Fox PN 214-3110-10
1500028	Valve, Shock, Fox PN 214-3080-08
1500029	Valve, Shock, Fox PN 214-3070-08
1500030	Valve, Shock, Fox PN 214-3130-08
1500031	Valve, Shock, Fox PN 214-3110-08
1500032	Valve, Shock, Fox PN 214-3100-08
1500033	Valve, Shock, Fox PN 214-3090-08
1500034	Body, Shock, Fox PN 560-0744-00
1500035	Shaft, Fox PN 650-0745-00
1500036	Eyelet, "G" Eye, Fox PN 711-5PS1-G1
1500037	Valve, Shock, Fox PN 214-3130-10
1500038	Eyelet, "A" Eye, Fox PN 711-5015-A1
1500039	Body, Shock, D-E-S, Fox PN 560-2498-00
1500040	Shaft, Fox PN 650-0535-00
1500041	Bearing, W/DU, Fox PN 812-0509-01
1500042	Piston, PM, Fox PN 213-3067-14
1500043	Piston, IFP, W/Dome, Fox PN 231-3145-50
1500044	Valve, Shock, Fox PN 214-3070-10
1500045	Valve, Shock, Fox PN 214-3100-10
1500046	Valve, Shock, Fox PN 214-3090-10
1500047	Valve, Shock, Fox PN 214-3080-10
1500048	Valve, Shock, Fox PN 214-3100-06
1500049	Valve, Shock, Fox PN 214-3110-06
1500050	Valve, Shock, Fox PN 214-3125-06
1500051	Valve, Shock, Fox PN 214-3125-08
1500052	Valve, Shock, Fox PN 214-3130-06
1500053	Valve, Shock, Fox PN 214-3090-06
1500054	Valve, Shock, Fox PN 214-3080-06
1500055	Valve, Shock, Fox PN 214-3070-06
1500056	Valve, Shock, Fox PN 214-3070-12
1500057	Valve, Shock, Fox PN 214-3080-12
1500058	Valve, Shock, Fox PN 214-3090-12
1500059	Valve, Shock, Fox PN 214-3100-12
1500060	Valve, Shock, Fox PN 214-3110-12
1500061	Valve, Shock, Fox PN 214-3125-06
1500062	Valve, Shock, Fox PN 214-3130-10

Fox, Registered Trademark of FOX Shox

