

CHAPTER 8

SUSPENSION

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1996 Independent Front Suspension (IFS)

Model	Front Suspension	Shock PN	Shock Description	IFS Spring PN*	Spring Rate
Indy Lite/GT/Deluxe	IFS 37	7041284	Hyd	7041261	105#/in
Indy Sport	IFS 38	7041284	Hyd	7041261	105#/in
Indy Sport Touring	IFS 38	7041285	Hyd	7041261	105#/in
Indy TranSport	IFS 38	7041284	Hyd	7041261	105#/in
Indy Super Sport	IFS 41	7041473	Air/Hyd/Cam	7041261	105#/in
Indy 440 XCR	IFS Xtra 10 CRC	7041401	IFP/Thread Adj.	7041396	50#/in
Indy 440 XCR SP	IFS Xtra 10 CRC	7041494	IFP/Thread Adj.	7041489	74/125 #/in.
Indy 600 XCR	IFS 41	7041474	IFP/Cam	7041252	120#/in
Indy 600 XCR SP	IFS 41	7041474	IFP/Cam	7041358	160#
Indy WideTrak GT/LX	IFS 38.5	7041284	Hyd	7041261	105#/in
Indy Trail	IFS 41	7041388	Air/Hyd/Cam	7041261	105#/in
Indy Trail Touring	IFS 41 Xtra 10	7041423	Air/Hyd/Cam	7041405	65#/in
Indy 440 LC	IFS 41	7041388	Air/Hyd/Cam	7041261	105#/in
Indy 500	IFS 41	7041388	Air/Hyd/Cam	7041261	105#/in
Indy 500 SKS	IFS 41 Xtra 10	7041423	Air/Hyd/Cam	7041405	65#/in
Indy 500 RMK	IFS 41 Xtra 10	7041423	Air/Hyd/Cam	7041405	65#/in
Indy 500 EFI	IFS 42.5 Xtra 12	7041424	Air/Hyd/Cam	7041396	50#/in
Indy 500 EFI SKS	IFS 41 Xtra 10	7041423	Air/Hyd/Cam	7041405	65#/in
Indy 500 EFI RMK	IFS 38	7041423	Air/Hyd/Cam	7041405	65#/in
Indy Classic	IFS 42.5 Xtra 12	7041424	Air/Hyd/Cam	7041396	50#/in
Indy Classic Touring	IFS 42.5 Xtra 12	7041427	Air/Hyd/Cam	7041396	50#/in
Indy XLT	IFS 42.5 Xtra 12	7041424	Air/Hyd/Cam	7041396	50#/in
Indy XLT SP	IFS 42.5 Xtra 12	7041385	IFP	7041396	50#/in
Indy XLT SKS	IFS 41 Xtra 10	7041423	Air/Hyd/Thread Preload Adj	7041405	65#/in
Indy XLT RMK	IFS 38	7041427	Air/Hyd/Thread Preload Adj	7041396	50#/in
Indy XLT Touring	IFS 42.5 Xtra 12	7041427	Air/Hyd/Cam	7041396	50#/in
Indy RXL	IFS 42.5 Xtra 12	7041385	Air/Hyd/Thread Preload Adj	7041398	75#/in
Indy Ultra SP	IFS 41	7041474	IFP	7041405	65#/in
Indy Ultra RMK	IFS 38	7041427	Air/Hyd/Thread Preload Adj	7041396	50#/in
Indy Ultra SKS	IFS 41 Xtra 10	7041423	Air/Hyd/Thread Preload Adj	7041405	65#/in
Indy Storm/SKS	IFS 41	7041474	IFP	7041358	160#/in
Indy Storm RMK	IFS 38	7041494	IFP	7041358	160#/in

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 rate column are $\pm 10\%$

* Add a suffix of "-067" to spring part number when ordering

SUSPENSION

Rear Suspension Specifications

1996 Rear Suspension

Model	Rear Suspension	Front Track Shock PN	Front Track Shock Desc.	Spring PN*	Spring Rate	Rear Track Shock PN	Rear Track Shock Desc.	Spring PN*	Spring Rate	Torsion Spring Dia.
Indy Lite/GT/Dlx	Sport Style	7041142	Hyd	7041127	181#/in	7041154	Hyd	N/A	N/A	.393
Indy Sport	Sport Style	7041142	Hyd	7041127	181#/in	7041154	Hyd	N/A	N/A	.393
Indy Sport Trg.	Xtra 10	7041430	Hyd	7041253	200/var	7041438	Indy Select	N/A	N/A	.421
Indy TransPort	Sport Style	7041142	Hyd	7041127	181#/in	7041154	Hyd	N/A	N/A	N/A
Indy Super Sport	Xtra 10	7041430	Hyd	7041253	200/var	7041441	Indy Select	N/A	N/A	.406
Indy 440 XCR	Xtra 10	7041402	IFP Gas	7041253	200/var	7041444	Fox IFP Gas	N/A	N/A	.406
Indy 440 XCR SP	Xtra 10	7041507	Fox™ Remote	7041508	190#/in	7041492	Fox IFP Gas	N/A	N/A	.421
Indy 600 XCR	Xtra 10	7041402	IFP Gas	7041253	200/var	7041444	Fox IFP Gas	N/A	N/A	.406
Indy 600 XCR SP	Xtra 10	7041402	IFP Gas	7041253	200/var	7041444	Fox IFP Gas	N/A	N/A	.406
Indy WideTrak GT	WideTrak Style	7041281	Hyd	7041140	181#/in	7041290	Hyd (2)	N/A	N/A	.468
Indy WideTrak LX	WideTrak Style	7041281	Hyd	7041140	181#/in	7041280	Hyd (2) Cam Adj	7041261	105#/in	.468
Indy Trail	Xtra 10	7041430	Hyd	7041253	200/var	7041441	Indy Select	N/A	N/A	.406
Indy Trail Trg.	Xtra 10	7041430	Hyd	7041253	200/var	7041438	Indy Select	N/A	N/A	.421
Indy 440 LC	Xtra 10	7041430	Hyd	7041253	200/var	7041441	Indy Select	N/A	N/A	.406
Indy 500	Xtra 10	7041430	Hyd	7041253	200/var	7041441	Indy Select	N/A	N/A	.406
Indy 500 SKS/RMK	Xtra 10	7041430	Hyd	7041253	200/var	7041438	Indy Select	N/A	N/A	.406
Indy 500 EFI	Xtra 12	7041433	Indy Select Thread Adj	7041351	75-125 #/in	7041440	Nitrogen Cell	7041253	200/var #/in	.406
Indy 500 EFI SKS/RMK	Xtra 10	7041430	Hyd	7041253	200/var	7041438	Indy Select	N/A	N/A	.406
Indy Classic	Xtra 12	7041433	Indy Select Thread Adj	7041351	75-125 #/in	7041440	Nitrogen Cell	7041253	200/var #/in	.406
Indy Classic Trg.	Xtra 12	7041485	Indy Select Thread Adj	7041404	90-150 #/in	7041481	Nitrogen Cell	7041482	250#/in	.437
Indy XLT	Xtra 12	7041433	Indy Select Thread Adj	7041351	75-125 #/in	7041440	Nitrogen Cell	7041253	200/var #/in	.406
Indy XLT SP	Xtra 12	7041386	Fox IFP Gas Thread Adj	7041351	75-125 #/in	7041480	Fox IFP Gas	7041253	200/var #/in	.406
Indy XLT SKS/RMK	Xtra 10	7041430	Hyd	7041253	200/var	7041438	Indy Select	N/A	N/A	.406
Indy XLT Trg.	Xtra 12	7041486	Ryde AFX Thread Adj	7041404	90-150 #/in	7041481	Nitrogen Cell	7041482	250#/in	.437
Indy RXL	Xtra 12	7041386	Fox IFP Thread Adj	7041351	75-125 #/in	7041480	Fox IFP Gas	7041253	200/var #/in	.406
Indy Ultra SP	Xtra 10	7041402	Fox IFP Gas	7041253	200/var	7041444	Fox IFP Gas	N/A	N/A	.406
Indy Ultra SKS/RMK	Xtra 10	7041430	Hyd	7041253	200/var	7041438	Indy Select	N/A	N/A	.406
Indy Storm/SKS/RMK	Xtra 10	7041402	Fox IFP Gas	7041253	200/var	7041444	Fox IFP Gas	N/A	N/A	.406

* Add a suffix of "-067" to spring part number when ordering

1997 Independent Front Suspension (IFS)

Model	Front Suspension	Shock PN	Shock Description	IFS Spring PN*	Spring Rate
Indy Lite/GT/Deluxe	Lite	7041284	Hyd	7041261	105#/in
Indy Sport	IFS 38x7	7041535	Hyd	7041261	105#/in
Indy Sport Touring	IFS 38x7	7041562	Hyd	7041261	105#/in
Indy TranSport	IFS 38x7	7041535	Hyd	7041261	105#/in
Indy Super Sport	IFS Xtra-10	7041496	Nitrogen Cell Thread Adj.	7041396	50#/in
Indy XCF	IFS Xtra-10 CRC	7041523	Indy Select Thread Adj.	7041552	80#/in
Indy Trail/Trail Touring	IFS Xtra-10	7041496	Nitrogen Cell Thread Adj.	7041552	80#/in
Indy Trail RMK	IFS 38 RMK	7041544	Nitrogen Cell Thread Adj.	7041552	80#/in
Indy WideTrak GT/LX	IFS 38x7	7041535	Hyd	7041261	105#/in
Indy 440 LC	IFS Xtra-10	7041496	Nitrogen Cell Thread Adj.	7041552	80#/in
Indy 440 XC	IFS Xtra-10 CRC	7041593	Gas IFP Thread Adj.	7041489	120#/in
Indy 440 XCR	IFS XC-10 CRC	7041494	Gas IFP Thread Adj.	7041489	120#/in
Indy 500/SKS	IFS Xtra-10	7041496	Nitrogen Cell Thread Adj.	7041552	80#/in
Indy 500 RMK	IFS 38 RMK	7041544	Nitrogen Cell Thread Adj.	7041552	80#/in
Indy Classic	IFS Xtra-12	7041539	Nitrogen Cell Thread Adj.	7041398	75#/in
Indy Classic Touring	IFS Xtra-12	7041503	Indy Select Thread Adj.	7041551	100#/in
Indy 500 EFI	IFS Xtra-12	7041539	Nitrogen Cell Thread Adj.	7041398	75#/in
Indy XLT/SKS	IFS Xtra-10	7041538	Nitrogen Cell Thread Adj.	7041552	80#/in
Indy XLT LTD/LTD SP	IFS Xtra-12	7041503	Indy Select Thread Adj.	7041552	80#/in
Indy XLT Touring	IFS Xtra-12	7041503	Indy Select Thread Adj.	7041551	100#/in
Indy XLT RMK	IFS 38 RMK	7041543	Nitrogen Cell Thread Adj.	7041552	80#/in
Indy XLT SP	IFS Xtra-12	7041537	Gas IFP Thread Adj.	7041552	80#/in
Indy 600 XC	IFS Xtra-10 CRC	7041536	Gas IFP Thread Adj.	7041550	120#/in
Indy 600 XCR/SE	IFS Xtra-10 CRC	7041540	Gas IFP Thread Adj.	7041575	120#/in
Indy RXL	IFS Xtra-12	7041524	Ryde AFX Thread Adj.	7041550	120#/in
Indy Ultra	IFS Xtra-12	7041503	Indy Select Thread Adj.	7041550	120#/in
Indy Ultra Touring	IFS Xtra-12	7041524	Ryde AFX Thread Adj.	7041549	140#/in
Indy Ultra SP	IFS Xtra-10 CRC	7041523	Indy Select Thread Adj.	7041550	120#/in
Indy Ultra SPX/SE	IFS Xtra-10 CRC	7041540	Gas IFP Thread Adj.	7041575	120#/in
Indy 700 XC	IFS XC-10 CRC	7041494	Gas IFP Thread Adj.	70411489	120#/in
Indy 700 SKS	IFS Xtra-10 CRC	7041538	Nitrogen Cell Thread Adj.	7041552	80#/in
Indy 700 RMK	IFS 38 RMK	7041543	Nitrogen Cell Thread Adj.	7041552	80#/in
Indy Storm/SE	IFS Xtra-10	7041540	Gas IFP Thread Adj.	7041575	120#/in
Indy Storm RMK	IFS 38 RMK	7041545	Gas IFP Thread Adj.	7041574	140#/in

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 rate column are $\pm 10\%$

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SUSPENSION

Rear Suspension Specifications

1997 Rear Suspension

Model	Rear Suspension	Front Track Shock PN	Front Track Shock Desc.	Spring PN*	Spring Rate	Rear Track Shock PN	Rear Track Shock Desc.	Spring PN*	Spring Rate	Torsion Spring Dia.
Indy Lite/Dlx	Xtra Lite	7041516	Hyd	7041570	80#/in	7041515	Hyd	N/A	N/A	.393
Indy Lite GT	Xtra Lite	7041516	Hyd	7041127	181#/in	7041154	Hyd	N/A	N/A	.393
Indy Sport	Xtra Lite	7041516	Hyd	7041569	60#/in	7041515	Hyd	N/A	N/A	.393
Indy Sport Trg.	Xtra 10 133.5	7041430	Hyd	7041253	200/var	7041438	Indy Select	N/A	N/A	.421
Indy TransPort	Sport Style	7041142	Hyd	7041127	181#/in	7041154	Hyd	N/A	N/A	.406
Indy Super Sport	Xtra 10 121	7041430	Hyd	7041253	200/var	7041441	Indy Select	N/A	N/A	.406
Indy XCF	Xtra 10 121	7041596	Ryde AFX	7041253	200/var	7041597	Ryde AFX	N/A	N/A	.406
Indy Trail	Xtra 10 121	7041430	Hyd	7041253	200/var	7041441	Indy Select	N/A	N/A	.406
Indy Trail Trg.	Xtra 10 133.5	7041430	Hyd	7041253	200/var	7041438	Indy Select	N/A	N/A	.421
Indy Trail RMK	Xtra 10 133.5	7041430	Hyd	7041253	200/var	7041577	Indy Select	N/A	N/A	.421
Indy WideTrak GT	WideTrak Style	7041281	Hyd	7041140	181#/in	7041290	Hyd (2)	N/A	N/A	.468
Indy WideTrak LX	WideTrak Style	7041281	Hyd	7041140	181#/in	7041280	Hyd (2) Cam Adj	7041261	105#/in	.468
Indy 440 LC	Xtra 10 121	7041430	Hyd	7041253	200/var	7041441	Indy Select	N/A	N/A	.406
Indy 440 XC	Xtra 10 Fox™	7041507 or 7041641	IFP Gas RA	7041508	190#/in	7041492	IFP Gas	N/A	N/A	.421
Indy 440 XCR	Xtra 10 Fox™	7041641	IFP Gas RA	7041508	190#/in	7041599	IFP Gas	N/A	N/A	.421
Indy 500	Xtra 10 121	7041430	Hyd	7041253	200/var	7041441	Indy Select	N/A	N/A	.406
Indy 500 SKS	Xtra 10 133.5	7041430	Hyd	7041253	200/var	7041567	Indy Select	N/A	N/A	.406
Indy 500 RMK	Xtra 10 133.5	7041430	Hyd	7041253	200/var	7041577	Indy Select	N/A	N/A	.421
Indy Classic	Xtra 12 121	7041586	Hyd	7041351	75/125 #/in	7041587	Gas Bag	7041561	85#/in	.406
Indy Classic Trg.	Xtra 12 133.5	7041485	Indy Select	7041404	90/150 #/in	7041481	Indy Select	7041484	275#/in	.437
Indy 500 EFI	Xtra 12 121	7041586	Indy Select	7041351	75/125 #/in	7041587	Gas Bag	7041561	85#/in	.406
Indy XLT	Xtra 10 121	7041590	Hyd	7041253	200/var	7041567	Indy Select	N/A	N/A	.421
Indy XLT LTD/ LTD SP	Xtra 12 121	7041586	Indy Select	7041351	75/125 #/in	7041587	Gas Bag	7041561	85#/in	.406
Indy XLT Trg.	Xtra 12 133.5	7041486	Indy Select	7041404	90/150 #/in	7041481	Indy Select	7041484	275#/in	.437
Indy XLT SKS	Xtra 10 133.5	7041430	Hyd	7041253	200/var	7041567	Indy Select	N/A	N/A	.406
Indy XLT RMK	Xtra 10 133.5	7041430	Hyd	7041253	200/var	7041577	Indy Select	N/A	N/A	.421
Indy XLT SP	Xtra 12 121 Fox™	7041386	IFP Gas	7041351	75/125 #/in	7041480	IFP Gas	7041561	85#/in	.406

* Add a suffix of "-067" to spring part number when ordering

SUSPENSION Rear Suspension Specifications

1997 Rear Suspension Cont.

Model	Rear Suspension	Front Track Shock PN	Front Track Shock Desc.	Spring PN*	Spring Rate	Rear Track Shock PN	Rear Track Shock Desc.	Spring PN*	Spring Rate	Torsion Spring Dia.
Indy 600 XC	Xtra 10 121 Fox™	7041584	IFP Gas	7041253	200/var	7041585	IFP Gas	N/A	N/A	.421
Indy 600 XCR/ SE	Xtra 10 121 Fox™	7041589	IFP Gas	7041253	200/var	7041595	IFP Gas	N/A	N/A	.421
Indy RXL	Xtra 12 121	7041559	AFX	7041351	75/125 #/in	7041560	Ryde AFX	7041561	85 #/in	.406
Indy Ultra	Xtra 12 121	7041433	Indy Select	7041351	75/125 #/in	7041440	Gas Bag	7041364	126#/in	.406
Indy Ultra SP	Xtra 10 121	7041590	Hyd	7041253	200/var	7041567	Indy Select	N/A	N/A	.421
Indy Ultra Trg.	Xtra 12 133.5	7041594	AFX	7041404	90/150 #/in	7041548	Ryde AFX	7041484	275#/in	.437
Indy Ultra SPX/ SE	Xtra 10 121 Fox™	7041589	IFP Gas	7041253	200/var	7041595	IFP Gas	N/A	N/A	.421
Indy 700 SKS/ RMK	Xtra 10 133.5	7041606	Hyd	7041253	200/var	7041438	Indy Select	N/A	N/A	.421
Indy Storm/SE	Xtra 10 121 Fox™	7041589	IFP Gas	7041253	200/var	7041595	IFP Gas	N/A	N/A	.421
Indy Storm RMK	Xtra 10 133.5	7041589	IFP Gas	7041253	200/var	7041588	IFP Gas	N/A	N/A	.421

* Add a suffix of "-067" to spring part number when ordering

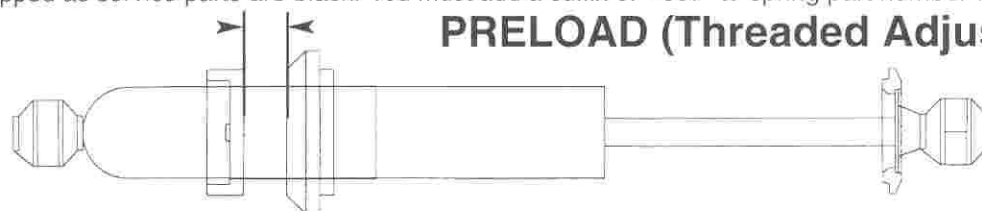
SUSPENSION

1998 IFS Data - Set-Up & Adjustment

1998 Model	Front Suspension Type	Shock Description	IFS Shock PN	IFS Spring PN*	Spring Rate	Spring Pre-Load
Lite/Lite Dlx/Lite Trg	Lite	Hyd	7041284	7041261	105#/in	3 Shims
Sport	IFS 38x7	Hyd	7041535	7041261	105#/in	1 Shim
TransPort	IFS 38x7	Hyd	7041535	7041261	105#/in	3 Shims
Sport Touring	IFS 38x7	N Cell Thr Adj.	7041562	7041598	105#/in	.13"
XCF	IFS Xtra-10 CRC	Select Thr Adj.	7041523	7041552	80#/in	1.0"
Super Sport	IFS Xtra-10	N Cell Thr Adj.	7041496	7041552	80#/in	1.0"
Trail	IFS Xtra-10	N Cell Thr Adj.	7041496	7041552	80#/in	.75"
Trail Touring	IFS Xtra-10	N Cell Thr Adj.	7041496	7041683	80#/in	.13"
Trail RMK	IFS 38 RMK	N Cell Thr Adj.	7041544	7041552	80#/in	.3"
WideTrak LX	IFS 38x7	Hyd	7041535	7041261	105#/in	3 Shims
440 LC	IFS Xtra-10	N Cell Thr Adj.	7041496	7041552	80#/in	.8"
440 XCR	IFS XC-10 CRC	Gas IFP Thr Adj.	7041692	7041489	74/120#	.625
500	IFS Xtra-10 CRC	N Cell Thr Adj.	7041496	7041552	80#/in	.8"
500 RMK	IFS 38 RMK	N Cell Thr Adj.	7041544	7041552	80#/in	.6"
Classic	IFS Xtra-12	N Cell Thr Adj.	7041539	7041405	65#/in	.75"
Classic Touring	IFS Xtra-12	Select Thr Adj.	7041503	7041551	100#/in	.4"
XLT LTD	IFS Xtra-12	Select Thr Adj.	7041503	7041398	75#/in	.25"
XLT Touring	IFS Xtra-12	Select Thr Adj.	7041503	7041550	120#/in	.13"
XLT SP	IFS Xtra-10 CRC	Select Thr Adj.	7041523	7041405	65#/in	.75"
XLT Classic	IFS XTRA-12	Select Thr Adj.	7041503	7041398	75#/in	.75
600 XC	IFS XC-10 CRC	Gas IFP Thr Adj.	7041697	7041613	75#/in	.75"
600 XCR	IFS Xtra-10 CRC	Gas IFP Thr Adj.	7041540	7041575	120#/in	1.5"
600 RMK	IFS 38 RMK CRC	N Cell Thr Adj.	7041543	7041551	100#/in	.13"
Ultra	IFS Xtra-12	Select Thr Adj.	7041503	7041550	120#/in	.13"
Ultra Touring	IFS Xtra-12	Ryde AFX Thr Adj.	7041524	7041549	140#/in	.63"
700 XC	IFS XC-10 CRC	Gas IFP Thr Adj.	7041697	7041613	75#/in	.75"
700 XCR	IFS Xtra-10 CRC	Gas IFP Thr Adj.	7041540	7041575	120#/in	1.5"
700 RMK	IFS 38 RMK CRC	N Cell Thr Adj.	7041543	7041551	100#/in	.13"
Storm	IFS Xtra-10	Gas IFP Thr Adj.	7041540	7041575	120#/in	1.55"

KEY: Hyd - Hydraulic Standard Shock; Gas IFP - Gas Charged Internal Floating Piston, Fox Rebuildable Shock; Select - Gabriel Select Adjustable Shock, non-rebuildable; Ryde AFX; Ryde AFX Adjustable Shock, non-rebuildable; N Cell - Nitrogen Cell; Thr Adj. - Threaded Adjuster; **NOTE:** All pounds referred to in the spring rate column are $\pm 10\%$

*All springs shipped as service parts are black. You must add a suffix of "-067" to spring part number when ordering



SUSPENSION

1998 Rear Suspension Data

Model	Rear Suspension	Front Track Shock PN	Front Track Shock (Type)	Front Track Shock Spring PN*	Front Track Shock Spring Rate (lb./in.)	Rear Track Shock PN	Rear Track Shock Desc.	Torsion Spring Part Number* Left / Right (Rear Track Shock Spring)	Torsion Spring Diameter / Angle (Rear Shock Spring Rate)	
Lite/Dlx	Xtra Lite	7041516	Hyd	7041570	80#/in	7041665	Hyd	7041557/7041558	.393	80°
Lite Trng	Xtra Lite-133	7041516	Hyd	7041570	80#/in	7041666	Hyd	7041461/7041462	.421	77°
Sport	Xtra Lite	7041516	Hyd	7041569	60#/in	7041665	Hyd	7041521/7041522	.406	82°
Sport Trng	Xtra Lite 133	7041516	Hyd	7041570	80#/in	7041666	Hyd	7041461/7041462	.421	77°
TranSport	141 GT	7041719	Hyd	7041710	181#/in	7041154	Hyd	7041320/7041321	.406	75°
XCF	Xtra-10	7041596	Ryde AFX	7041253	200/var	7041667	Ryde AFX	7041463/7041464	.406	77°
440 LC	Xtra-10	7041430	Hyd	7041253	200/var	7041441	Select	7041463/7041464	.406	77°
440 XCR	Xtra 10	7041706	FOX IFP	7041508	190#/in	7041707	FOX IFP	7041461/7041462	.421	77°
Trail	Xtra 10	7041430	Hyd	7041253	200/var	7041441	Select	7041463/7041464	.406	77°
Trail Trng	Xtra 10 133.5	7041430	Hyd	7041253	200/var	7041438	Select	7041465/7041466	.437	77°
Trail RMK	Xtra 10 133.5	7041430	Hyd	7041253	200/var	7041577	Select	7041461/7041462	.421	77°
Super Sport	Xtra 10	7041430	Hyd	7041253	200/var	7041441	Select	7041463/7041464	.406	77°
WideTrak LX	WideTrak 156	7041711	Hyd	7041712	181#/in	7041280	Hyd	7041239/7041240	.468	74°
500	Xtra 10	7041430	Hyd	7041253	200/var	7041441	Select	7041463/7041464	.406	77°
500 RMK	Xtra 10 133.5	7041430	Hyd	7041253	200/var	7041577	Select	7041461/7041462	.421	77°
Classic	Xtra 12	7041586	Select	7041351	75/125	7041587	Gas Bag	7041394/7041395 (7041561)	.406 (85#/in)	55° —
Classic Trg	Xtra 12 133.5	7041485	Select	7041404	90/150 #/in	7041481	Select	7041487/7041488 (7041484)	.437 (275#/in)	77° —
XLT SP	Xtra-10	7041639	Ryde FX	7041253	200/var	7041694	Ryde AFX	7041461/7041462	.421	77°
XLT LTD	Xtra 12	7041586	Select	7041351	75/125	7041587	Gas Bag	7041394/7041395 (7041561)	.406 (85#/in)	55° —
XLT Trng	Xtra 12 133.5	7041486	Select	7041404	90/150	7041481	Select	7041487/7041488 (7041484)	.437 (275#/in)	77° —
XLT Classic	Xtra 12	7041559	AFX/Elect	7041351	75/125	7041560	Ryde AFX	7041394/7041395 (7041561)	.406 (85#/in)	55° —
600 XC	Xtra 10	7041639	Ryde FX	7041253	200/var	7041640	Ryde AFX	7041461/7041462	.421	77°
600 RMK	Xtra-10 136	7041606	Hyd	7041253	200/var	7041438	Select	7041461/7041462	.421	77°
600 XCR	Xtra 10	7041642	FOX IFP	7041253	200/var	7041695	FOX IFP	7041461/7041462	.421	77°
Ultra	Xtra 12	7041433	Select	7041351	75/125	7041440	Gas Bag	7041394/7041395 (7041364)	.406 (126#/in)	55° —
Ultra Trng	Xtra 12 133.5	7041594	Select	7041404	90/150	7041548	Ryde AFX	7041487/7041488 (7041484)	.437 (275#/in)	77°
700 XC	Xtra-10	7041639	Ryde FX	7041253	200/var	7041640	Ryde AFX	7041461/7041462	.421	77°
700 XCR	Xtra 10	7041642	FOX IFP	7041253	200/var	7041695	FOX IFP	7041461/7041462	.421	77°
700 RMK	Xtra 10 136	7041606	Hyd	7041253	200/var	7041438	Select	7041461/7041462	.421	77°
Storm	Xtra 10	7041642	FOX IFP	7041253	200/var	7041695	FOX IFP	7041461/7041462	.421	77°

*All springs shipped as service parts are black. You must add a suffix of "-067" to spring part number when ordering.

SUSPENSION

IFS - Torsion Bar

Adjustable Torsion Bar

Operation: For high performance applications the torsion bar can be adjusted for any number of varying conditions.

Adjustment: Each side is individually adjustable.

1. Rider must be in position on the machine.
2. Loosen rod end jam nuts on both left and right sides.
3. Adjust rod until there is a small amount of free play detectable on all rod ends.
4. Tighten jam nuts securely.

Maintenance: Periodic inspection of the support area, set screw and bar arm bolts is recommended to prevent arm to spline loosening. Periodic lubrication of the bushings is required using Polaris Low Temp or Premium All Season grease.

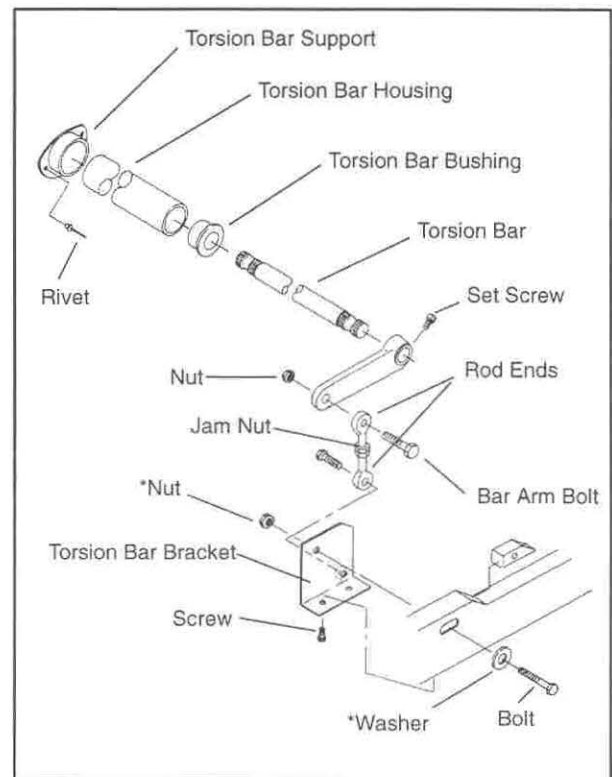
NOTE: Refer to kit instructions for proper assembly.

Polaris Low Temp Grease PN 2870577

**Polaris Premium All Season Grease
PN 2871423**

Adjustable Torsion Bar Kit

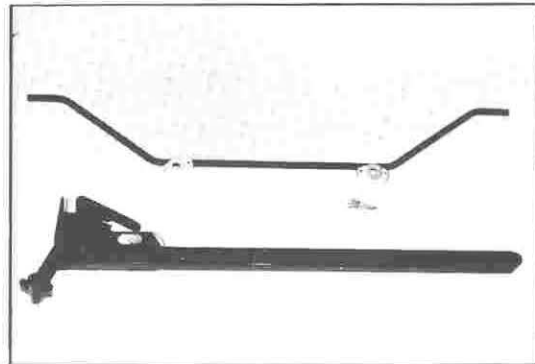
PN 2871035



*Parts for new style liquid twin models.

Torsion Bar Removal

1. Remove trailing arm assembly.
2. Using a small pin punch, tap out the rivet mandrels in the center of the torsion bar support rivets.
3. Using a 1/4" bit, drill out the center portion of the rivets.
4. Punch out the rivet body.
5. Remove support and torsion bar.
6. Repeat procedure for second torsion bar.

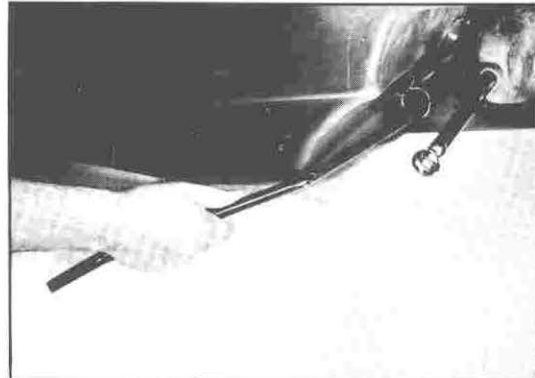


Torsion Bar Installation

1. Rivet support in place using Polaris PN 7621449 rivets. **NOTE:** These high strength "Q" rivets are the only replacement rivets recommended for this application.

Torsion Bar Support Rivets

PN 7621449



2. Reinstall torsion bar.
3. Reinstall trailing arm assembly.
4. Check camber and toe adjustments. Refer to Chapter 2.

NOTE: Accurate set up is critical for proper function of front suspension. Refer to Body and Steering, Chapter 7, for set up dimensions.

SUSPENSION

Rear Suspension Operation

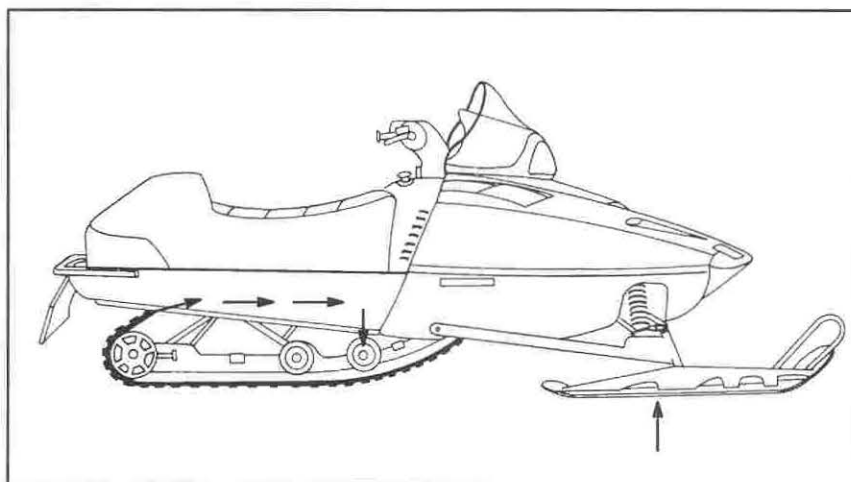
Rear Suspension Operation

The primary function of the rear suspension is to provide a comfortable ride in all types of riding conditions. It separates the rider from the ground, while allowing for complete vehicle control. The rear suspension also must provide weight transfer and maintain track tension.

The rear suspension has many adjustable features for fine tuning to achieve optimum comfort. The suspension can be adjusted to suit rider preference and deliver excellent performance for a given set of conditions. It should be noted, however, that suspension adjustments involve a compromise or trade off. A machine set up to perform well in the moguls would not suit the preference of a groomed trail rider.

Weight Transfer

The shifting of weight from the skis to the track is called weight transfer. As engine torque is applied to the drive axle the torque is transferred to the track, pulling it forward. This energy also tries to pull the suspension forward. The front torque arm reacts to this force by pushing down on the front of the track, in effect applying more weight to the track and reducing the weight on the skis. It is important to note that energy used to lift the front of the machine is not available to push the vehicle forward.



Changing the angle of the front torque arm changes the suspension's reaction to the force. Adjusting the length of the limiter strap will change the front torque arm angle. Shortening the strap limits the extension of the front of the suspension; reducing the angle of the torque arm and increasing ski pressure. Lengthening the strap allows the front of the suspension to extend further; increasing the angle of the torque arm and decreasing ski pressure. Limiter strap adjustment has a great affect on weight transfer. It is important to check track tension whenever limiter strap length is changed.

Front track shock spring preload also affects weight transfer. A stiffer spring and/or more preload on the spring transfers more weight to the track. A softer spring and/or less preload keeps more weight on the skis. Keep your riding application in mind when choosing springs and setting spring preload. Soft springs/preload will increase ski pressure, but may bottom out. Stiff springs/preload will provide more track pressure (reduced ski pressure), but may result in a less comfortable ride.

During acceleration, the rear of the suspension will compress and the IFS will extend, pivoting the machine. Because of this pivoting effect, rear spring and spring preload also have some effect on weight transfer. Softer rear springs, or less preload, allow more weight transfer to the track and reduce ski pressure. Stiffer rear springs, or increased preload, allow less weight transfer to the track and increase ski pressure. The main function of the rear torque arm is to support the weight of the vehicle and rider, as well as to provide enough travel to absorb bumps and jumps.

Shock valving also has an effect on weight transfer. Refer to shock tuning information beginning on page 8.83.

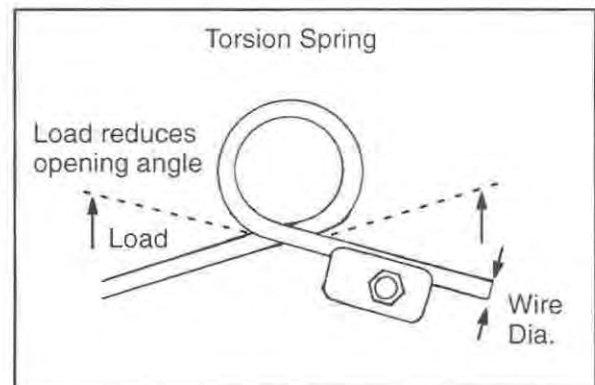
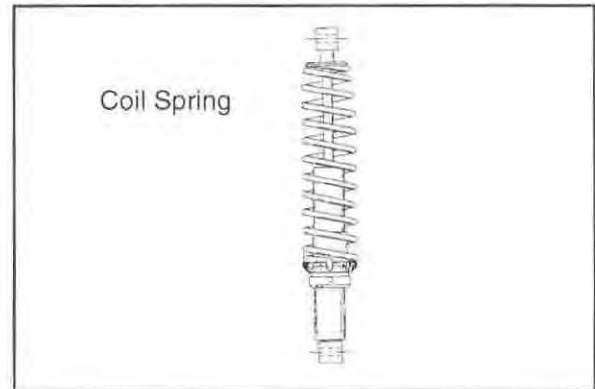
Springs

Two types of springs are employed in Polaris suspensions, coil springs and torsion springs. Following is some of the terminology used when referring to coil springs.

- *Free length* - the length of a coil spring with no load applied to the spring
- *Installed length* - the length of the shock absorber between the spring retainers. If the installed length of the spring is less than the free length, it will be pre-loaded.
- *Spring rate* - the amount of force required to compress a coil spring one inch. For example, if 150 pounds of force are required to compress a spring 1 inch, the spring rate would be 150 #/in.
- *Straight rate spring* - the spring requires the same amount of force to compress the last one inch of travel as the first one inch of travel. For example, if a 150 #/in. spring requires 150 pounds of force to compress it one inch, 300 pounds of force would compress it two inches, 450 pounds of force would compress it three inches, etc.
- *Progressively wound spring* - the rate of the spring increases as it is compressed. For example, a 100/200 #/in. rate spring requires 100 pounds of force to compress the first one inch, but requires 200 additional pounds to compress the last one inch.

When a bump is encountered by the suspension, the force of the bump compresses the spring. If the force were 450 pounds, a 100 #/in. spring would compress 4.5 inches. A 150 #/in. spring would only compress 3 inches. If the suspension had 4 inches of spring travel the 100 #/in. spring would bottom out, while the 150 #/in. spring would have one inch of travel remaining.

Torsion springs are much like coil springs, although shaped differently. The rate of the torsion spring is controlled by the free opening angle, the installed opening angle, and the wire diameter of the spring.



SUSPENSION

Rear Suspension Tuning

Many factors influence the overall handling characteristics of snowmobile suspensions. Rider weight, riding style, course conditions, and the condition of suspension components are some of the things that you have to consider when tuning a suspension.

On new machines, or whenever new suspension parts are installed, the sled should be ridden for at least one tank of fuel to allow moving parts in the shocks and suspension to wear in. The shock springs will also take their initial set and the setup will be more accurate.

Suspension Tuning

To begin suspension tuning, check the condition of shocks and other suspension parts.

Begin by taking the shocks apart, inspecting all parts for damage, and changing the oil. Even new shocks should get an oil change after break in to clean break-in material from the shocks and valve body.

If oil is low, inspect seal cap O-Ring and seals for damage. If air or foam is evident in the oil, the O-Ring in the floating piston must be replaced. After changing the oil reassemble shocks, making sure oil level, floating piston depth (IFP), and nitrogen pressure are correct.

The use of nitrogen in Fox™ shocks provides consistent damping at extreme temperatures. Don't overcharge the shocks. Excess nitrogen pressure may cause seal "stiction" and prevent proper shock action. If too much oil is added, or if the IFP depth is set incorrectly (too low) shock travel will be limited.

Inspect and grease all suspension parts, making sure they pivot freely. All suspension components should be greased when disassembled. Regular maintenance greasing should be done with no weight on the component to allow grease to reach important contact areas.

When everything is working correctly, set the preload on the springs for the correct sag. There should be 1 1/2" of sag on the rear suspension when you sit on the snowmobile, measured at the rear bumper. Bounce on the suspension a couple of times to overcome any "stiction" and settle the sled to an accurate reference point. The rider should have their weight placed correctly on the machine. Adjust spring preload to achieve the 1 1/2" sag dimension.

When they get off the machine it should return to 1/2" of sag. If the sag is less than 1/2" stiffer springs may be needed. If it is greater than 1/2" softer springs may be needed. This may seem backwards at first, but if the spring is too soft, the preload must be greatly increased to prevent excess sag. This shows up in the form of less unloaded sag. Therefore, a stiffer spring is required. If the spring is too stiff, the preload will have to be backed off, and unloaded sag will be excessive. This is a very important step because the proper spring will also help ensure proper weight transfer.

The front suspension should sag about 1" (measured at the front bumper) with the weight of the sled on it. Use stiffer or softer springs as needed to keep from bottoming too hard, to ensure using all the travel.

Shock Tuning

The shocks work in two directions. Compression damping prevents the shock from bottoming hard while rebound damping keeps the shock from springing back too fast. Both compression and rebound damping can be adjusted for high and low speed damping characteristics. **NOTE:** When we refer to high and low speed, we are referring to the speed of the shock shaft or valve, *not* vehicle speed.

To check low speed shock valving, drive the machine through rounded, soft bumps. Feel what each area of the snowmobile is doing so you can tell which shocks need to be adjusted. Low speed valving may also be checked on small chatter bumps, but the machine's reactions will be more difficult to feel.

The ideal low speed rebound valving allows the machine to return to full up position quickly, but not so fast that it pushes you off the seat or bounces the skis up. The ideal low speed compression valving uses most or all of the travel, without bottoming out. The idea is to keep the skis and the track on the ice or snow without bouncing or a harsh ride.

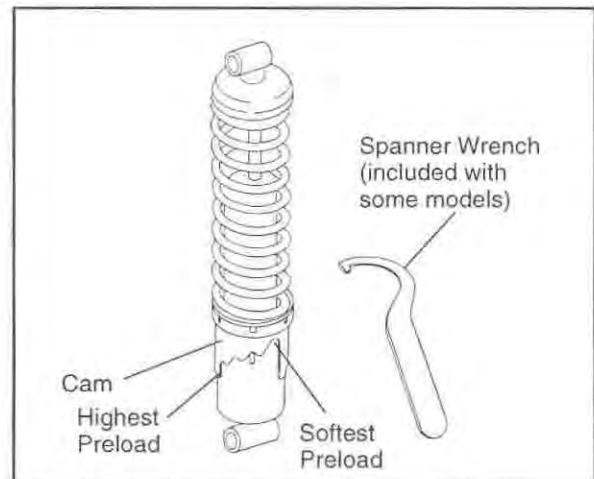
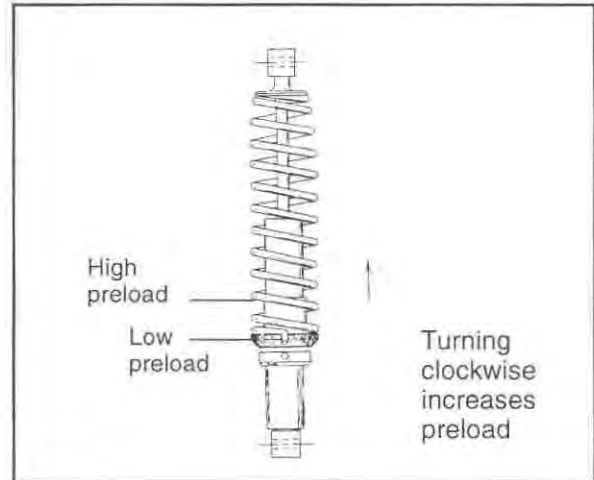
Front Shock Spring Preload Adjustment

The XTRA 10 and XTRA 12 suspension systems on Polaris snowmobiles have been designed to provide the rider with a wide range of adjustment.

Generally, the softest spring and spring preload adjustment give the best ride and also the best traction. Front shock spring preload will affect the ride height of the machine, the amount of rear suspension sag, and ski pressure or steering effort.

Spring preload should be adjusted equally on both sides of the machine. Ski pressure must be equal to prevent undesirable handling characteristics. The front shock spring preload can be adjusted by grasping the spring and turning in a clockwise direction, (as viewed from the bottom), to increase preload.

NOTE: Access to the cam with the spanner wrench is easiest from the inside of the ski.



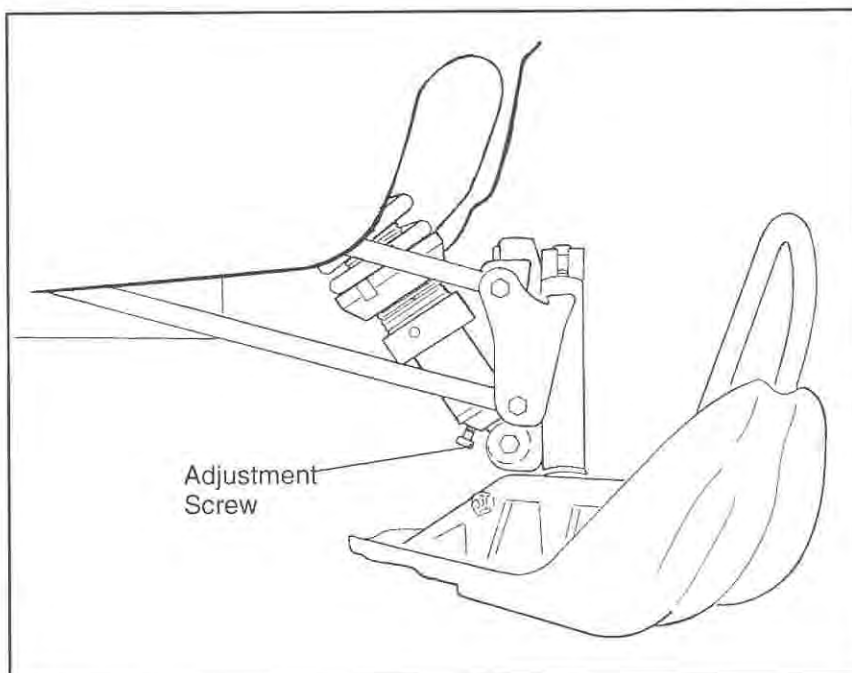
SUSPENSION

Indy Select / Ryde AFX Shock Adjustment

Indy Select / Ryde AFX IFS Shock

Snowmobiles equipped with adjustable compression damping IFS shocks, will allow the driver to make adjustments to the compression valving of the front shocks by turning the screws located near the base of the shocks.

By turning the screw clockwise, the compression of the shock is increased, stiffening the ride. By turning counter clockwise, the compression is decreased, softening the ride. The factory setting is in the softest position. (Screw all the way out - counterclockwise). If bottoming occurs, the compression damping should be used in conjunction with the spring preload to achieve the desired ride affect. 1/2 of a turn will affect the ride considerably. There are approximately 3 turns of adjustment available.



Indy Select / Ryde AFX Rear Track Shock

Snowmobiles equipped with rear adjustable compression damping rear track shocks will allow the driver to make adjustments to the compression valving of the rear shock by turning the screw located near the base of the shock.

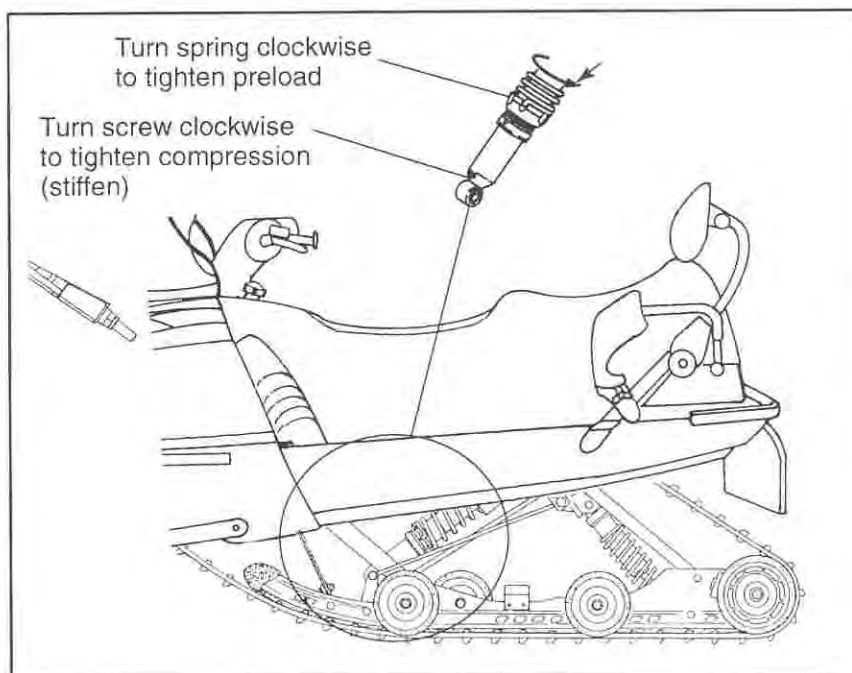
Adjustment

Locate the adjustment screw near the base of the shock. **NOTE:** This adjustment is easiest to make with the machine tipped on its side.

WARNING

Be sure to shut off the fuel supply before tipping the machine to prevent fuel spillage and flooding of the carburetors.

By turning the screw clockwise (a small screwdriver or dime work well), the compression valving is increased, stiffening the ride. To soften the ride, reduce the compression by turning the screw counter-clockwise. A great deal of ride performance is accomplished with a mere 1/2 to 1 turns. There are approximately 3 full turns of adjustment available.



SUSPENSION

Rear Suspension Adjustment

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

The suspension can be adjusted to suit rider preference and deliver excellent performance for a given set of conditions. It should be noted, however, that suspension adjustments involve a compromise or trade off. A machine set up to perform well in the moguls would not suit the preference of a groomed trail rider.

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 identification chart on page 8.3 to identify suspension type (e.g. 1996 Indy Classic - Xtra 12). Adjustment procedures for each type are explained later in this section.

Adjustable Features and Adjustment Options

Following is a list of possible adjustment features and options. Not all features apply to all suspension types.

Independent Front Suspension (IFS)

- Front shock spring preload
- Optional springs
- Optional shock valving
- Indy Select / Ryde AFX adjustable compression rate

Rear Suspension

- Spring preload - front track shock
- Spring preload - rear track shock
- Rear torsion spring
- Front rear scissor stop (FRSS)
- Rear rear scissor stop (RRSS)
- Optional coil springs
- Optional torsion springs
- Optional shock valving
- Limiter strap - front
- Limiter strap - rear
- Indy Select / Ryde AFX adjustable compression rate

SUSPENSION

1996 Tunnel Mounting Positions

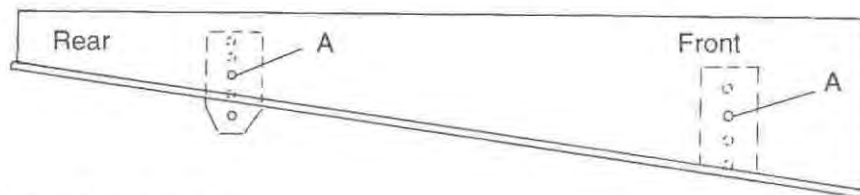
Tunnel Mounting Positions for Deep Snow Operation

Suspension Mounting Bolt Torque:

7/16" 60 ft.lbs. (8.28 Kg-m)

3/8" 40 ft.lbs. (5.52 Kg-m)

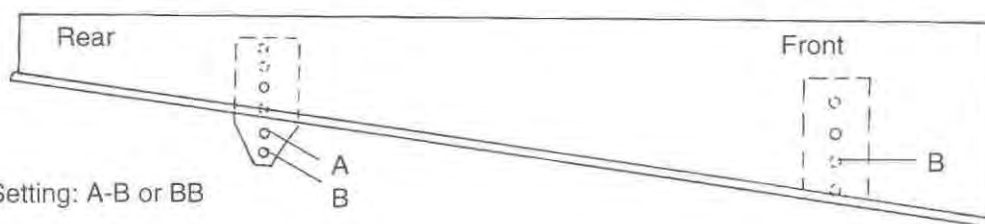
121" Standard Length Tunnel All Models



Factory Setting: A-A

Any Other Combination will Result in Tunnel Damage

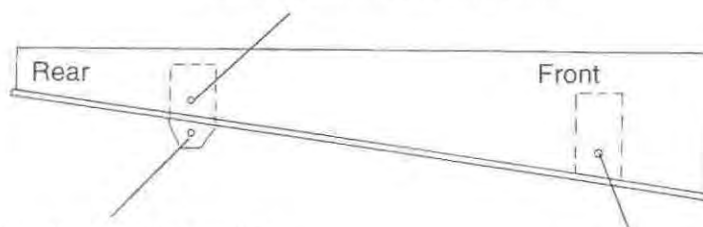
133" SKS Length Tunnel All Models



Factory Setting: A-B or BB

Tunnel Mounting Positions - XTRA 10 133"

133" SKS stock mounting position.
Optional position - lower hole.



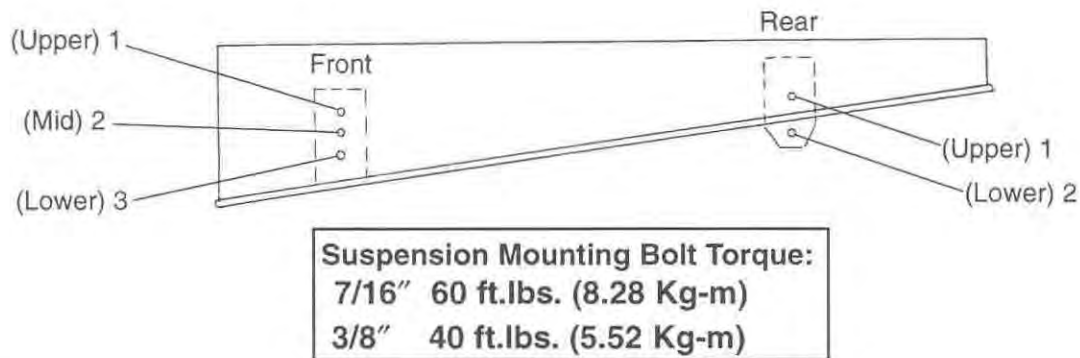
133" RMK stock mounting position.
No optional positions for maximum deep
snow performance.

Front torque arm
stock mounting position.
No optional positions.

For improved deep snow performance, tighten the front limiter strap 5/8 - 3/4" (1.59 - 1.91 cm).

NOTE: XTRA 10 121", XTRA 12 121", and XTRA 12 133" have no optional tunnel mounting positions. XTRA 12 front limiter strap may be shortened for more ski pressure and lower track approach angle.

1997 Model Tunnel Mounting Positions



Model	Front Torque Arm Tunnel Position	Rear Mount Location	Optional Positions* (Front/Rear)
Indy Lite/Deluxe/GT	Fixed	Fixed	None
Indy Sport/TranSport	Fixed	Fixed	None
Indy Sport Touring	Mid	Upper	1/2
Indy Super Sport / XCF	Upper	Fixed	2/1
Indy Trail	Upper	Fixed	2/1
Indy Trail Touring	Mid	Upper	1/2
Indy Trail RMK	Mid	Lower	1/1, 2/1, 3/2
WideTrak GT/LX	Fixed	Fixed	None
Indy 440 / 440 XC	Upper	Fixed	2/1
Indy 500	Upper	Fixed	2/1
Indy 500 SKS	Upper	Upper	2/1, 2/2, 3/2
Indy 500 RMK	Mid	Lower	1/1, 2/1, 3/2
Indy 500 Classic/Touring/EFI	Fixed	Fixed	None
Indy XLT	Upper	Fixed	2/1
Indy XLT LTD/Touring/SP/ LTD SP	Fixed	Fixed	None
Indy XLT SKS	Upper	Upper	2/1, 2/2, 3/2
Indy XLT RMK	Mid	Lower	1/1, 2/1, 3/2
Indy 600 XC	Upper	Fixed	2/1
Indy 600 XCR/SE	Mid	Fixed	1/1
Indy RXL	Fixed	Fixed	None
Indy Ultra/Touring	Fixed	Fixed	None
Indy Ultra SP	Upper	Fixed	2/1
Indy Ultra SPX/SE	Mid	Fixed	1/1
Indy 700 SKS	Mid	Upper	1/1, 2/2, 3/2
Indy 700 RMK	Mid	Lower	1/1, 2/1, 3/2
Indy Storm/SE	Mid	Fixed	1/1
Indy Storm RMK	Mid	Lower	1/1, 2/1, 3/2

* **CAUTION:** Use only combinations specified to prevent track and drive train damage. Always install bolts (PN 7517289) and nuts (PN 7542453) in open mounting holes to prevent tunnel damage.

SUSPENSION

Tunnel Mounting

1998 Rear Suspension Set Up / Tunnel Mounting Positions

Model	Front Track Shock Mount	Front Torque Arm Tunnel Position	Rear Torque Arm Tunnel Mount	Options
Lite/Dlx	N/A	#3	Fixed	No Optional Mounting Positions
Lite Trng	N/A	#2	Fixed (Below)	
Sport	N/A	#3	Fixed	
Sport Trng	N/A	#1	Fixed (Below)	
TranSport	N/A	#2	Fixed	
XCF	Lower	#1	Fixed	
440 LC	Lower	#1	Fixed	
440 XCR	Lower	#1	Fixed	
Trail	Lower	#1	Fixed	
Trail Trng	Lower	#1	Fixed (Below)	
Trail RMK	Upper	#2	Fixed (Below)	
Super Sport	Lower	#1	Fixed	
WideTrak LX	N/A	#3	Fixed	
500	Lower	#1	Fixed	
500 RMK	Upper	#2	Fixed (Below)	
Classic	N/A	Fixed	Fixed	
Classic Trg	N/A	Fixed	Fixed	
XLT SP	Lower	#2	Fixed	
XLT LTD	N/A	Fixed	Fixed	
XLT Trng	N/A	Fixed	Fixed	
XLT Classic	N/A	Fixed	Fixed	
600 XC	Lower	#2	Fixed	
600 RMK	Upper	#2	Fixed (Below)	
600 XCR	Lower	#2	Fixed	
Ultra	N/A	Fixed	Fixed	
Ultra Trng	N/A	Fixed	Fixed	
700 XC	Lower	#2	Fixed	
700 XCR	Lower	#2	Fixed	
700 RMK	Upper	Fixed	Fixed (Below)	
Storm	Lower	#2	Fixed	

NOTE: There are no optional front torque arm mounting positions. Do not re-locate the front torque arm.

SUSPENSION

Hi-Fax Inspection / Replacement

Hi-Fax Replacement - All Models

Hi-Fax replacement on all Polaris models is similar. When any area of the Hi-Fax 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, improper track adjustment or machine operation on surfaces without snow.

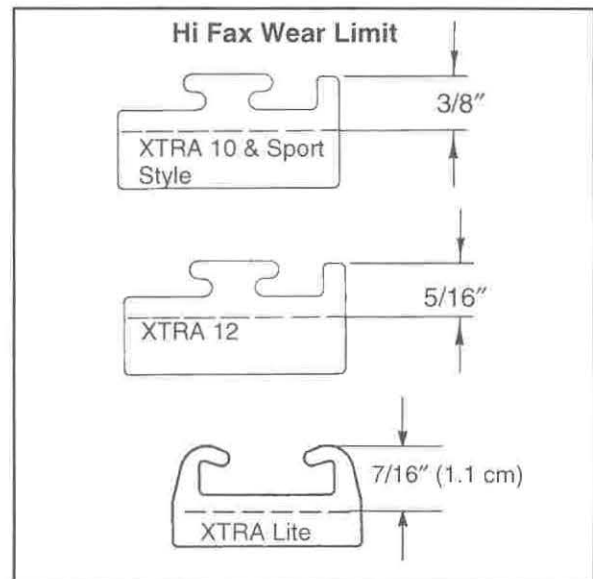
Replace Hi-Fax when worn to $5/16"$ (.79 cm) on XTRA 12 suspensions; $3/8"$ (.95 cm) on XTRA 10 and Sport style suspensions; $7/16"$ (1.1 cm) on XTRA Lite style suspensions.

Suggested Hi Fax Wear Limit:

XTRA 12 - $5/16"$ (.79 cm)

XTRA 10 & Sport Style - $3/8"$ (.95 cm)

XTRA Lite - $7/16"$ (1.1 cm)



Hi-Fax wear patterns are somewhat different on machines equipped with the XTRA 12 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.

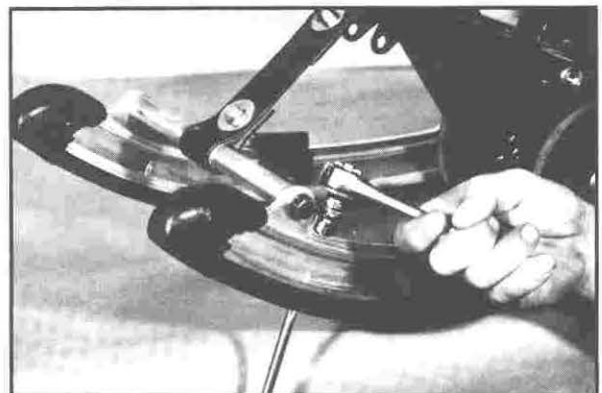
New Hi-Fax are best used in deep snow conditions. Marginal snow or hard-pack conditions are better suited to worn Hi-Fax, or Hi-Fax which have been cured or broken in.

Hi-Fax Removal

1. Remove suspension from machine.

NOTE: Some models may allow Hi Fax to be removed by sliding it through track windows with the suspension mounted in the machine.

2. Remove front Hi-Fax retaining bolt as shown.

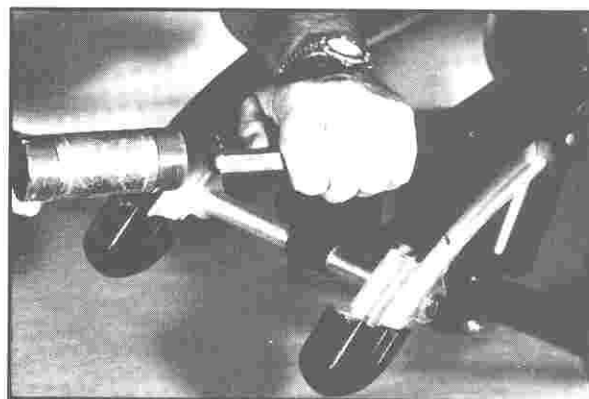


SUSPENSION Hi-Fax Replacement

3. Use a block of wood or a drift punch and hammer to drive Hi-Fax rearward off the slide rail.
4. With Hi-Fax material at room temperature, install new Hi-Fax by reversing steps 1 - 3.

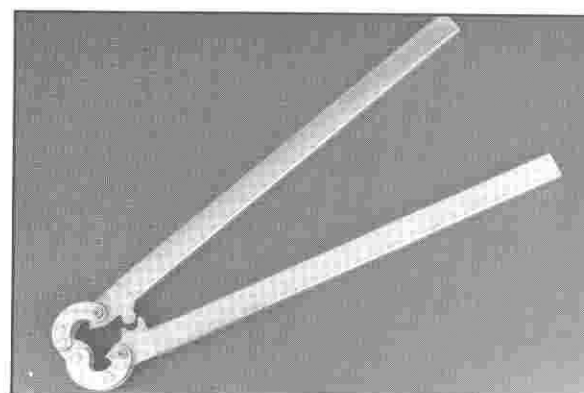
NOTE: Lightly coat Hi-Fax track clip area with a lubricant such as LPS2 or WD-40 to ease installation.

NOTE: Wide Hi-Fax should be narrowed on the leading sides to allow it to fit through narrow windows.



Track Clip Removal - All Types

1. Position removal tool jaws on edge of clip.
2. Squeeze handles together to spread clip.
3. Remove clip.

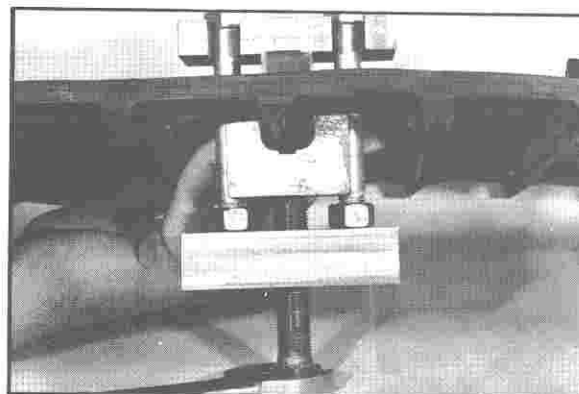


Track Clip Replacement - Yokohama

1. Install replacement clip and clipping tool 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.

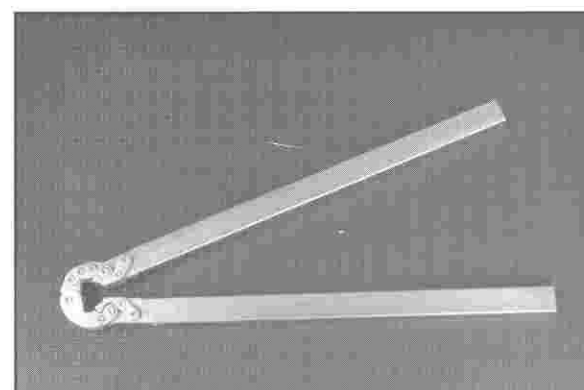


Track Clip Replacement - Camoplast

1. Place new clip in position on track.
2. Connect clip installation tool on top of clip.
3. Squeeze handles together to crimp new clip.

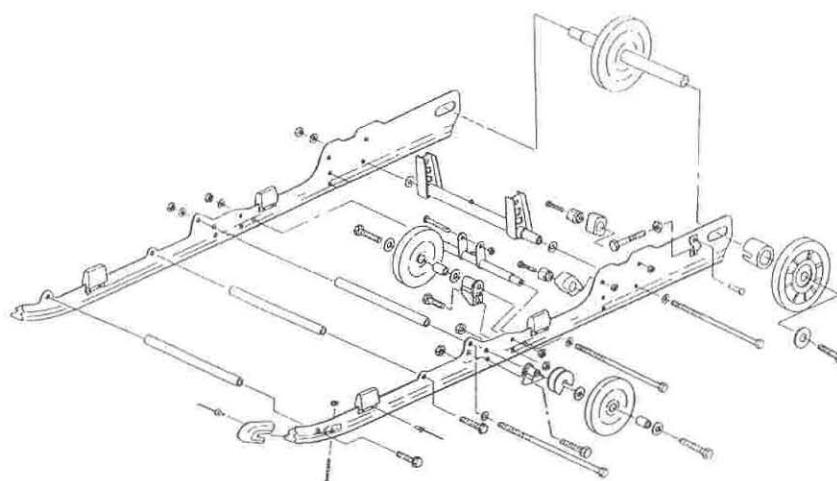
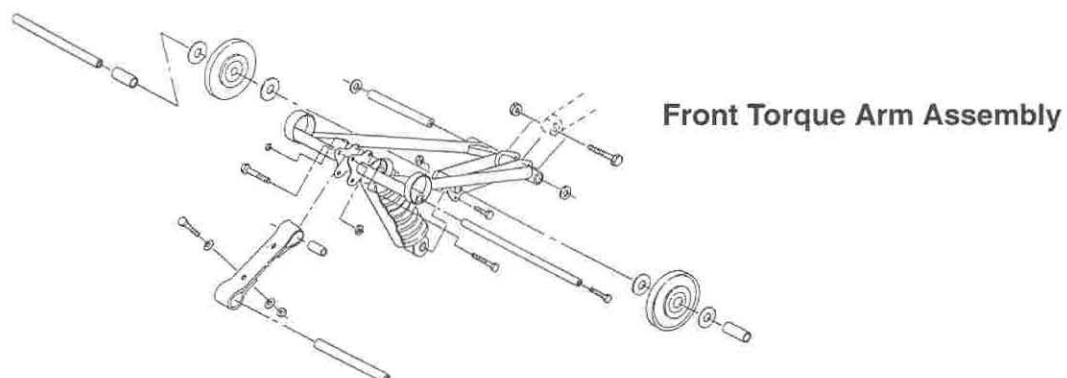
Track Clip Installation Tool (Camoplast)
PN 2871041

Track Clip Installation Tool (Yokohama)
PN 2870380



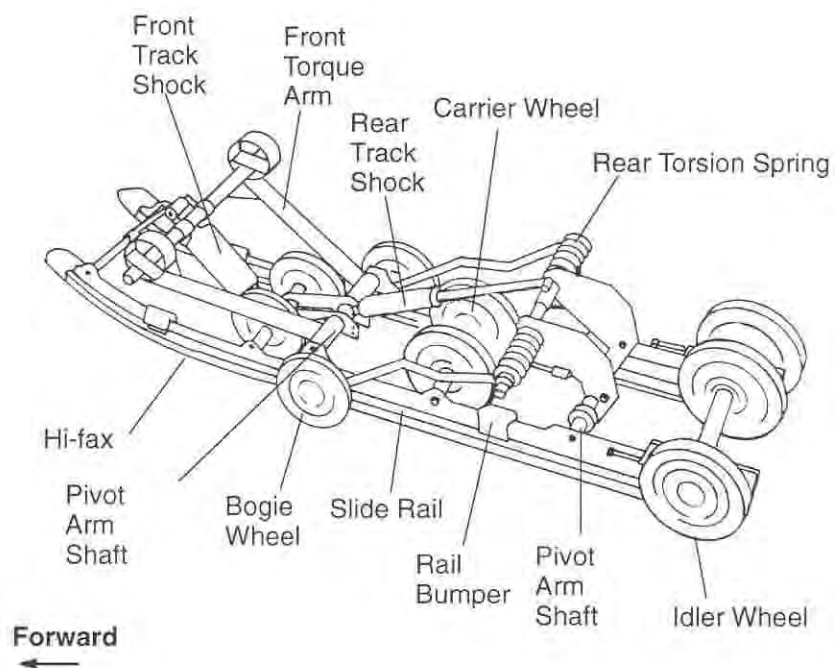
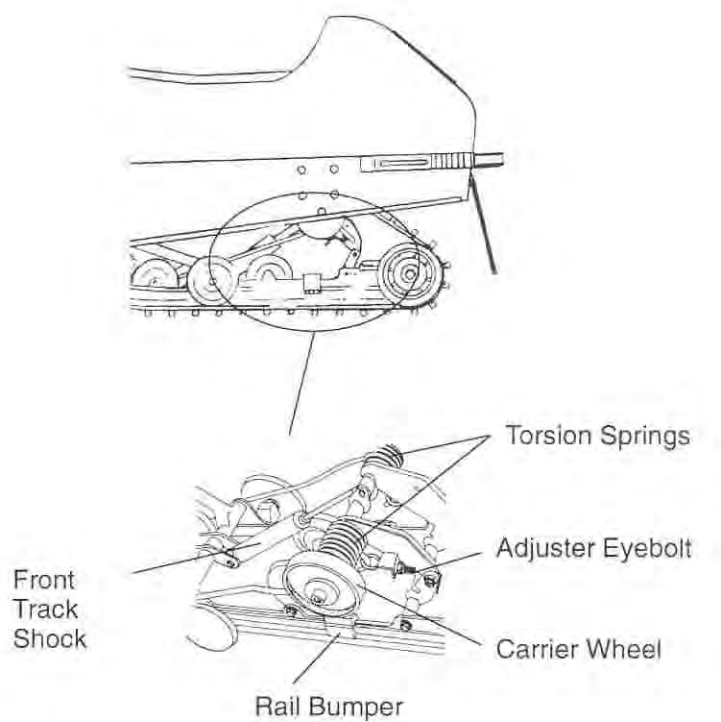
SUSPENSION

Rear Suspension Exploded View - 1996 Sport Style



SUSPENSION

Rear Suspension Components - 1996 Sport Style



SUSPENSION

Suspension Adjustment - 1996 Sport Style

The Polaris Sport Style suspension has been designed and set up to deliver a soft ride under average riding conditions. Rider weight, riding styles, trail conditions, and vehicle speed each affect suspension action.

The suspension can be adjusted to suit rider preference and deliver excellent performance for a given set of conditions. It should be noted, however, that suspension adjustments involve a compromise or trade off. A machine set up to perform well in the moguls would not suit the preference of a groomed trail rider.

Adjustable Features and Adjustment Options

- IFS compression spring preload
- Rear torsion spring preload
- Rear shock compression (if equipped with Indy Select / Ryde AFX shock)
- Optional coil springs for front track shock
- Optional torsion springs

Adjustment Procedures

It is a good idea to have customers break the suspension in for approximately 150 miles (240 km) before fine tuning adjustments are made.

All settings will vary from rider to rider, depending on rider weight, vehicle speed, riding style, and trail conditions. We recommend starting with factory settings and then customizing each adjustment individually to suit rider preference. The machine should be methodically tested under the same conditions after each adjustment (trail and snow conditions, vehicle speed, riding position, etc.) until a satisfactory ride is achieved. Adjustments should be made to one area at a time, in order to properly evaluate the change.

The purpose of the front track shock coil spring is to control ride height. If you find that in order to obtain the desired ride effect the spring preload is at its maximum, consider removing the existing spring and installing the next highest rate spring. See the chart on page 8.21.

IFS Adjustments

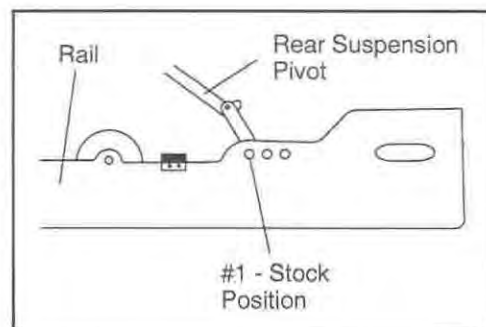
IFS spring preload is one of the adjustment options which affects ride. Preload is the initial compression placed on the spring. The longer the installed length of the spring, the less the amount of preload; the shorter the installed length of the spring, the more the amount of preload. Increasing preload on the IFS spring will result in more bite on the skis, but will require more effort to turn. The IFS compression spring preload can be increased by adding shims (PN 5210953) under the spring.

Always verify ski alignment before making adjustments to the IFS. See Body and Steering, Chapter 7 to check alignment. If the skis are misaligned, we recommend the camber adjustment be checked as this may also be affected.

SUSPENSION

Rear Suspension Adjustments - 1996 Sport Style

The Indy Lite Deluxe model comes from the factory with the rear suspension pivot mounted in the forwardmost hole in the rail. *Do not* change this mounting position. The other holes in the rail are for use on different machines utilizing the same rail.



Optional Suspension Adjustment Springs

Torsion Springs

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

	Soft Firm		
Part No. LH	7041318	7041119	7041320
Part No. RH	7041319	7041120	7041321
Wire Size	.375	.393	.406
Sport	Option	Standard	Option
TranSport	Option	Standard	Option
Indy Lite	Option	Standard	Option
Indy Lite Deluxe	Option	Standard	Option
Indy Lite GT	Option	Standard	Option

Shock Coil Springs

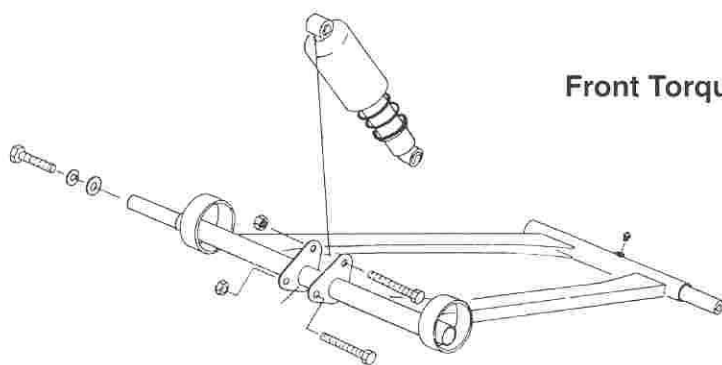
Changing the rate of the front track shock coil spring can affect handling.

Heavier springs will reduce darting and require less effort to steer. However, they will stiffen the ride and give the machine a tendency to push through corners.

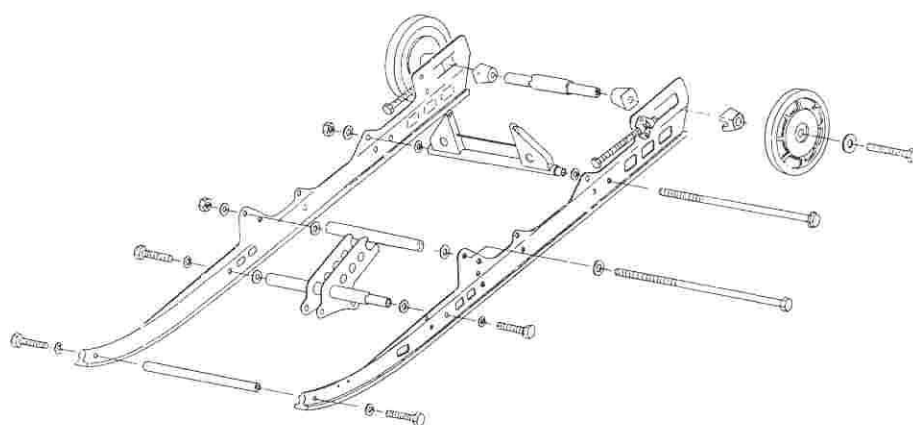
Lighter springs will increase ski pressure for positive pressure through curves.

PN 7041127	Standard	Light	181 #/in
PN 7041140	Option	Medium	181 #/in (longer free length than above)
PN 7041289	Option	Heavy	200#/Variable

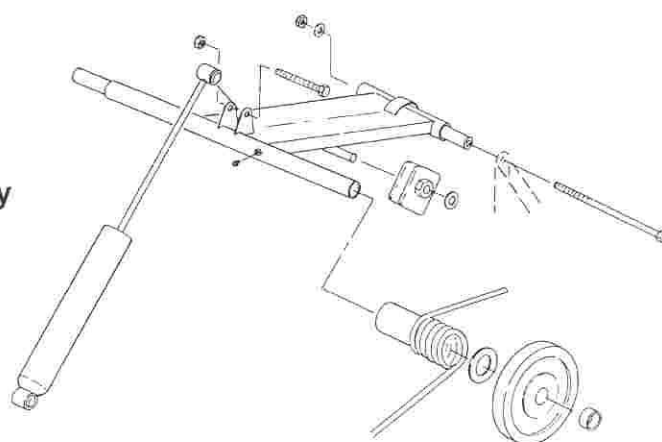
SUSPENSION
1997 XTRA Lite Style Exploded View



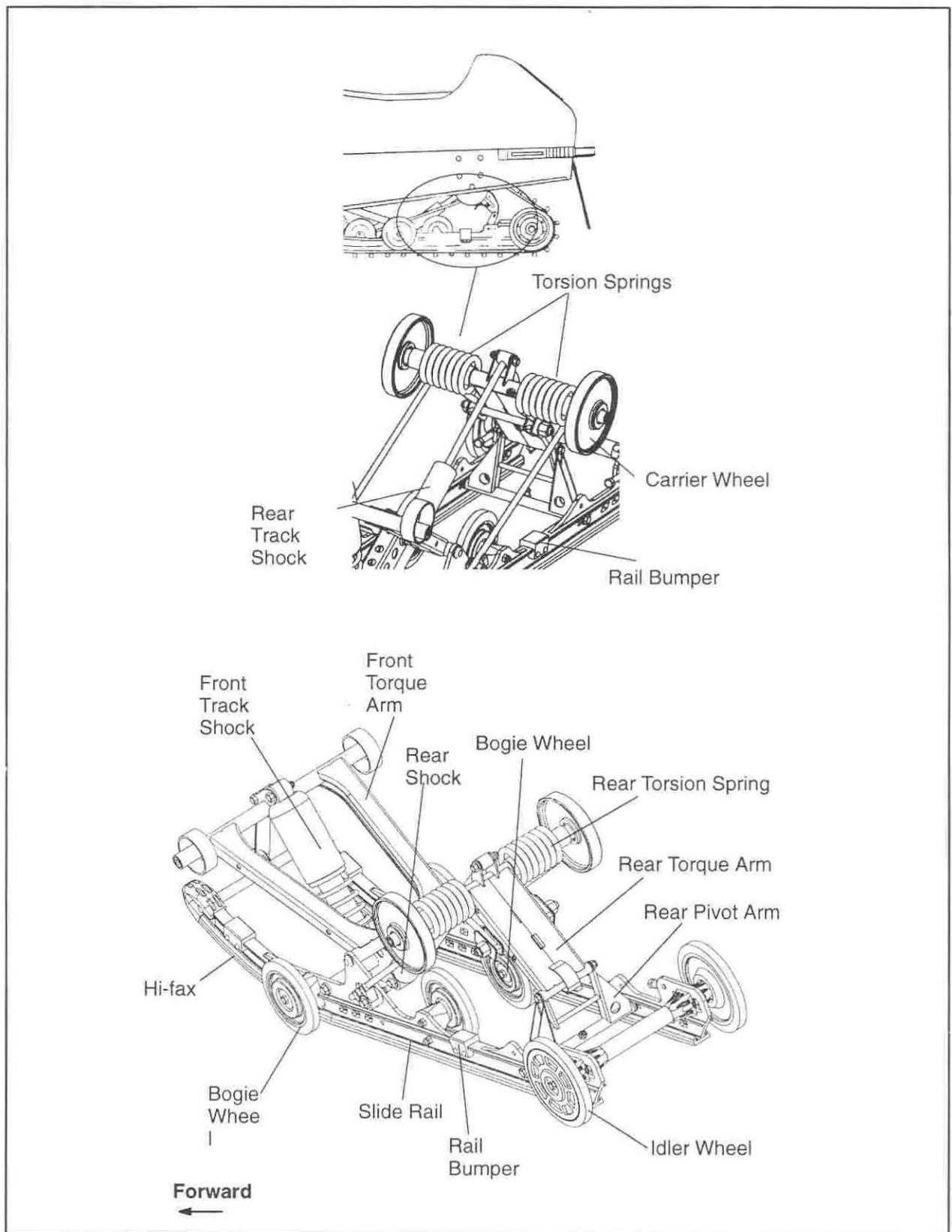
Front Torque Arm Assembly



Rear Torque Arm Assembly



SUSPENSION
Rear Suspension Components - 1997 XTRA Lite Style



SUSPENSION

Suspension Adjustment - 1997 XTRA Lite

Suspension Adjustment

The Polaris suspension has been designed and set up to deliver a soft ride under average riding conditions. Rider weight, riding styles, trail conditions, and vehicle speed each affect suspension action.

The suspension can be adjusted to suit rider preference and deliver excellent performance for a given set of conditions. It should be noted, however, that suspension adjustments involve a compromise or trade off. A machine set up to perform well in the moguls would not suit the preference of a groomed trail rider.

Adjustable Features and Adjustment Options

- IFS compression spring preload
- Rear torsion spring preload
- Optional coil springs for front track shock
- Optional torsion springs

Adjustment Procedures

It is a good idea to break the suspension in for approximately 150 miles (240 km) before fine tuning adjustments are made.

All settings will vary from rider to rider, depending on rider weight, vehicle speed, riding style, and trail conditions. We recommend starting with factory settings and then customizing each adjustment individually to suit rider preference. The machine should be methodically tested under the same conditions after each adjustment (trail and snow conditions, vehicle speed, riding position, etc.) until a satisfactory ride is achieved. Adjustments should be made to one area at a time, in order to properly evaluate the change.

The purpose of the front track shock coil spring is to control ride height and front IFS preload. If you find that in order to obtain the desired ride effect the spring preload is at its maximum, consider removing the existing spring and installing the next highest rate spring. See the chart on page 8.26.

IFS Adjustments

IFS spring preload is one of the adjustment options which affects ride. Preload is the initial compression placed on the spring. The longer the installed length of the spring, the less the amount of preload; the shorter the installed length of the spring, the more the amount of preload. Increasing preload on the IFS spring will result in more bite on the skis, but will require more effort to turn. The IFS compression spring preload can be increased by adding shims (PN 5210953) under the spring.

Always verify ski alignment before making adjustments to the IFS. If the skis are misaligned, correct the camber adjustment first.

Rear Suspension Adjustments

The primary adjustment for riding comfort is rear torsion spring preload adjustment. To check for the recommended settings:

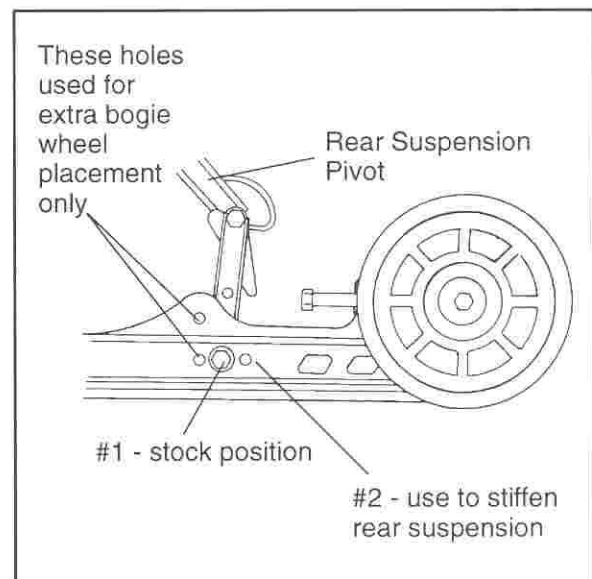
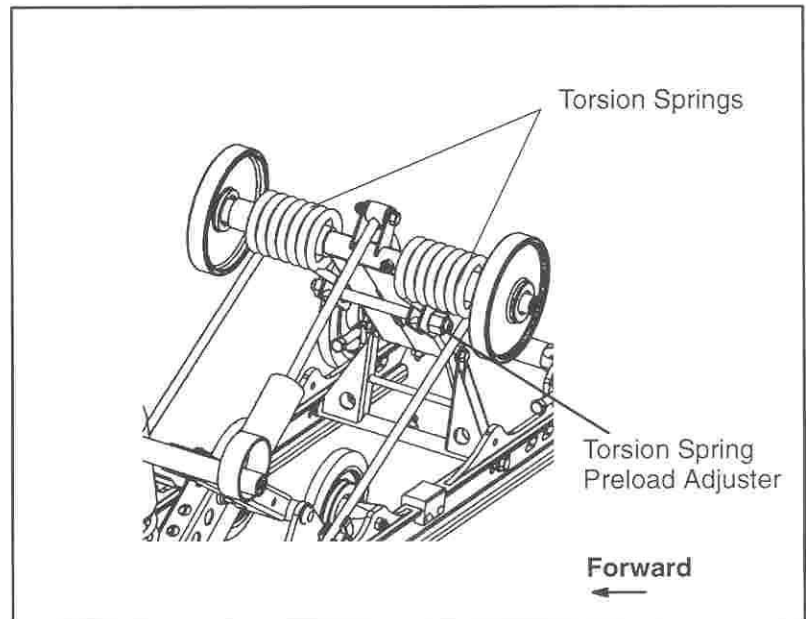
1. Lift the rear of the machine to relieve the rear springs.
2. Slowly lower the machine and measure the distance between the ground and the running board at the rear of the tunnel.
3. Without letting the suspension settle, the rider should carefully mount the snowmobile.
4. Measure the distance between the ground and the same spot on the running board.

If the difference is greater than 1 1/2", the rear spring should be adjusted equally on both sides until the desired 1 1/2" drop is obtained. See adjustment information below.

Compensating adjustments for heavy or light drivers or cargo loads can be made by adjusting the preload adjuster.

NOTE: Rear torsion spring settings will affect ski-to-ground pressure. It may be desirable to tighten rear torsion springs for an increase in ski-to-ground pressure. If ski pressure is too light, the machine will be hard to steer around curves and will tend to push, or drive straight through curves.

The XTRA Lite suspension comes from the factory with the rear suspension pivot mounted in the second hole from the front of the rail. *Do not* change this mounting position. The other holes in the rail are for use on different machines utilizing the same rail.



SUSPENSION

Suspension Adjustment - 1997 XTRA Lite

Accessory 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 preferences.

	Soft		Firm
Part No. LH	7041555	7041557	7041521
Part No. RH	7041556	7041558	7041522
Wire Size	.393/77°	.393/80°	.406/82°
Indy Lite	Option	Standard	Option
Indy Lite Deluxe	Option	Standard	Option
Indy Sport	Standard	Option	Option

Shock Coil Springs

Changing the rate of the front track shock coil spring can affect handling.

Heavier springs will reduce darting and require less effort to steer. However, they will stiffen the ride and give the machine a tendency to push through corners.

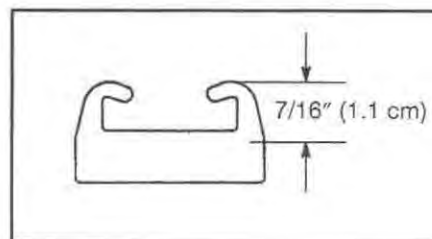
Lighter springs will increase ski pressure for positive pressure through curves.

PN 7041569	Standard	Light	60 #/in	Sport
PN 7041570	Standard	Medium	80 #/in	Lite/Lite Deluxe
PN 7041520	Option	Heavy	90 #/in.	All
PN 7041571	Option	Light	70 #/in.	All

Maintenance

A visual inspection of the following items should be done on a weekly basis or before any long distance trip:

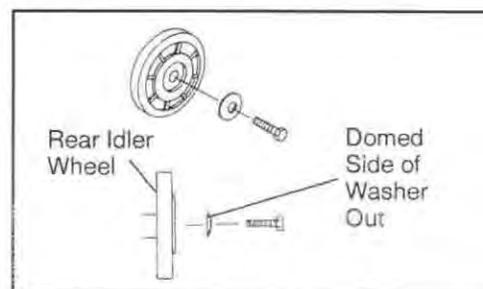
- Suspension pivot arm bolts for tightness
- Rear idler wheel bolts for tightness
- Rear idler adjusting bolt locknuts for tightness
- Bogie wheels and attaching bolts for tightness
- Front torque arm limiter strap condition
- Slide rail hi-fax thickness - replace when worn to 7/16" (1.1 cm).



CAUTION:

If suspension bolts are removed, the threaded shaft must be cleaned thoroughly with a brake parts type cleaner. A new bolt, which must have a locking patch on the threads, must be installed.

If rear idler wheel assembly washers are removed, be sure they are reinstalled with the domed side of the washer facing out as shown.



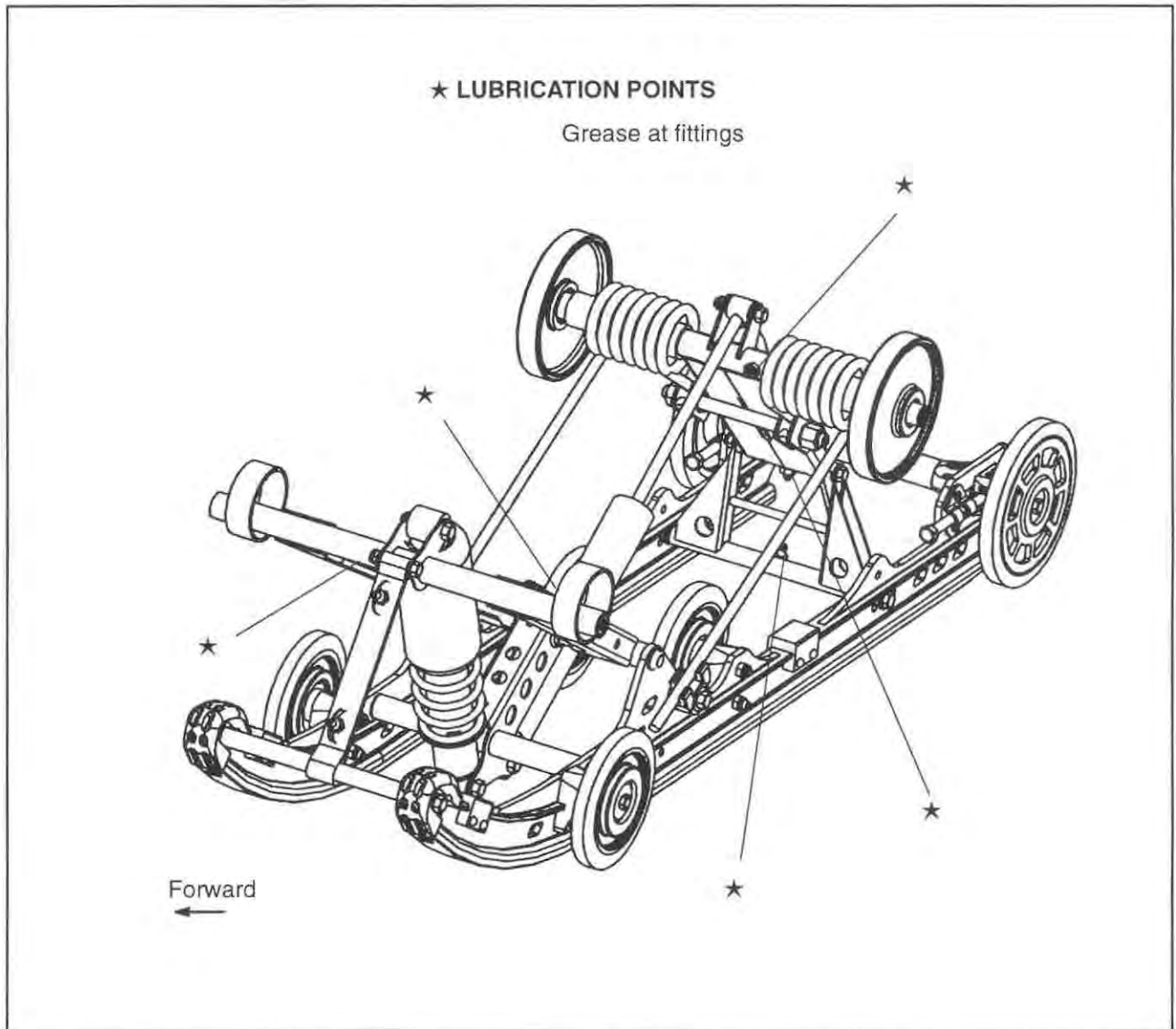
SUSPENSION

Suspension Adjustment - 1997 XTRA Lite

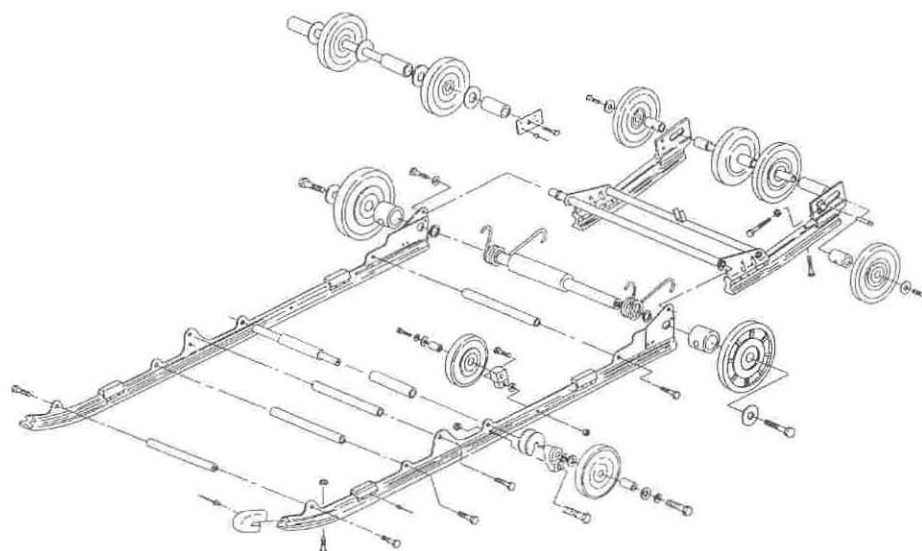
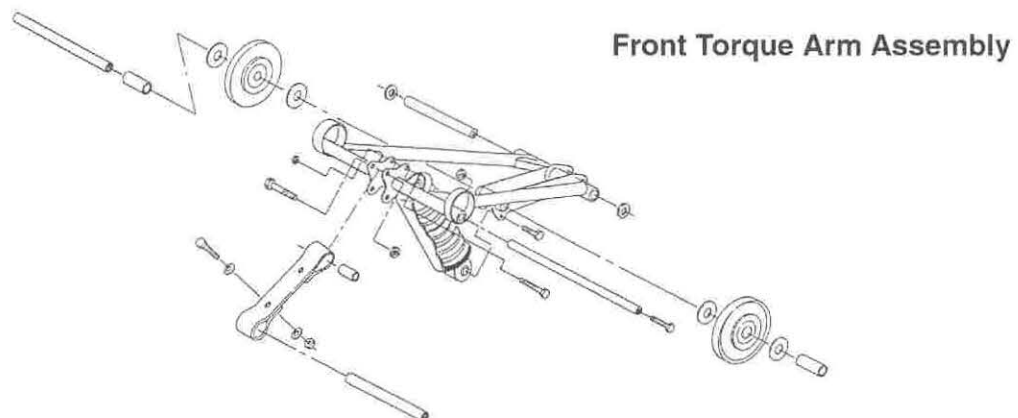
Suspension Lubrication

To maintain rider comfort and to retard wear of the pivot shafts, the suspension pivot shafts should be lubricated with Polaris Premium All Season Grease, PN 2871066, at 500 miles (800 km) initially; 1000 miles (1600 km) and before summer storage each year. The riding characteristics of the snowmobile will be affected by lack of lubrication of these shafts. **NOTE:** A grease gun kit complete with grease and adaptors is available to lubricate all fittings on Polaris snowmobiles. Order PN 2871312.

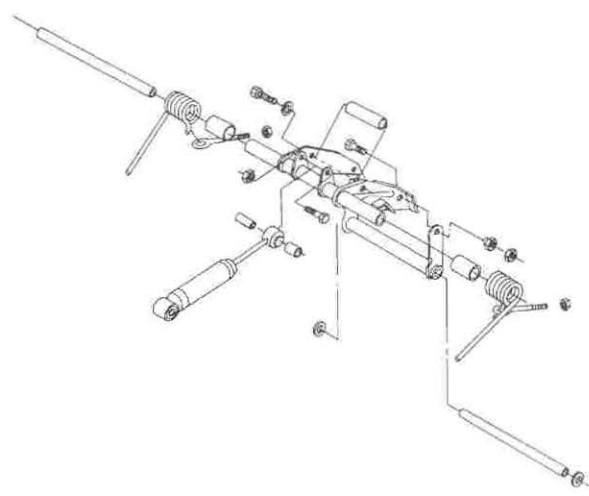
Refer to the diagram below for suspension lubrication points.



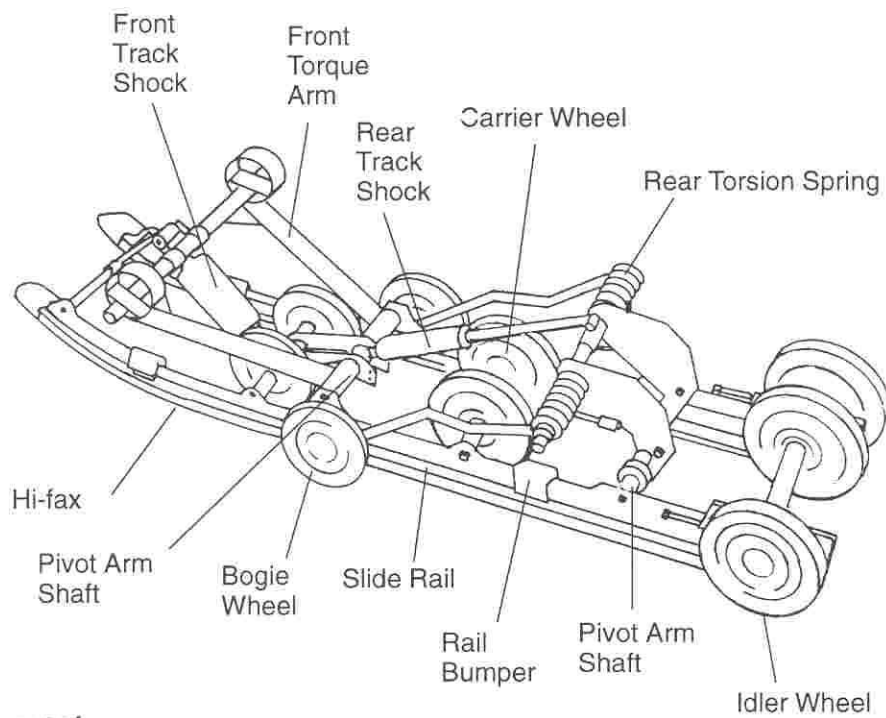
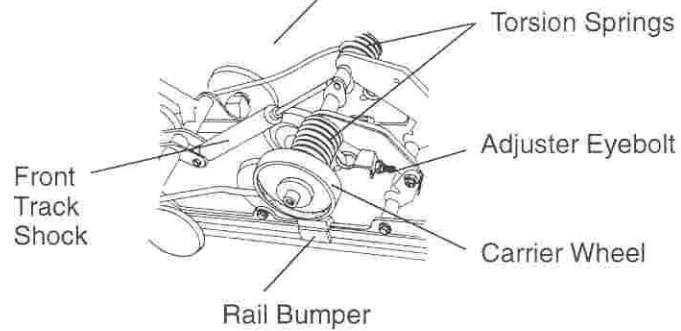
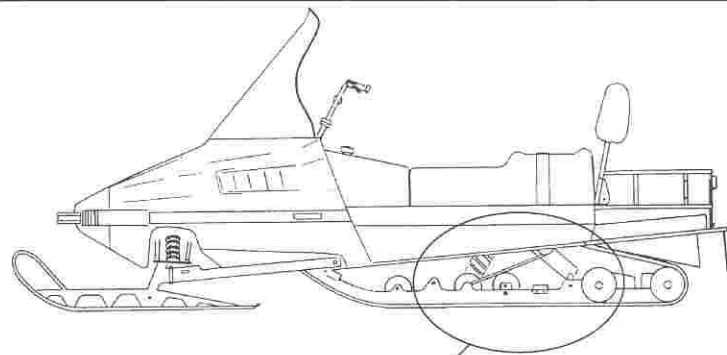
SUSPENSION
1996 WideTrak Style Exploded View



Rear Torque Arm Assembly



SUSPENSION 1996 WideTrak Style Exploded View



NOTE: General representation only. Models may differ.

SUSPENSION

Suspension Adjustment - 1996 WideTrak Style Models

The Polaris WideTrak style suspension has been designed and set up to deliver a soft ride under average riding conditions. Rider weight, riding styles, trail conditions, and vehicle speed each affect suspension action.

The suspension can be adjusted to suit rider preference and deliver excellent performance for a given set of conditions. It should be noted, however, that suspension adjustments involve a compromise or trade off. A machine set up to perform well in the moguls would not suit the preference of a groomed trail rider.

Adjustable Features and Adjustment Options

- IFS compression spring preload
- Rear torsion spring preload
- Optional coil springs for front track shock

Adjustment Procedures

It is a good idea to have customers break the suspension in for approximately 150 miles (240 km) before fine tuning adjustments are made.

All settings will vary from rider to rider, depending on rider weight, vehicle speed, riding style, and trail conditions. We recommend starting with factory settings and then customizing each adjustment individually to suit rider preference. The machine should be methodically tested under the same conditions after each adjustment (trail and snow conditions, vehicle speed, riding position, etc.) until a satisfactory ride is achieved. Adjustments should be made to one area at a time, in order to properly evaluate the change.

The purpose of the front track shock coil spring is to control ride height. If you find that in order to obtain the desired ride effect the spring preload is at its maximum, consider removing the existing spring and installing the next highest rate spring. See the chart on page 8.37.

IFS Adjustments

IFS spring preload is one of the adjustment options which affects ride. Preload is the initial compression placed on the spring. The longer the installed length of the spring, the less the amount of preload; the shorter the installed length of the spring, the more the amount of preload. Increasing preload on the IFS spring will result in more bite on the skis, but will require more effort to turn. The IFS compression spring preload can be increased by adding shims (PN 5210953) under the spring.

Always verify ski alignment before making adjustments to the IFS. See Body and Steering, Chapter 7 to check alignment. If the skis are misaligned, we recommend the camber adjustment be checked as this may also be affected.

SUSPENSION

Rear Suspension Adjustments - 1996 WideTrak Style

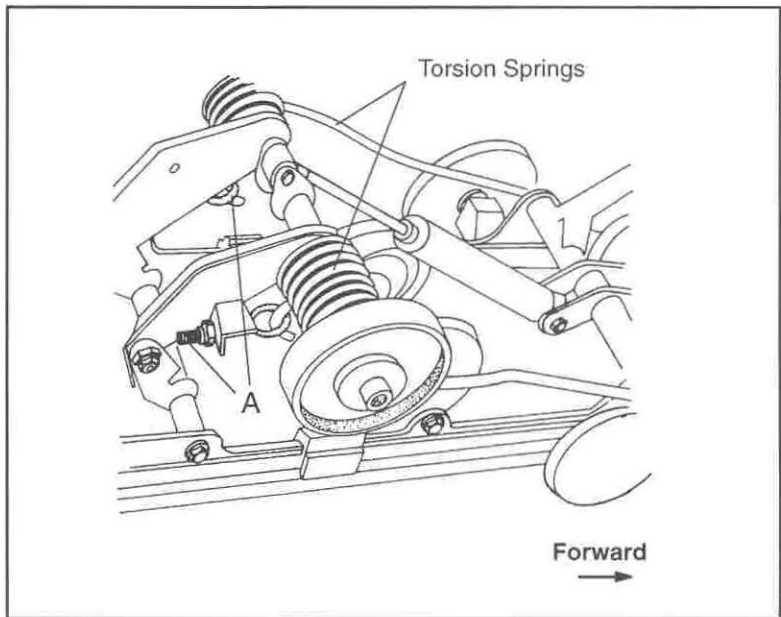
The primary adjustment for riding comfort is rear torsion spring preload adjustment. To check for the recommended settings:

1. Lift the rear of the machine to relieve the rear springs.
2. Slowly lower the machine and measure the distance between the ground and the running board at the rear of the tunnel.
3. Without letting the suspension settle, the rider should carefully mount the snowmobile.
4. Measure the distance between the ground and the same spot on the running board.

If the difference is greater than 1 1/2", the rear spring should be adjusted equally on both sides until the desired 1 1/2" drop is obtained.

Compensating adjustments for heavy or light drivers or cargo loads can be made by adjusting the rear torsion spring eye bolt (A) length. Adjust spring tension so there is equal tension on the long leg of each spring.

NOTE: Rear torsion spring settings will affect ski-to-ground pressure. It may be desirable to tighten rear torsion springs for an increase in ski-to-ground pressure. If ski pressure is too light, the machine will be hard to steer around curves and will tend to push, or drive straight through curves.



SUSPENSION

Optional Suspension Adjustment Springs - 1996 - Current WideTrak Style

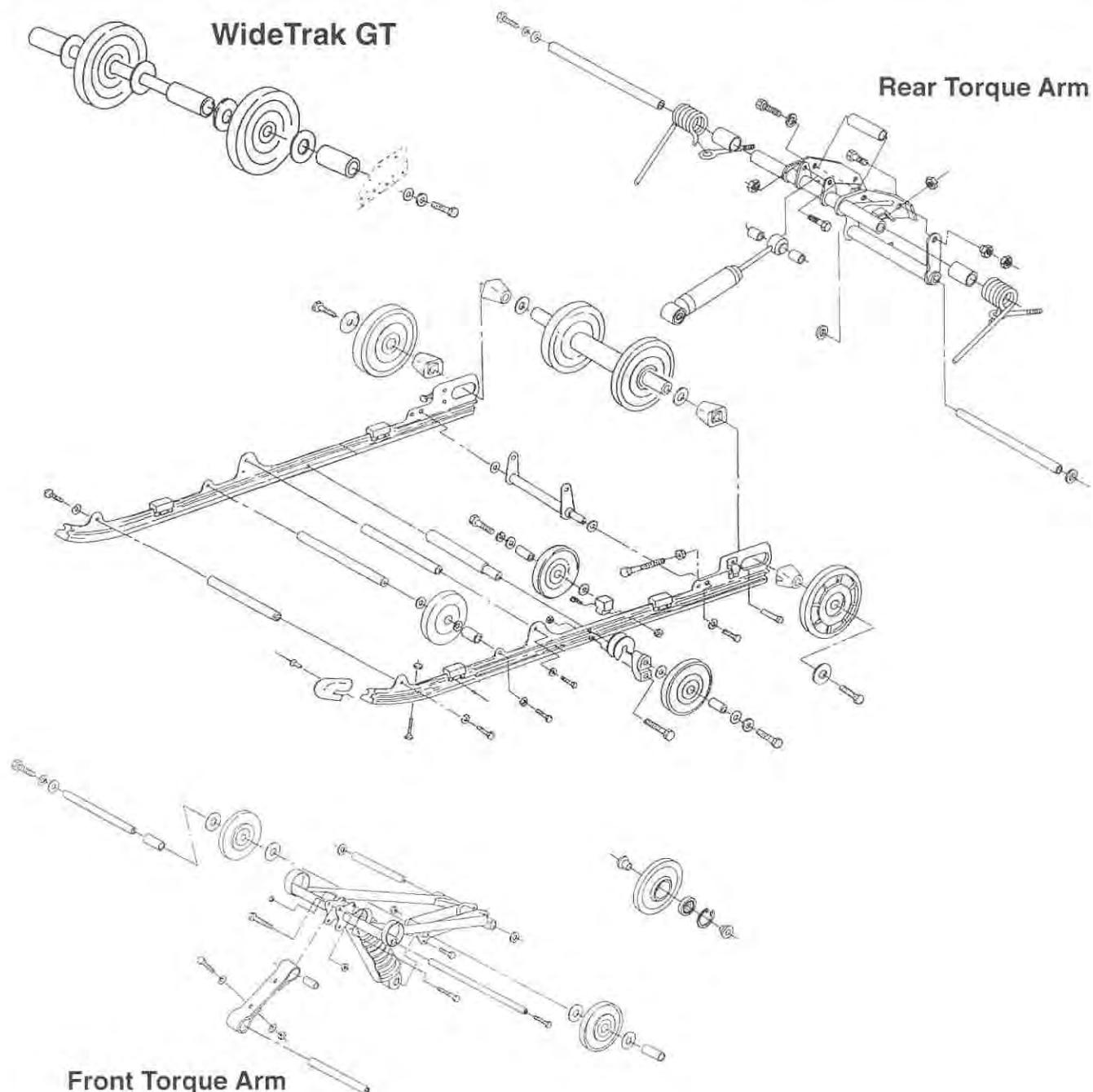
Front Track Shock Coil Springs

Changing the rate of the front track shock coil spring can affect handling.

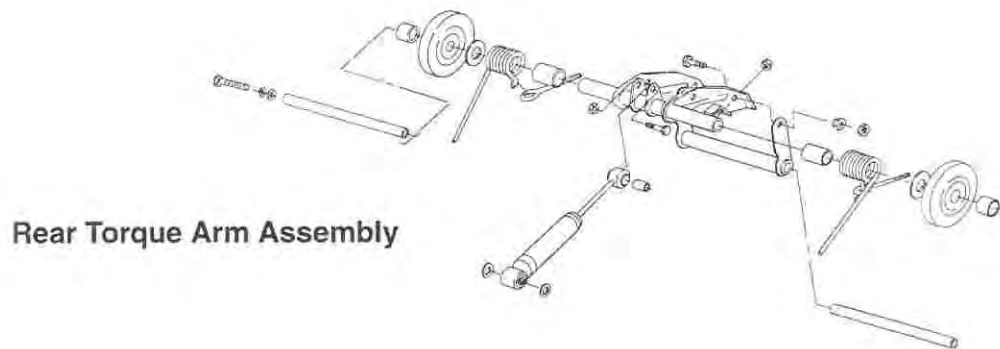
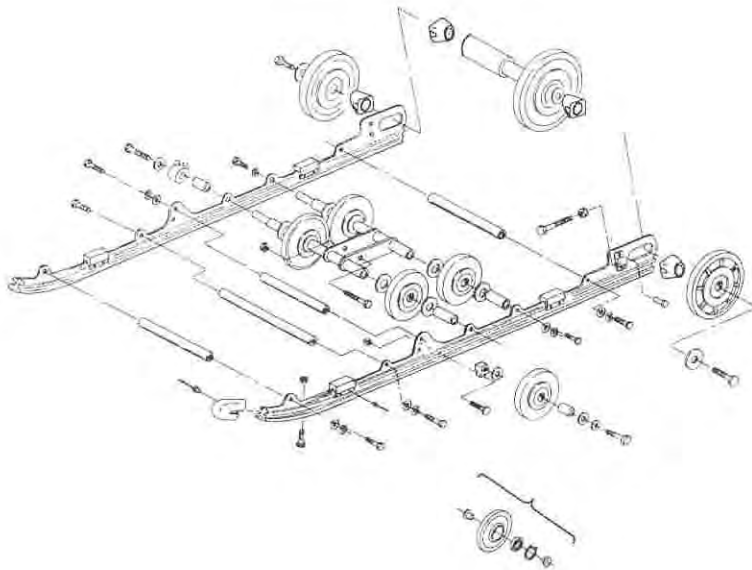
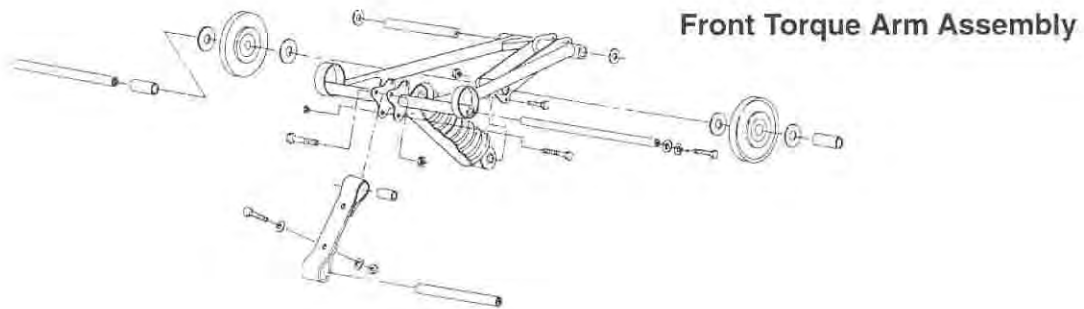
Heavier springs will reduce darting and require less effort to steer. However, they will stiffen the ride and give the machine a tendency to push through corners.

Lighter springs will increase ski pressure for positive pressure through curves.

PN 7041127	Option	Light	181 #/in (6.88" free length)
PN 7041140	Standard	Medium	181 #/in (7.50" free length)
PN 7041289	Option	Heavy	200#/Variable

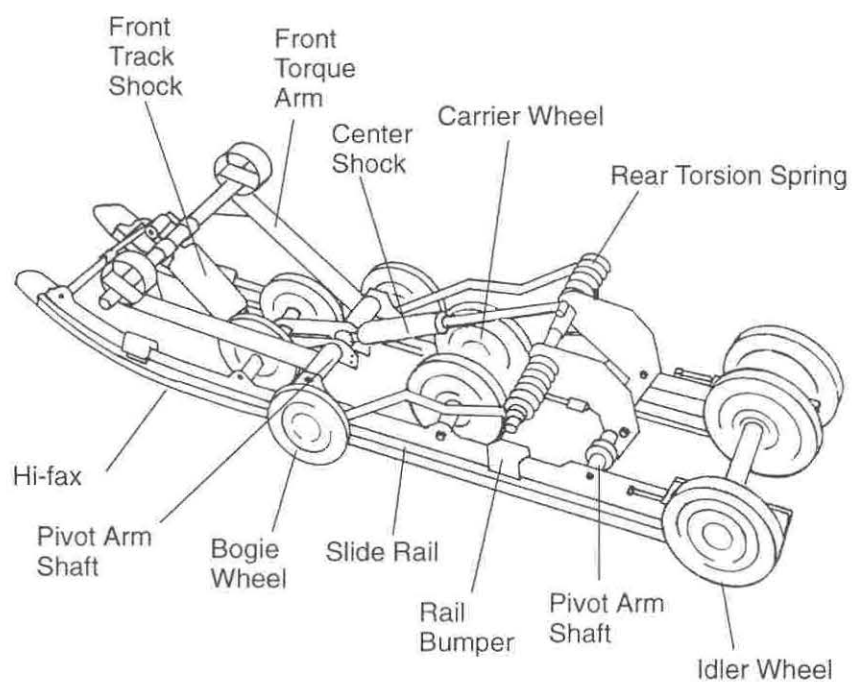
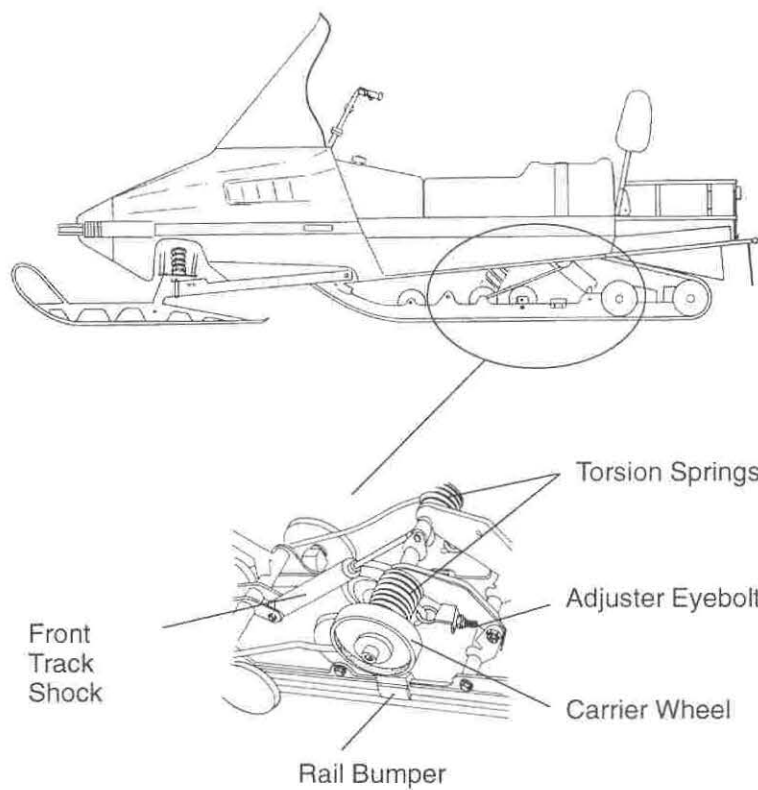


SUSPENSION
1997 Standard Indy 133.5" / 141" Exploded View



SUSPENSION

1997 Standard Indy 133.5" / 141" Exploded View



Suspension Adjustment - 1997 Standard Indy 133.5" / 141"

The Polaris suspension has been designed and set up to deliver a soft ride under average riding conditions. Rider weight, riding styles, trail conditions, and vehicle speed each affect suspension action.

The suspension can be adjusted to suit rider preference and deliver excellent performance for a given set of conditions. It should be noted, however, that suspension adjustments involve a compromise or trade off. A machine set up to perform well in the moguls would not suit the preference of a groomed trail rider.

Adjustable Features and Adjustment Options

- IFS compression spring preload
- Rear torsion spring preload
- Optional coil springs for front track shock

Adjustment Procedures

It is a good idea to have customers break the suspension in for approximately 150 miles (240 km) before fine tuning adjustments are made.

All settings will vary from rider to rider, depending on rider weight, vehicle speed, riding style, and trail conditions. We recommend starting with factory settings and then customizing each adjustment individually to suit rider preference. The machine should be methodically tested under the same conditions after each adjustment (trail and snow conditions, vehicle speed, riding position, etc.) until a satisfactory ride is achieved. Adjustments should be made to one area at a time, in order to properly evaluate the change.

The purpose of the front track shock coil spring is to control ride height. If you find that in order to obtain the desired ride effect the spring preload is at its maximum, consider removing the existing spring and installing the next highest rate spring. See the chart on page 8.37.

IFS Adjustments

IFS spring preload is one of the adjustment options which affects ride. Preload is the initial compression placed on the spring. The longer the installed length of the spring, the less the amount of preload; the shorter the installed length of the spring, the more the amount of preload. Increasing preload on the IFS spring will result in more bite on the skis, but will require more effort to turn. The IFS compression spring preload can be increased by adding shims (PN 5210953) under the spring.

Always verify ski alignment before making adjustments to the IFS. See Body and Steering, Chapter 7 to check alignment. If the skis are misaligned, we recommend the camber adjustment be checked as this may also be affected.

SUSPENSION

Rear Suspension Adjustments - 1997 Standard Indy 133.5" / 141"

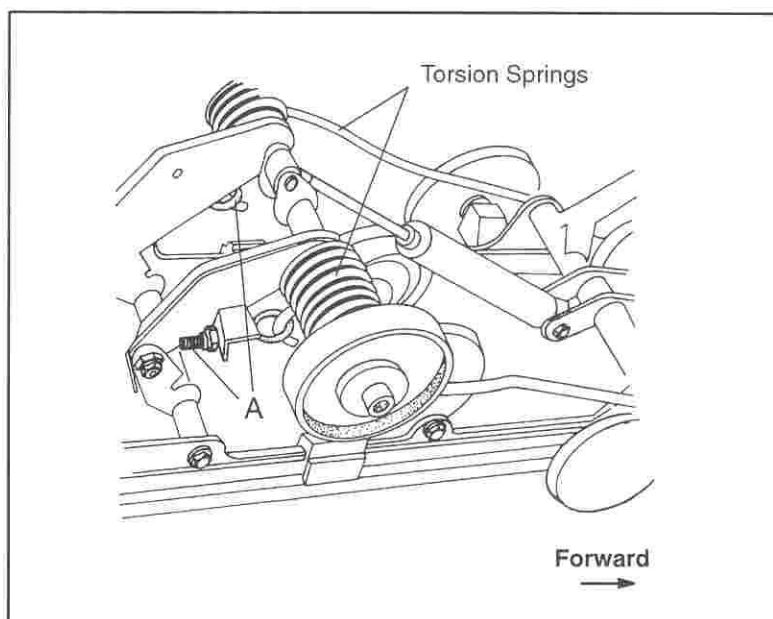
The primary adjustment for riding comfort is rear torsion spring preload adjustment. To check for the recommended settings:

1. Lift the rear of the machine to relieve the rear springs.
2. Slowly lower the machine and measure the distance between the ground and the running board at the rear of the tunnel.
3. Without letting the suspension settle, the rider should carefully mount the snowmobile.
4. Measure the distance between the ground and the same spot on the running board.

If the difference is greater than 1 1/2", the rear spring should be adjusted equally on both sides until the desired 1 1/2" drop is obtained.

Compensating adjustments for heavy or light drivers or cargo loads can be made by adjusting the rear torsion spring eye bolt (A) length. Adjust spring tension so there is equal tension on the long leg of each spring.

NOTE: Rear torsion spring settings will affect ski-to-ground pressure. It may be desirable to tighten rear torsion springs for an increase in ski-to-ground pressure. If ski pressure is too light, the machine will be hard to steer around curves and will tend to push, or drive straight through curves.



Optional Suspension Adjustment Springs - 1997 Standard Indy 133.5" / 141"

Shock Coil Springs

Changing the rate of the front track shock coil spring can affect handling.

Heavier springs will reduce darting and require less effort to steer. However, they will stiffen the ride and give the machine a tendency to push through corners.

Lighter springs will increase ski pressure for positive pressure through curves.

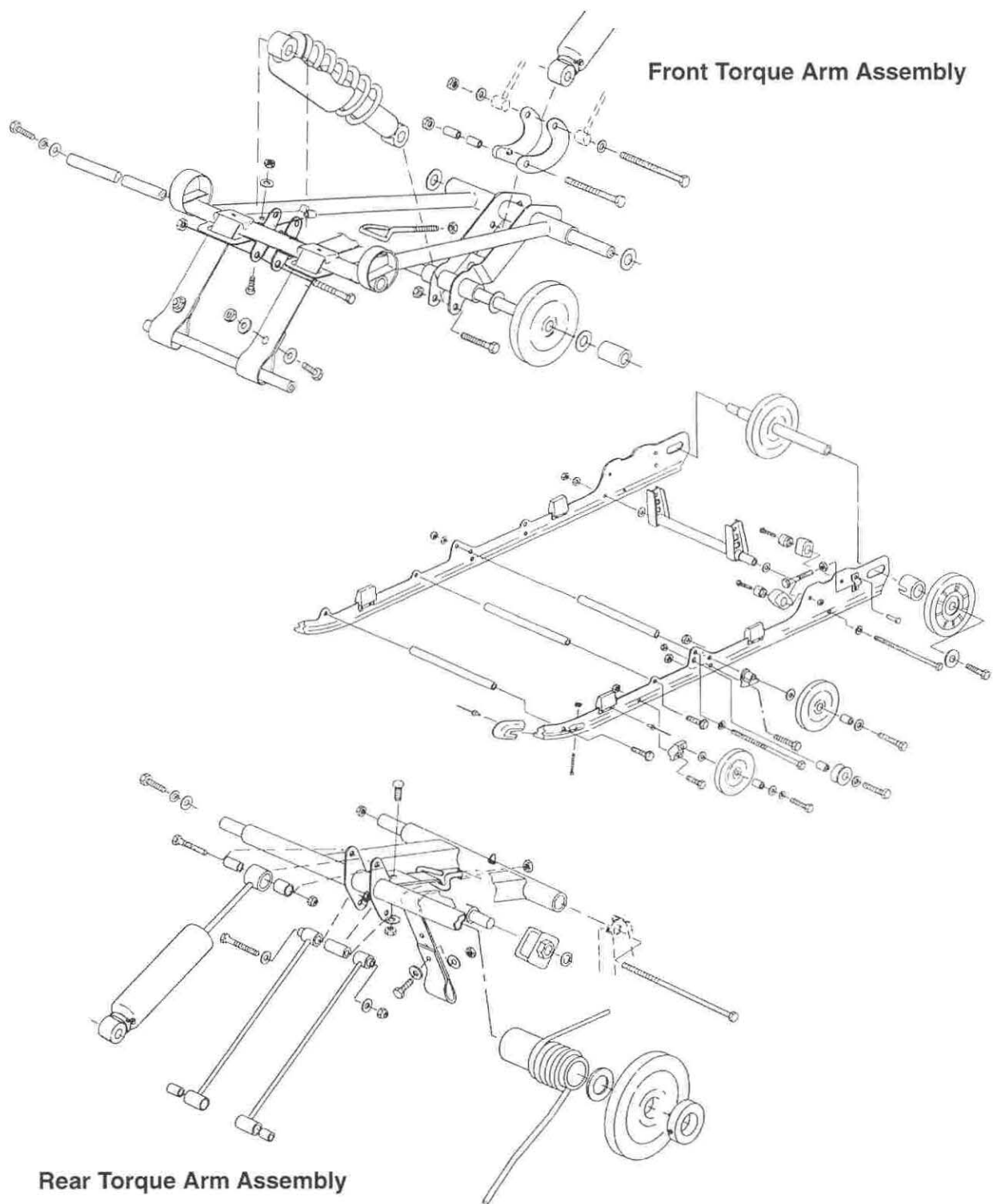
1997 Models

PN 7041127	Option	Light	181 #/in
PN 7041140	Standard	Medium	181 #/in (longer free length than above)
PN 7041289	Option	Heavy	200#/Variable

An optional shock/spring assembly is available for the rear track shock. Order PN 2871042.

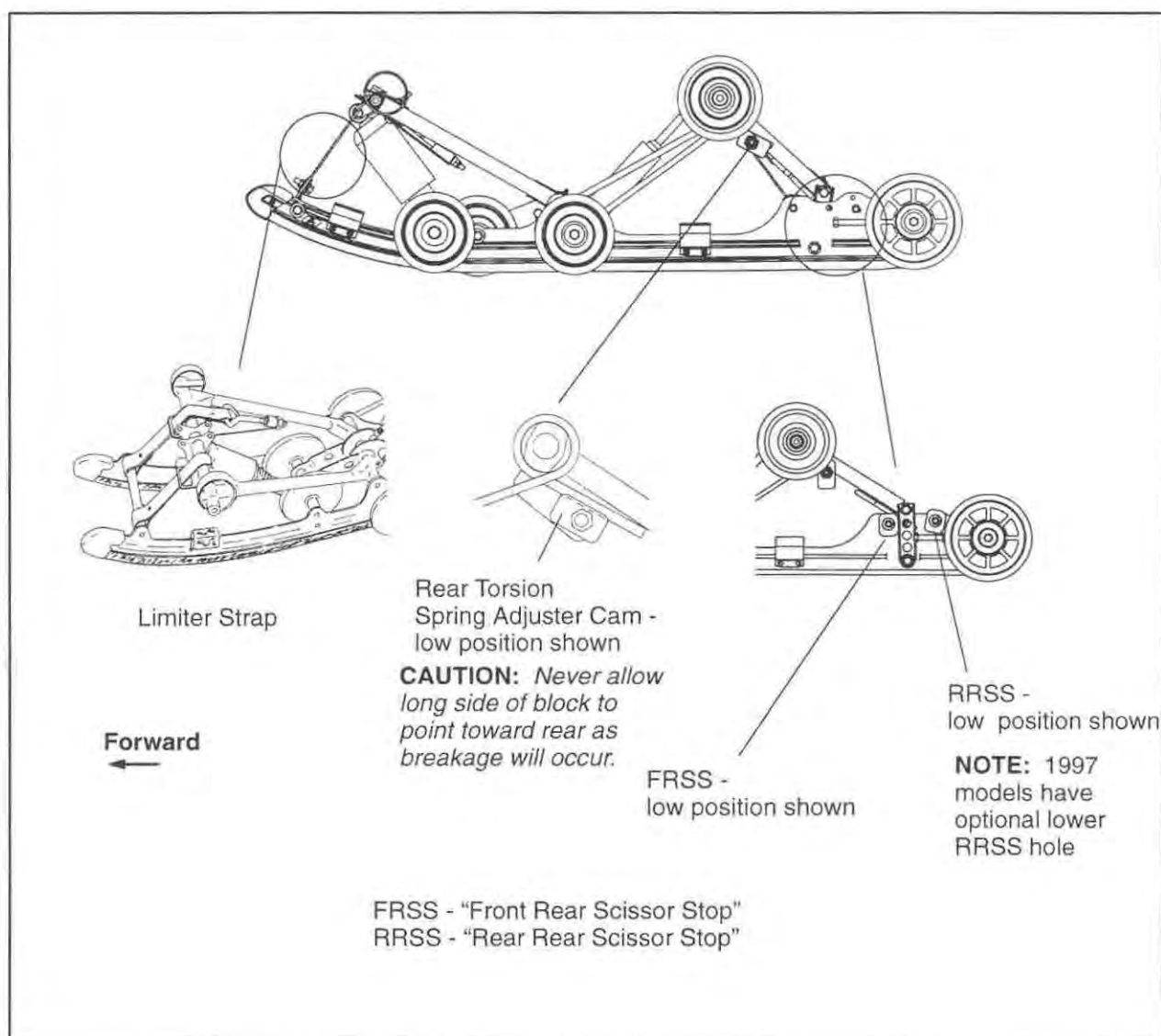
SUSPENSION

Rear Suspension Exploded View - XTRA 10 Style



SUSPENSION

Rear Suspension Components - XTRA 10 Style



The rear shock rod has two positions. The hole closer to the tube is less progressive than the lower one. This effectively changes the damping effect of the rear shock absorber in relation to vertical displacement of suspension.

CAUTION: The rear torsion spring block should never have the long side pointing toward the rear or block breakage will occur.

Front Limiter

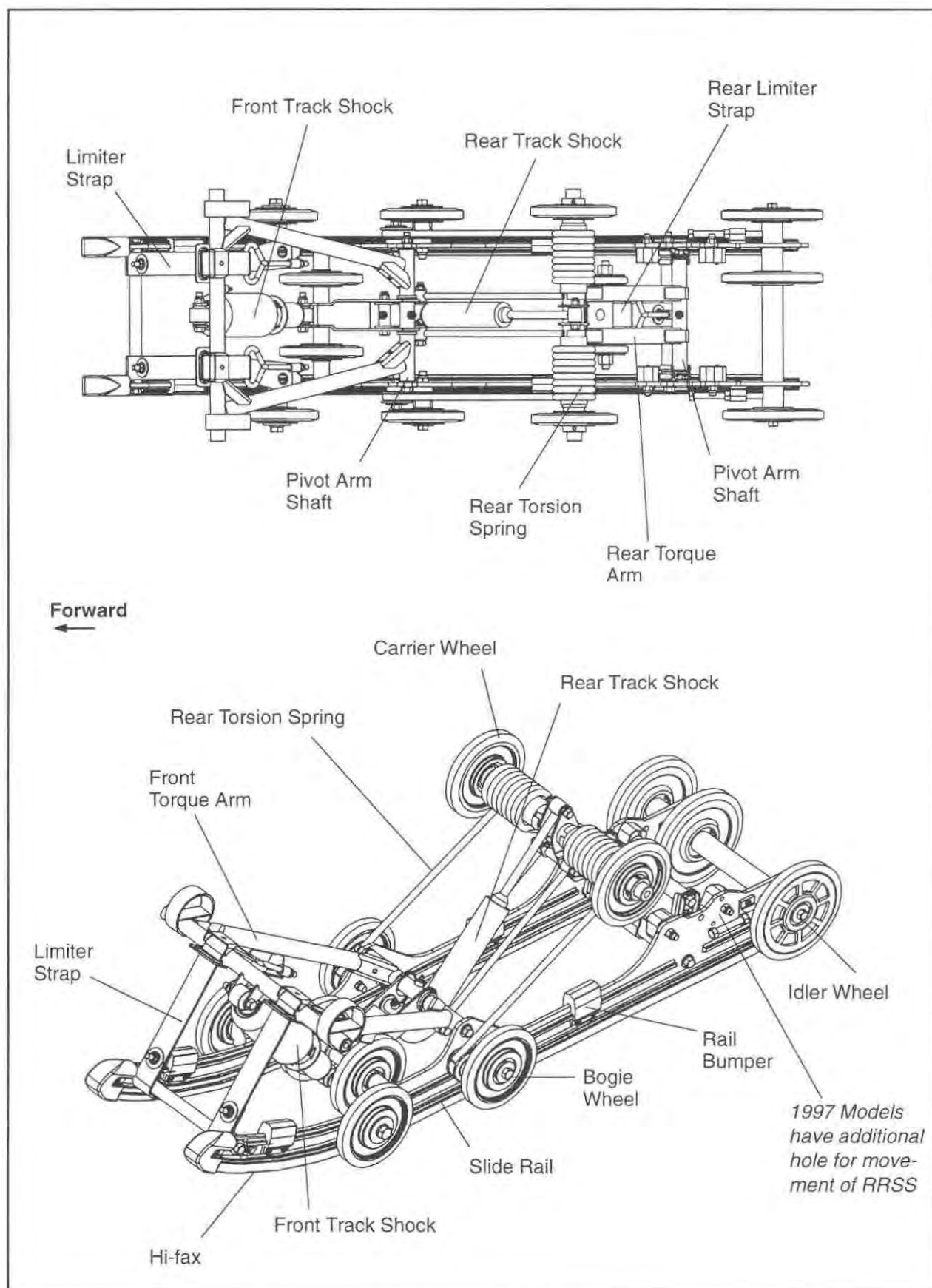
The front limiter strap controls the amount of weight transfer, ski pressure, and to some degree the ride height. The rear limiter controls ride height and increases preload on the rear springs when tightened, which also decreases transfer (i.e. the lighter the torsion spring preload, the more weight transfer).

Setting	Ski Pressure	Weight Transfer
Longer	Decreased	Increased
Shorter	Increased	Decreased

NOTE: RRSS has greatest affect on weight transfer on XTRA 10 suspensions.

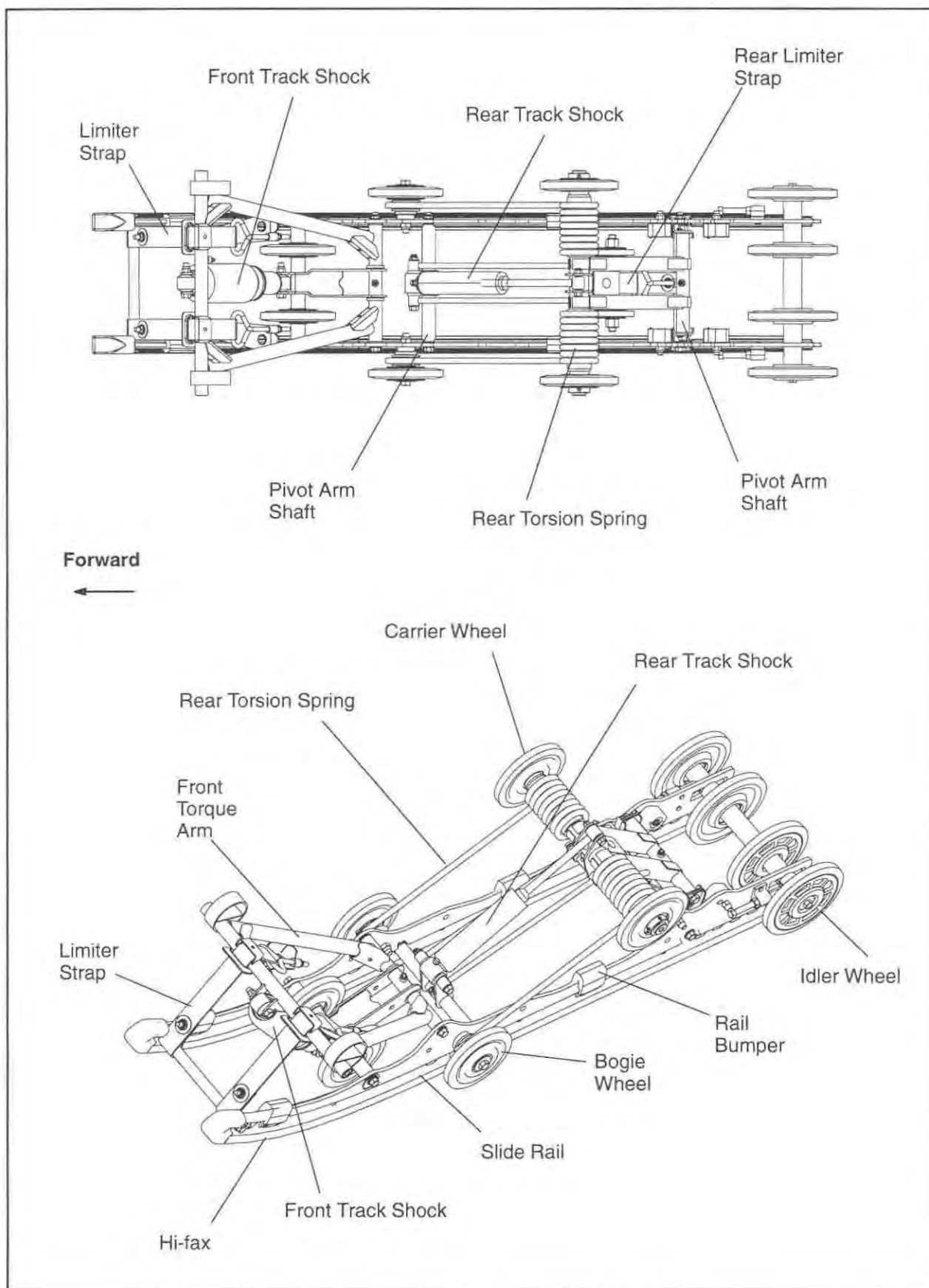
SUSPENSION

Rear Suspension Components - XTRA 10 121" Style



SUSPENSION

Rear Suspension Components - XTRA 10 133.5" / 136" Style



SUSPENSION

Suspension Adjustment - XTRA 10 Style

The XTRA™ 10 suspension has been designed and set up to deliver a soft ride under average riding conditions. Rider weight, riding styles, trail conditions, and vehicle speed each affect suspension action.

The suspension can be adjusted to suit rider preference and deliver excellent performance for a given set of conditions. It should be noted, however, that suspension adjustments involve a compromise or trade off. A machine set up to perform well in the moguls would not suit the preference of a groomed trail rider.

Adjustable Features and Adjustment Options

Independent Front Suspension (IFS)

- Front shock spring preload
- Optional springs
- Adjustable compression valving via Ryde AFX / Indy Select shock

Rear Suspension

- Rear torsion springs
- Front rear scissor stop (FRSS)
- Rear rear scissor stop (RRSS)
- Optional coil springs for front track shock
- Optional torsion springs
- Adjustable compression via Ryde AFX / Indy Select shock rear track shock
- Limiter straps - front and rear

Adjustment Procedures

It is a good idea to have customers break the suspension in for approximately 150 miles (240 km) and grease all suspension pivots before fine tuning adjustments are made. Use Polaris Premium All Season Grease.

All settings will vary from rider to rider, depending on rider weight, vehicle speed, riding style, and trail conditions. We recommend starting with factory settings and then customizing each adjustment individually to suit rider preference. The machine should be methodically tested under the same conditions after each adjustment (trail and snow conditions, vehicle speed, riding position, etc.) until a satisfactory ride is achieved. Adjustments should be made to one area at a time, in order to properly evaluate the change.

Compression Damping Adjustable Shock

Snowmobiles equipped with compression damping adjustable rear shocks allow the driver to make adjustments to the compression valving of the rear shock by turning the screw located near the base of the shock.

Adjustment

Locate the adjustment screw near the base of the shock. **NOTE:** This adjustment is easiest to make with the machine tipped on its side.

⚠ WARNING

Be sure to shut off the fuel supply before tipping the machine to prevent fuel spillage and flooding of the carburetors.

By turning the screw clockwise (a small screwdriver or dime work well), the compression valving is increased, stiffening the ride. To soften the ride, reduce the compression by turning the screw counter-clockwise. An adjustment of 1/2 to 1 turn usually makes a noticeable difference in ride. There are approximately 3 full turns of adjustment available.

How to Adjust

If the suspension is "bottoming," tighten the compression screw clockwise in 1/2 turn increments until the bottoming stops. Backing off 1/4 turn counter-clockwise at this point should give you the best possible ride ensuring use of the full travel of the suspension. The opposite procedure should be used if the suspension is too stiff upon initial set-up.

If bottoming continues after the screw is bottomed out, the torsion spring should be adjusted using the adjustment block. Back the screw out to the original starting position after torsion spring preload has been increased.

Riding conditions are ever changing. Keep in mind the Indy Select / Ryde AFX shocks can be adjusted at any time to achieve the best possible ride in any condition.

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.

SUSPENSION

IFS Adjustments - XTRA 10 Style

Front Suspension Setup and Adjustments

Spring preload is one of the adjustment options which affects ride. Preload is the amount of load the spring provides in the installed position. The longer the installed length of the spring, the less the amount of pre-load; the shorter the installed length of the spring, the more the amount of pre-load. An increase in IFS shock spring pre-load will result in an increase in ski pressure.

The front spring preload can be adjusted by using the spanner wrench (PN 2871095) provided in the tool kit. As the cam is rotated, spring length will be either increased or decreased. **NOTE:** The Sport Touring front spring is not adjustable, except by adding shims.

To adjust front spring preload on threaded adjust models, grasp the spring and turn in a clockwise direction (as viewed from the bottom of the shock) to increase the preload. Turn in a counter-clockwise direction to decrease preload.

NOTE: Access to the cam with the spanner wrench is easiest from the inside of the ski.

When adjusting, be sure springs on both the left and right sides of the machine are at the same adjustment.

For the best ride the spring preload should be as low as possible. Set the preload to use the full travel of the ski shock with occasional light bottoming.

The purpose of the shock coil spring is to control ride height. The purpose of shock valving is to control damping. If you find that in order to obtain the desired ride effect the spring preload is at its maximum, consider removing the existing spring and install the next highest rate spring.

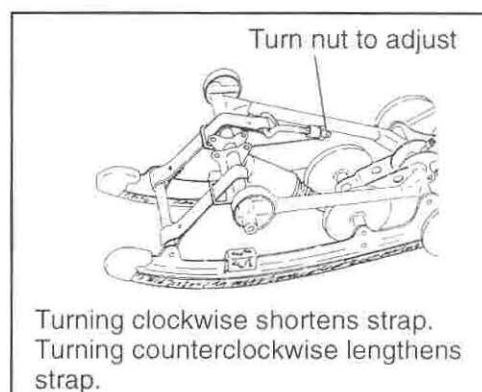
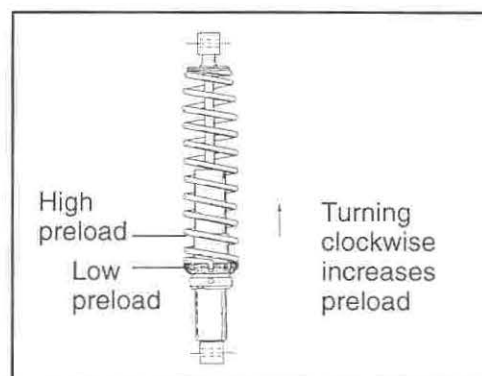
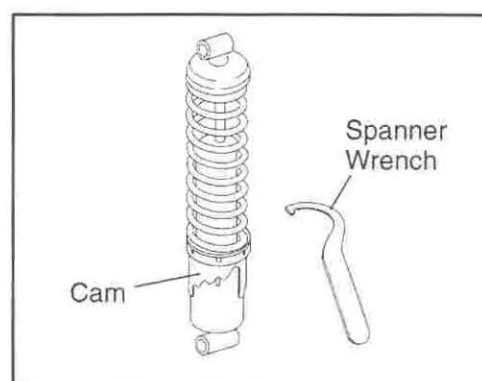
Front Torque Arm Limiter Strap Adjustment

One method of changing ski-to-snow pressure is to change the length of the front torque arm limiter straps. The limiter strap is normally mounted in the fully extended position.

- Lengthening the straps decreases ski pressure under acceleration.
- Shortening the straps increases ski pressure under acceleration.

To adjust models with quick adjust front limiter straps, turn the eyebolt nut to lengthen or shorten the straps. To shorten the strap, turn the nut clockwise. To lengthen the strap, turn the nut counterclockwise.

NOTE: Both limiter straps must be adjusted evenly and remain equal in length to avoid improper Hi-Fax and track wear.



SUSPENSION

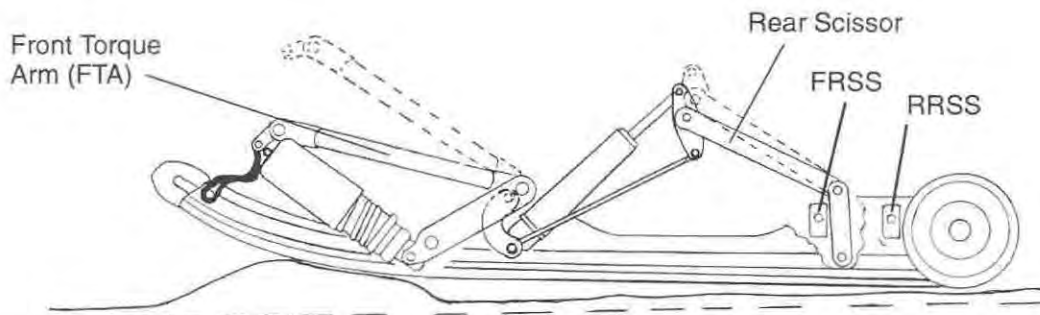
Front Rear Scissor Stop (FRSS) - XTRA 10 Style

The purpose of the front rear scissor stop (FRSS) is to control the bump attitude of the rear suspension. As the front torque arm (FTA) hits the bump, it forces the rear scissor to collapse a predetermined amount, depending on the FRSS block position.

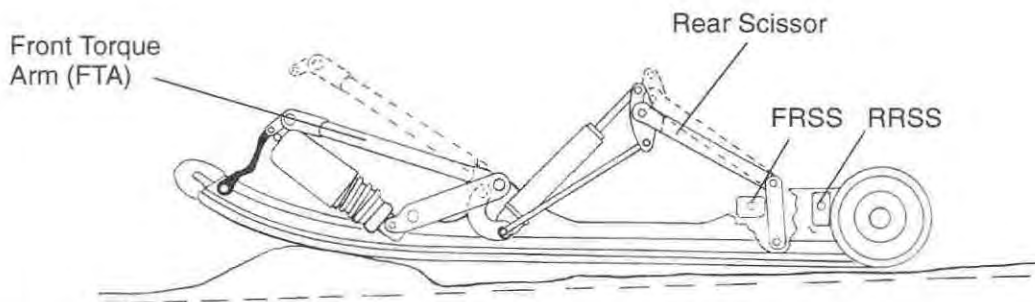
This accomplishes two important things, it allows a lighter spring rate on the FTA because it can borrow spring rate from the rear torsion springs; and it prepares the rear portion of the suspension for the bump.

The FRSS is made of a resilient material allowing smooth action and preventing any suspension component damage.

This unique feature is applied to the XTRA™ 10 rear suspension. Patents are pending.



FRSS with short (low) leg to rear. Note the FTA comes up higher before rear scissor begins to collapse.



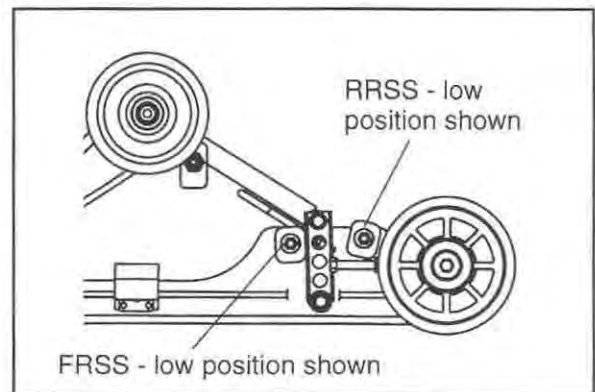
FRSS with long (high) leg to rear. Note this forces rear scissor to collapse with less FTA movement than when in short position.

SUSPENSION

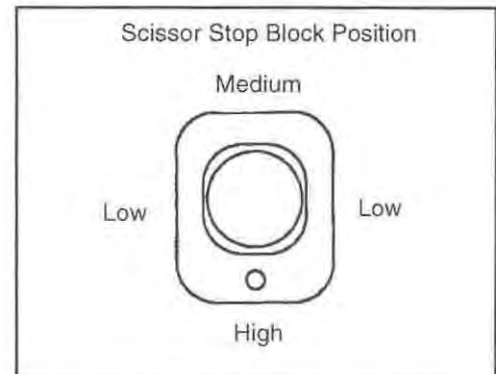
Rear Rear Scissor Stop (RRSS) - XTRA 10 Style

The RRSS controls weight transfer from the rear suspension to the skis. It also influences the stiffness of the ride by controlling the amount of coupling action between the front and rear torque arms. To increase the stiffness of the suspension, the RRSS should be set in the high position.

NOTE: The RRSS can be totally removed for maximum weight transfer. However, unless the torsion springs and rear shock valving are changed, the ride will be compromised. Always maintain equal adjustment on both sides.

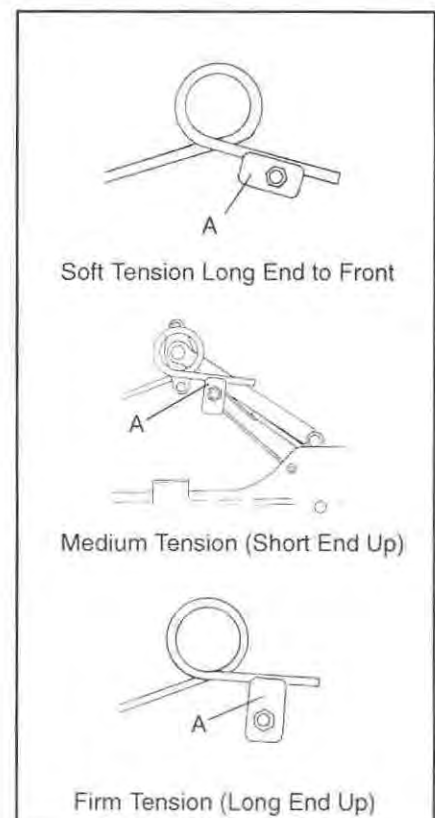


Be sure rear scissor stop face is square with the face of the scissor arm to ensure complete contact.



Rear Spring Tension

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.



Optional Springs - 1996 - Current XTRA 10 Style

The following optional springs are available to better suit individual riding preference. **NOTE:** There are no options for the front ski springs.

The following optional springs are available to better suit individual riding preference.

Front Track Spring Part No.	Spring Wire Dia. x Free Length - Rate
7041361-067	.343 x 7.0 - 243 #/in.
7041253-067	.312 x 7.5 - 200/Var.
7041362-067	.261 x 7.0 - 85 #/in.
7041364-067	.283 x 7.5 - 126 #/in.

Torsion Spring Part No.	Wire Dia./Degrees
7041463-067 Left	.406/77°
7041464-067 Right	.406/77°
7041461-067 Left	.421/77°
7041462-067 Right	.421/77°
7041465-067 Left	.437/77°
7041466-067 Right	.437/77°

The following optional front ski springs are available for the **440 XCR**.

Front Ski Spring Part No.	Spring Wire Dia. x Free Length - Rate
7041396-067	.283 x 11.88 - 50#/in.
7041398-067	.312 x 11.88 - 75#/in.
7041351-067	.331 x 11.88 - 75-125#/in.
7041405-067	.283 x 11.88 - 65#/in.

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

The following optional front ski springs are available for the **600 XCR**.

Front Ski Spring Part No.	Spring Wire Dia. x Free Length - Rate
7041358-067	.331 x 9.5 - 160#/in.
7041359-067	.312 x 9 - 146#/in.
7041360-067	.331 x 9 - 120/170#/in.
7041366-067	.331 x 9 - 110/140#/in.

The following optional front track springs are available for the **440 XCR SP**.

Front Track Spring Part No.	Spring Wire Dia. x Free Length - Rate
7041509-067	.343 x 6.18 - 140/240#/in
7041510-067	.362 x 6.25 - 165/245#/in.
7041511-067	.225 x 5.25 - 50#/in.
7041512-067	.263 x 5.25 - 85#/in.
7041513-067	.295 x 5.25 - 135#/in.
7041514-067	.297 x 5.25 - 100/180#/in.

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.

Ryde AFX shocks also available as an accessory for the IFS or rear track. These shocks offer more tuning ability. See the accessory section at the back of this manual.

SUSPENSION

Optional Springs - 1997 XTRA 10 Style

Following is a list of all available springs for the XTRA 10 front and rear suspension. These springs can be used to better suit individual riding preference.

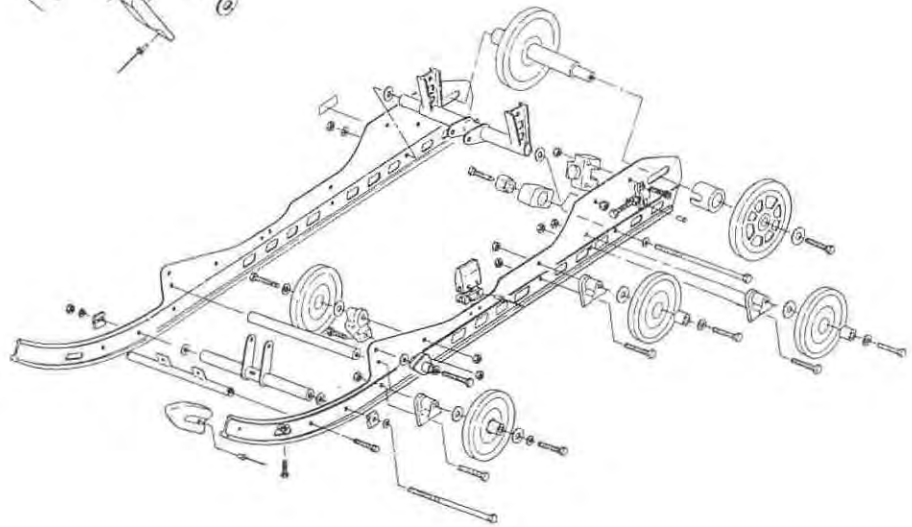
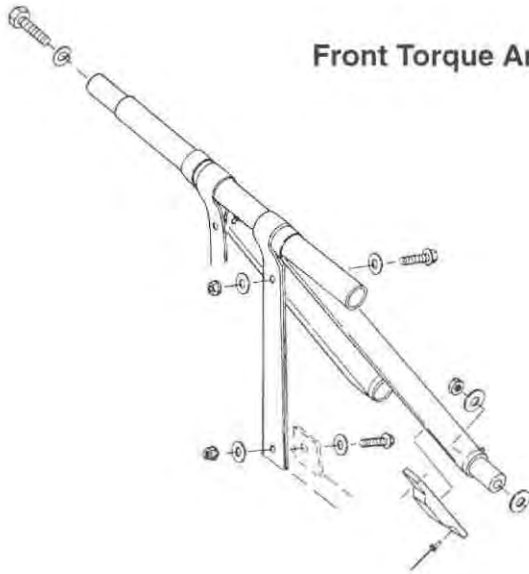
Torsion Spring Part No.	Wire Dia./Degrees
7041463-067 LH	.406/77°
7041464-067 RH	.406/77°
7041461-067 LH	.421/77°
7041462-067 RH	.421/77°
7041465-067 LH	.437/77°
7041466-067 RH	.437/77°

Front Ski Spring Part No.	Length/Rate - Application
7041554-067	80# Fox
7041576-067	100# Fox
7041575-067	120# Fox
7041574-067	140# Fox
7041573-067	160# Fox
7041553-067	60# Gabriel/Arvin
7041552-067	80# Gabriel/Arvin
7041551-067	100# Gabriel/Arvin
7041550-067	120# Gabriel/Arvin
7041549-067	140# Gabriel/Arvin

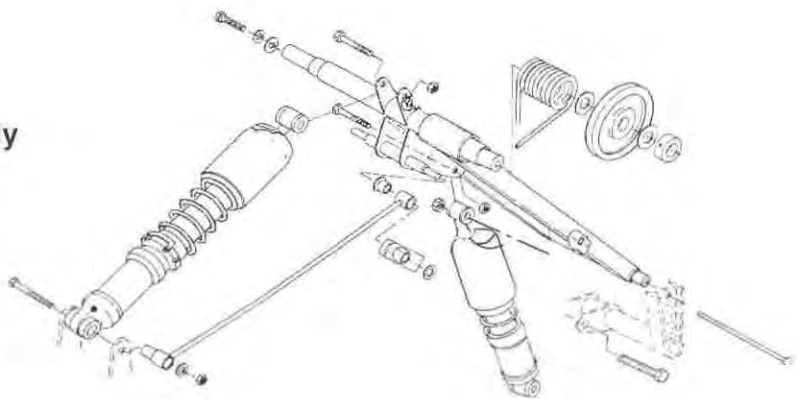
Front Track Spring Part No.	Spring Wire Dia. x Free Length - Rate
7041361-067	.343 x 7.0 - 243 #/in
7041253-067	.312 x 7.5 - 200/Var
7041362-067	.261 x 7.0 - 85 #/in
7041364-067	.283 x 7.5 - 126 #/in

SUSPENSION
Rear Suspension Exploded View - XTRA 12 121" Style

Front Torque Arm Assembly



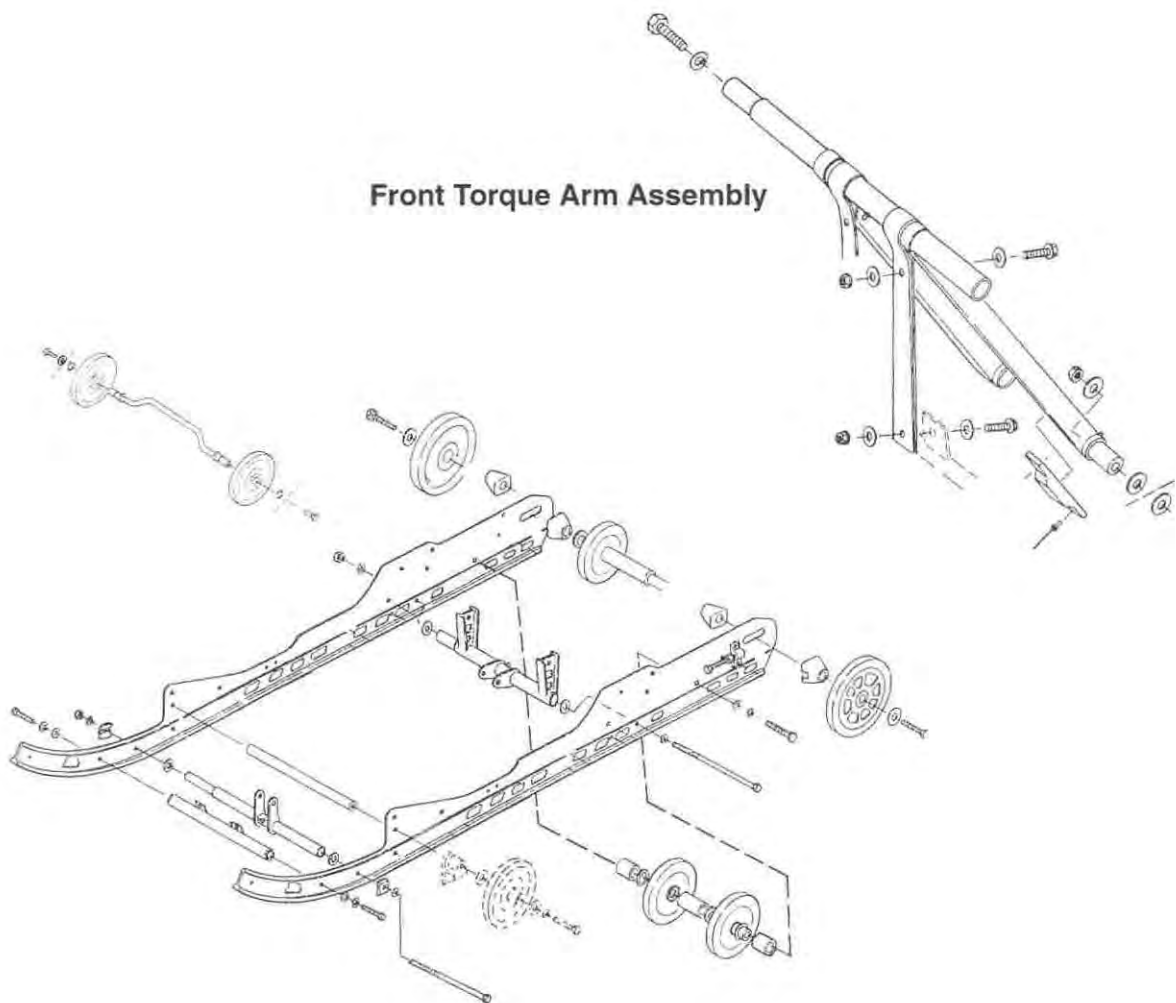
Rear Torque Arm Assembly



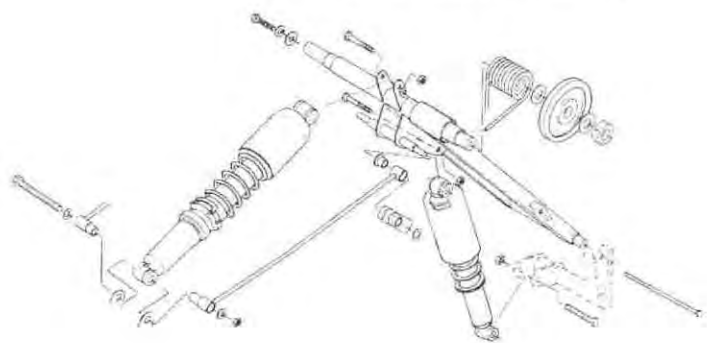
SUSPENSION

Rear Suspension Exploded View - XTRA 12 133.5" Style

Front Torque Arm Assembly

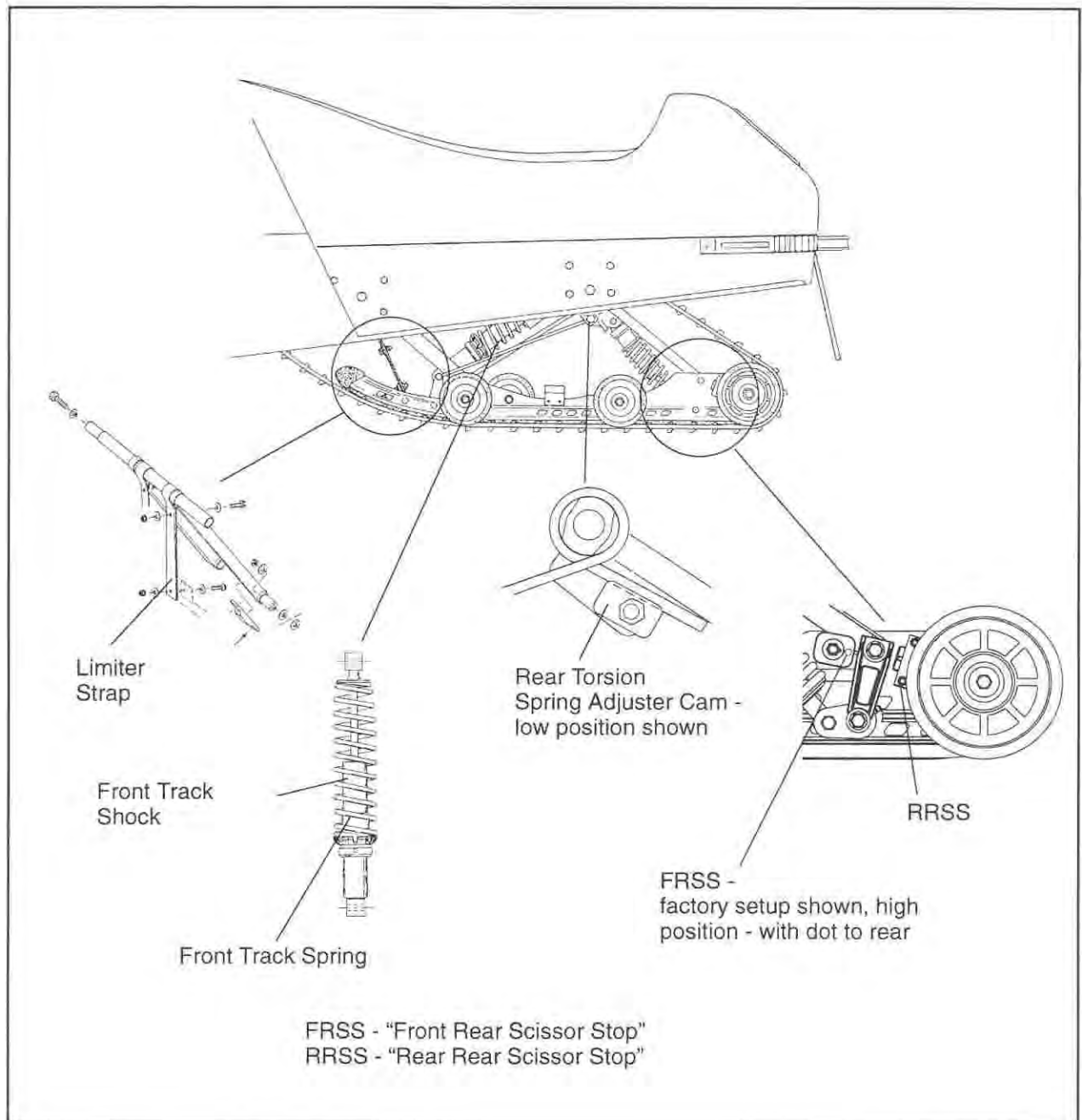


Rear Torque Arm Assembly



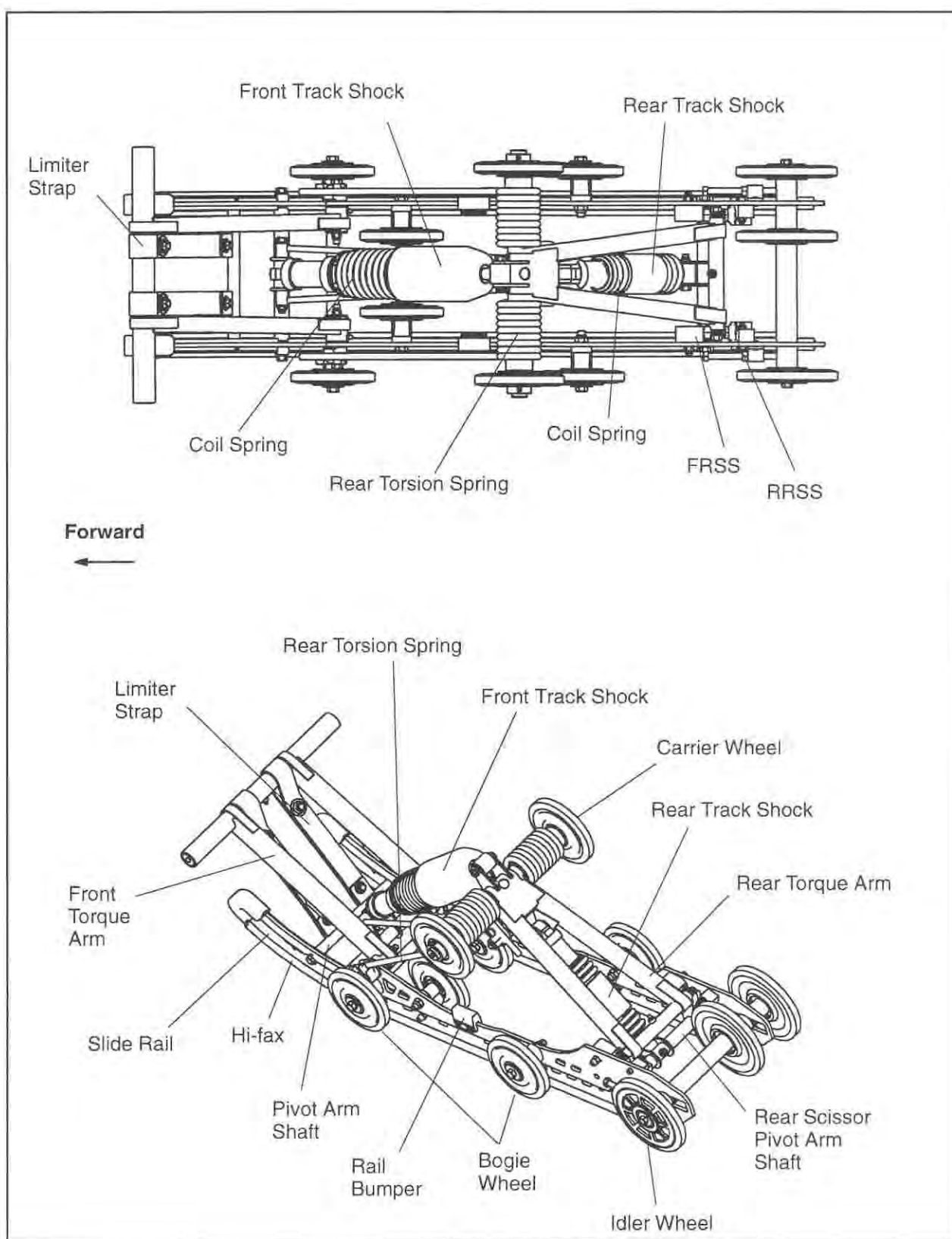
SUSPENSION

Rear Suspension Components - XTRA 12 Style



SUSPENSION

Rear Suspension Components - XTRA 12 Style



Spring preload is one of the adjustment options which affects ride. Preload is the amount of pressure at which the spring is held. The longer the installed length of the spring, the less the amount of preload; the shorter the installed length of the spring, the more the amount of preload.

To adjust spring preload on the ski, grasp the spring and turn in a clockwise direction (as viewed from the bottom of the shock) to increase the preload. Turn in a counterclockwise direction to decrease preload.

CAUTION:

If the plastic nut is unscrewed from the threaded body the nut will break. Always leave one thread showing above the plastic nut or the spring coils will stack, resulting in damage.

For the best ride the spring preload should be as low as possible. Set the preload to use the full travel of the ski shock with occasional light bottoming. To determine if your machine is using full travel, push the shock jounce bumper down as far as it will go on the shock rod and test ride the machine.

The bumper will move up on the rod in direct relation to the amount of travel. For example, if the shock travel is full, the bumper will be seated at the top of the shock.

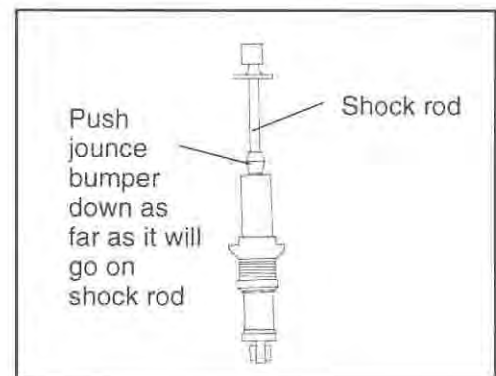
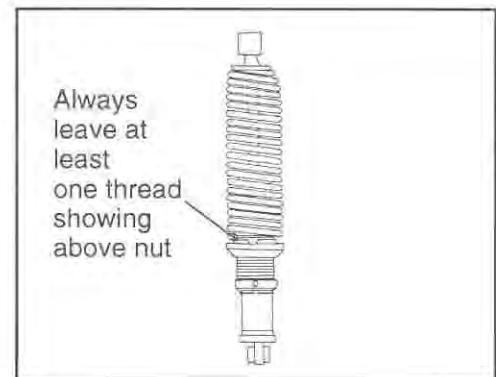
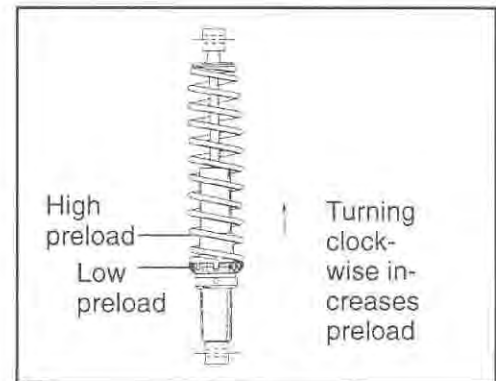
The purpose of the shock coil spring is to control ride height. The purpose of shock valving is to control damping. If you find that in order to obtain the desired ride effect the spring preload is at its maximum, consider one of these options:

- Remove the existing spring and install the next highest rate spring, or
- Reduce the preload on the existing spring and change the shock valving to obtain the desired effect. **NOTE:** Shock valving can only be adjusted or changed on models equipped with Indy Select or Fox™ shocks.

⚠ WARNING

Changing shock valving requires special tools and a sound knowledge of mechanical theory, tool use, and shop procedures in order to perform the work safely and correctly. Shocks contain high pressure nitrogen gas. Extreme caution should be observed when handling and working with high pressure service equipment. See Fox™ Shock rebuilding information later in this chapter.

Always verify ski alignment before making adjustments to the IFS. See page 7.17 to check alignment. If the skis are misaligned, we recommend the camber adjustment be checked as this may also be affected.



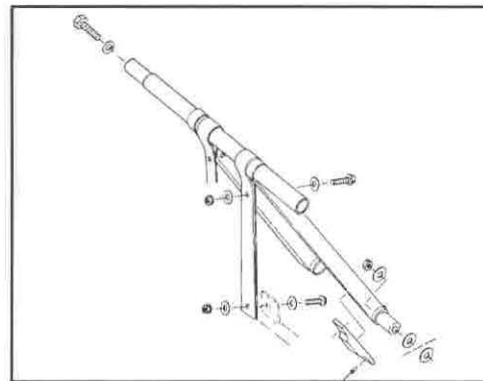
SUSPENSION

IFS Front Torque Arm Limiter Strap Adjustment - XTRA 12 Style

One method of changing ski-to-snow pressure is to change the length of the front torque arm limiter straps using the holes provided. The limiter strap is normally mounted in the fully extended position. It is important to note that decreasing limiter strap length will stiffen the whole suspension.

- Lengthening the straps decreases ski pressure.
- Shortening the straps increases ski pressure.

The preferred method for changing ski pressure is to move the FRSS to the forwardmost hole. See page 8.56.



SUSPENSION

Suspension Adjustment - XTRA 12 Style

The XTRA™ 12 suspension has been designed and set up to deliver a soft ride under average riding conditions. Rider weight, riding styles, trail conditions, and vehicle speed each affect suspension action.

The suspension can be adjusted to suit rider preference and deliver excellent performance for a given set of conditions. It should be noted, however, that suspension adjustments involve a compromise or trade off. A machine set up to perform well in the moguls would not suit the preference of a groomed trail rider.

Adjustable Features and Adjustment Options

Independent Front Suspension (IFS)

- Front shock spring preload
- Optional springs
- Optional shock valving
- Compression adjust Indy Select / Ryde AFX shock (see page 8.62)

Rear Suspension

- Spring preload - front track shock
- Spring preload - rear track shock
- Rear torsion spring pre-load
- Front rear scissor stop (FRSS)
- Optional coil springs
- Optional torsion springs
- Optional shock valving
- Limiter strap - front
- Compression adjust Indy Select Ryde AFX shock (see page 8.62)

Adjustment Procedures

It is a good idea to have customers break the suspension in for approximately 150 miles (240 km) and grease all suspension pivots before fine tuning adjustments are made. Use Polaris Premium All Season Grease.

All settings will vary from rider to rider, depending on rider weight, vehicle speed, riding style, and trail conditions. We recommend starting with factory settings and then customizing each adjustment individually to suit rider preference. The machine should be methodically tested under the same conditions after each adjustment (trail and snow conditions, vehicle speed, riding position, etc.) until a satisfactory ride is achieved. Adjustments should be made to one area at a time, in order to properly evaluate the change.

SUSPENSION

Rear Suspension Adjustments - XTRA 12 Style

The primary rear suspension adjustments are the front track spring preload and the rear torsion spring preload. It is important to note that adjusting the limiter strap does not change weight transfer from the rear suspension to the skis as in a conventional suspension. Instead it will increase the entire rear suspension preload and decrease travel. To *increase* ski pressure the front rear scissor stop (FRSS) should be set to low. To *decrease* ski pressure the FRSS should be set to high.

To properly adjust the rear suspension, start with the lightest preload setting that will prevent heavy bottoming. Adjustments should be made to one area at a time, in order to properly evaluate the change.

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. It is also possible to reposition the FRSS for increased ski pressure.

Front Track Shock Spring

Front track shock spring preload is adjusted by grasping the spring and turning in a clockwise direction to *increase* the preload. Turn in a counterclockwise direction to *decrease* preload.

Rear Track Shock Spring

The rear track shock coil spring does not have a threaded adjuster. One option to *decrease* preload for *less aggressive riders* is removal of the rear track shock spring.

Front Rear Scissor Stop (FRSS)

To *adjust the FRSS* compress the rear suspension until the rear scissor pivots away from the FRSS. Turn adjuster to desired position. The dot on the stop indicates the high position. High position is with the dot located toward the rear of the machine.

(See illustration) Medium position is with the dot toward the front of the machine.

CAUTION:

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

NOTE: It may be necessary to loosen the FRSS mounting bolts to adjust the position. Tighten after adjustment.

If the FRSS is in the low position but additional ski pressure is desired, move the FRSS to the optional front hole. Remove the attaching bolts and relocate the FRSS blocks in the forwardmost hole. Reinstall bolts and tighten.

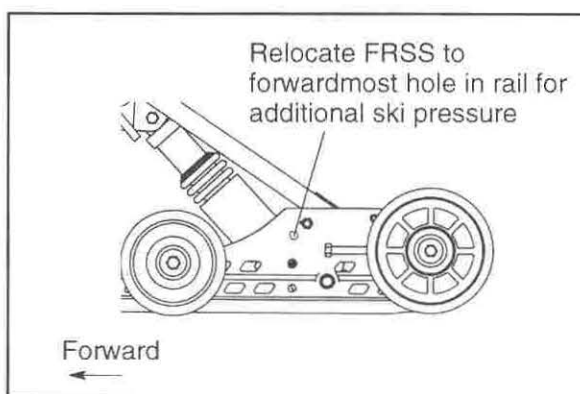
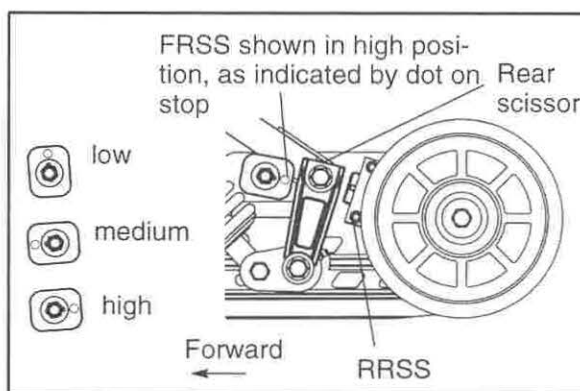
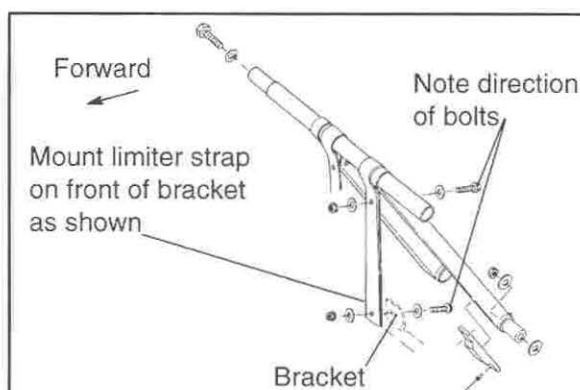
Rear Rear Scissor Stop (RRSS)

The RRSS is not adjustable but can be changed to provide less weight transfer on 121" models. See chart below.

XTRA 12 RRSS Production Settings

Suspension	Length	Color	Part Number
121"	Short	Black	5410937
133"	Long	Gray	5411041

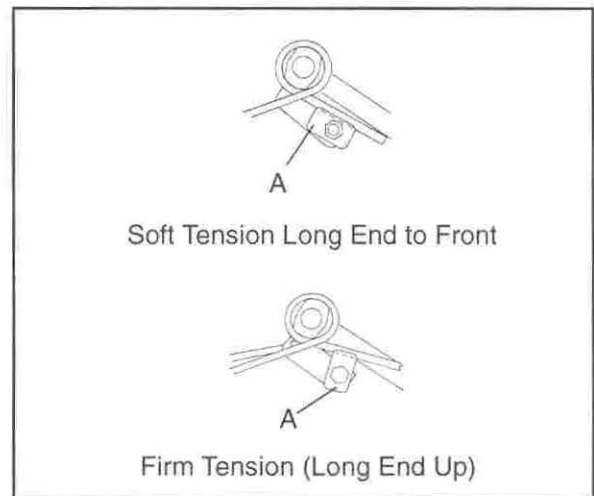
NOTE: For less weight transfer on XTRA 12 121" use long (gray) RRSS block.



Rear Torsion Spring

Rear torsion spring preload is adjusted by turning the two position cam (A) on the short leg of the spring as shown with the engine spark plug tool. This adjustment is easier if the long spring leg is lifted over the roller and replaced after the cam is properly positioned.

NOTE: See charts on page 8.60 for suggested set up for rider's weight and/or carrying capacity.



SUSPENSION

Optional Springs - 1996 XTRA 12 Style

The following optional springs are available to better suit individual riding preference.

Coil Spring Part No. For Use on Ski or Front Track Shocks	Spring Wire Dia. x Free Length - Rate
7041405-067	.306 x 11.88 - 65 #/in.
7041398-067	.312 x 11.88 - 75 #/in.
7041404-067	.343 (or .362) x 11.88 - 90/150 #/in.

Rear Track Spring Part No.	Spring Wire Dia. x Free Length - Rate
7041362-067	.261 x 7.0 - 85#/in.
7041364-067	.283 x 7.5 - 126#/in.
7041361-067	.343 x 7.0 - 243 #/in.

Torsion Spring Part No.	Wire Dia./Degrees
7041406-067 Left	.421/55°
7041407-067 Right	.421/55°
7041467-067 Left	.437/55°
7041468-067 Right	.437/55°

Coil Spring Part No. For Use on Ski (or Classic Front Track)	Spring Wire Dia. x Free Length - Rate
7041405-067	.306 x 11.88 - 65 #/in.
7041398-067	.312 x 11.88 - 75 #/in.
7041404-067	.343 x 11.88 - 90/150 #/in.

Rear Track Spring Part No. <i>Classic Only</i>	Spring Wire Dia. x Free Length - Rate
7041362-067	.261 x 7.0 - 85#/in.
7041364-067	.283 x 7.5 - 126#/in.
7041361-067	.343 x 7.0 - 243 #/in.

NOTE: A front track spring option kit is available for Classic Touring and XLT Touring Models. Order part number 2871349. This kit is included in the optional rear rack kit. See your dealer for more information.

Torsion Spring Part No. Classic, Classic Trg. & XLT Trg.	Wire Dia./Degrees
7041406-067 Left	.421/55°
7041407-067 Right	.421/55°
7041467-067 Left	.437/55°
7041468-067 Right	.437/55°

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.

SUSPENSION

Optional Springs - 1997 XTRA 12 Style

Following is a list of all available springs for the XTRA 12 front and rear suspension. These springs can be used to better suit individual riding preference.

Torsion Spring Part No.		Wire Dia./Degrees
7041394-067 LH	More Pre-load	.406/65°
7041395-067 RH	More Pre-load	.406/65°
7041487-067 LH		.406/77°
7041488-067 RH		.406/77°
7041406-067 LH	More Pre-load	.421/55°
7041407-067 RH	More Pre-load	.421/55°
7041487-067 LH		.437/77°
7041488-067 RH		.437/77°

IFS Spring Part No.	Length/Rate - Application
7041554-067	80# Fox
7041576-067	100# Fox
7041575-067	120# Fox
7041574-067	140# Fox
7041573-067	160# Fox
7041553-067	60# Gabriel/Arvin
7041552-067	80# Gabriel/Arvin
7041551-067	100# Gabriel/Arvin
7041550-067	120# Gabriel/Arvin
7041549-067	140# Gabriel/Arvin

Front Track Shock Spring Part No.	Spring Wire Dia. x Free Length - Rate
7041404-067	.343 x 11.88 - 90/150 #/in
7041396-067	.283 x 11.88 - 50 #/in
7041484-067	.406 x 9.0 - 275 #/in
7041405-067	.306 x 11.88 - 65 #/in
7041398-067	.312 x 11.88 - 75 #/in

Rear Track Shock Spring Part No.	Spring Wire Dia. x Free Length - Rate
7041362-067	.261 x 7.0 - 85 #/in
7041364-067	.283 x 7.5 - 126 #/in
7041361-067	.343 x 7.0 - 243 #/in
7041561-067	.261 x 7.5 - 85 #/in

SUSPENSION

XTRA 12 Rear Suspension Set Up

Rear Suspension Suspension Set Up

The following charts are only guidelines to be used for initial suspension set up. Set up may vary based on your desired riding style.

XTRA 12 121"

Rider Weight	Front Track Shock Spring	Torsion Spring	Rear Track Shock Spring**	
110-160 lbs. (50-73 kg)	75 #/in.	.406 Low Setting	85 #/in.	Ultra 126 #/in.
*160-210 lbs. (73-95 kg)	75/125 #/in Low-Medium Preload	.406 Low Setting	85 #/in.	Ultra 126 #/in.
210-260 lbs. (95-118 kg)	75/125 #/in High Preload	.421 Low Setting	85 #/in.	Ultra 126 #/in.
260+ lbs. (118+ kg)	90/150 #/in Low Preload	.421 High Setting	126 #/in.	Ultra 200 #/in. Variable

*Indicates production set up for average rider/ average conditions.

** May be removed if ride is too stiff after other adjustments or changed to a lighter rate spring. See Rear Track Spring Options, page 8.58.

XTRA 12 133"

Rider Weight	Front Track Spring (1)	Torsion Spring	Rear Track Spring (2)	Front Track Shock (3)	Rear Track Shock (3)
110-160 Soft With rack plus 30 lbs.	75-125 #/in. 90/150 #/in. 190 #/in.	.421 x 55 low .437 x 77 low .437 x 77 low	275 #/in. 275 #/in. 275 #/in.	3/4 3/4 1.75	3/4 3/4 1.75
160-200 with rack plus 30 lbs.	90-150 #/in. 190 #/in.	.437 x 77 low .437 x 55 high	275 #/in. 275 #/in.	1 2	1 2
200-260 with rack plus 30 lbs.	90-150 #/in. 190 #/in. w/1.0 " pre-load	.437 x 77 low .437 x 77 high	275 #/in. 275 #/in.	1.5 2.5	1.5 2.5
260+ with rack plus 30 lbs.	90-150 #/in. 190 #/in. w/1.0 "pl	.437 x 77 high .437 x 77 high	275 #/in. 275 #/in.	2.5 3	2.5 3

(1) Note: The front track spring preload may be adjusted using the threaded adjuster to the desired setting in combination with the listed configurations.

(2) Note: For extreme conditions up to one inch of preload can be added to the rear track shock spring using spacers (PN 5210953).

(3) Note: This setting refers to the compression adjust screw in Indy Select shocks. Setting indicates number of turns in clockwise direction.

SUSPENSION

Compression Adjustable Shocks

Compression Damping Adjustable Shocks

Snowmobiles equipped with the Indy Select / Ryde AFX rear shocks allow the driver to make adjustments to the compression valving of the rear shock by turning the screw located near the base of the shock.

Adjustment

Locate the adjustment screw near the base of the shock. **NOTE:** This adjustment is easiest to make with the machine tipped on its side.

WARNING

Be sure to shut off the fuel supply before tipping the machine to prevent fuel spillage and flooding of the carburetors.

By turning the screw clockwise (a small screwdriver or dime work well), the compression valving is increased, stiffening the ride. To soften the ride, reduce the compression by turning the screw counter-clockwise. A great deal of ride performance is accomplished with a mere 1/2 to 1 turns. There are approximately 3 full turns of adjustment available.

How to Adjust

If the suspension is "bottoming," tighten the compression screw clockwise in 1/2 turn increments until the bottoming stops. Backing off 1/4 turn counter-clockwise at this point should give you the best possible ride ensuring use of the full travel of the suspension. The opposite procedure should be used if the suspension is too stiff upon initial set-up.

The adjustment of the front track shock should be used in conjunction with the shock spring preload. To adjust spring, see page 8.60.

If bottoming continues after the screw is bottomed out, the torsion spring should be adjusted per the adjustment block. See page 8.60. Back the screw out to the original starting position after the torsion spring has been tightened.

Riding conditions are ever changing. Keep in mind the compression damping adjustable can be adjusted at any time to achieve the best possible ride in any condition.

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.

XTRA 12 Suspension Shock Removal

Steps 1-4 (immediately below) may be used for either front or rear track shock removal.

1. Turn fuel valve to off position.
2. Loosen rear idler bolts (A), lock nuts (C), and track adjuster bolts (B).
3. Remove (4) suspension mounting bolts.
4. Place a protective mat along side of machine. Tip the machine on its side onto protective mat.
5. Note orientation of shocks before removal - gas valve (Fox) or adjuster screw (Select) up or down.
6. Remove suspension.
7. Lift rear torsion springs (D) from their lower mounts.
8. Remove top bolt from front track shock.
9. Remove lower front track shock bolt (lift torque arm to gain access).
10. With front track shock removed, loosen and remove top and bottom bolts from rear track shock.

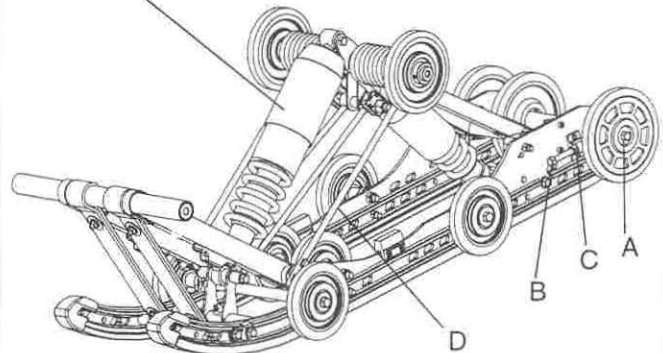
XTRA 12 Suspension Shock Installation

1. Reverse steps above for assembly, with the following notes:
 - Use new Flex-Loc™ nuts for installation. Tighten shock bolts to 15-18 ft. lbs. (2.07-2.48 kg-m). Be sure the shock still pivots freely.
 - Position torsion springs on top eccentric and lower mount.
 - Readjust and align track. See pages 2.12-2.16.
 - Torque suspension mounting bolts to 60 ft. lbs. (8.28 kg-m).
 - Secure jam nuts and tighten rear idler bolts.

Front Track Shock Installation

Fox Shocks - Gas fitting positioned downward (toward track)

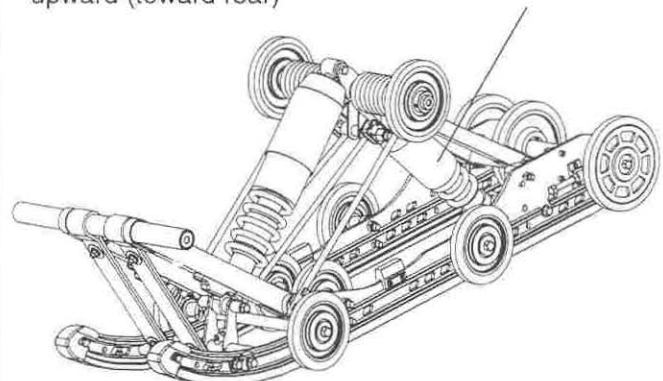
Indy Select Shocks - Adjuster screw positioned upward



Rear Track Shock Installation

Fox Shocks - Gas fitting positioned upward (toward rear)

Indy Select Shocks - Adjuster screw positioned upward (toward rear)

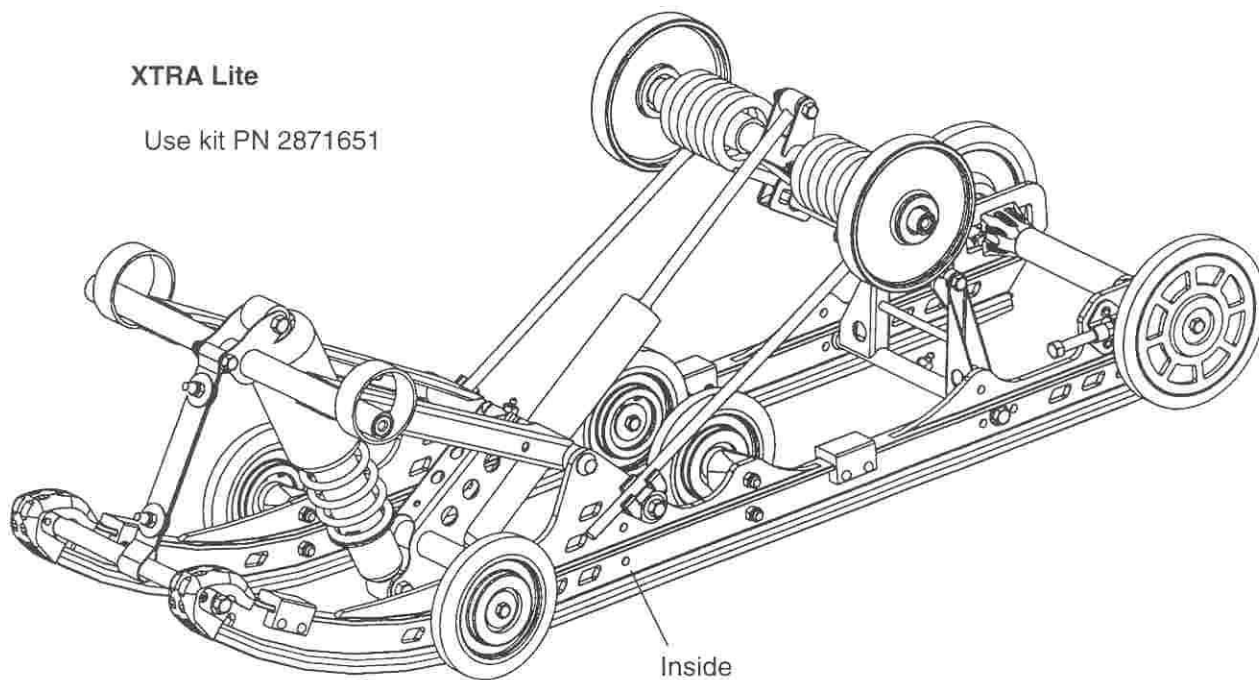


Wheel Kit Mounting Recommendations

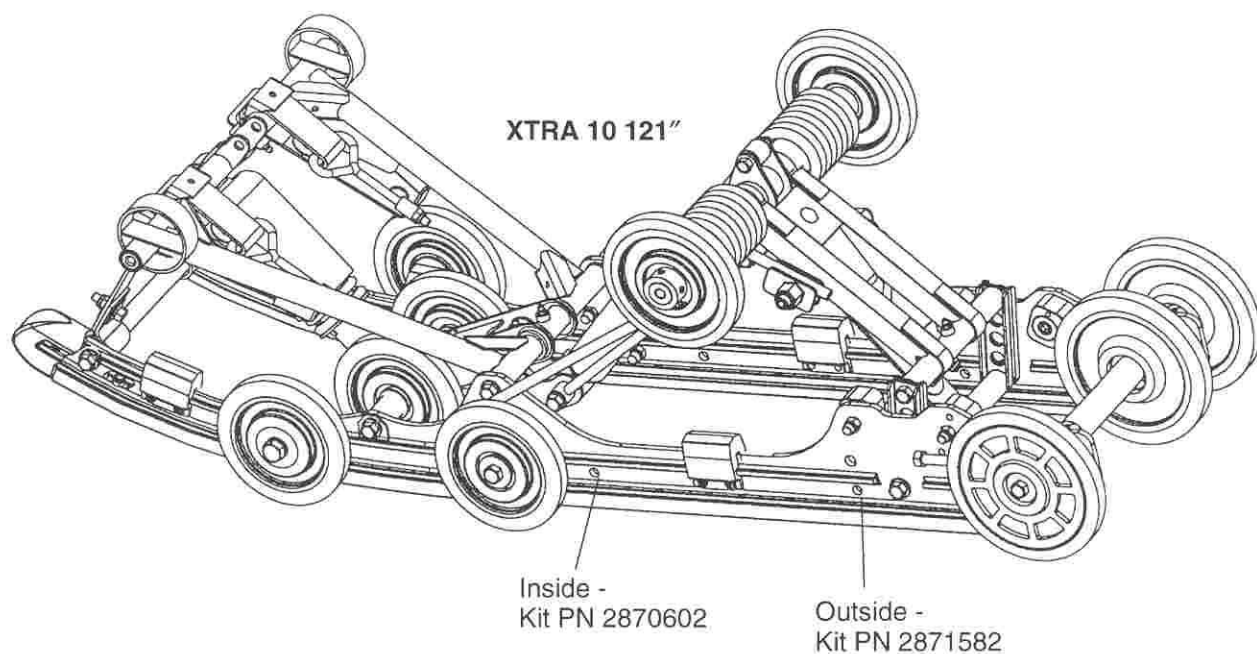
The following illustrations indicate proper installation of optional wheel kits.

XTRA Lite

Use kit PN 2871651



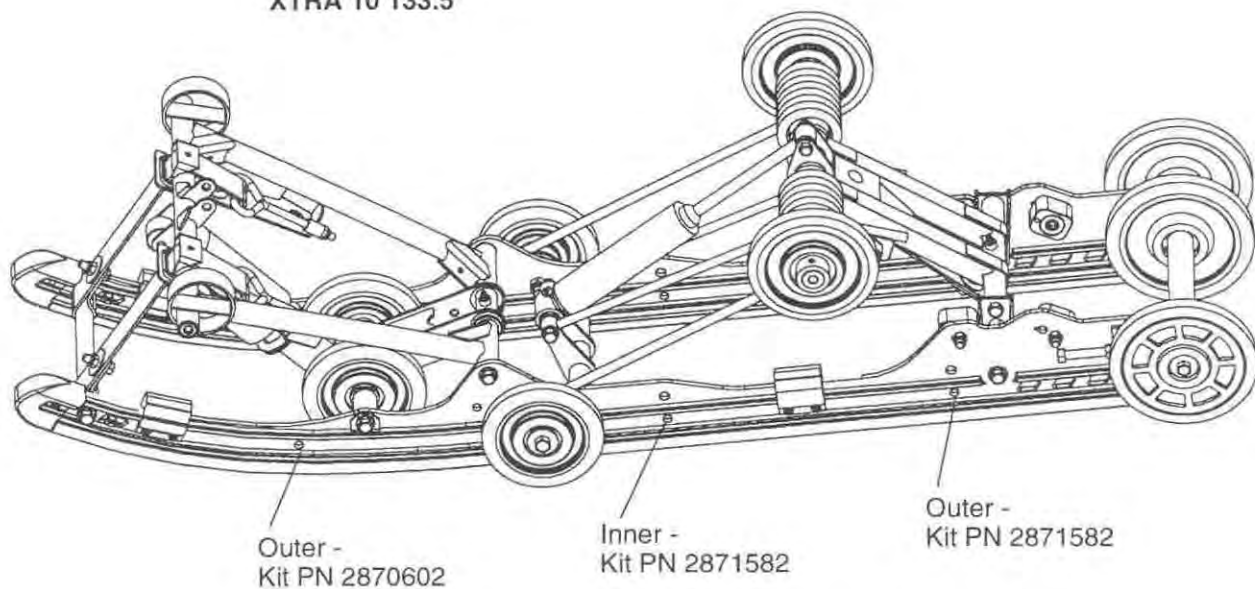
XTRA 10 121"



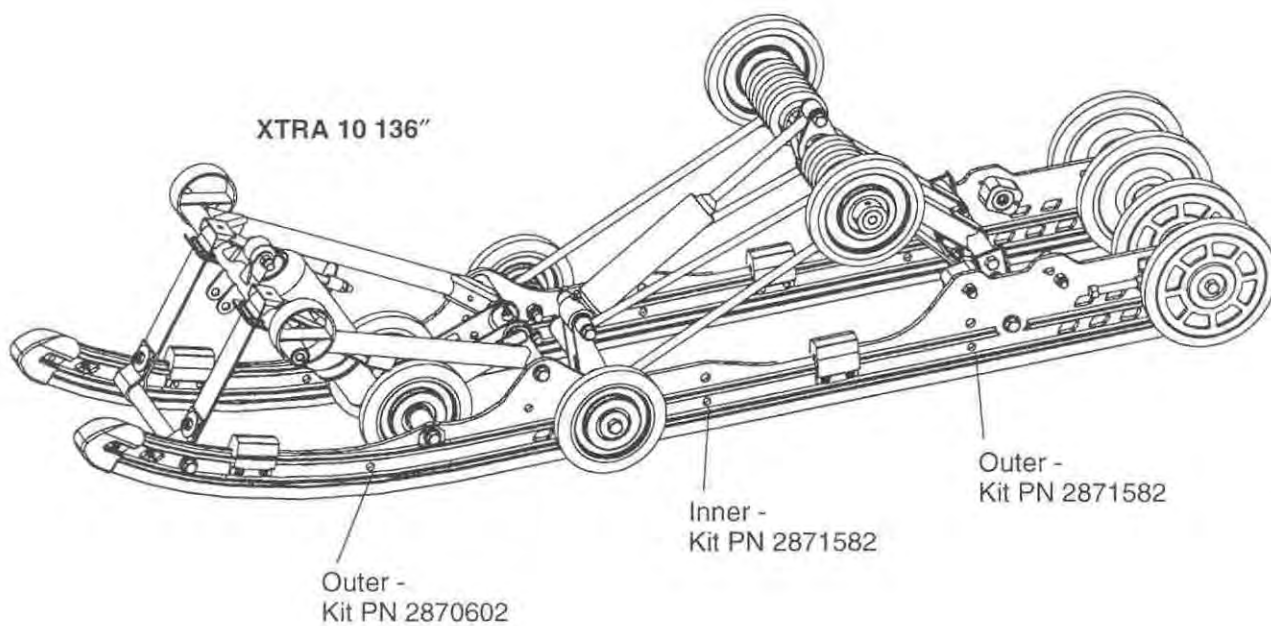
SUSPENSION Wheel Kits

Wheel Kit Mounting Recommendations

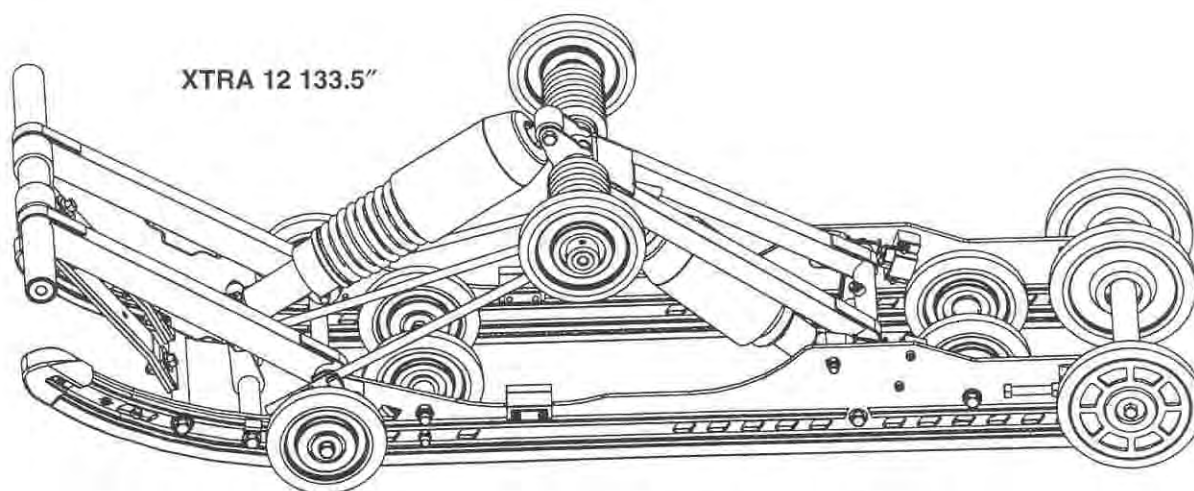
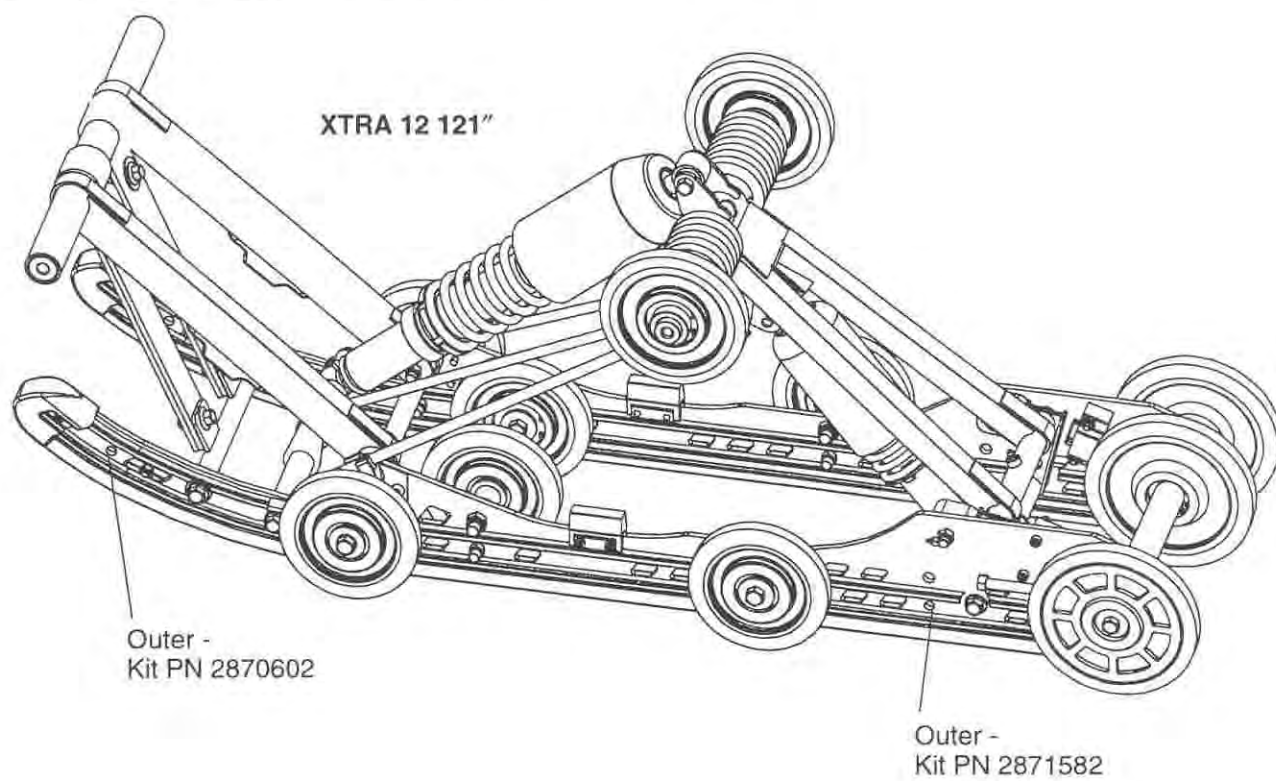
XTRA 10 133.5"



XTRA 10 136"



Wheel Kit Mounting Recommendations



**No Wheel Kits recommended
for this suspension**

SUSPENSION

Fox™ Shock Data

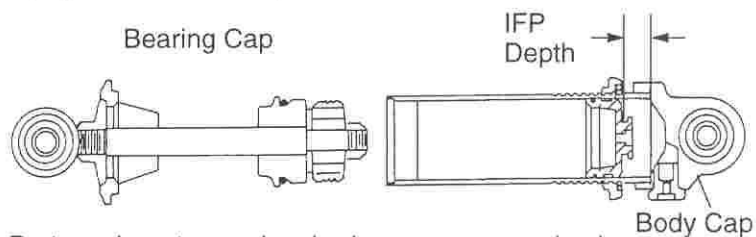
FOX™ Shock Specifications

Shock PN	Extended Length (in.)	Compression (in)	Stroke (in)	IFP Depth (in) ± .025 (See NOTE:)
7041385	18.15	11.78	6.37	1.142
7041386	18.15	11.78	6.37	1.142
7041387	12.32	8.67	3.65	.633
7041401	16.56	10.75	5.81	1.139
7041402	11.07	8.00	3.07	.586
7041403	13.56	9.21	4.35	.795
7041444	14.52	9.82	4.70	.835
7041474	13.25	9.21	4.04	.728
7041480	12.32	8.67	3.65	.633
7041490	12.71	8.86	3.85	.700
7041492	14.52	9.82	4.7	.835
7041494	15.70	10.47	5.23	1.00
7041507	11.06	7.9	3.15	.25 (Reservoir)
7041536	15.70	10.47	5.23	1.00
7041537	16.14	11.29	4.85	2.00
7041540	15.70	10.47	5.23	1.00
7041545	13.64	9.29	4.35	.675
7041584	11.07	8.00	3.07	.586
7041585	14.52	9.82	4.70	.835
7041588	14.52	9.82	4.70	.835
7041589	11.07	8.00	3.07	.586
7041593	15.70	10.47	5.23	1.00
7041595	14.52	9.82	4.70	.835
7041599	14.52	9.82	4.70	1.50 (Reservoir)
7041612				1.00
7041641	10.97	7.90	3.07	.600
7041642	10.97	7.90	3.07	.600
7041692	15.70	10.47	5.23	1.00
7041695	14.52	9.82	4.70	.835
7041697	15.70	10.47	5.23	1.00
7041706	10.85	7.78	3.07	.600
7041707	14.52	9.82	4.70	1.50 (Reservoir)

Measure IFP depth from flat of piston as shown using IFP depth tool or dial caliper. IFP depths for non-current Fox shocks and kits are listed on page 8.89.

IFP Depth Tool PN 2871351

NOTE: IFP depth listed applies to full travel set-up only (production shock travel). Refer to page 8.83 for IFP adjustment for limited travel.



SUSPENSION

Fox™ Shock Maintenance

Changing oil on Fox™ Shocks is recommended annually and should be included when performing end of season storage preparation. This oil change is necessary to avoid any chance of corrosion which could be caused by moisture contamination. For competition use, shocks should be disassembled, inspected and serviced more frequently.

When performing maintenance on Fox™ Shocks, use Gas Shock Recharging Kit PN 2200421. It consists of the necessary valves, pressure gauge, and fittings to deflate and pressurize the shocks. The Body Holder Tool, Internal Floating Piston (IFP), and Shock Rod Holding Tool are not included in the Recharging Kit and must be ordered separately. Refer to General Tools, Chapter 1 for part numbers.

Gas Shock Recharging Kit

PN 2200421

⚠ WARNING

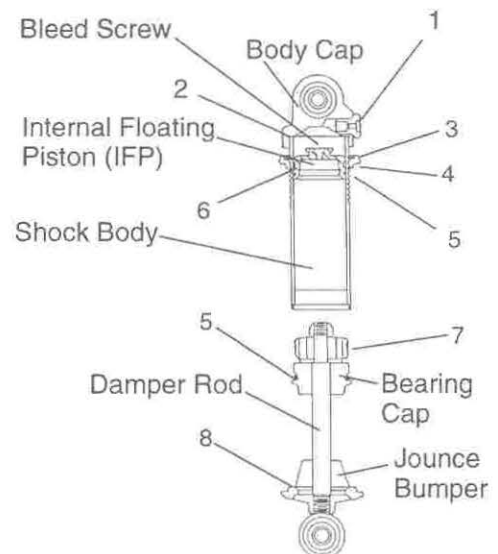
Extreme caution should be observed while handling and working with high pressure service equipment. Wear a face shield, safety glasses, and ear protection during service of these shocks.

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 a 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.

Keep the parts in order as they are disassembled. Note the direction and position of all internal parts for reassembly.

Ref. #	Part No.	Qty.	Description
1	1500005	1	Pressure 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



SUSPENSION

Fox™ Shock Maintenance

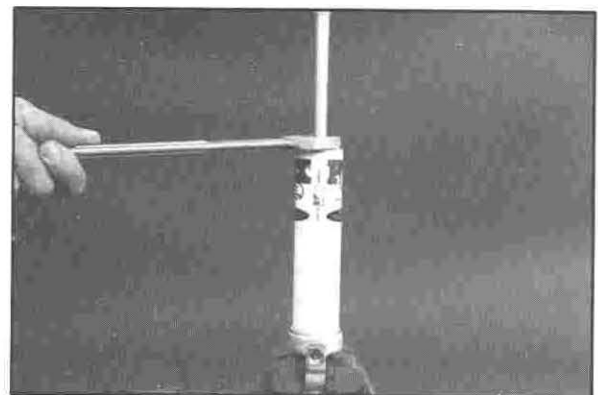
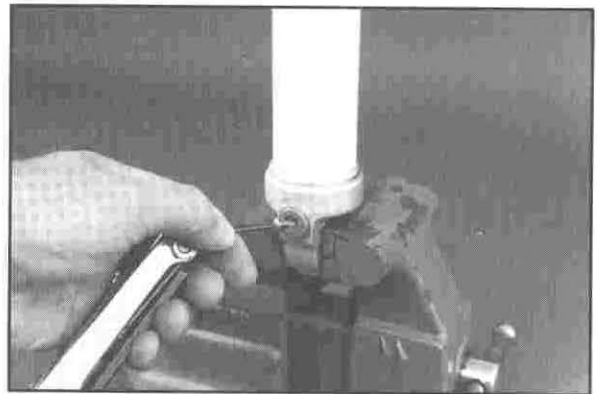
Disassembly

1. Remove spring and bushings from shock eyes. Thoroughly wash shocks in a parts washer or with soap and water to remove dirt and other debris. Dry thoroughly with compressed air. Position and clamp body cap of shock in soft jaws (aluminum or brass) of vise. Remove Allen screw from pressure valve.
2. With valve outlet pointed in a safe direction, insert red tip of safety needle assembly into recess in shock pressure valve. Depress safety pin on safety needle and push gauge and needle assembly slowly toward shock, inserting needle. Be sure to push needle completely into shock valve. Release nitrogen in a safe direction away from everyone by turning T-handle clockwise (if equipped) or by depressing Schrader valve pin.

CAUTION:

It is possible for some residual pressure to remain in the shock regardless of the gauge reading. *Always* completely remove valve from body cap before further disassembly of shock.

3. Remove valve and sealing O-ring from body cap.
4. Extend shock shaft by pulling up on shock eyelet. Using a 1" (25 mm) wrench, loosen shaft bearing cap.



Disassembly, Cont.

5. If body of shock starts to unscrew from body, tighten and try again. To keep body from turning, it may be necessary to use Body Clamp Tool clamped lightly around body in soft jaws of vise as shown.

NOTE: Position body clamp at least 1 1/2" below bearing cap.

Shock Body Clamp Tool

PN 2871071

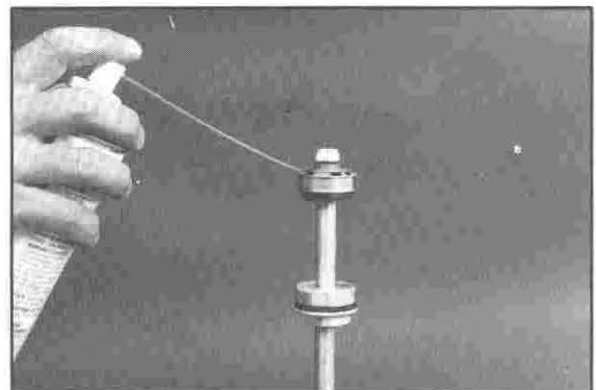
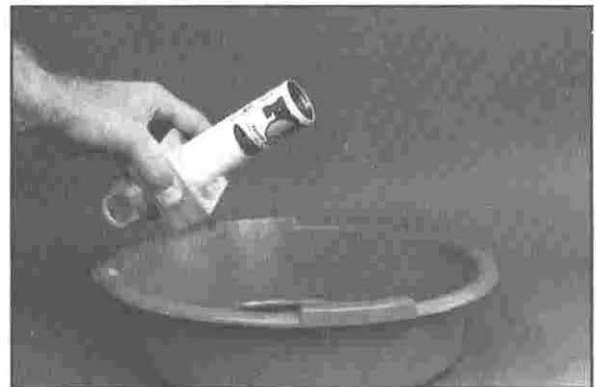
6. Pull shock rod and piston straight out to avoid seal or valve damage. Be prepared to catch piston ring when removing the damper rod/valve piston.

7. Remove shock from vise and dispose of used oil properly in suitable container. Set shock body aside.

8. Mount damper rod in soft-jawed vise as shown. Loosen valve nut and clean the valve piston and valving washers with electrical contact cleaner. Dry thoroughly with compressed air. Tighten nut and torque to 12 ft. lbs. (1.66 kg-m).

Valve Nut Torque -

12 ft. lbs. (1.66 kg-m)



SUSPENSION

Fox™ Shock Maintenance

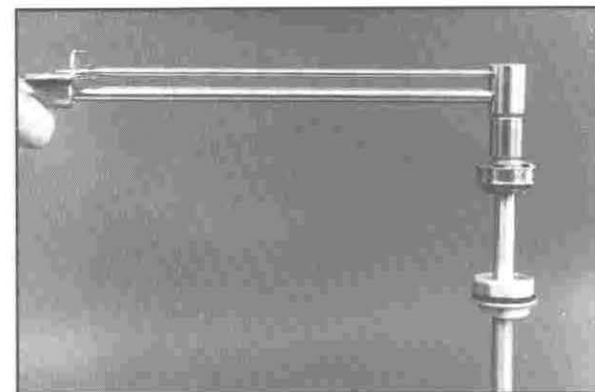
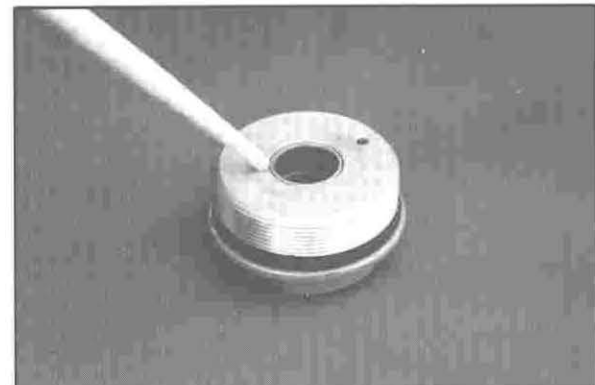
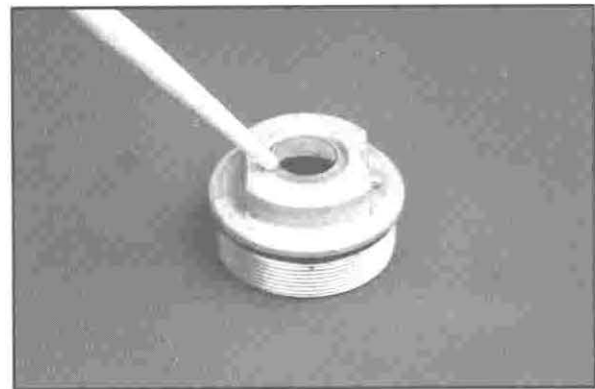
9. If bearing cap and/or seals are to be replaced, remove nut, washer, and valve piston with valving washers and set aside. Keep washers in order and note orientation of slots in piston for proper re-installation. The side with the greater number of slots must face the damper rod nut (toward IFP).

Seal Replacement

1. Remove bearing cap from damper rod. Inspect seals, o-ring, and bushing inside cap. Inspect cap O-ring and replace if torn or damaged.
2. Using a small screwdriver or scribe pry upper seal, main seal, and O-ring out of bearing cap. Use care to avoid scratching the seal cavity.
3. Clean seal cavity and inspect bushing for wear or damage and replace bearing cap if necessary.
4. Lubricate new seals and O-ring with Polaris shock oil and install. Be sure the seals are seated completely in the seal cavity.
5. Inspect jounce bumper (where applicable) and replace if damaged.
6. Inspect damper rod for nicks, scratches or abrasion. Install bearing cap and thick backing washer on damper rod. Install compression valve washer stack in same order as disassembly. Install valve piston with greater number of slots facing damper rod nut (toward IFP). Install rebound stack, washer, and a new nut. Torque nut to 12 ft. lbs.

Valve Nut Torque -

12 ft. lbs. (1.66 kg-m)



Seal Replacement, Cont.

7. Inspect valve piston ring for wear. The outer surface of the ring should be even in color. Set aside damper rod assembly for reinstallation.
8. Position shock in vise with Body Clamp Tool positioned as shown. Clean body clamp tool before installing. Lightly heat threaded area of body cap with a butane or propane torch to loosen Loctite™ sealant.

CAUTION:

Never apply heat to shock body without first depressurizing shock and removing bearing cap and oil. Do not over heat. Damage to internal seals or personal injury could result.

Shock Body Clamp Tool

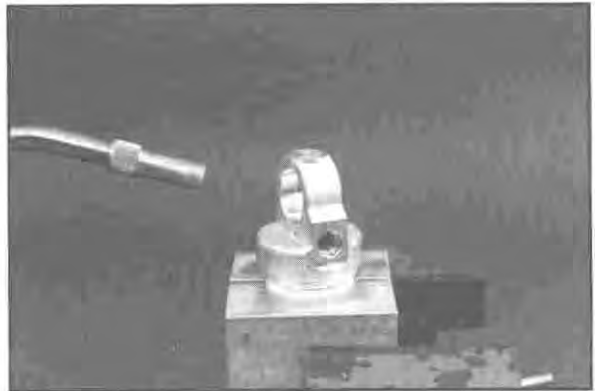
PN 2871071

9. Using an open end or large adjustable wrench, unscrew the body cap from the body.

CAUTION:

If parts are hot, wear leather gloves to avoid burns.

10. Inspect O-ring in body cap for damage.
11. Note location of Allen screw in internal floating piston (IFP) for reassembly in body tube. Remove IFP by pushing with handle of hammer against piston toward body cap end (external threaded end). Be prepared to catch piston ring and piston as it comes out. Remove Allen screw from center of piston. Inspect bleeder screw O-ring and IFP sealing O-ring for wear or damage. Replace O-rings upon reassembly.
12. Carefully clean *all* parts thoroughly with electrical contact cleaner or solvent and dry with compressed air. Inspect shock body for scratches or wear.



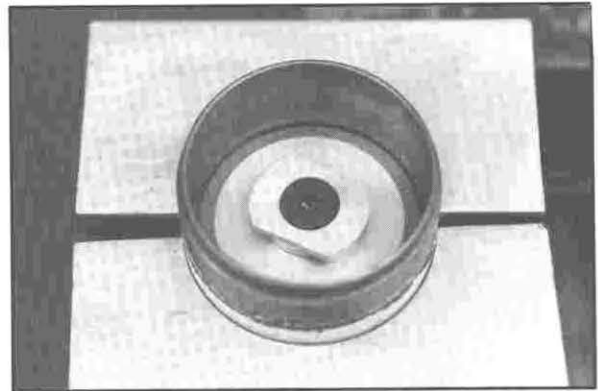
SUSPENSION

Fox™ Shock Maintenance

Reassembly

1. Install bleeder screw in IFP until O-ring is lightly seated.
2. Lubricate IFP O-ring and piston ring with shock oil. Wrap piston ring around IFP and install into shock body to a depth of approximately 1/4" (.6 cm). Do not install the IFP to a depth greater than 1/4" (.6 cm) at this time.

NOTE: Bleeder screw must be positioned toward body cap (externally threaded) end of shock body.



3. Mount shock in soft jaws of vise using body clamp as shown. Slowly pour suspension fluid into the body of the shock until it comes within 1/4" (6 mm) from the top of the body. Allow time for air bubbles to rise to the surface.

Suspension Fluid PN 2870995



4. Position bearing cap on damper rod against valve piston. Submerge valve piston in a clean container of suspension fluid and rotate to remove as much air as possible.
5. Compress flexible piston ring around valve piston and install piston into shock body with three closely spaced slots (on nut side) at the highest point. Rock the damper rod lightly back and forth while installing to allow air to escape through the low speed orifice in the piston.



Reassembly, Cont.

6. Wrap a shop towel around shock body and screw bearing cap in until hand tight - enough to seat O-ring.
7. Invert shock and mount bearing cap flats lightly in vise. Caution: Be sure damper rod is fully extended. Pour shock fluid on top of IFP until covered to a depth of about 1/4" (6mm). Do not remove bleeder screw at this time. Install body cap until O-ring is lightly seated.

CAUTION:

Do not over-tighten vise or bearing cap may be damaged.

8. Mount shock in vise by top eyelet as shown. Support shock and strike body cap end 2-3 times with a soft faced hammer to remove all air trapped inside the valve piston. Allow shock to stand for 3-5 minutes.
9. Unscrew body cap and remove bleeder screw from the IFP. *Slowly* stroke shock to force air through piston orifice. Move the shock body slowly to prevent aeration of the oil. Allow all air to purge through the bleeder screw hole.



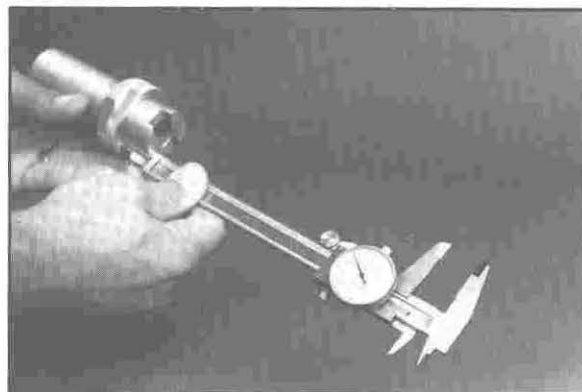
SUSPENSION

Fox™ Shock Maintenance

Reassembly, Cont.

10. Mount shock in vise by bearing cap flats.
IMPORTANT: Fully extend damper rod. Set IFP tool to specified depth with a dial caliper as shown.

IFP Tool PN 2871351



11. Place a shop towel over the end of IFP tool and slowly push IFP to specified depth.



12. Install the bleeder screw with a new O-ring and tighten securely using the flats on the tool to prevent the IFP from turning. Pour out excess oil. It is not necessary to completely clean all oil from the nitrogen chamber, a small amount of oil will lubricate the IFP. Verify the proper IFP depth to within $\pm .025"$ (.63mm) with a dial caliper. Be sure to measure to the flat portion of the IFP, not to the tapered outer edge.

13. Reinstall body cap with a new O-ring 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.



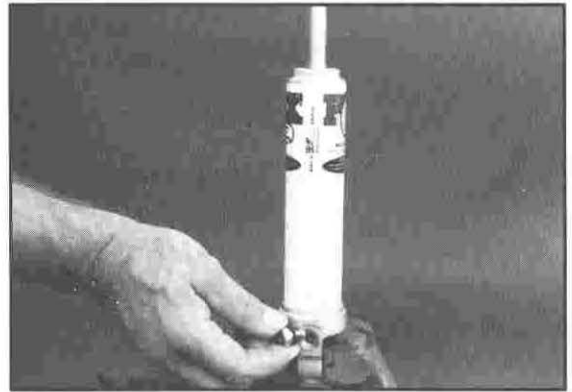
CAUTION:

Do not over tighten or damage to the bearing may result.

Bearing Cap Torque -
8-10 ft. lbs. (1.10-1.38 kg-m)

Reassembly, Cont.

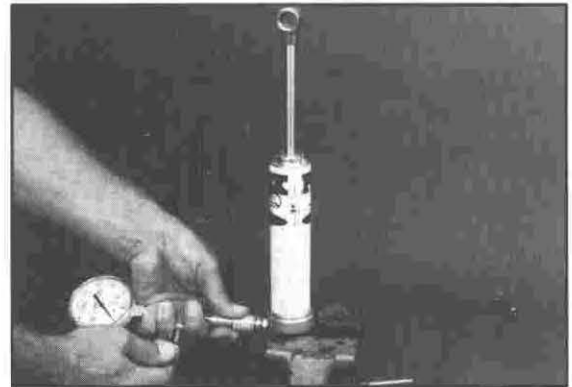
14. Install pressurizing valve with new O-ring and tighten securely.



15. Set the nitrogen tank pressure regulator to 200 - 205 PSI.



16. Insert the Fox™ Safety Needle and charge with nitrogen to 200 PSI. Pull the needle straight outward and remove from the pressurizing valve while holding the pressure hose on the fitting. Do not insert the needle again to check pressure as the volume inside the gauge will reduce pressure in the shock.



17. As a final check, push the damper rod through a full stroke. The damper rod must bottom out at full travel, and then slowly rise to full extension. Shaft movement must be smooth and consistent throughout the entire compression and rebound stroke, without binding or loss of damping.



SUSPENSION

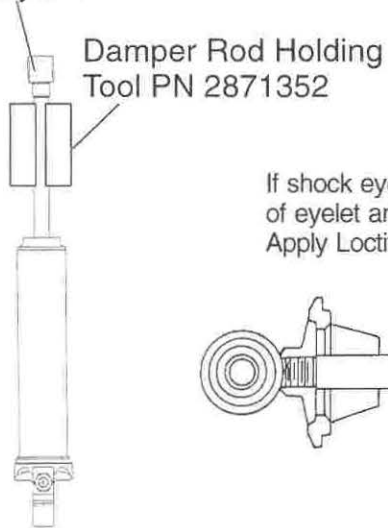
Fox™ Shock Maintenance

Reassembly, Cont.

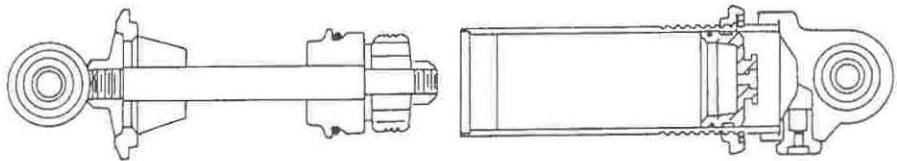
18. To check for leaks, submerge the shock in water and look for bubbles or oil seepage around the bearing and body caps.
19. When reinstalling shocks on the machine, torque only to required specifications. If the shock is over tightened it will not pivot, possibly resulting in damage to shaft and seals.
20. When installing IFS shocks, tighten top mount first. Pivot shock body into lower mount and determine if spacer washers are necessary to prevent twist or side loading of shock. Suspension assemblies should always be moved through entire travel without springs to verify free movement and proper alignment of all components.

Shock Eyelet Replacement

Top Shock Eyelet



If shock eyelet is removed for damper rod replacement, clean threads of eyelet and damper rod thoroughly with Loctite™ Primer N. Apply Loctite™ 262 to threads before assembly.



1996 Fox™ Remote Shock

The 1996 Indy 440 XCR SP features a remote shock limiter assembly. The shock length is adjusted by a variable volume of oil between the damping piston and the shock bearing end cap. The assembly has two separate and isolated oil reservoirs. One reservoir system provides damping, while the other system limits the extended shock length. The systems are kept independent of one another by means of the separator piston. Both systems use the same type of oil.

NOTE: When servicing the remote shock limiter assembly, cleanliness is of utmost importance. Be prepared to set disassembled items on a clean surface. Clean cloth or paper towels are recommended.

Disassembly

1. Clean the self-sealing quick-disconnect coupler near the remote limiter knob assembly to avoid contamination. Uncouple the connector.
2. Remove the remote limiter knob assembly and shock from the snowmobile.

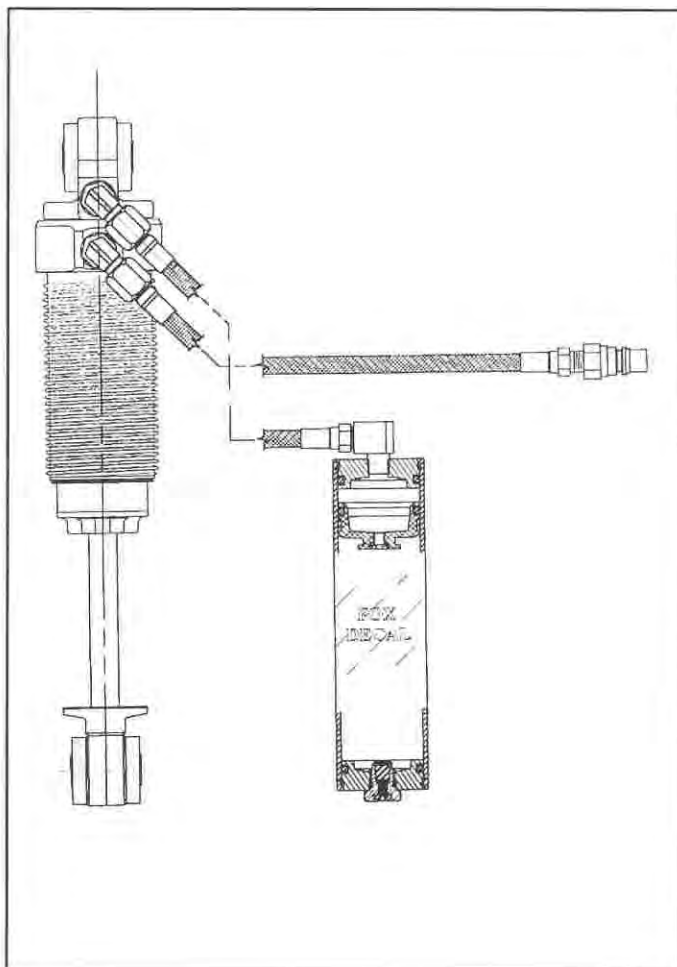
CAUTION:

The hoses bend freely. Be careful not to twist, crush, or kink the hose.

3. Thoroughly wash shocks in a clean parts washer or with soap and water. Dry with compressed air to remove sand, dirt, and other debris.
4. Inspect hoses for damage. Replace if necessary.
5. Position the main shock reservoir in a vise with the air valve facing up. Using the body cap tool clamp lightly near the hose end, taking care not to crush the reservoir.

Body Cap Tool PN 2871071

6. Remove the Allen screw from the air valve.
7. With valve outlet pointed in a safe direction, insert red tip of safety needle assembly into recess in shock pressure valve. Depress safety pin on safety needle and push gauge and needle assembly slowly toward shock, inserting needle. Be sure to push needle completely into shock valve. Release nitrogen in a safe direction away from everyone by turning T-handle clockwise (if equipped) or by depressing Schrader valve pin.



SUSPENSION

Fox™ Remote Shock Maintenance

CAUTION:

It is possible for some residual pressure to remain in the shock regardless of the gauge reading. Always completely remove valve from body cap before further disassembly of shock.

8. Push the reservoir cap into the reservoir until the wire retaining ring is exposed. Lightly tap the cap inward to break it loose if necessary. Using a scribe, remove the wire ring. Be careful not to scratch the bore of the reservoir since the reservoir cap O-ring must seal on this surface.
9. Lightly lubricate the reservoir bore to ease removal of the reservoir cap and O-ring. Remove the reservoir cap by grabbing the air valve and gently working the cap out of the reservoir. Try to keep the cap straight with the reservoir, being especially careful when passing over the groove. Do not remove the air valve.
10. Insure that the reservoir is secure in the vise. Remove the bleed screw from the internal floating piston (IFP) located inside the reservoir. Lightly lubricate the reservoir bore to ease removal of the IFP. Gently work the IFP out of the reservoir, catching the piston ring just after the O-ring is clear. Be especially careful when passing over the groove.
11. Drain the oil out of the reservoir into a suitable container. Suspend the reservoir over a container. With the main shock positioned shaft up above the reservoir, stroke the shaft to force most of the damping oil out of the shock body and hose. Do not disconnect the hoses. The remote limiter knob assembly does not need to be connected at this time.
12. Push a clean cloth or paper towel into the reservoir.
13. Secure the aluminum body cap in a vise with the shaft pointing up. Position the remote limiter knob assembly below the level of the body cap. Using a 1" wrench, unscrew the shaft bearing cap. The bearing must loosen before the body cap. If the body cap loosens first, tighten and try again. Disassembly via the body cap is not recommended.
14. Gently pull the shock rod and piston straight out to avoid seal or valving damage. Be prepared to catch the piston ring and some oil, using a clean cloth or paper towel held around the body at the bearing cap. Set the shaft assembly on a clean towel.

NOTE: The aluminum body cap and external threaded by-pass sleeve do not need to be removed for general shock service or revalving. If they are being removed for replacement, do so now.

NOTE: Do not attempt to drain the oil out of the remote limiter knob assembly. This oil does not need to be replaced.

15. Clean the shock and reservoir internal surfaces by wiping with clean towels and flushing the surfaces with clean shock oil. Put 1" to 2" of shock oil in the reservoir and flush all surfaces. Pour into the shock body and flush all surfaces. Repeat. Discard oil into a suitable container.

CAUTION:

Do not clean the internal portions of the shock body, reservoir, hoses, or adjuster assembly with solvents. It is difficult to ensure that residual solvent is flushed from the hoses without complete disassembly.

16. Clean the shaft assembly (bearing cap, separator piston, and valving) in a suitable solvent. Dry thoroughly. Inspect the damping piston and valving for damage and contamination. Inspect the shaft seals and shaft bearing (sleeve) for damage or wear. If condition is in doubt, replace O-ring seals on bearing cap and separator piston. Revalve at this time if applicable.
17. Reassemble shaft assembly with valving. Do not over torque the damping piston nut.

Damping Piston Nut Torque -

15 ft. lbs. (2.07 kg-m)

Assembly

1. Position the shock with the aluminum body cap in a vice with the bearing cap end facing up. Put the Allen screw and O-ring seal into the IFP. Insure that the main IFP O-ring is in place and in good condition. Have a new IFP piston ring ready. While holding the reservoir below the level of the aluminum body cap, insure that the reservoir cap at the hose end is in position against the wire retaining ring. *After removing the towel from the reservoir*, fill the reservoir to the groove with new shock oil.
2. Insert the IFP (with piston ring) into the reservoir. Slowly push the IFP into the reservoir until it bottoms out. This will purge the air from the reservoir and hose. Make sure the shock does not overfill with oil.
3. Letting the reservoir hang freely, fill the shock body to about 1.5" from the end. Prepare the fully assembled shaft bearing cap assembly by sliding the bearing cap and separator piston against the eyelet. Using a new piston ring on the damping piston, slowly and carefully slip the damping piston into the shock. Be careful not to drag the piston ring over the threads and contaminate the oil.
4. Slowly push the damping piston into the oil. Excessive speed will displace the IFP in the reservoir. Lightly tap the end of the shaft so the valves open enough to fill the piston cavities with oil. Stroke the shaft slowly to force air trapped below the piston through the piston orifice. Do not let the piston come out of the oil.
5. Add enough oil to keep the piston submerged when the top out plate is even with the internal threads on the body. Slide the bearing and separator piston down to the top out plate. Wrap a towel around the shock body at the bearing.
6. While pushing down on the bearing cap, gently work the separator piston into the shock past the threads, being careful not to damage the O-ring seal on the separator piston. Use a towel to catch overflowing oil.
7. Continue to push down on the bearing cap and tighten the bearing cap into place. Torque to specification. Do not push the shaft in until the shock is pressurized. To fully extend the shaft, push in on the IFP.

Bearing Cap Torque -

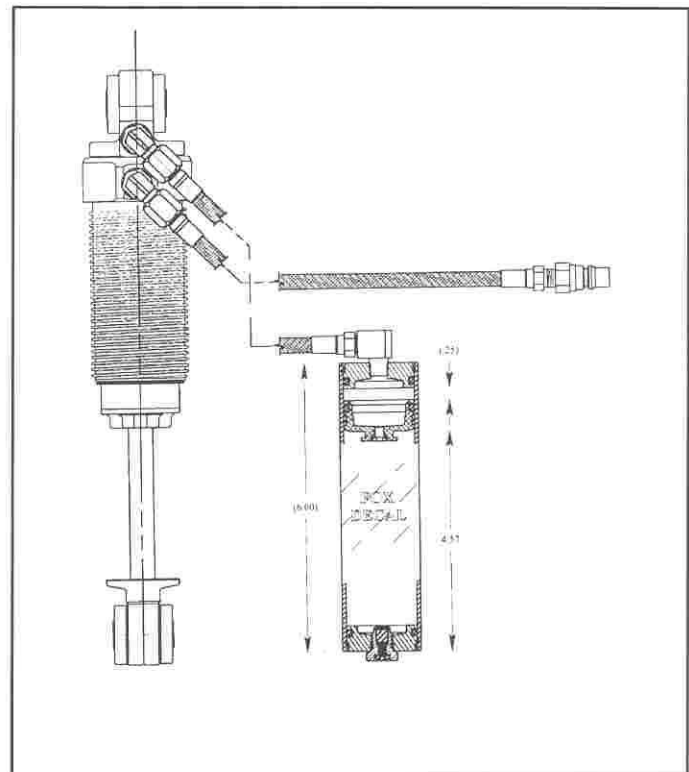
8 - 10 ft. lbs. (1.10 - 1.38 kg-m)

8. Check the IFP depth. IFP depth can be changed by removing the bleed screw and adding oil through the reservoir. However, it is difficult to keep the IFP from rotating while tightening the sealing Allen screw.

Shock IFP Depth -

4.57" (11.6 cm) from end of reservoir

9. Using a clean reservoir cap with a good O-ring, carefully insert the reservoir cap into the reservoir past the groove. Install the wire ring into the groove. Using the Fox safety needle pressurize the shock to 200 PSI.
10. Test the shock for smooth and consistent damping. Inspect for leaks.



SUSPENSION

Fox™ Remote Shock Maintenance

Recharging the Remote Limiter Knob Assembly

1. Hold the remote limiter knob assembly in a vise using the body cap tool. Clamp lightly near the hose end. Remove the knob assembly using a 1 1/4" wrench. If necessary, apply heat lightly to soften the Loctite™.

CAUTION:

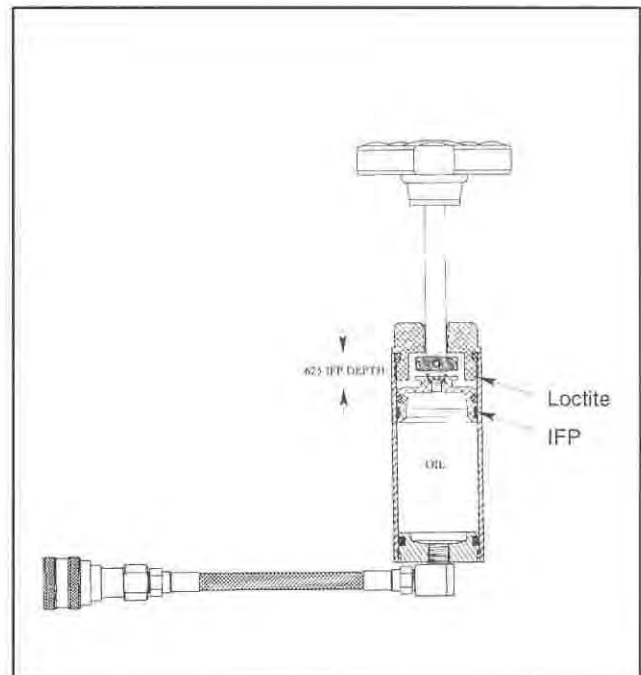
Do not overheat. The knob or seals may melt.

Body Cap Tool PN 2871071

2. Holding the remote limiter knob assembly below the shock bearing end cap, remove the bleed screw and steel ball from the bearing end cap. The separator piston will keep the pressurized damping oil from leaking out of the bearing end cap. Any pressurized leakage at this time indicates a damaged or missing seal on the separator piston.
3. Position the shock, shaft end up, over a container suitable to catch oil. Holding the remote limiter knob assembly below the bearing end cap, push the IFP inside the remote limiter knob assembly in until the oil bleeding out of the bearing end cap appears free of air bubbles, or until the IFP bottoms out. Use a wooden dowel or hammer handle to avoid damage to the internal bore. Be prepared to collect the oil purged out of the shock. Install the ball and set screw into the bearing end cap and seal so that no air gets back into the hole.
4. Secure the remote limiter knob assembly in a vice using the body cap tool. Clamp lightly. Position the shock below the level of the remote limiter knob assembly. **NOTE:** It may hang freely.
5. Remove the Allen screw and O-ring seal from the IFP in the remote limiter knob assembly. Remove the IFP, being careful not to damage to O-ring and piston rings as they pass over the threads.
6. Fill the remote limiter knob assembly with shock oil to about 1/2" from the reservoir end. Insert the IFP to a depth of .625" from the end of the reservoir to the main flat part of the IFP. The IFP should be completely submerged in oil. The oil under the IFP should be free of air bubbles.

Remove Limiter Knob Assembly IFP Depth - .625" from end of reservoir

7. Install the Allen screw and O-ring into the IFP. Check the IFP depth.
8. Back the knob all the way out of the knob assembly. Install the knob assembly into the remote limiter knob assembly reservoir. Apply blue Loctite™ to the threads prior to assembly.
9. Test the adjuster system by tightening the knob and reducing the extended length of the shock.
10. Inspect for leaks.



Typical Shock Valving Arrangement

Shown below is an example of how valving stacks are arranged. The tables on page 8.84 contain production valving specifications and piston orifice sizes for 1996-current FOX™ shocks. Optional valving (by shock part number) is listed in the tables on following pages. Refer to

Parts in box are an example of standard valving.

* Note direction of valve piston before disassembly. The side with the greater number of slots should face the IFP (nut end of the shaft).

Typical Valve Stack

Standard Valving

Shaft End

Piston Orientation
Side with greater # of slots must face nut end (Toward nut & IFP)

Slots

Orifice

Orifice must be drilled to required size on replacement valve pistons.

Compression Stack

6-C	.800 x .010
5-C	.900 x .010
4-C	1.00 x .010
3-C	1.100 x .010
2-C	1.300 x .010
1-C	1.300 x .012

Rebound Stack

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

Nut End

IFP Depth Adjustment For Limited Travel Setup		
Spacer Thickness	IFP Depth Modifier	
.25	.029 (Subtract)	
.50	.058	
.75	.088	
1.0	.117	
1.25	.146	
1.50	.175	
1.75	.204	
2.00	.234	
2.25	.263	
2.50	.292	
2.75	.321	
3.00	.350	
3.25	.380	
3.50	.409	
3.75	.438	
4.00	.467	
4.25	.496	
4.50	.526	
4.75	.555	
5.00	.584	

**Spacer
PN
5431355**

Changing oil on Fox™ Shocks is recommended annually and should be included when performing end of season storage preparation. For competition use, shocks should be disassembled, inspected and serviced more frequently.

SUSPENSION Shock Valving

1996 Production Valving Specifications

Shock PN		7041385 IFS	7041386 Front Track X 12	7041401 IFS	7041402 Front Track X 10	7041403 Rear Track X 10	7041444 IFP, Rear Track X 10	7041474 IFS, IFP, Cam	7041480 IFP, Rear Track X 12	7041490 IFP
Com- pres- sion Stack	6C	0.700X.008	0.700X.006	1.250X.010	1.250X.010	1.250X.012	N/A		0.700X.006	N/A
	5C	0.800X.008	0.800X.006	0.800X.008	0.800X.008	0.800X.012	0.800X.008	0.800X.008	0.800X.006	0.800X.008
	4C	0.900X.008	0.900X.006	0.900X.010	0.900X.010	0.900X.015	0.900X.008	0.900X.008	0.900X.006	0.900X.008
	3C	1.000X.008	1.000X.006	1.000X.010	1.000X.010	1.000X.012	1.000X.008	1.000X.008	1.000X.006	1.000X.008
	2C	1.100X.008	1.100X.006	1.100X.008	1.100X.010	1.100X.012	1.100X.006	1.100X.008	1.100X.006	1.100X.008
	1C	1.300X.008	1.300X.006	1.300X.008	1.300X.012	1.300X.012	1.300X.008	1.300X.010	1.300X.006	1.300X.010
Orifice		0.078	0.078	0.089	0.075	0.072	0.067	0.078	0.067	N/A
Re- bound Stack	1R	1.250X.008	1.250X.012	1.250X.008	1.250X.010	1.250X.012	1.250X.008	1.250X.010	1.250X.010	1.250X.010
	2R	1.100X.008	1.250X.012	1.300X.012	1.100X.010	1.100X.012	1.100X.008	1.100X.010	1.100X.010	1.100X.010
	3R	1.000X.008	1.100X.010	1.300X.012	1.000X.010	1.000X.012	1.000X.008	1.000X.010	1.000X.010	1.000X.010
	4R	0.900X.008	1.000X.010	1.300X.012	0.900X.010	0.900X.012	0.900X.008	0.900X.010	0.900X.010	0.900X.010
	5R	0.800X.008	0.900X.010	1.300X.012	0.800X.010	0.800X.012	0.800X.008	0.800X.008	0.800X.010	0.800X.008
	6R	0.700X.008	0.800X.010	0.700X.008	0.700X.010	0.700X.012	N/A	0.700X.008	0.700X.010	0.700X.008

SUSPENSION

1997/1998 Production Valving Listed By Shock Part Number

Shock PN		7041385 IFS	7041494 IFS	7041536 IFS	7041537 IFS	7041540 IFS	7041545 IFS	7041593 IFS	7041692 IFS
Compress. Stack	8C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.250x.010
	7C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	.800x.008
	6C	0.700X.008	1.250x.010	N/A	.700x.008	N/A	N/A	1.250x.010	.900x.010
	5C	0.800X.008	.800x.010	.800x.008	.800x.008	.800x.008	.800x.008	.800x.010	1.000x.010
	4C	0.900X.008	.900x.010	.900x.008	.900x.008	.900x.008	.900x.008	.900x.010	1.100x.008
	3C	1.000X.008	1.000x.010	1.00x.008	1.000x.008	1.000x.010	1.000x.008	1.000x.010	1.300x.010
	2C	1.100X.008	1.00x.010	1.100x.008	1.100x.008	1.100x.008	1.100x.008	1.100x.010	1.000x.006
	1C	1.300X.008	1.300x.010	1.300x.010	1.300x.008	1.300x.010	1.300x.010	1.300x.010	1.300x.008
Orifice		0.078	0.081	0.078	0.078	0.078	0.078	0.081	0.081
Rebound Stack	1R	1.250X.008	1.250x.010	1.250x.010	1.250x.008	1.250x.015	1.250x.010	1.250x.010	1.250x.010
	2R	1.100X.008	1.100x.008	1.100x.010	1.100x.008	1.100x.012	1.100x.010	1.100x.008	1.100x.010
	3R	1.000X.008	1.000x.008	1.000x.010	1.000x.008	1.000x.010	1.000x.010	1.000x.008	1.000x.008
	4R	0.900X.008	.900x.008	.900x.010	.900x.008	.900x.008	.900x.010	.900x.008	.900x.008
	5R	0.800X.008	.800x.008	.800x.008	.800x.008	.800x.008	.800x.008	.800x.008	.800x.008
	6R	0.700X.008	.700x.008	.700x.008	.700x.008	N/A	.700x.008	.700x.008	.700x.008

Shock PN		7041697 IFS	7041507 Front Track	7041584 Front Track	7041589 Front Track	7041641 Front Track	7041642 Front Track	7041706 Front Track
Compress. Stack	8C	1.250x.010	N/A	N/A	N/A	N/A	N/A	1.250x.010
	7C	.800x.008	N/A	1.250x.010	.700x.010	N/A	.700x.010	.800x.010
	6C	.900x.010	1.250x.010	.900x.010	.800x.010	1.250x.010	.800x.010	.900x.012
	5C	1.000x.008	.800x.008	1.000x.012	.900x.010	.800x.008	.900x.010	1.000x.012
	4C	1.100x.008	.900x.012	1.100x.012	1.000x.010	.900x.012	1.000x.010	1.100x.010
	3C	1.300x.008	1.000x.012	1.300x.012	1.100x.010	1.000x.012	1.100x.010	1.300x.012
	2C	1.000x.006	1.100x.012	.900x.006	1.250x.012	1.100x.012	1.250x.012	1.000x.006
	1C	1.300x.008	1.300x.012	1.300x.008	1.300x.012	1.300x.012	1.300x.012	1.300x.010
Orifice		0.086	0.075	0.075	0.075	0.075	0.075	0.075
Rebound Stack	1R	1.250x.010	1.250x.010	1.250x.010	1.250x.010	1.250x.010	1.250x.010	1.250x.010
	2R	1.100x.008	1.100x.010	1.100x.010	1.100x.010	1.100x.010	1.100x.010	1.100x.010
	3R	1.000x.008	1.000x.010	1.000x.010	1.000x.012	1.000x.010	1.000x.012	1.000x.010
	4R	.900x.008	.900x.010	.900x.010	.900x.010	.900x.010	.900x.010	.900x.010
	5R	.800x.008	.800x.010	.800x.010	.800x.010	.800x.010	.800x.010	.800x.010
	6R	.700x.008	.700x.010	.700x.010	.700x.010	.700x.010	.700x.010	.700x.010

Shock PN		7041480 Rear Track	7041492 Rear Track	7041585 Rear Track	7041588 Rear Track	7041595 Rear Track	7041599 Rear Track	7041695 Rear Track	7041707 Rear Track
Compress. Stack	8C	N/A	1.250x.010	N/A	N/A	N/A	1.250x.010	1.250x.010	1.250x.010
	7C	N/A	.900x.010	1.250x.010	.700x.008	1.250x.010	.900x.010	.900x.012	.900x.010
	6C	0.700X.006	1.000x.012	.900x.010	.800x.008	.900x.010	1.000x.012	1.000x.008	1.000x.012
	5C	0.800X.006	1.100x.015	1.000x.010	.900x.010	1.000x.012	1.100x.015	1.000x.012	1.100x.015
	4C	0.900X.006	1.250x.010	1.100x.015	1.000x.008	1.100x.015	1.250x.010	1.100x.015	1.250x.010
	3C	1.000X.006	1.300x.015	1.300x.015	1.100x.008	1.300x.015	1.300x.015	1.300x.015	1.300x.012
	2C	1.100X.006	1.000x.006	1.000x.006	1.250x.008	.900x.012	1.000x.006	.900x.012	1.000x.006
	1C	1.300X.006	1.300x.012	1.300x.010	1.300x.008	1.300x.012	1.300x.012	1.300x.012	1.300x.012
Orifice		0.067	0.072	0.086	0.078	0.086	0.072	.086	.072
Rebound Stack	1R	1.250X.010	1.250x.010	1.250x.012	1.250x.012	1.250x.012	1.250x.010	1.250x.012	1.250x.010
	2R	1.100X.010	1.100x.012	1.100x.012	1.100x.012	1.100x.012	1.100x.012	1.100x.012	1.250x.010
	3R	1.000X.010	1.000x.012	1.000x.012	1.000x.012	1.100x.012	1.000x.012	1.100x.012	1.100x.012
	4R	0.900X.010	.900x.012	.900x.012	.900x.012	1.000x.012	.900x.012	1.000x.012	1.000x.012
	5R	0.800X.010	.800x.012	.800x.012	.800x.012	.900x.012	.800x.012	.900x.012	.900x.012
	6R	0.700X.010	.700x.012	.700x.012	.700x.012	.800x.012	.700x.012	.800x.012	.800x.012
	7R	N/A	N/A	N/A	N/A	.700x.012	N/A	.700x.012	.700x.012

SUSPENSION

Optional Shock Valving (By Shock Part Number)

1996/1997 Optional Valving Specifications - Light

Shock PN		7041385 IFS	7041386 Front Track X 12	7041401 IFS	7041402 Front Track X 10 ☐	7041403 Rear Track X 10	7041444 IFP, Rear Track X 10	7041474 IFS, IFP, Cam ☐	7041480 IFP, Rear Track X 12	7041490 IFP
Com- pres- sion Stack	8C	N/A	N/A	N/A	N/A	N/A				N/A
	7C	N/A	N/A	N/A	N/A	N/A				N/A
	6C	N/A	N/A	1.250x.008	N/A	1.250x.010	N/A	*	N/A	N/A
	5C	0.800X.006	*	.800x.008	*	.800x.012	*	*	*	.800x.008
	4C	0.900X.006	*	.900x.008	*	.900x.015	*	*	*	.900x.008
	3C	1.000X.006	*	1.000x.008	*	1.000x.012	*	*	*	1.000x.008
	2C	*	*	1.100x.008	*	1.100x.010	*	*	*	1.100x.008
	1C	*	*	1.300x.008	*	1.300x.010	1.300X.006	1.300X.008	*	1.300x.008
Orifice		0.078	0.081	.089	.075	.072	0.067	0.078	.081	.081
Re- bound Stack	1R	1.250X.006	1.250X.010	1.250x.008	*	1.250x.012	*	*	1.250X.008	1.250x.010
	2R	1.100X.006	1.100X.010	1.100x.008	*	1.100x.012	*	*	1.100X.008	1.100x.010
	3R	*	*	1.000x.008	*	1.000x.012	*	*	*	1.000x.010
	4R	*	*	.900x.008	*	.900x.012	*	*	*	.900x.010
	5R	*	*	.800x.008	*	.800x.012	*	*	*	.800x.010
	6R	*	*	.700x.008	*	.700x.012	N/A	*	*	.700x.010

* Use existing washer here (no change)

N/A = Not Applicable

☐ Spring In Third Groove

☐ Install Springs PN 7041252 – 8.5" Installed Length

1996/1997 Optional Valving Specifications - Extra Light

Shock PN		7041385 IFS	7041386 Front Track X 12	7041401 IFS	7041402 Front Track X 10	7041403 Rear Track X 10	7041444 IFP, Rear Track X 10	7041474 IFS, IFP, Cam	7041480 IFP, Rear Track X 12	7041490 IFP
Com- pres- sion Stack	8C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6C	N/A	N/A	1.250x.008	1.250X.010	1.250x.010	N/A	*	N/A	N/A
	5C	0.800X.006	*	.800x.008	0.800X.008	.800x.010	*	*	*	.800x.008
	4C	0.900X.006	*	.900x.008	0.800X.008	.900x.012	*	*	*	.900x.006
	3C	1.000X.006	*	1.000x.008	1.000X.008	1.000x.010	1.000X.006	1.000X.006	*	1.000x.008
	2C	1.100X.006	*	1.100x.006	1.100X.008	1.100x.008	1.100X.006	1.100X.006	*	1.100x.008
	1C	1.300X.006	*	1.300x.008	1.250X.008	1.300x.008	1.300X.006	1.300X.006	*	1.300x.008
Orifice		0.078	0.089	.093	0.075	.081	0.067	0.078	.089	.086
Re- bound Stack	1R	1.250X.006	1.250X.008	1.250x.008	*	1.250x.010	*	*	1.250X.006	1.250x.010
	2R	1.100X.006	1.100X.008	1.100x.008	*	1.100x.010	*	*	1.100X.006	1.100x.010
	3R	1.000X.006	1.000X.008	1.000x.008	*	1.000x.012	*	*	1.000X.006	1.000x.008
	4R	0.900X.006	0.900x.008	.900x.008	*	.900x.012	*	*	*	.900x.008
	5R	0.800X.006	0.800x.008	.800x.008	*	.800x.012	*	*	*	.800x.008
	6R	0.700X.006	*	.700x.008	*	.700x.012	N/A	*	*	.700x.008

* Use existing washer here (no change)

N/A = Not Applicable

SUSPENSION

Optional Shock Valving (By Shock Part Number)

1996/1997 Optional Valving Specifications - Heavy

Shock PN		7041385 IFS	7041386 Front Track X 12	7041401 IFS	7041402 Front Track X 10	7041403 Rear Track X 10	7041444 IFP Rear Track X 10	7041474 IFS, IFP, Cam	7041480 IFP, Rear Track X 12	7041490 IFP
Com- pres- sion Stack	7C	N/A	N/A	N/A	1.250x.010	N/A	1.250x.010	N/A	N/A	N/A
	6C	N/A	N/A	1.250x.010	.900x.010	1.250x.012	.900x.010	1.25x.010	N/A	N/A
	5C	*	N/A	.800x.010	1.000x.012	.800x.012	1.000x.010	.800x.010	.800X.008	.800x.008
	4C	*	*	.900x.012	1.100x.012	.900x.015	1.100x.015	.900x.010	.900X.008	.900x.010
	3C	*	1.000X.008	1.00x.010	1.300x.012	1.000x.015	1.300x.015	1.000x.010	1.000X.008	1.00x.010
	2C	1.100X.010	1.100X.008	1.100x.008	.900x.006	1.100x.012	1.000x.006	1.100x.008	1.100X.012	1.100x.008
	1C	1.300X.010	1.300X.008	1.300x.008	1.300x.008	1.300x.012	1.300x.010	1.300x.008	1.300X.012	1.300x.010
Orifice		0.078	0.078	.081	.075	.072	.072	.078	.067	.078
Re- bound Stack	1R	*	*	1.250x.008	No change	1.250x.012	1.250x.010	1.250x.010	*	1.250x.010
	2R	1.100X.010	*	1.100x.008	No change	1.100x.012	1.100x.012	1.100x.008	*	1.100x.010
	3R	*	1.100X.012	1.000x.008	No change	1.000x.012	1.000x.012	1.000x.008	*	1.000x.010
	4R	*	1.000X.012	.900x.008	No change	.900x.012	.900x.012	.900x.008	1.000X.012	.900x.010
	5R	*	0.900X.012	.800x.008	No change	.800x.012	.800x.012	.800x.008	.900X.012	.800x.008
	6R	*	0.800X.012	.700x.008	No change	.700x.012	.700x.012	.700x.008	.800X.012	.700x.008

* Use existing washer here (no change)

N/A = Not Applicable

1996/1997 Optional Valving Specifications - Extra Heavy

Shock PN		7041385 IFS	7041386 Front Track X 12	7041401 IFS	7041402 Front Track X 10	7041403 Rear Track X 10	7041444 IFP, Rear Track X 10	7041474 IFS, IFP, Cam	7041480 IFP, Rear Track X 12	7041490 IFP
Com- pres- sion Stack	8C	N/A	N/A	N/A	N/A	N/A	1.250x.010	N/A	N/A	N/A
	7C	N/A	N/A	N/A	N/A	N/A	.900x.010	N/A	N/A	N/A
	6C	N/A	N/A	1.250x.010	1.250X.010	1.250x.012	1.000X.012	1.250X.010	N/A	1.250x.010
	5C	0.800X.010	0.800X.010	.800x.010	0.800X.008	.800x.012	1.100X.015	0.800X.010	.800X.008	.800x.010
	4C	0.900X.010	0.900X.010	.900x.012	0.900X.012	.900x.015	1.250X.010	0.900X.010	.900X.008	.900x.010
	3C	1.000X.010	1.000X.010	1.000x.012	1.000X.012	1.000x.015	1.300X.015	1.000X.010	1.000X.008	1.000x.010
	2C	1.100X.010	1.100X.010	1.100x.010	1.100X.012	1.100x.012	1.000X.006	1.100X.010	1.100X.012	1.100x.010
	1C	1.300X.010	1.300X.010	1.300x.010	1.300X.012	1.300x.012	1.300X.012	1.300X.010	1.300X.012	1.300x.010
Orifice		0.078	0.067	.081	0.075	.067	0.067	0.078	.067	.072
Re- bound Stack	1R	1.250X.010	1.250X.015	1.250x.010	1.250X.010	1.250x.012	1.250X.010	1.250X.010	1.250X.012	1.250x.012
	2R	1.100X.010	1.250X.015	1.100x.008	1.100X.010	1.100x.012	1.100X.012	1.100X.008	1.250X.012	1.100x.012
	3R	*	1.100X.012	1.000x.008	1.000X.010	1.000x.015	1.000X.012	1.000X.008	1.100X.012	1.000x.010
	4R	*	1.000X.012	.900x.008	0.900X.010	.900x.012	0.900X.012	0.900X.008	*	.900x.010
	5R	*	0.900X.012	.800x.008	0.800X.010	.800x.012	0.800X.012	0.800X.008	*	.800x.010
	6R	*	0.800X.010	.700x.008	0.700X.010	.700x.012	0.700X.012	0.700X.008	*	.700x.010

* Use existing washer here (no change)

N/A = Not Applicable

SUSPENSION

1997/1998 Optional Valving Listed By Shock Part Number

Shock PN		LIGHT			HEAVY		
		7041593 IFS X-10 CRC	7041706 Front Track	7041707 Rear Track	7041593 IFS X-10 CRC	7041706 Front Track	7041707 Rear Track
Compression Stack	8C	N/A	1.25X.010*	1.25X.010*	NA	1.25x.010*	N/A
	7C	N/A	0.8x.010	0.9x.008	0.8X.010	0.8X.012	1.25X.010*
	6C	N/A	0.9X.010	1.0X.010	0.9X.010	0.9X.012*	0.9X.012
	5C	0.8X.008	1.0X.010	1.1X.010	1.0X.010	1.0X.015	1.0X.012*
	4C	0.9X.008	1.1X.008	1.25X.008	1.1X.012	1.1X.015	1.1X.015*
	3C	1.0X.006	1.3X.010	1.3X.010	1.3X.012	1.3X.012*	1.3X.015*
	2C	1.1X.008	1.0X.006	1.0X.006*	1.0X.006	1.0X.006	1.0X.006*
	1C	1.3X.006	1.3X.008	1.3X.008	1.3X.010*	1.3X.010	1.3X.012*
Orifice		0.078	0.081	0.075	0.078	0.075	0.075
Rebound Stack	1R	1.25X.010*	1.25X.010*	1.25X.010*	1.25X.010*	1.25X.012	1.25X.010*
	2R	1.1X.010	1.1X.010*	1.1X.010	1.1X.012	1.1X.012	1.25X.012
	3R	1.0X.008*	1.0X.010*	1.0X.012*	1.0X.012	1.0X.012	1.1X.012*
	4R	0.9X.008*	0.9X.010*	0.9X.012*	0.9X.010	0.9X.010*	1.0X.012*
	5R	0.8X.008*	0.8X.010*	0.8X.012*	0.8X.010	0.8X.010*	0.9X.012*
	6R	0.7X.008*	0.7X.010*	0.7X.012*	0.7X.010	0.7X.010*	0.8X.012*
	7R	N/A	N/A	N/A	N/A	N/A	0.7X.012*

* Use production washer here (no change)

Shock PN		LIGHT			HEAVY		
		7041692 IFS	7041641 Front Track	7041599 Rear Track	7041692 IFS	7041641 Front Track	7041599 Rear Track
Compression Stack	8C	1.25X.008	1.25X.010*	1.25X.010*	1.25X.010*	1.25X.010*	1.25X.010*
	7C	.8X.008*	0.8X.010*	.9X.008	0.8X.010*	0.8X.012	0.9X.012
	6C	.9X.008	0.9X.010	1.0X.010	0.9X.012	0.9X.012*	1.0X.012*
	5C	1.0X.008	1.0X.010	1.1X.010	1.0X.010*	1.0X.015	1.1X.015*
	4C	1.1X.008*	1.1X.008	1.25X.008	1.1X.010*	1.1X.015	1.25X.012
	3C	1.3X.010*	1.3X.010	1.3X.010	1.3X.012	1.3X.012*	1.3X.015
	2C	1.0X.008	1.0X.006*	1.0X.006*	1.0X.006*	1.0X.006*	1.0X.006*
	1C	1.3X.008*	1.3X.008	1.3X.008	1.3X.010*	1.3X.010*	1.3X.012*
Orifice		0.081	0.081	0.075	0.081	0.075	0.075
Rebound Stack	1R	1.25X.010*	1.25X.010*	1.25X.010*	1.25X.010*	1.25X.012	1.25X.010*
	2R	1.1X.008*	1.1X.010*	1.1X.010	1.1X.010*	1.1X.012	1.25X.012
	3R	1.0X.008*	1.0X.010*	1.0X.012*	1.0X.008*	1.0X.012	1.1X.012*
	4R	0.9X.008*	0.9X.010*	0.9X.012*	0.9X.008*	0.9X.010*	1.0X.012*
	5R	0.8X.008*	0.8X.010*	0.8X.012*	0.8X.008*	0.8X.010*	0.9X.012*
	6R	0.7X.008*	0.7X.010*	0.7X.012*	0.7X.008*	0.7X.010*	0.8X.012*
	7R	N/A	N/A	N/A	N/A	N/A	0.7X.012*

* Use production washer here (no change)

SUSPENSION

1997/1998 Optional Valving Listed By Shock Part Number

Shock PN		LIGHT				HEAVY			
		7041540 IFS	7041595 Rear Track	7041642 Front Track	7041695 Rear Track	7041540 IFS	7041595 Rear Track	7041642 Front Track	7041695 Rear Track
Comp. Stack	8C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7C	N/A	1.25X.010*	0.7X.008	1.25X.010	N/A	1.25X.010*	0.7X.010*	1.25X.010
	6C	N/A	0.9X.008	0.8X.008	0.9X.008	N/A	0.9X.012	0.8X.012	0.9X.012
	5C	0.8X.008	1.0X.008	0.9X.008	1.0X.008	0.8X.010*	1.0X.010	0.9X.012	1.0X.010
	4C	0.9X.008	1.1X.010	1.0X.008	1.1X.010	0.9X.010*	1.10X.015*	1.0X.012	1.10X.015*
	3C	1.0X.008*	1.3X.012	1.1X.010*	1.3X.012	1.0X.012*	1.3X.015*	1.1X.015	1.3X.015*
	2C	1.1X.006*	0.9X.012*	1.25X.010	0.9X.012	1.1X.012*	0.9X.008	1.25X.012*	0.9X.008
	1C	1.3X.008*	1.3X.010	1.3X.008	1.3X.010	1.3X.012*	1.3X.012*	1.3X.012*	1.3X.012*
Orifice		0.078	0.086	0.075	0.086	0.078	0.086	0.075	0.086
Reb. Stack	1R	1.25X.012	1.25X.012*	1.25X.010*	1.25X.012	1.25X.015	1.25X.012*	1.25X.010*	1.25X.012*
	2R	1.1X.012	1.1X.010	1.1X.010*	1.1X.010	1.1X.012	1.10X.012*	1.1X.010*	1.10X.012*
	3R	1.0X.012	1.0X.010	1.0X.012*	1.0X.010	1.0X.012	1.0X.012*	1.0X.012*	1.0X.012*
	4R	0.9X.010	0.9X.010	0.9X.010*	0.9X.010	0.9X.010	0.9X.012*	0.9X.010*	0.9X.012*
	5R	0.8X.008	0.8X.010	0.8X.010*	0.8X.010	0.8X.008	0.8X.012*	0.8X.010*	0.8X.012
	6R	0.7X.008	0.7X.010	0.7X.010*	0.7X.010	0.7X.008	0.7X.012*	0.7X.010*	0.7X.012
	7R	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

* Use production washer here (no change)

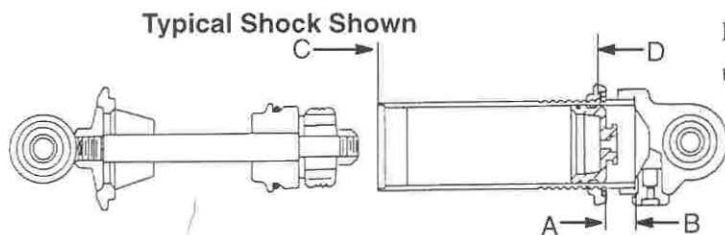
Shock PN		LIGHT			HEAVY		
		7041589 Front Track	7041584 Front Track	7041585 Rear Track	7041589 Front Track	7041584 Front Track	7041585 Rear Track
Compression Stack	8C	N/A	N/A	N/A	N/A	N/A	N/A
	7C	0.7X.008	1.25x.010*	1.25X.010*	0.7X.010*	1.25x.010*	1.25X.010*
	6C	0.8X.008	.9x.010*	0.9X.010*	0.8X.012	.9x.012	0.9X.012
	5C	0.9X.008	1.0X.010	1.0X.010*	0.9X.012	1.0X.012*	1.0X.010*
	4C	1.0X.008	1.1X.010	1.1X.012	1.0X.012	1.1X.015	1.1X.015*
	3C	1.1X.010*	1.3X.010	1.3X.010	1.1X.015	1.3X.012*	1.3X.015*
	2C	1.25X.010	.9X.008	0.9X.006	1.25X.012*	.9X.006*	1.0X.006*
	1C	1.3X.008	1.3X.008*	1.3X.008	1.3X.012*	1.3X.010	1.3X.012
Orifice		0.075	0.075	0.086	0.075	0.075	0.086
Rebound Stack	1R	1.25X.010*	1.25X.010*	1.25X.012*	1.25X.010*	1.25X.012	1.25X.012*
	2R	1.1X.010*	1.1X.008	1.1X.010	1.1X.010*	1.1X.010*	1.1X.012*
	3R	1.0X.012*	1.0X.010*	1.0X.010	1.0X.012*	1.0X.010*	1.0X.012*
	4R	0.9X.010*	0.9X.010*	0.9X.010	0.9X.010*	0.9X.010*	0.9X.012*
	5R	0.8X.010*	0.8X.010*	0.8X.010	0.8X.010*	0.8X.010*	0.8X.012*
	6R	0.7X.010*	0.7X.010*	0.7X.010	0.7X.010*	0.7X.010*	0.7X.012*
	7R	N/A	N/A	N/A	N/A	N/A	N/A

* Use production washer here (no change)

SUSPENSION

Fox IFP Depth 1992-1995 and Kit Shocks

The following chart lists all Pre-1996 Fox™ Shock IFP depths by model and part number for quick reference. Measure as shown in the illustration using IFP depth/removal tool PN 2871351 or vernier caliper.



For welded dome IFP shocks measure C-D using a dial caliper to center of IFP.

For body style IFP measure from point A-B using IFP depth tool PN 2871351

IFS Shocks			
Model	Part Number	IFP Depth	Measurement Point
1992 440 XCR	7041266	2" oil (no IFP)	Oil level from top of shock body (C)
1993/1994 440 XCR; 1993/1994 XLT SP	LH 7041291 RH 7041292	.728" (18.5 mm)	A-B
1994 440 XCR SP & 600 XCR 1994 XLT SP 1995 440 XCR & 600 XCR	7041346	.728" (18.5 mm)	A-B
1995 RXL & XLT SP	7041385	1.142"(29.0 mm)	A-B
1995 440 XCR SP.	7041401	1.139"(28.9 mm)	A-B
Front Track Shocks			
Model	Part Number	IFP Depth	
1992 XCR	7041254	4.150" (105.40 mm)	C-D
1993 440 XCR & XLT SP 1994 440 XCR	7041294	4.150" (105.40 mm)	C-D
1994 440 XCR SP & 600 XCR 1994 XLT SP 1995 440 XCR & 600 XCR	7041344	4.150" (105.40 mm)	C-D
1995 440 XCR SP	7041402	.586"(14.9 mm)	A-B
1995 XLT SP & RXL	7041386	1.142"(28.9 mm)	A-B
Rear Track Shocks			
Model	Part Number	IFP Depth	A-B
1992 440 XCR and 1993 XLT SP	7041267 (s/s to 2870979)	.835" (21.2 mm)	A-B
1993 440 XCR	7041295	.835" (21.2 mm)	A-B
1994 440 XCR, XLT SP	7041347	.835" (21.2 mm)	A-B
1994 440 XCR SP & 600 XCR 1995 440 XCR & 600 XCR	7041345	.835" (21.2 mm)	A-B
1995 440 XCR SP	7041403	.795"(20.2 mm)	A-B
1995 XLT SP & RXL	7041387	.633"(16.1 mm)	A-B
Kit Shocks			
Kit Part Number / Model	Shock Part Number	IFP Depth	Measurement Point
2871711 38 - 41" Widening Kit	7041612	1.000" (25.4mm)	A-B
2871401 XTRA-10 - IFS Shocks	7041401	1.139"(28.9mm)	A-B
2871396 XTRA-12 - IFS Shocks.	7041385	1.142"(29.0mm)	A-B
2871399 XTRA-12 121 / 133.5 Track Shocks	7041386-(Fr Track)	1.142"(28.9cm)	A-B
	7041480-(RrTrack)	.633"(16.0mm)	A-B
2871077 ITS; XC100; XC101 Rear Track Shock	7041293	.835"(21.2mm)	A-B
2870978 ITS; XC100; XC101 Front Track Shock	7041294	4.150" (105.40 mm)	C-D
2870979 1988-1991 Dial Adjust Rear Shock	7041347	.835" (21.2mm)	A-B

Refer to the appropriate parts manual for a complete listing of Fox shock parts. Fox, Registered Trademark of FOX Shox.

Valve Washer Part Numbers

Part No.	Description	Part No.	Description
1500052	 1.300 x 0.006	1500079	... 1.300 x 0.012
1500050	 1.250 x 0.006	1500078	... 1.250 x 0.012
1500049	 1.100 x 0.006	1500060	... 1.100 x 0.012
1500048	 1.000 x 0.006	1500059	... 1.000 x 0.012
1500053	 0.900 x 0.006	1500058	... 0.900 x 0.012
1500054	 0.800 x 0.006	1500057	... 0.800 x 0.012
1500055	 0.700 x 0.006	1500056	... 0.700 x 0.012
1500030	 1.300 x 0.008	1500087	... 1.300 x 0.015
1500051	 1.250 x 0.008	1500086	... 1.250 x 0.015
1500031	 1.100 x 0.008	1500085	... 1.100 x 0.015
1500032	 1.000 x 0.008	1500084	... 1.000 x 0.015
1500033	 0.900 x 0.008	1500083	... 0.900 x 0.015
1500028	 0.800 x 0.008	1500082	... 0.800 x 0.015
1500029	 0.700 x 0.008	1500081	... 0.700 x 0.015
1500062	 1.300 x 0.010		
1500026	 1.250 x 0.010		
1500027	 1.100 x 0.010		
1500045	 1.000 x 0.010		
1500046	 0.900 x 0.010		
1500047	 0.800 x 0.010		
1500044	 0.700 x 0.010		

SHOCK SHAFT (POLARIS PART NUMBER)	SHAFT LENGTH (INCHES)	SHOCK PART NUMBER	
1500068	9.125	7041385	7041386
1500076	6.35	7041387 7041490	7041480
1500153	5.57	7041402 7041584	7041493 7041589
1500133	6.85	7041255 7041545	7041403
1500140	7.60	7041537	
1500152	7.45	7041256 7041295 7041347 7041492 7041588 7041599	7041267 7041293 7041444 7041585 7041595
1500136	7.73	7041593 7041612 7041536	7041540 7041494

Shock Travel Limiting Spacer (1/4") - Part Number 5431355

Note: Subtract .029" from IFP depth for each 1/4 inch spacer added to the shock damper rod for limiting.

For example: If standard (full shock travel) IFP depth is .835", and 6 spacers are added to reduce shock travel by 1.5 inches, multiply .029 x 6 to calculate the amount to subtract from IFP depth,

.835 - .174 = .661 (± .025") New IFP Depth

SUSPENSION

Suspension Troubleshooting - WideTrak Style

Problem	Solution
Rear suspension bottoms too easily	-Increase torsion spring preload -Increase rear shock compression valving by turning screw clockwise (if equipped with optional Indy Select / Ryde AFX shock) -Install overload kit PN 2871042 for extreme use
Rides too stiff in rear	-Check for binding suspension shafts and grease all pivot points -Decrease torsion spring preload adjustments -Decrease rear shock compression valving by turning screw counterclockwise (if equipped with optional Indy Select / Ryde AFX shock) -Check for proper track tension
Machine darts from side to side	-Make sure skis are aligned properly (straight forward with rider on machine) -Make sure spindles and all steering components are free turning -Make sure skags are straight on skis -Check hi-fax and replace if worn -Reduce ski pressure: ●Increase front track spring preload ●Reduce IFS spring preload if shims have been added ●Reduce rear torsion spring preload
Front end pushes	-Check for worn skags -Check for binding suspension shafts and grease all pivot points -Increase IFS spring preload by adding shims
Steering is heavy	-Check ski alignment -Check skags and skis for damage -Reduce ski pressure: ●Increase front track spring preload ●Reduce IFS spring preload if shims have been added ●Reduce rear torsion spring preload
Setting up for deep snow operation	-Change worn hi-fax -Lower front and rear torque arms (see Performance section at the back of this manual)

SUSPENSION

Suspension Troubleshooting - Sport Style

Problem	Solution
Rear suspension bottoms too easily	-Increase torsion spring preload -Increase rear shock compression valving by turning screw clockwise (if equipped with optional Indy Select / Ryde AFX shock)
Rides too stiff in rear	-Check for binding suspension shafts and grease all pivot points -Decrease torsion spring preload adjustments -Decrease rear shock compression valving by turning screw counterclockwise (if equipped with optional Indy Select / Ryde AFX shock)
Machine darts from side to side	-Make sure skis are aligned properly (straight forward with rider on machine) -Make sure spindles and all steering components are free turning -Make sure skags are straight on skis -Check hi-fax and replace if worn -Reduce ski pressure: •Increase front track spring preload •Reduce IFS spring preload if shims have been added •Reduce rear torsion spring preload
Front end pushes	-Check for worn skags -Check for binding suspension shafts and grease all pivot points -Increase IFS spring preload by adding shims
Steering is heavy	-Check ski alignment -Check skags and skis for damage -Reduce ski pressure: •Increase front track spring preload •Reduce IFS spring preload if shims have been added •Reduce rear torsion spring preload
Setting up for deep snow operation	-Change worn hi-fax -Lower front and rear torque arms (see Performance section at the back of this manual)

SUSPENSION

Suspension Troubleshooting - XTRA Lite Style

Problem	Solution
Rear suspension bottoms too easily	-Increase torsion spring preload -Install optional torsion springs
Rides too stiff in rear	-Check for binding suspension shafts and grease all pivot points -Decrease torsion spring preload adjustments
Machine darts from side to side	-Make sure skis are aligned properly (1/8-1/4" toe out at ride height) -Make sure spindles and all steering components are free turning -Make sure skags are straight on skis -Check hi-fax and replace if worn -Reduce ski pressure: ●Increase front track spring preload (requires shims) ●Reduce IFS spring preload ●Reduce rear torsion spring preload ●Lengthen front limiter strap
Front end pushes	-Check for worn skags -Check for binding suspension shafts and grease all pivot points -Increase IFS spring preload by adding washers -Shorten front limiter strap
Steering is heavy	-Check ski alignment -Check skags and skis for damage -Reduce ski pressure: ●Increase front track spring preload ●Reduce IFS spring preload ●Reduce rear torsion spring preload
Setting up for deep snow operation	-Change worn hi-fax -Increase front limiter strap length -Increase front track spring preload by adding washers

SUSPENSION

Suspension Troubleshooting - XTRA 10 Style

Problem	Solution
Rear suspension bottoms too easily	-Increase torsion spring preload -Increase rear shock compression valving by turning screw clockwise (if equipped with optional Indy Select / Ryde AFX shock) or refer to optional valving on Suspension Wallchart for Fox equipped models -Change RRSS to highest setting -Install optional torsion springs (stiffer)
Rides too stiff in rear	-Check for binding suspension shafts and grease all pivot points -Decrease torsion spring preload adjustments -Decrease rear shock compression valving by turning screw counterclockwise (if equipped with optional Indy Select / Ryde AFX shock) or refer to optional valving on Suspension Wallchart for Fox equipped models -Set RRSS to lowest position or totally remove -Install optional torsion springs (softer)
Machine darts from side to side	-Make sure skis are aligned properly (1/8-1/4" toe out at ride height) -Make sure spindles and all steering components are free turning -Make sure skags are straight on skis -Check hi-fax and replace if worn -Reduce ski pressure: •Increase front track spring preload (requires shims) •Reduce IFS spring preload by adjusting cam •Reduce rear torsion spring preload •Lengthen front limiter strap
Front end pushes	-Check for worn skags -Check for binding suspension shafts and grease all pivot points -Increase IFS spring preload by adjusting cam or adding washers -Shorten front limiter strap -Install optional carbide skags
Steering is heavy	-Check ski alignment -Check skags and skis for damage -Reduce ski pressure: •Increase front track spring preload •Reduce IFS spring preload by adjusting cam •Reduce rear torsion spring preload
Setting up for deep snow operation	-Change worn hi-fax -Lower rear torque arms -Increase front limiter strap length -Based on rider preference, RRSS may be removed to increase weight transfer -Increase front track spring preload -Move front track shock to upper mounting position

SUSPENSION

Suspension Troubleshooting - XTRA 12 Style

Problem	Solution
Rear suspension bottoms too easily	-Check to be sure FRSS block is in highest position -Adjust torsion spring blocks to highest position -Adjust coil over spring on front track shock to increase preload -Install optional (stiffer) torsion springs -Install next heavier coil spring (e.g. 75/125 #/in. to 90/150 #/in. -Increase compression damping on models equipped with Indy Select or Ryde AFX shocks -Check nitrogen pressure in shocks (models equipped with Fox™ shocks) -Change shock valving to heavier setting (models equipped with Fox™ shocks)
Rides too stiff in rear	-Check for binding suspension shafts and grease all pivot points -Decrease spring preload adjustments -Remove rear track shock spring or reduce rate of spring (refer to wallchart) -Change front track shock to lighter spring -Change to lighter shock valving on models equipped with Fox™ or Indy Select / Ryde AFX shocks (refer to wallchart)
Machine darts from side to side	-Make sure skis are aligned properly (1/8-1/4" toe out at normal ride height) -Make sure spindles and all steering components are free turning -Make sure skags are straight on skis and in good condition
Front end pushes	-Check for worn skags -Check for binding suspension shafts and grease all pivot points -Increase front IFS preload -Change FRSS to low setting or move to forwardmost hole -Install optional carbide skags
Steering is heavy	-Check ski alignment -Check skags and skis for damage -Change FRSS to high setting -Decrease IFS spring preload
Setting up for deep snow operation	-Rotate FRSS to lowest setting, depending upon rider preference -Decrease preload on front track spring -Move FRSS to forwardmost hole -Tighten limiter strap one hole