



SKI-DOO 2022-2 Suspension Spring Chart

Product: **Ski-Doo**
Bulletin type: **Service**
Bulletin no: **2022-2** (mbs2022-002 en LG)
Revision no:
Revision date:
Campaign no.:
Publication date: **June 2021**
Subject: **Suspension Spring Chart**

YEAR	MODEL
2022	All Ski-Doo

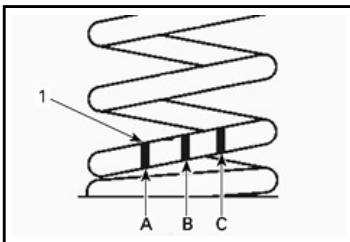
This bulletin is divided into 3 main sections:

Section 1: Spring Identification
- Spring identification guideline. Gives information on color codes, part number and spring shape.
Section 2: Spring Applications
- Quick reference chart which provides authorized spring application for each Ski-Doo model. It contains the standard spring part number (in gray shading) as installed at the factory, as well as 1 softer spring and 1 harder spring recommendation.
Section 3: Spring Specifications
- Refers to spring specifications table.

SECTION 1: SPRING IDENTIFICATION

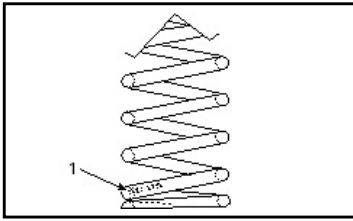
Coil Spring Identification

Spring identification is done by color code stripes **or** by its part number printed on the spring with white ink within the first 1-1/4 coils.



IDENTIFICATION BY COLOR STRIPES
1. COLOR STRIPES WHEN SPRING IS UPRIGHT WITH THE STRIPES DOWN

- A. 1st stripe
- B. 2nd stripe
- C. 3rd stripe



IDENTIFICATION BY THE SPRING PART NUMBER

1. Part number

Color Code Legend

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

Coil Spring Types

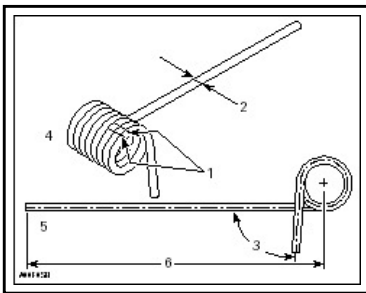
All call-outs below each following illustrations (except torsion springs) refer to:

1. Color code stripes
2. Wire diameter
3. Free length
4. Positioning tab (where applicable).

SPING TYPE		
<p>Type R (straight at both ends)</p>	<p>Single Rate Spring</p>	
<p>Type S (barrel shape at one end)</p>	<p>Single Rate Spring</p>	
<p>Type T (barrel shape at both ends)</p>	<p>Single Rate Spring</p>	

SPRING TYPE		
<p>Type V (barrel shape at both ends)</p>	<p>Single Rate Spring</p>	
<p>Type Y (barrel shape at both ends with positioning tab at the identification code coils end)</p>	<p>Single Rate Spring</p>	
<p>Type Z (barrel shape at both ends with positioning tab at identification code coils end and 2 different diameter ends)</p>	<p>Single Rate Spring</p>	
<p>Type 2 (barrel shape at both ends)</p>	<p>Dual Rate Spring</p>	

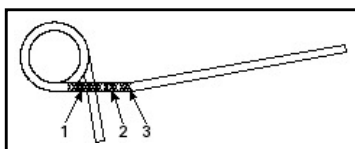
Torsion Spring Identification



IDENTIFICATION BY COLOR STRIPES

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

Spring identification is done by color code stripes (as shown above) **or** by its part number printed on the spring with white ink (as shown below).



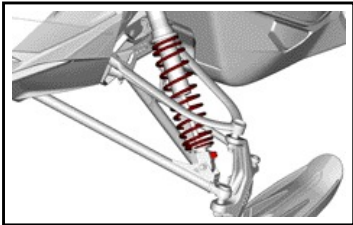
IDENTIFICATION BY THE SPRING PART NUMBER

1. Spring Part Number
2. Spring rate
3. Angle dimension

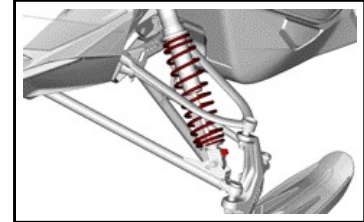
Color Code Legend

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

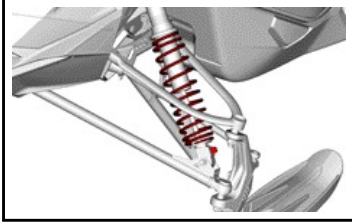
SECTION 2 : SPRING APPLICATIONS

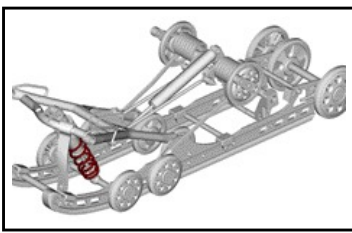
FRONT SPRINGS				
		MODEL	(PART NUMBER) SOFTER	(PART NUMBER) STANDARD
FREERIDE SERIES				
Freeride 146 - 154 - 165	N.A.	505074709	505074309	
GRAND TOURING SERIES				
Grand Touring Sport 600 ACE (EUR)	505074389	505074687	N.A.	
Grand Touring Sport 600 ACE (CAN / USA) / 900 ACE	505073265	505074389	505074687	
Grand Touring Limited 900 ACE	505074293	505075036	505074391	
Grand Touring Limited 900 ACE Turbo	505075036	505075037	N.A.	
MXZ SERIES				
MXZ Sport (EUR)	505074389	505074687	N.A.	
MXZ Sport (CAN / USA)	505073265	505074389	505074687	
MXZ X 600R E-TEC / 850 E-TEC	505072741	505074046	505074390	
MXZ TNT 600R E-TEC / 850 E-TEC	505074293	505075036	505074391	
MXZ X-RS 600R E-TEC / 850 E-TEC without smart-shox	505074293	505074309	505074391	
MXZ X-RS 850 E-TEC with Smart-shox	n.a.	505074865	505075194	
MACH Z				
mach z	505074865	505075194	N.A.	
RENEGADE SERIES				
Renegade Sport 600 ACE (CAN / US)	505073265	505074389	505074687	

FRONT SPRINGS

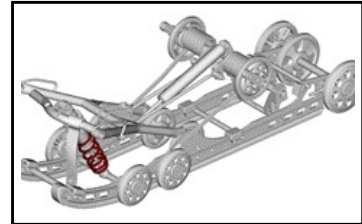


MODEL	(PART NUMBER) SOFTER	(PART NUMBER) STANDARD	(PART NUMBER) HARDER
Renegade Sport 600 ACE (EUR)	505074389	505074687	N.A.
Renegade X 600R E-TEC / 850 E-TEC	505072741	505074046	505074390
Renegade Adrenaline 900 ACE (CAN / USA) / ADRENALINE 850 e-TEC / Enduro 900 ACE	505074293	505075036	505074391
RENEGADE ADRENALINE 900 ace TURBO / RENEGADE ENDURO 900 ace TURBO / RENEGADE ADRENALINE 900 ace (EUR)	505075036	505075037	N.A.
Renegade X 900 ACE Turbo	505074046	505074390	N.A.
Renegade X-RS 850 E-TEC	505074293	505074309	505074391
renegade x-rs 850 e-tec with Smart-shox	N.A.	505074865	505075194
Renegade X-RS 900 ACE turbo	505074309	505074391	N.A.
Renegade X-RS 900 ACE turbo with Smart-shox	505074865	505075194	N.A.
RENEGADE X-RS racing	505074047	505075216	N.A.
BACKCOUNTRY SERIES			
Backcountry Sport (EUR)	505074389	505074687	N.A.
Backcountry Sport (CAN / US)	505073265	505074389	505074687
Backcountry (CAN / US)/ Backcountry X	N.A.	505072741	505074046
Backcountry (EUR)	505072741	505074046	505074390
Backcountry X-RS	505074293	505074309	505074391
SUMMIT SERIES			
Summit SP 600R E-TEC / 850 E-TEC Summit edge 850 E-TEC	N.A.	505075035	505074309
Summit x 850 E-TEC / Turbo	N.A.	505074048	505074046
Summit ExPert 850 E-TEC / Turbo	N.A.	505075321	N.A.
EXPEDITION SERIES			
Expedition Sport 600 EFI / 600 ACE / 900 ACE (CAN / US / asia)	505073265	505074389	505074687
Expedition Sport 900 ACE / 600 EFI (EUR)	505074309	505075037	N.A.
Expedition LE / SWT 600R E-TEC	5050744309	505075037	N.A.
Expedition Xtreme	505072741	505074046	505074390
Expedition LE 900 ACE (EUR) /900 ACE Turbo (EUR) Expedition SE 600R E-TEC / 900 ACE / 900 ACE Turbo	505074309	505075037	N.A.
Expedition LE / 900 ACE (CAN / US) / 900 ACE Turbo (CAN / US) / Expedition SWT 900 ACE / 900 ACE Turbo	505074309	505075037	N.A.
SKANDIC SERIES			
Skandic Sport / WT / SWT	505072557	505072745	505073204

FRONT SPRINGS			
MODEL	(PART NUMBER) SOFTER	(PART NUMBER) STANDARD	(PART NUMBER) HARDER
TUNDRA SERIES			
Tundra Sport / LT	N.A.	505072557	505072745

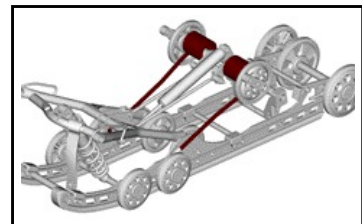
CENTER SPRINGS			
MODEL	(PART NUMBER) SOFTER	(PART NUMBER) STANDARD	(PART NUMBER) HARDER
FREERIDE SERIES			
Freeride 146 - 154 - 165	N.A.	503195913	N.A.
GRAND TOURING SERIES			
Grand Touring Sport 600 ACE / 900 ACE	503191879	503191882	503191880
Grand Touring Limited 600R E-TEC / 900 ACE / 900 ACE Turbo	503193837 503193067	503193837 503193160	503191343 503192279
MXZ SERIES			
MXZ Sport / MXZ X / MXZ TNT	N.A.	503195855	503191343 503192279 503191281
MXZ TNT	N.A.	505195855	503191343 503192279 503191281
MXZ X-RS	503196469 503193065	503193479 503193065	503192724 503192744
MACH Z			
mach z	n.a.	503196469 503193065	503193479 503193065
RENEGADE SERIES			
Renegade Sport	503191879	503191882	503191880
Renegade X E-TEC / Adrenaline E-TEC / Enduro E-TEC	N.A.	503195855	503191343 503192279 503191281
Renegade X 900 ACE Turbo / Adrenaline 900 ACE / 900 ACE Turbo / Enduro 900 ACE / 900 ACE Turbo	503193837 503193067	503193837 503193160	503191343 503192279
Renegade X-RS 850 E-TEC / 900 ACE Turbo	503196469 503193065	503193479 503193065	503192724 503192744
renegade x-rs racing	503193479 503193065	503193479 503193113	503192744 503192724

CENTER SPRINGS



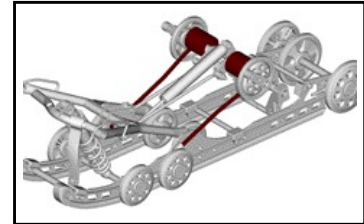
MODEL	(PART NUMBER) SOFTER	(PART NUMBER) STANDARD	(PART NUMBER) HARDER
BACKCOUNTRY SERIES			
Backcountry / Sport / X / Adrenaline	N.A.	503195855	503191343 503192279 503191281
Backcountry X-RS	N.A.	503193479 503193065	503192724 503192744
SUMMIT SERIES			
Summit SP / EDGE except 175"	503191879	503191882	503191880
Summit sp / edge 175"	503191882	503191880	503189686
Summit X except 175"	N.A.	503194182	503194990
Summit Expert	N.A.	503195465	503195516
EXPEDITION SERIES			
Expedition Sport 600 EFI / 600 ACE (ASIA)	503191879	503191882	503191880
Expedition Sport 600 ACE (CAN / USA)/ 900 ACE (CAN / US)	503191882	503191880	503189686
Expedition Sport 600 EFI / 900 ACE (EUR)	N.A.	503195855	503191343 503192279 503191281
Expedition LE / SE /SWT / Extreme	503193837 503193067	503193837 503193160	503191343 503192279
SKANDIC SERIES			
Skandic Sport / WT / SWT	503191882	503191880	503189686
TUNDRA SERIES			
Tundra Sport	503191879	503191882	503191880
Tundra LT	503191882	503191880	503189686

REAR SPRINGS

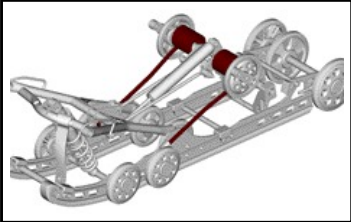


MODEL	(PART NUMBER) SOFTER	(PART NUMBER) STANDARD	(PART NUMBER) HARDER
FREERIDE SERIES			
Freeride 146 / 154 / 165	503193637 (right) 503193636 (left)	503193002 (right) 503193003 (left)	503192270 (right) 503192271 (left)
GRAND TOURING SERIES			

REAR SPRINGS



MODEL	(PART NUMBER) SOFTER	(PART NUMBER) STANDARD	(PART NUMBER) HARDER
Grand Touring Sport (CAN / US)	503191287 (right) 503191289 (left)	503192270 (right) 503192271 (left)	503191247 (right) 503191249 (left)
Grand Touring Sport 600 ACE (EUR)	503192270 (right) 503192271 (left)	503193538 (right) 503193539 (left)	503191481 (right) 503191483 (left)
Grand Touring Limited	503192270 (right) 503192271 (left)	503196202 (right) 503196203 (left)	503191481 (right) 503191483 (left)
MXZ SERIES			
MXZ Sport	503192080 (right) 503192081 (left)	503193159 (right) 503 193158 (left)	503192270 (right) 503192271 (left)
MXZ X / X-RS / TNT	503193159 (right) 503 193158 (left)	503196053 (right) 503196052 (left)	503193538 (right) 503193539 (left)
MACH Z			
MACH Z	N.A.	503196524 (right) 503196525 (left)	503196202 (right) 503196203 (left)
RENEGADE SERIES			
Renegade Sport (EUR) / renegade adrenaline (eur)	503193159 (right) 503193158 (left)	503192270 (right) 503192271 (left)	503193538 (right) 503193539 (left)
Renegade Sport (CAN / USA) / renegade Enduro (CAN / US)	503192080 (right) 503192081 (left)	503193159 (right) 503193158 (left)	503192270 (right) 503192271 (left)
Renegade X / X-RS / adrenaline	503193159 (right) 503 193158 (left)	503196053 (right) 503196052 (left)	503196202 (right) 503196203 (left)
renegade x-rs racing	n.A.	503195812 (right) 503195813 (left)	503196202 (right) 503196203 (left)
BACKCOUNTRY SERIES			
backcountry (CAN/US) / Sport (CAN/US) / X / X-RS	503192080 (right) 503192081 (left)	503193159 (right) 503193158 (left)	503192270 (right) 503192271 (left)
backcountry (EUR) / Sport (EUR)	503193159 (right) 503193158(left)	503192104 (right) 503192105 (left)	503192270 (right) 503192271 (left)
SUMMIT SERIES			
Summit SP / X/ edge / expert	503193637 (right) 503193636 (left)	503193002 (right) 503193003 (left)	503192270 (right) 503192271 (left)
EXPEDITION SERIES			
Expedition Sport 600 EFI / 600 ACE / 900 ACE (CAN / USA / asia)	503191287 (right) 503191289 (left)	503192270 (right) 503192271 (left)	503191247 (right) 503191249 (left)
Expedition Sport 900 ACE (EUR)	503192270 (right) 503192271 (left)	503193538 (right) 503193539 (left)	503191481 (right) 503191483 (left)
Expedition LE	503194340 (right) 503194341 (left)	503192377 (right) 503192378 (left)	503192910 (right) 503192911 (left)
Expedition SE / Extreme	N.A.	503194340 (right) 503194341 (left)	503192377 (right) 503192378 (left)
EXPEDITION SWT	503192377 (right) 503192378 (left)	503192910 (right) 503192911 (left)	N.A.

REAR SPRINGS			
MODEL	(PART NUMBER) SOFTER	(PART NUMBER) STANDARD	(PART NUMBER) HARDER
SKANDIC SERIES			
Skandic Sport (CAN / USA)	N.A.	503194340 (right) 503194341 (left)	503192377 (right) 503192378 (left)
Skandic Sport (EUR) / WT	503194340 (right) 503194341 (left)	503192377 (right) 503192378 (left)	503192910 (right) 503192911 (left)
Skandic SWT	503192377 (right) 503192378 (left)	503192910 (right) 503192911 (left)	N.A.
TUNDRA SERIES			
Tundra Sport	503193637 (right) 503193636 (left)	503192080 (right) 503192081 (left)	503192270 (right) 503192271 (left)
Tundra LT	503192080 (right) 503192081 (left)	503192137 (right) 503192136 (left)	503192270 (right) 503192271 (left)

SECTION 3 : SPRING SPECIFICATIONS

Coil Springs Specifications

(PART NUMBER)	TYPE	SPRING RATE (lb/in) ±10	FREE LENGTH (mm) ±3	WIRE DIAMETER (mm) ±.05	COLOR CODE	COLOR OF SPRING
503189686	T	200	242	9.19	RD/SI/YL	BLACK
503191343	R	223	56	5.94	SI/RD/RD	BLACK
503191879	T	135	242	7.49	detail "A" WH/WH/OR	BLACK
503191880	T	180	242	8.25	–	BLACK
503191882	T	150	242	7.77	–	BLACK
503192279	T	275	184	8.71	–	BLACK
503192724	S	275	155	9.19	–	BLACK
503192744	R	222	59	6.17	–	BLACK
503193065	S	190	162	8.25	–	BLACK
503193067	S	190	189	7.92	–	BLACK
503193160	V	275	189	9.19	–	BLACK
503193479	R	197	52	5.94	–	BLACK
503193837	R	178	51	5.94	–	BLACK
503194182	Z	150	242	7.49	–	BLACK
503194990	U	180	242	8.25	–	BLACK

(PART NUMBER)	TYPE	SPRING RATE (lb/in) ±10	FREE LENGTH (mm) ±3	WIRE DIAMETER (mm) ±.05	COLOR CODE	COLOR OF SPRING
503195465	U	150	240	7.29	-	BLACK
503195516	V	180	240	7.92	-	BLACK
503195855	7	92/190	242	7.92	-	BLACK
503195913	S	150	218	7.49	-	BLACK
505072557	T	70	263	5.94	-	BLACK
505072741	Z	90	280	7.49	-	BLACK
505072745	T	60	263	6.17	-	BLACK
505073204	T	88	266	6.65	-	BLACK
505073265	T	90	280	7.92	-	BLACK
505074046	Z	105	280	8.25	-	BLACK
505074048	Z	80	280	7.29	-	BLACK
505074293	V	90	280	7.92	-	BLACK
505074309	V	105	280	8.41	-	BLACK
505074389	T	105	300	8.41	-	BLACK
505074390	Z	120	280	8.71	-	BLACK
505074391	V	120	280	8.71	-	BLACK
505074687	T	120	300	8.71	-	BLACK
505074708	Z	80	240	6.81	-	BLACK
505074709	V	80	278	6.81	-	BLACK
505075036	T	105	280	8.41	-	BLACK
505075037	T	120	280	8.71	-	BLACK
505075194	V	120	280	8.71	-	BLACK
503196469	R	103	52	4.6	-	BLACK
505075321	Z	80	240	6.65	-	BLACK
505074865	V	105	280	8.25	-	BLACK

Torsion Springs Specifications

Torsion Springs for SC-5M, cMotion, tMotion and rMotion Suspensions

(PART NUMBER)	WIRE DIAMETER (MM)	OPENING ANGLE ± 7°	COLOR CODE	COLOR OF SPRING	CONSTANT (N•mm / DEGREE)
503191247 (Right) 503191249 (Left)	11.0 x 9.25 (rectangular)	90°			

BLACK	1.99				
503191287 (Right) 503191289 (Left)	9.525 (square)	80°	GN/YL/YL	BLACK	1.44
503191481 (Right) 503191483 (Left)	11.0 x 9.25 (rectangular)	100°	WH/BL	BLACK	2.30

503192080 (Right) 503192081 (Left)	8.85 (square)	80°	-	BLACK	1.27
503192104 (Right) 503192105 (Left)	9.525 (square)	90°	-	BLACK	1.50
503192137 (Right) 503192136 (Left)	9.0 (square)	80°	-	BLACK	1.35
503192270 (Right) 503192271 (Left)	9.86 (square)	80°	-	BLACK	1.66
503193002 (Right) 503193003 (Left)	8.46 (square)	80°	-	BLACK	1.27
503193159 (Right) 503193158 (Left)	9.14 (square)	80°	-	BLACK	1.35
503193538 (Right) 503193539 (Left)	11.0 x 9,25 (Rectangular)	90°	-	BLACK	1.94
503193637 (Right) 503193636 (Left)	8.46 (square)	90°	-	BLACK	1,13
503196053 (Right) 503196052 (Left)	9.14 (square)	82°	-	BLACK	1.52
503196202 (Right) 503196203 (Left)	11.0 x 9.25 (rectangular)	80°	-	BLACK	1.86
503196525 (Right) 503196524 (Left)	9.14 (square)	90°	-	BLACK	1.50

Torsion Springs for SC-5U Suspension (Skandic and Expedition LE / SE / Extreme / SWT)

(PART NUMBER)	WIRE DIAMETER (MM)	OPENING ANGLE ± 7°	COLOR OF SPRING	CONSTANT (N•mm / DEGREE)
503192377 (Right) 503192378 (Left)	11 x 9.25 (rectangular)	75°	BLACK	1.92
503192910 (Right) 503192911 (Left)	11 x 11 (square)	75°	BLACK	2.45
503194340 (right) 503194341 (left)	11 x 9.25 (rectangular)	90°	BLACK	1.88

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MULTI-RATE CHART

DUAL-RATES

Spring Rate #1	Spring Rate #2		Initial Rate	Interm. Rate	Final Rate
240	60	--	48	--	60
240	80	--	60	--	80
240	100	--	71	--	100
240	120	--	80	--	120
240	150	--	92	--	150
240	170	--	100	--	170
500	150	--	115	--	150
500	170	--	127	--	170
500	210	--	148	--	210
500	215	--	150	--	215
500	220	--	153	--	220
500	235	--	160	--	235
500	250	--	167	--	250
500	260	--	171	--	260
500	300	--	188	--	300

DUAL-RATES

Spring Rate #1	Spring Rate #2		Initial Rate	Interm. Rate	Final Rate
500	325	--	197	--	325
500	350	--	206	--	350
600	250	--	176	--	250
600	260	--	181	--	260
600	300	--	200	--	300
600	325	--	211	--	325
600	350	--	221	--	350
900	235	--	186	--	235
900	250	--	196	--	250
900	260	--	202	--	260
900	300	--	225	--	300
900	325	--	239	--	325
900	350	--	252	--	350
900	450	--	300	--	450
900	625	--	369	--	625

TRIPLE-RATES

Spring Rate #1	Spring Rate #2	Spring Rate #3	Initial Rate	Intermed. Rate	Final Rate
240	240	60	40	48	60
240	240	80	48	60	80
240	240	100	55	71	100
240	240	120	60	80	120
240	240	150	67	92	150
500	240	100	62	71	100
500	240	120	69	80	120
500	240	150	78	92	150
500	240	170	83	100	170
500	500	100	71	83	100
500	500	120	81	97	120
500	500	150	94	115	150
500	500	170	101	127	170
500	500	210	114	148	210
500	500	215	116	150	215
500	500	220	117	153	220
500	500	235	121	160	235
500	500	260	127	171	260
500	500	300	136	188	300
500	500	325	141	197	325
500	500	350	146	206	350
600	500	170	105	127	170
600	500	210	119	148	210
600	500	215	120	150	215
600	500	220	122	153	220
600	500	235	126	160	235
600	500	260	133	171	260
600	500	300	143	188	300
600	500	325	148	197	325

TRIPLE-RATES

Spring Rate #1	Spring Rate #2	Spring Rate #3	Initial Rate	Intermed. Rate	Final Rate
600	500	350	153	206	350
600	600	170	109	132	170
600	600	210	124	156	210
600	600	215	125	158	215
600	600	220	127	161	220
600	600	235	132	169	235
600	600	260	139	181	260
600	600	300	150	200	300
600	600	325	156	211	325
600	600	350	162	221	350
900	600	210	133	156	210
900	600	215	135	158	215
900	600	220	137	161	220
900	600	235	142	169	235
900	600	260	151	181	260
900	600	300	164	200	300
900	600	325	171	211	325
900	600	350	177	221	350
900	600	450	200	257	450
900	900	210	143	170	210
900	900	215	145	174	215
900	900	220	148	177	220
900	900	235	154	186	235
900	900	260	165	202	260
900	900	300	180	225	300
900	900	325	189	239	325
900	900	350	197	252	350
900	900	450	225	300	450
900	900	625	262	369	625