

2011 - 2012
ROCKY MOUNTAIN BICYCLES TECHNICAL
MANUAL
Edited

Edited Version; Bikeaction Fahrradhandelsges. mbH, by Marco Schröder Nov. 2011



TABLE OF CONTENTS

INTRODUCTION	3
OUR MISSION	3
SECTION I: GENERAL INSTALLATION INSTRUCTIONS FOR ALL PLATFORMS...	4
IGUS Bushings Explained:	4
Lubrication	5
Seatpost Insertion Explained:.....	5
Hardware and Torque Specification:.....	5
Suspension Setup:	6
2011-2012 Element RSL and MSL Exploded Views:	9
2011-2012 Element RSL and MSL Small Parts	11
2012 Element Alloy Exploded Views:	12
2012 Element Alloy Small Parts:.....	14
2012 Element 29 Exploded Views	15
2012 Element 29 Small Parts:.....	17
2011-2012 Element Front Derailleur Configuration Diagrams:.....	18
2011-2012 Element Front Derailleur Small Parts:.....	19
2011-2012 Altitude Exploded Views:.....	20
2011-2012 Altitude Small Parts List:	22
2012 Altitude 29 Exploded Views:	23
2012 Altitude 29 Small Parts:.....	25
2011-2012 Flatline World Cup Exploded Views:	26
2011-2012 Flatline World Cup Small Parts:	28
2011-2012 Slayer Exploded Views:	29
2011-2012 Slayer Small Parts:	31
WARRANTY.....	32
Definition of Intended Use by Category	33
'11 -'12 RMB KEY Dimensions.....	35

INTRODUCTION

No two riders are alike. That's why at Rocky Mountain our bikes built according to different platforms for different riding styles. The bikes may be different, but they all share our commitment to quality and innovation. Bikes built by people who love to ride for people who love the ride.

OUR MISSION

Our goal is simple: build a high-grade quiver of bikes that riders will love to ride. It's the approach we take when we design, test, and build our extreme freeride bikes, our road racers, or any of our city bikes.

Whether you're looking for that certitude and grit to stick that big drop on the North Shore, the faith that you can push just a little harder to win your category, or the peace of mind in knowing you have the reliability in your city bike to take you on your daily commute, you need to have confidence in your bike to really love the experience.

So, to ensure that every rider who rides a Rocky Mountain bicycle has the confidence that they have the best bike there is, we employ a higher standard of manufacturing. Visit our R&D design and testing facility in Vancouver, BC, Canada, and you'll see this adherence to quality for yourself.

SECTION I: GENERAL INSTALLATION INSTRUCTIONS FOR ALL PLATFORMS

Lubrication:

Grease is required where the bolt contacts metal such as a bearing or the frame. No grease is required for IGUS bushings.

Frame and Linkage Bearing Installation:

Warning: This is a difficult procedure that needs to be done by an experienced mechanic. Without a proper press and press-in tools parts can get damaged very easily. If there is any uncertainty understanding this procedure contact Rocky Mountain Bicycles for assistance. 1.800.663.2512

-To begin, ensure that all surfaces are clean, dry and free of any contaminants. It is recommended to use Loctite Primer 7649 on any linkage pieces and the bearings before installing bearings. This will speed the cure time but mostly will ensure proper cure of retaining compound.

-Once the primer is dry apply Loctite Bearing Retaining Compound 638 or red or green Loctite or equivalent to each linkage piece just before each bearing is being pressed in. Ensure that the bearing has completely bottomed out in the linkage before assembling linkage to frame.

Again, caution should be taken as these bearings need to be pressed in square to the pivot using proper tools.

IGUS Bushings Explained:

Rocky Mountain Bicycles have been using low maintenance IGUS Bushings for many years. They are used to assist the rotation of our custom 12mm thru-bolt hardware in 2012 Element Alloy, Slayer and all Altitude platforms. There are 3 lengths of these bushings, 8, 10 and 15mm and all have a 12mm inside diameter with a 14mm outside diameter.

*** FOR ABC™ IGUS Angular Contact Bushings found on 2012 Element, Element 29, Element RSL, and Element MSL, please see Element Assembly Guide on page 10 of this document.***

Lubrication

All IGUS bushings are a dry fit installation and function. They require NO grease or oil to install or function. Only after washing with water should the bushing area be sprayed lightly with WD-40 to disperse water, and then wiped clean to prevent dirt buildup. *Caution: prolonged exposure to water can cause the bushings to swell.*

Installation

The process for installation and removal is quite simple. They are a mild friction fit and do not need any special tools to install or remove. To install, using a pivot thru-bolt works best. Slip the bushing with the round starter edge towards the frame over the thru-bolt, insert the thru-bolt with the bushing against the base of the bolt head and the round starter edge against the frame, into the pivot mount hole and tap lightly until the bushing is FLUSH with the face of the pivot mount. These bushings are self-lubricating and do not need any grease or oil to help them work.

Removal

Using a round metal dowel, gently punch the bushings through from the opposite side. Always replace with new bushings when re-installing.

!! Seatpost Insertion Explained:

Seat post must be inserted at least 100mm (4 inches) on all full suspension frames for warranty to remain valid; this is to ensure maximum support of the saddle during riding.

Hardware and Torque Specification:

All custom hardware (alloy thru-bolts, screws, and nuts) requires the use of LOCTITE 262 (a high strength threadlock). **The torque specification unless otherwise stated is 100 to 110 in*lbs or 11.3 to 12.4 N*m.**

Non custom hardware (steel bolts) requires the use of LOCTITE 242 (blue), a medium strength threadlock. **The torque specification unless otherwise stated is 60 to 80 in*lbs or 6.7 to 9.0 N*m.**

Suspension Setup:

To maximize suspension performance, the sag (the amount the shock compresses under rider weight) must be set correctly. A good starting point is to inflate the rear shock with one psi per pound of rider body weight. We recommend the following sag percentages:

Fox Suspension

Rider Weight lbs.	Suggested Fork Air Spring Pressure Settings PSI							
	80 mm	100 mm	120 mm	140 mm	150 mm	160 mm	170 mm	180 mm
≤125	60	55	50	50	45	45	45	45
125 - 135	60	55	50	55	50	48	48	48
135 - 145	65	60	55	60	55	50	50	50
145 - 155	75	70	65	70-75	70	53	53	53
155 - 170	85	80	75	80	75	55	55	55
170 - 185	90	85	80	85	80	65	60	60
185 - 200	95	90	85	90	90	75	70	70
200 - 215	100	95	95	100	100	85	80	80
215 - 230	110	100	100	110	110	95	90	90
230 - 250	120	110	110	125	125	105	100	100

Fox 40 Coil Spring Settings			
FOX Part #	Spring Rate ±8%	Color Code	Rider Weight (lbs.)
039-05-070	30 lb/in	Black	<90 - 120
039-05-071	35 lb/in	Purple	120 - 150
039-05-062	40 lb/in	Blue	150 - 180
039-05-073	45 lb/in	Green	180 - 210
039-05-074	50 lb/in	Yellow	210 - ≥240
039-05-075	55 lb/in	Orange	210 - ≥240
039-05-076	63 lb/in	Red	210 - ≥240

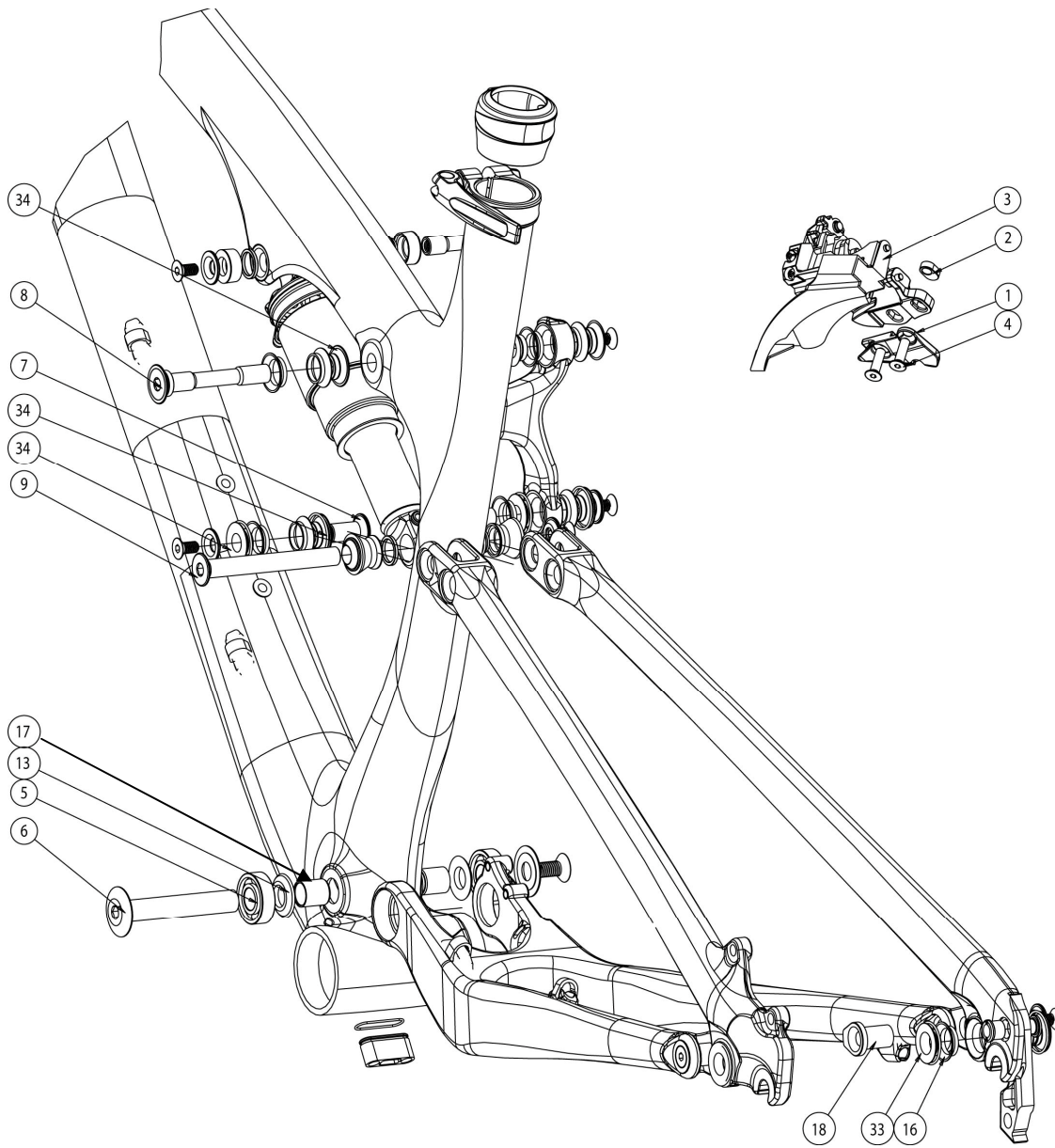
Rider Weight lbs	Fox Rear Shock Air Spring Pressure Settings PSI					Flatline WC Rate
	Slayer	Element RSL	Element MSL	Altitude	Altitude 30	
	PSI	PSI	PSI	PSI	PSI	
130	145	115	100	105	65	300
140	160	125	110	115	72	300
150	170	135	120	130	80	350
160	180	147	130	140	85	350
170	190	158	140	150	93	400
180	200	170	150	160	100	400
190	215	180	160	170	115	450
200	230	193	170	180	130	450
210	245	205	180	190	145	500
220	260	220	190	205	160	500
230	270	235	210	225	180	550

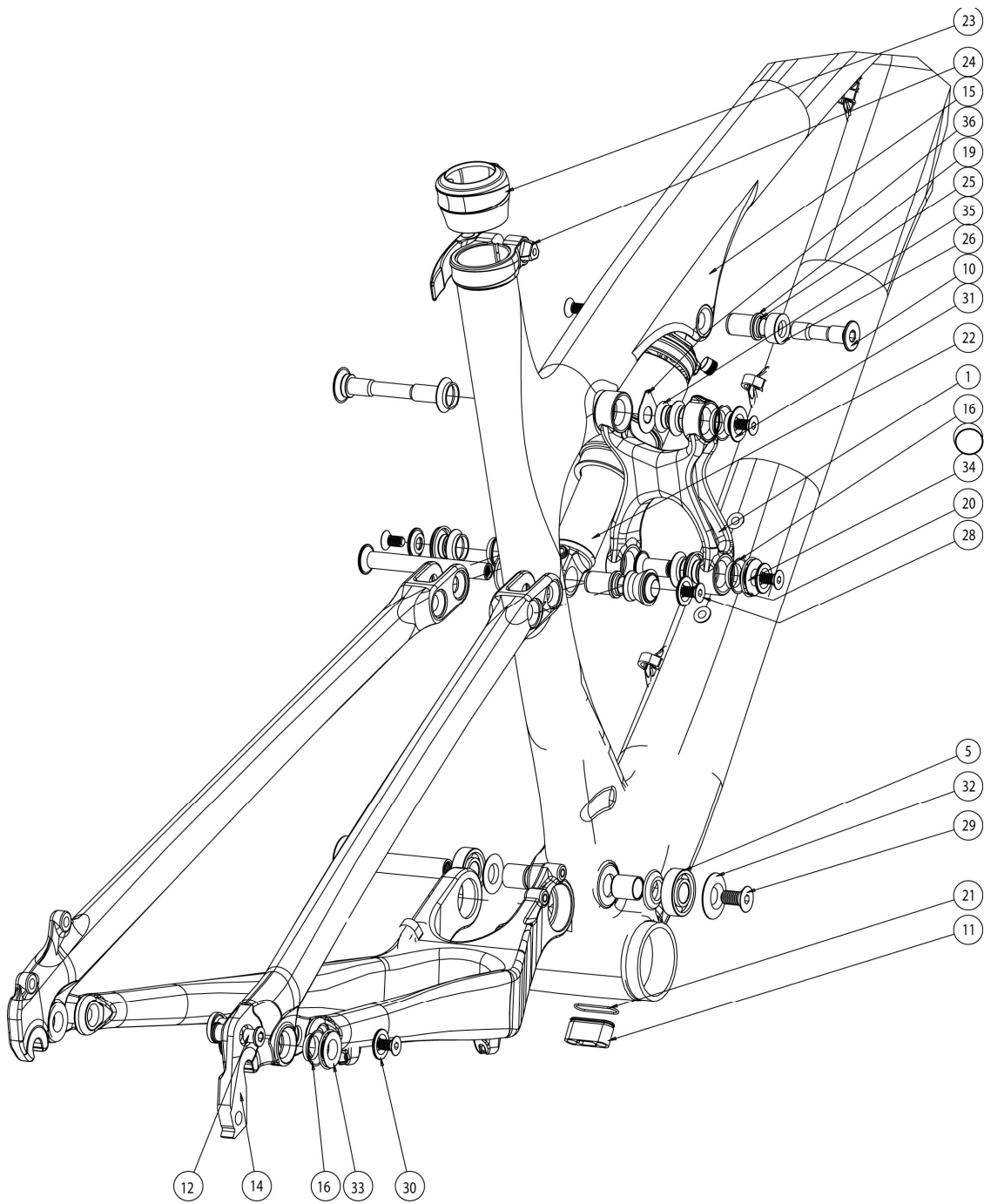
Rock Shox Suspension

Rider Weight	Recon	Recon	Reba/Sid	Boxer Race
	(327, 335, 351)	(Race, SL, XC)		
	Solo Air	Solo Air	Dual Air	Spring Color
<140 (63kg)	50-70psi	90-110psi	70-90psi	Silver
140-160 (63-72kg)	70-85psi	110-125psi	90-105psi	Yellow
160-180 (72-81kg)	85-100psi	125-140psi	105-120psi	Red (Stock)
180-200 (81-90kg)	100-120psi	140-160psi	120-135psi	Blue
>220 (99kg)	135+psi	175+psi	150psi	Black

Rider Weight lbs	Rock Shox Rear Shock Air Spring Pressure Settings PSI		
	Ario R / RL	Monarch RT3 / RT	Vivid R2
	PSI	PSI	Spring Rate
130	85	150	300
140	95	160	300
150	105	170	350
160	115	180	350
170	125	190	400
180	140	200	400
190	150	210	450
200	160	225	450
210	170	235	500
220	180	245	500
230	190	250	550

2011-2012 Element RSL and MSL Exploded Views:

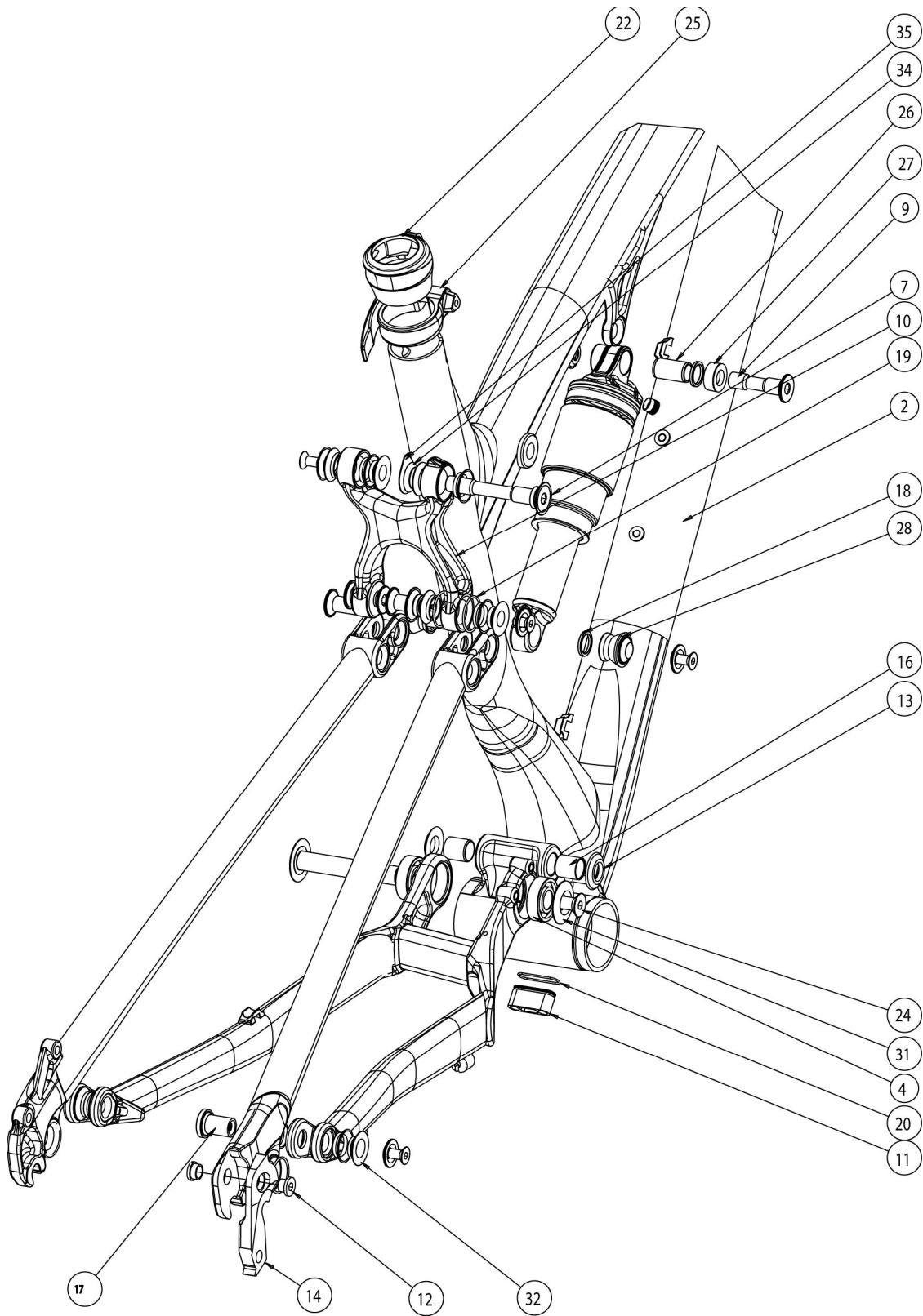


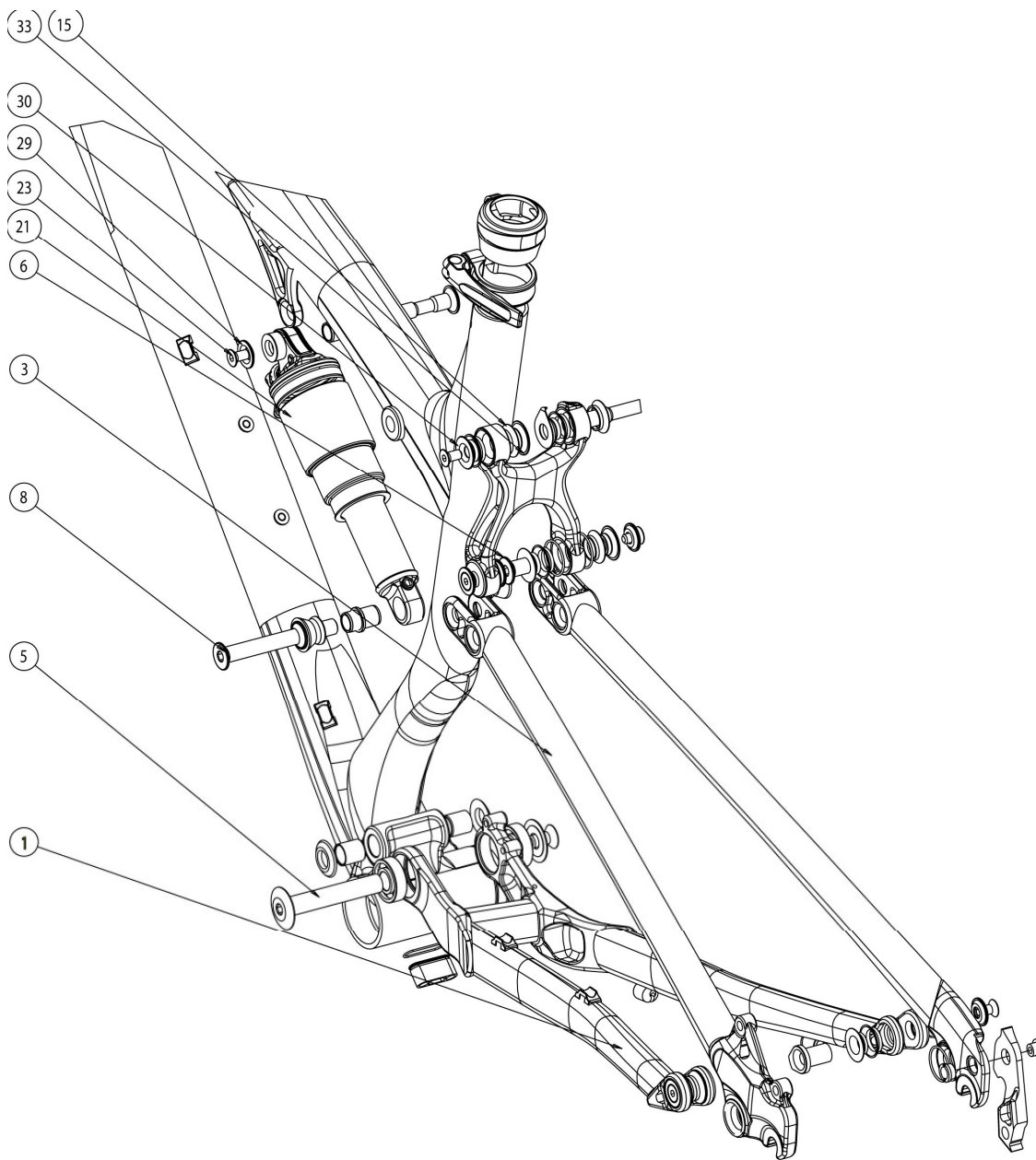


2011-2012 Element RSL and MSL Small Parts:

#	QTY	Part No.	Description
5	2	181063ABI	BEARING - 12X28X8; 6001-2RS
6	1	180466-070AST	28mm FLANGE HD, THRU. BLT; INTERNAL M8X1.25 - OD:12X70mm
7	2	180491	C'SUNK HD, THRU BOLT. OD:10MM X 21, INT. M6 THREAD
8	1	180492	C'SUNK HD, THRU BOLT. OD:12MM X 68, INT. M6 THREAD
9	1	180496	C'SUNK HD, THRU BOLT. OD:10MM X 85, INT. M6 THREAD
10	1	180527	ELEM WC SHOCK BOLT, OD:10MM, L: 40MM.
1	1	109080PMG	ELEMENT CARBON 1-PIECE TOP LINK, 95MM LONG.
11	1	1092019MEK	INTERNAL CABLE STOP INSERT, AL7005, "JY-009 XTR GREY" ANO.
12	1	180237RUX	CHAINRING BOLT & NUT - M8X0.75 X 8.5mm; AL7075
13	2	180545	CONICAL WASHER - ID:12mm, OD:24, 3.0mm THK.
14	1	1098095UAT	2009 DERAILLEUR HANGER; AL7005-T6.
16	12	180444IGS	IGUS ANGULAR CONTACT BEARING, ID:14, 3MM LEN.
17	2	180283IGS	IGUS L280 SLEEVE, LSM-1214-15: ID:12, OD:14, L:15
18	2	180463-021	KEYED C'SUNK "L" BOLT - OD:12X21mm. INT M6X1.0 THREAD
19	4	180522	RUBBER O-RING, FOR 12.7mm FOX SHOCK PIN.
20	8	180543	O-RING, ID 20MM, W:1.25. NITRILE.
21	1	180572	O-RING ID:14MM, W:1.5MM, NITRILE
22	1	N/A	Rear Shock
23	1	165383	2011 ELEMENT SEAT QR RUBBER BOOTY.
24	7	180566FBY-012	FLAT HEAD C'SUNK SOCKET SCREW, M6-1.0 X 12MM
25	1	180567FBY-016	FLAT HEAD C'SUNK SOCKET SCREW, M8-1.25 X 16MM
26	1	165382JDM	JD SEAT QR CLAMP, 34.9mm CLAMP, AL6061-T6. POLISH. W TI. BOLT
27	2	111989FOX	CUSTOM SHOCK INSERT, ID:10, OD:12.7, L:22.2.
28	2	180509	SHOCK SPACER, ID: 10, FOR 28MM WIDTH.
29	2	180495	2011 ELEMENT REAR SHOCK SPACER CUSTOM, ID:10.
30	6	180476AST	conical c'sunk washer: (for M6 screw) id:6mm x od:18 x 3mm thk
31	1	180494	ALLOY WASHER FOR ANGULAR POLY. BRG, C'SUNK, ID:12, L:3.35
32	1	180499	BEARING CAP WASHER - OD:28 FOR M8 CSUNK SCREW
33	4	180490	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:2.63
34	5	180493	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:3.35
35	1	180506	ALLOY WASHER FOR ANGULAR POLY. BRG, NO-FLANGE, ID:12, L:3.35
36	1	180507	WASHER, WITH ELEMENT SAG INDICATOR POINT ARROW

2012 Element Alloy Exploded Views:

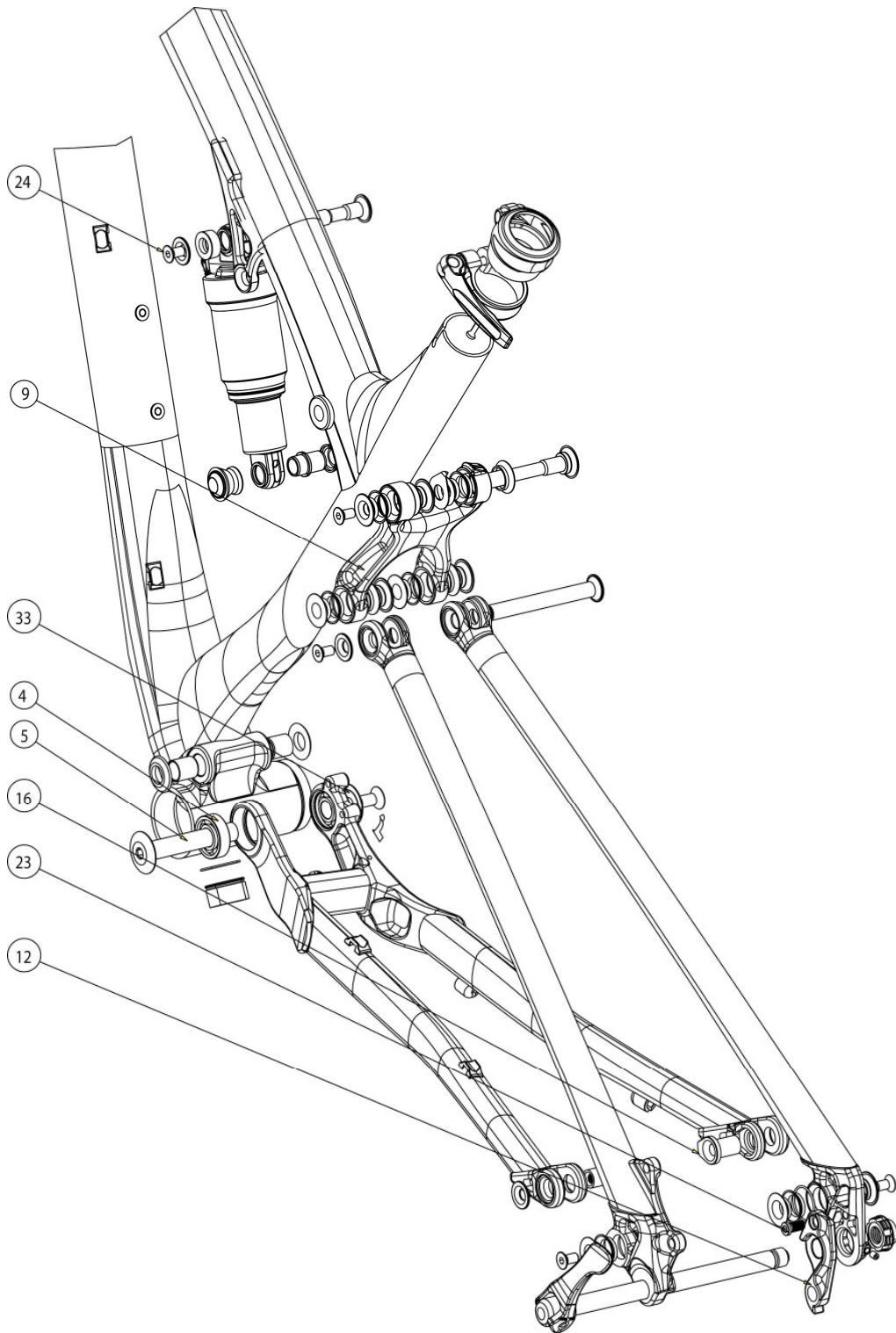


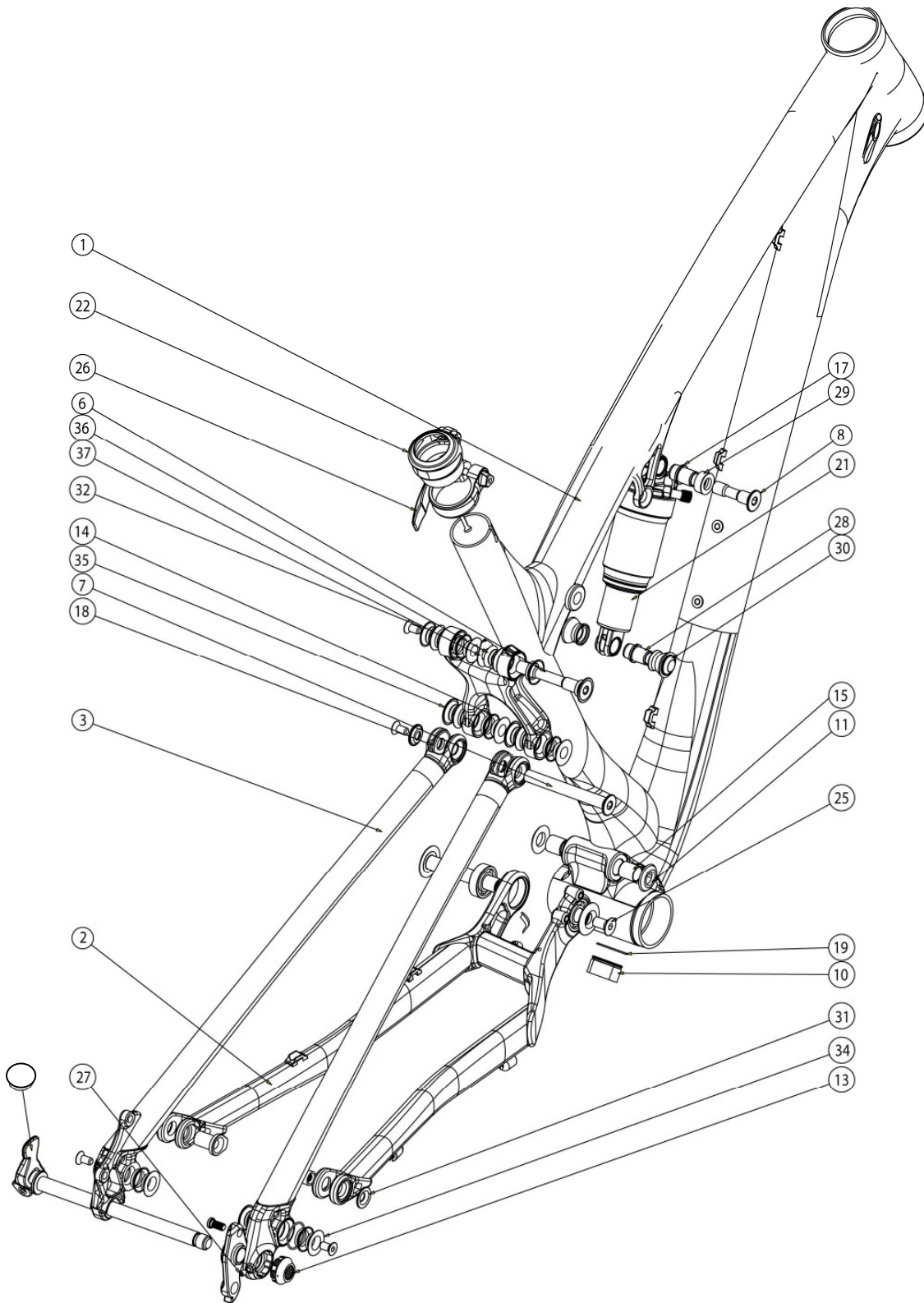


2012 Element Alloy Small Parts:

#	QTY	Part No.	Description
4	2	181063ABI	BEARING - 12X28X8; 6001-2RS
5	1	180466-070AST	28mm FLANGE HD, THRU. BLT; INTERNAL M8X1.25 - OD:12X70mm
6	2	180491	C'SUNK HD, THRU BOLT. OD:10MM X 21, INT. M6 THREAD
7	1	180492	C'SUNK HD, THRU BOLT. OD:12MM X 68, INT. M6 THREAD
8	1	180496	C'SUNK HD, THRU BOLT. OD:10MM X 85, INT. M6 THREAD
9	1	180527	ELEM WC SHOCK BOLT, OD:10MM, L: 40MM
10	1	1092180MEK	BONDED 2-PIECE ELEMENT ALLOY TOP LINK, 95MM LONG.
11	1	1092019MEK	INTERNAL CABLE STOP INSERT
12	1	180237RUX	CHAINRING BOLT & NUT - M8X0.75 X 8.5mm
13	2	180545	CONICAL WASHER - ID:12mm, OD:24, 3.0mm THK.
14	1	1098095UAT	2009 DERAILLEUR HANGER; AL7005-T6.
15	12	180444IGS	IGUS ANGULAR CONTACT BEARING, ID:14, 3MM LEN.
16	2	180283IGS	IGUS L280 SLEEVE, LSM-1214-15: ID:12, OD:14, L:15
17	2	180463-021	KEYED C'SUNK "L" BOLT - OD:12X21mm. INT M6X1.0 THREAD
18	4	180522	RUBBER O-RING, FOR 12.7mm FOX SHOCK PIN.
19	8	180543	O-RING, ID 20MM, W:1.25. NITRILE.
20	1	180572	O-RING ID:14MM, W:1.5MM, NITRILE
22	1	165383	2011 ELEMENT SEAT QR RUBBER BOOTY
23	7	180566FBY-012	FLAT HEAD C'SUNK SOCKET SCREW, M6-1.0 X 12MM
24	1	180567FBY-016	FLAT HEAD C'SUNK SOCKET SCREW, M8-1.25 X 16MM
25	1	165382JDM	JD SEAT QR CLAMP, 34.9mm CLAMP
26	2	111989FOX	CUSTOM SHOCK INSERT, ID:10, OD:12.7, L:22.2
27	2	180509	SHOCK SPACER, ID: 10, FOR 28MM WIDTH.
28	2	180495	2011 ELEMENT REAR SHOCK SPACER CUSTOM, ID:10
29	6	180476AST	CONICAL C'sunk WASHER: (for M6 screw) id:6mm x od:18 x 3mm thk
30	1	180494	ALLOY WASHER FOR ANGULAR POLY. BRG, C'SUNK, ID:12, L:3.35
31	1	180499	BEARING CAP WASHER - OD:28 FOR M8 CSUNK SCREW
32	4	180490	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:2.63
33	5	180493	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:3.35
1	1	N/A	ELEMENT ALLOY CHAINSTAY/all
34	1	180506	ALLOY WASHER FOR ANGULAR POLY. BRG, NO-FLANGE, ID:12, L:3.35
35	1	180507	WASHER, WITH ELEMENT SAG INDICATOR POINT ARROW

2012 Element 29 Exploded Views:



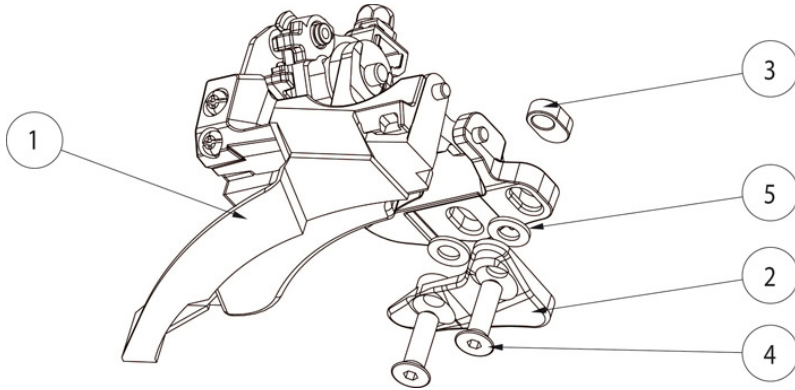


2012 Element 29 Small Parts:

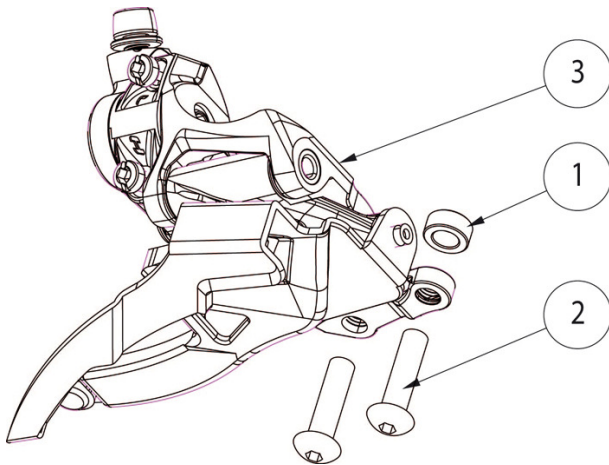
#	QTY	Part No.	Description
4	2	181063ABI	BEARING - 12X28X8; 6001-2RS
5	1	180466-070AST	28mm FLANGE HD, THRU. BLT; INTERNAL M8X1.25 - OD:12X70mm
6	1	180492	C'SUNK HD, THRU BOLT. OD:12MM X 68, INT. M6 THREAD
7	1	180496	C'SUNK HD, THRU BOLT. OD:10MM X 85, INT. M6 THREAD
8	1	180527	ELEM WC SHOCK BOLT, OD:10MM, L: 40MM.
9	1	1092180MEK	BONDED 2-PIECE ELEMENT ALLOY TOP LINK, 95MM LONG.
10	1	1092019MEK	INTERNAL CABLE STOP INSERT,
11	2	180545	CONICAL WASHER - ID:12mm, OD:24, 3.0mm THK.
12	1	1092020	DER HANGER, SHIMANO 12MM X 142 O.L.D V2 VERSION.
13	1	180448	DROPOUT NUT: M12X1.5, FOR SHIMANO 12 X 142 O.L.D.
14	12	180444IGS	IGUS ANGULAR CONTACT BEARING, ID:14, 3MM LEN.
15	2	180283IGS	IGUS L280 SLEEVE, LSM-1214-15: ID:12, OD:14, L:15
16	2	180463-021	KEYED C'SUNK "L" BOLT - OD:12 x 21mm. INT M6X1.0 THREAD
17	4	180522	RUBBER O-RING, FOR 12.7mm FOX SHOCK PIN
18	8	180543	O-RING, ID 20MM, W:1.25
19	1	180572	O-RING ID:14MM, W:1.5MM
22	1	165383	2011 ELEMENT SEAT QR RUBBER BOOTY
23	1	180487-012	CUSTOM , LOW FLAT HEAD SHOULDER SCREW, M6-1.0 X 12MM, SS.
24	5	180566FBY-012	FLAT HEAD C'SUNK SOCKET SCREW, M6-1.0 X 12MM
25	1	180567FBY-016	FLAT HEAD C'SUNK SOCKET SCREW, M8-1.25 X 16MM
26	1	165382JDM	JD SEAT QR CLAMP, 34.9mm CLAMP, AL6061-T6. POLISH. W TI. BOLT
27	1	180571FBY	SET SCR., FLT. PT., M4 x 0.7 x 5mmL.
28	2	111989FOX	CUSTOM SHOCK INSERT, ID:10, OD:12.7, L:22.2.
29	2	180509	SHOCK SPACER, ID: 10, FOR 28MM WIDTH
30	2	180495	2011 ELEMENT REAR SHOCK SPACER CUSTOM, ID:10mm
31	4	180476AST	CONICAL C'sunk WASHER: (for M6 screw) id:6mm x od:18 x 3mm thk.
32	1	180494	ALLOY WASHER FOR ANGULAR POLY. BRG, C'SUNK, ID:12, L:3.35
33	1	180499AST	BEARING CAP WASHER - OD:28 FOR M8 CSUNK SCREW
34	4	180490	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:2.63
35	5	180493	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:3.35
36	1	180506	ALLOY WASHER FOR ANGULAR POLY. BRG, NO-FLANGE, ID:12, L:3.35
37	1	180507	WASHER, WITH ELEMENT SAG INDICATOR POINT ARROW

2011-2012 Element Front Derailleur Configuration Diagrams:

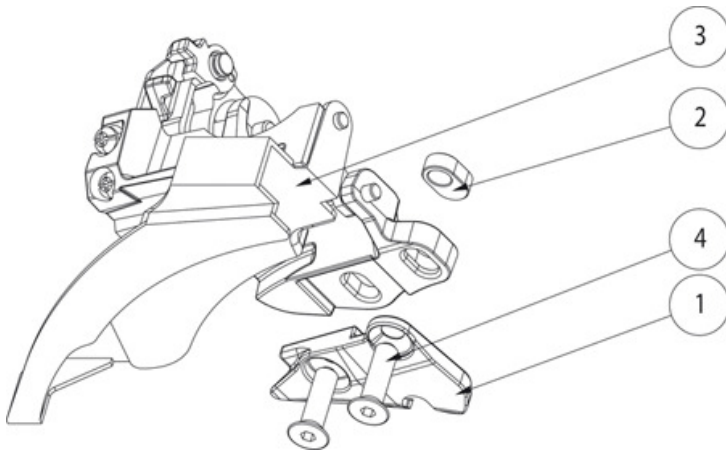
Shimano 2 Ring Configuration:



Sram 2 Ring Configuration:



Shimano 3 Ring Configuration:



2011-2012 Element Front Derailleur Small Parts:

Shimano 2 Ring Config.

#	QTY	Part No.	Description
1	1	N/A	SHIMANO E-MOUNT FD. 2 SPEED.
2	1	180473AST	E-TYPE FD SLOT SPACER, FOR THRU BOLT; AL6061
3	1	1091042PMG	2-SPEED SHIMANO ANTI-CHAINDROP PLATE, E-MOUNT
4	2	180565FBY-018	FLAT HEAD C'SUNK SOCKET SCREW, M5-0.8 X 18MM
5	2	180049FBY	STEEL WASHER

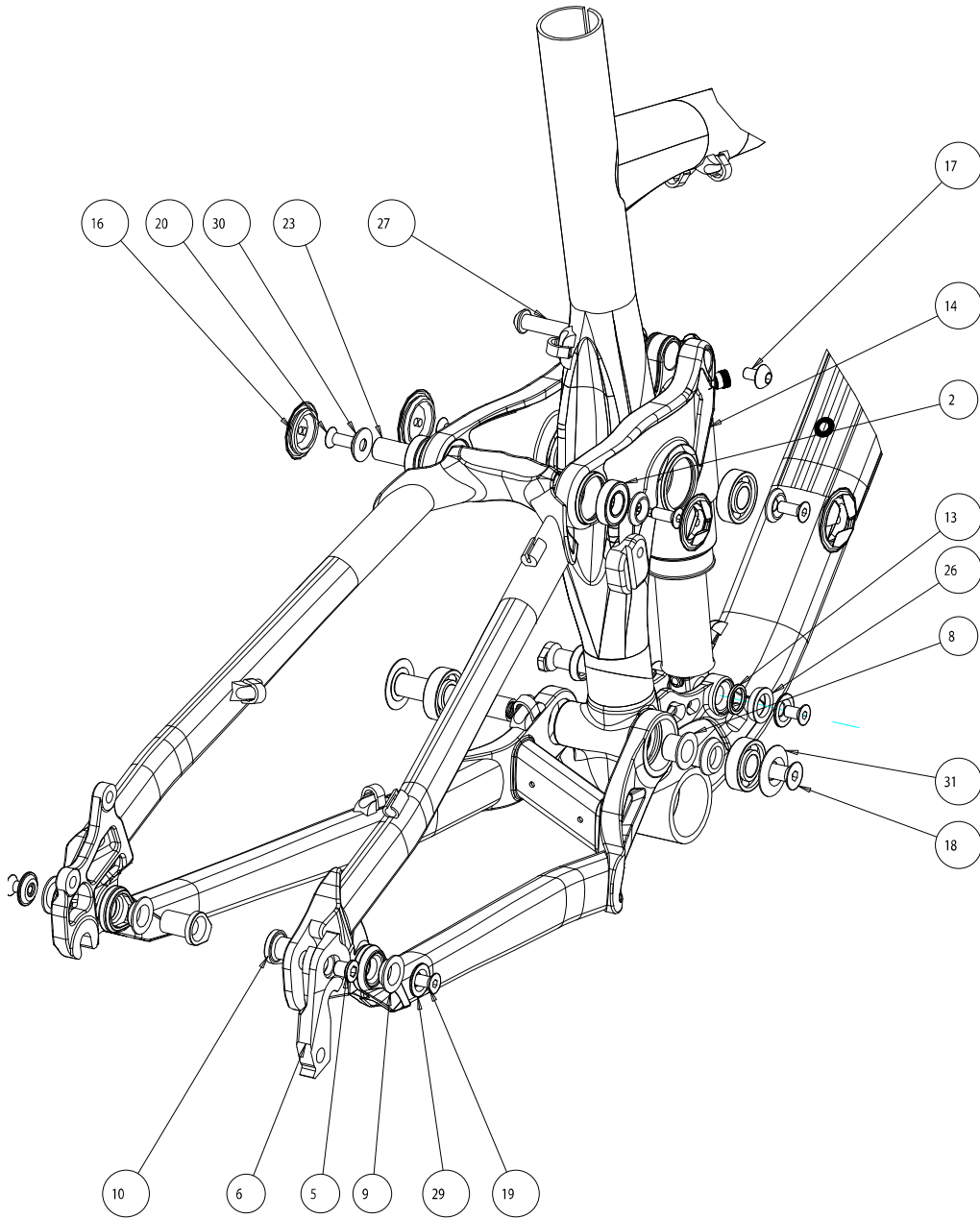
Sram 2 Ring Config.

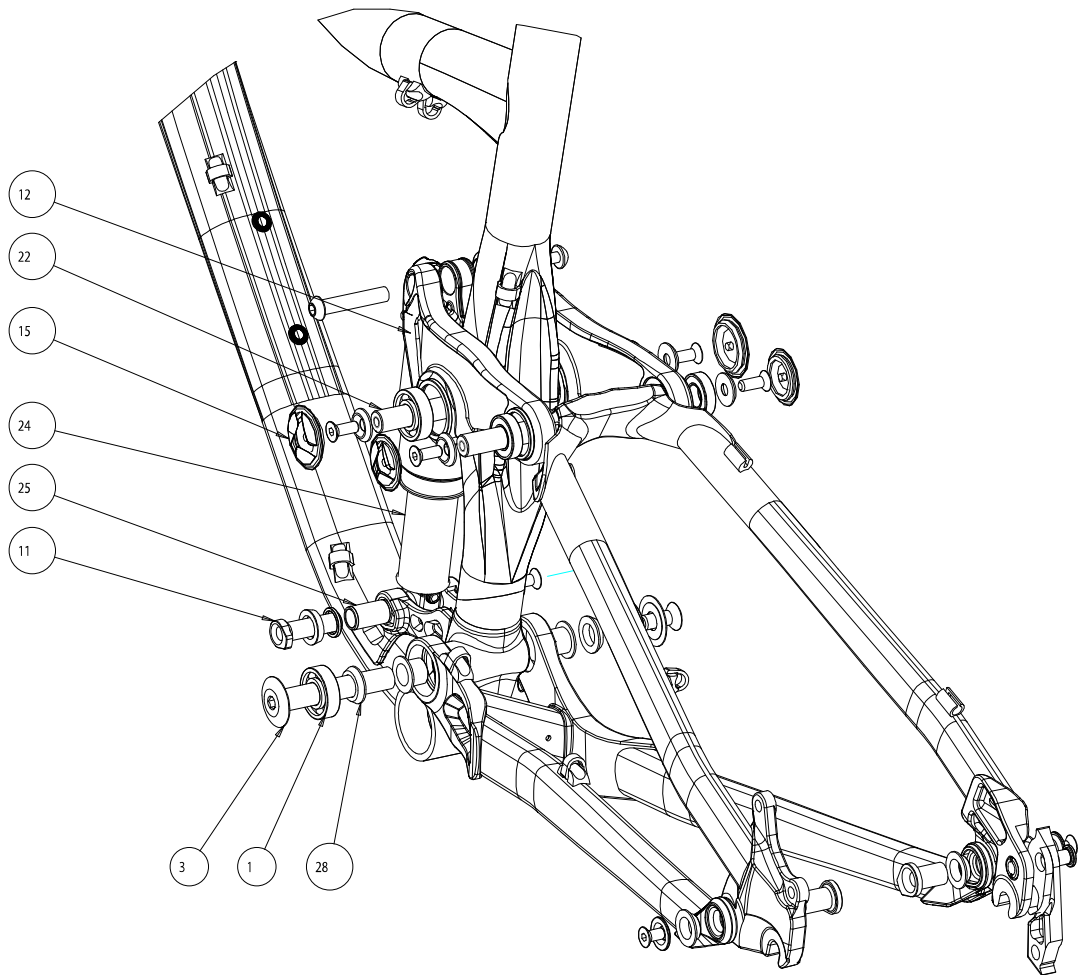
1	1	180573PMG	E-TYPE FD SPACER, FOR SRAM; AL6061-T6. OD:9; ID:5.2; T:4.
2	2	180574FBY	DOMED HEAD CAP SCREW, M5X20MM
3	1	N/A	SRAM, 2-SPEED, E-TYPE FD

Shimano 3 Ring Config.

1	1	1091040	ANTI-CHAINDROP PLATE, ELEM. WC., DIRECT E-MOUNT
2	1	180473	E-TYPE FD SLOT SPACER, FOR THRU BOLT
3	1	N/A	SHIMANO E-MOUNT FD. 3 SPEED.
4	2	180565FBY-018	FLAT HEAD C'SUNK SOCKET SCREW, M5-0.8 X 18MM

2011-2012 Altitude Exploded Views:

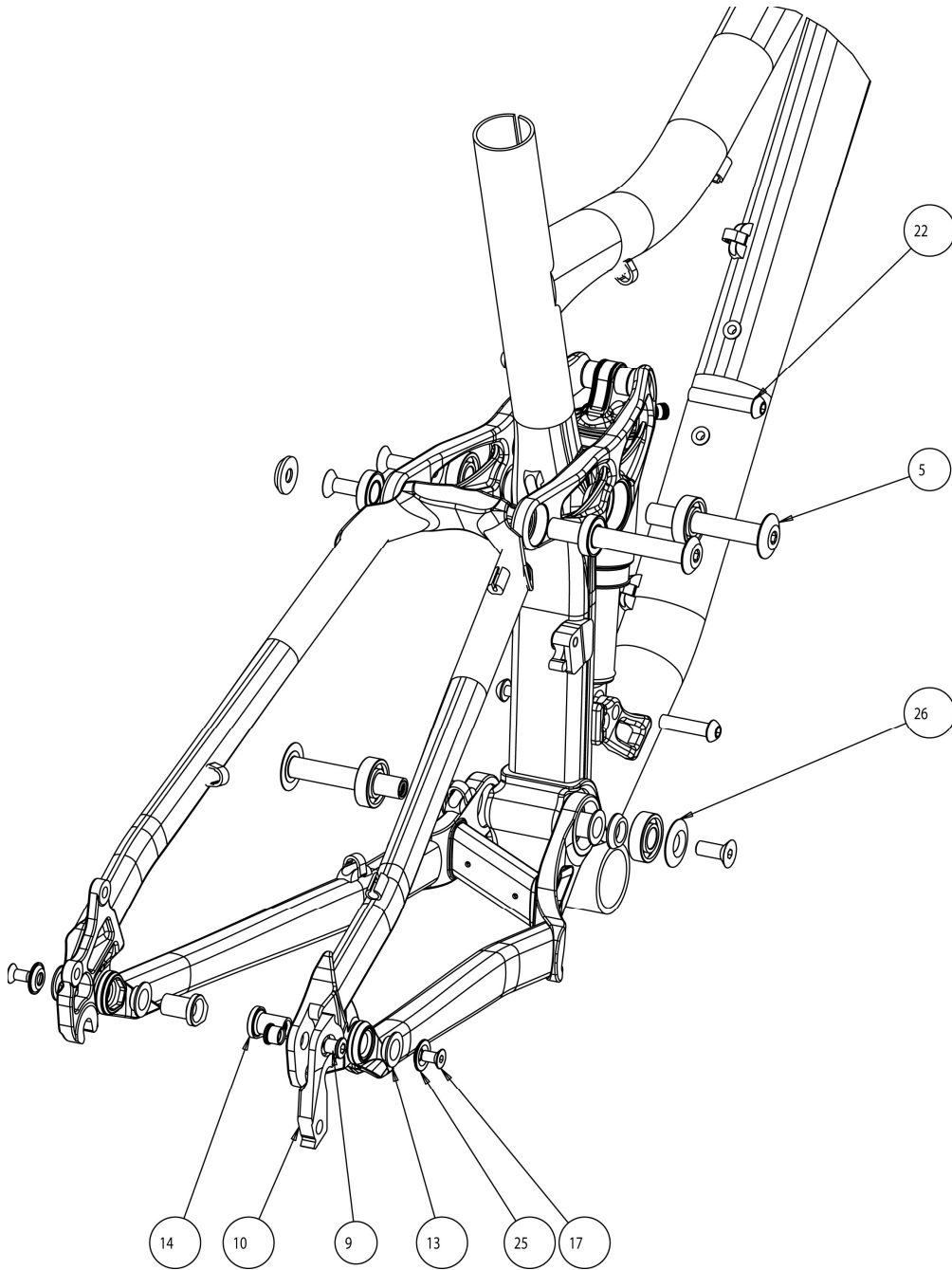


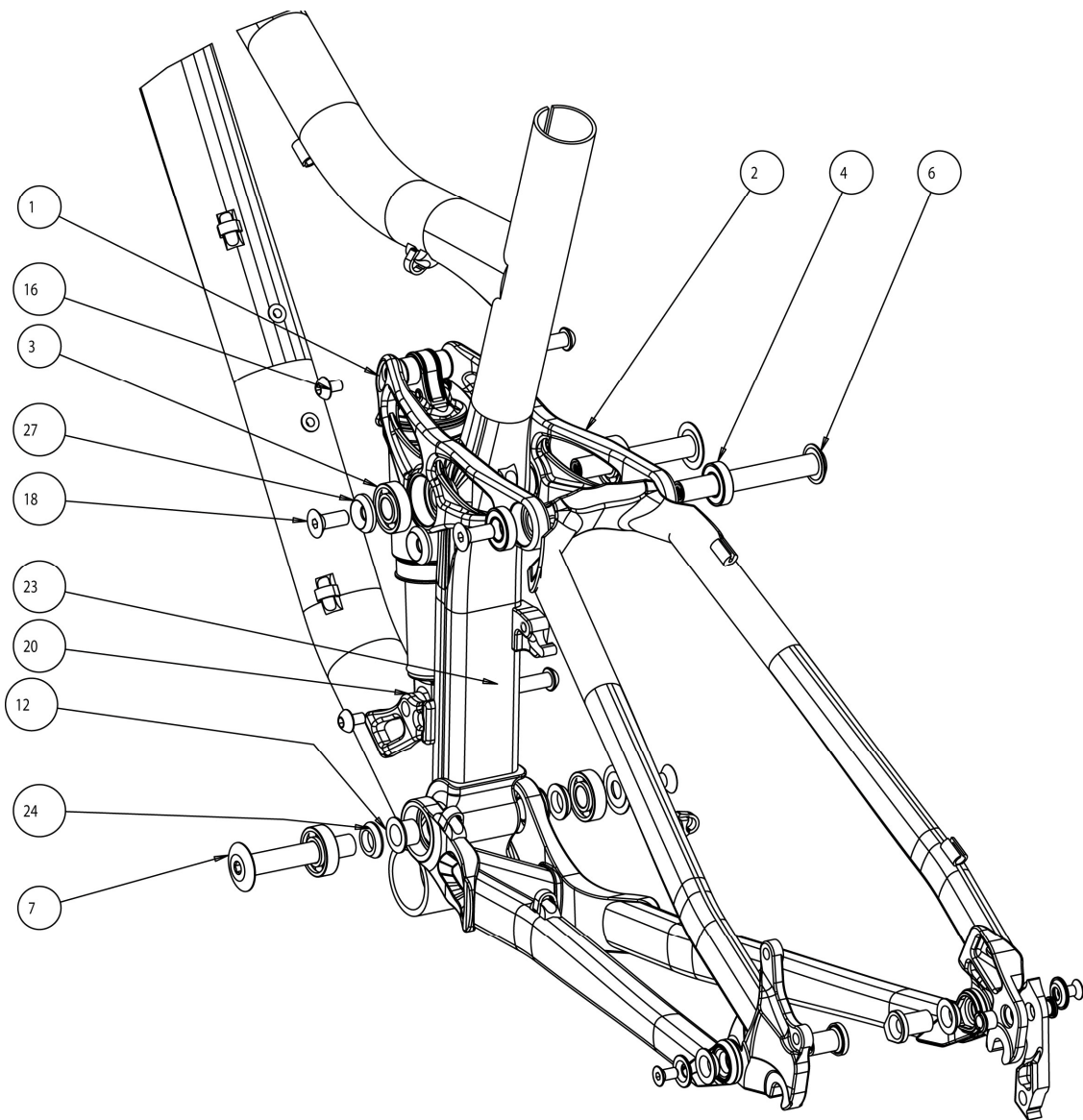


2011-2012 Altitude Small Parts List:

#	QTY.	PART #	DESCRIPTION
1	4	181063	BEARING - ID:12mm X OD:28mm X 8mm; (6001-2RS)
2	2	181064	BEARING - ID:12mm X OD:24mm X 6mm W (61901-2RS)
3	1	180466-070	BOLT - OD:12 x 70mm long / (HD:28); Internal M8x1.25 thread
4	1	1051019	ALTITUDE CHAINSTAY
5	1	180237	CHAIN RING BOLTS M8X0.75X8.5MM
6	1	1098095	2011 DERAILLEUR HANGER, FORGED, AL7075-T6
8	2	180334	IGUS INSERT, LFM-1214-12.
9	4	180335	IGUS FLANGE BUSHING - ID:12mm OD:14mm L:5.5mm (CUSTOM)
10	2	180463-021	BOLT - KEY HEAD "L" BOLT. OD:12mm X 21mm; INT M6-1.0 thread
11	1	180464-038	SHOCK BOLT - KEY HEAD "L" BOLT; OD:10mm X 38mm; INT M6-1.0 thread
12	1	181108	CARBON TOP LINKAGE, LEFT
13	2	180522	RUBBER O-RING, ID:12.7mm (FOR OD:12.7mm SHOCK PIN)
14	1	181109	CARBON TOP LINKAGE, RIGHT
15	2	180482	CARBON ALTITUDE LINKAGE PLUG LARGE
16	2	180483	CARBON ALTITUDE LINKAGE PLUG SMALL
17	1	180354	Sleeve Bolt, M8 x 41 - with M6 x 14.5 Locking Cap Screw
18	1	180435-020	SCREW - Flat Head Hex Socket, C'sunk M8-1.25x20 - gr.10.9, ZP;
19	3	180191-012	SCREW - FLAT HEAD, C'SUNK SOCKET SCREW; M6 X 12mm
20	4	180191-016	SCREW - FLAT HEAD, C'SUNK SOCKET SCREW; M6 x 16mm
22	1	180480-075	12MM OD X 75L X M6 SHAFT BOLT
23	1	180480-089	12MM OD X 89L X M6 SHAFT BOLT
24	1	N/A	SHOCK 200x57 mm
25	1	111989	FOX SHOCK PIN - ID:11mm 22.2MM Long
26	2	180516	SHOCK REDUCER - FOR ID:10x22.2mm STEEL PIN; 22.2mm OUTER SPAN
27	1	180354	Sleeve Bolt, M8 x 41 - with M6 x 14.5 Locking Cap Screw
28	2	180204	CONICAL WASHER - ID:12mm X 4mm THK
29	3	180476	CONICAL C'SUNK WASHER, ID:6mm x OD:18mm x 3mm THK.
30	4	180481	CUSTOM M6 COUNTERSUNK WASHER
31	1	180499	BEARING CAP, CUSTOM - OD:28 (for M8 C'sunk Screw)

2012 Altitude 29 Exploded Views:

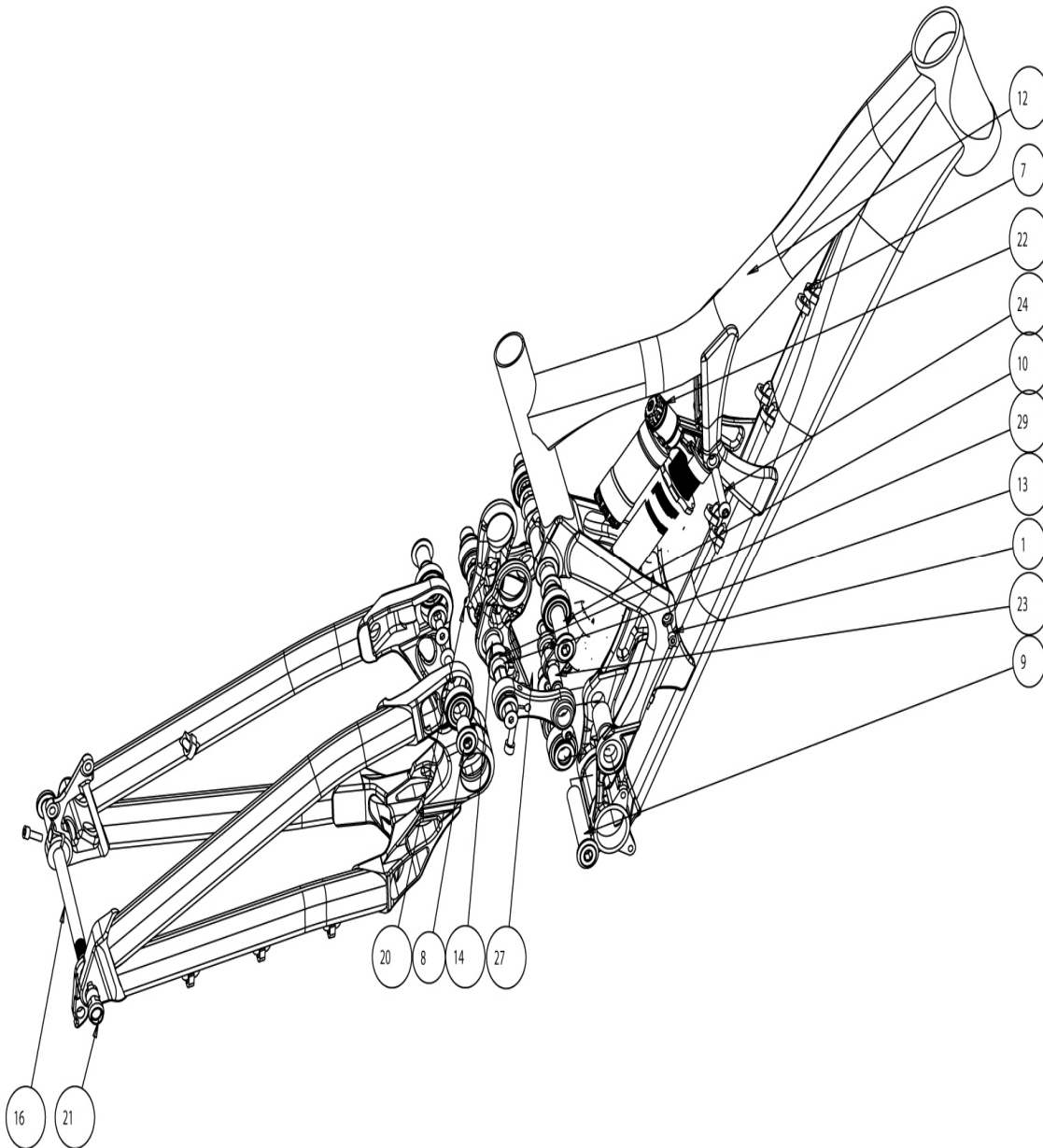


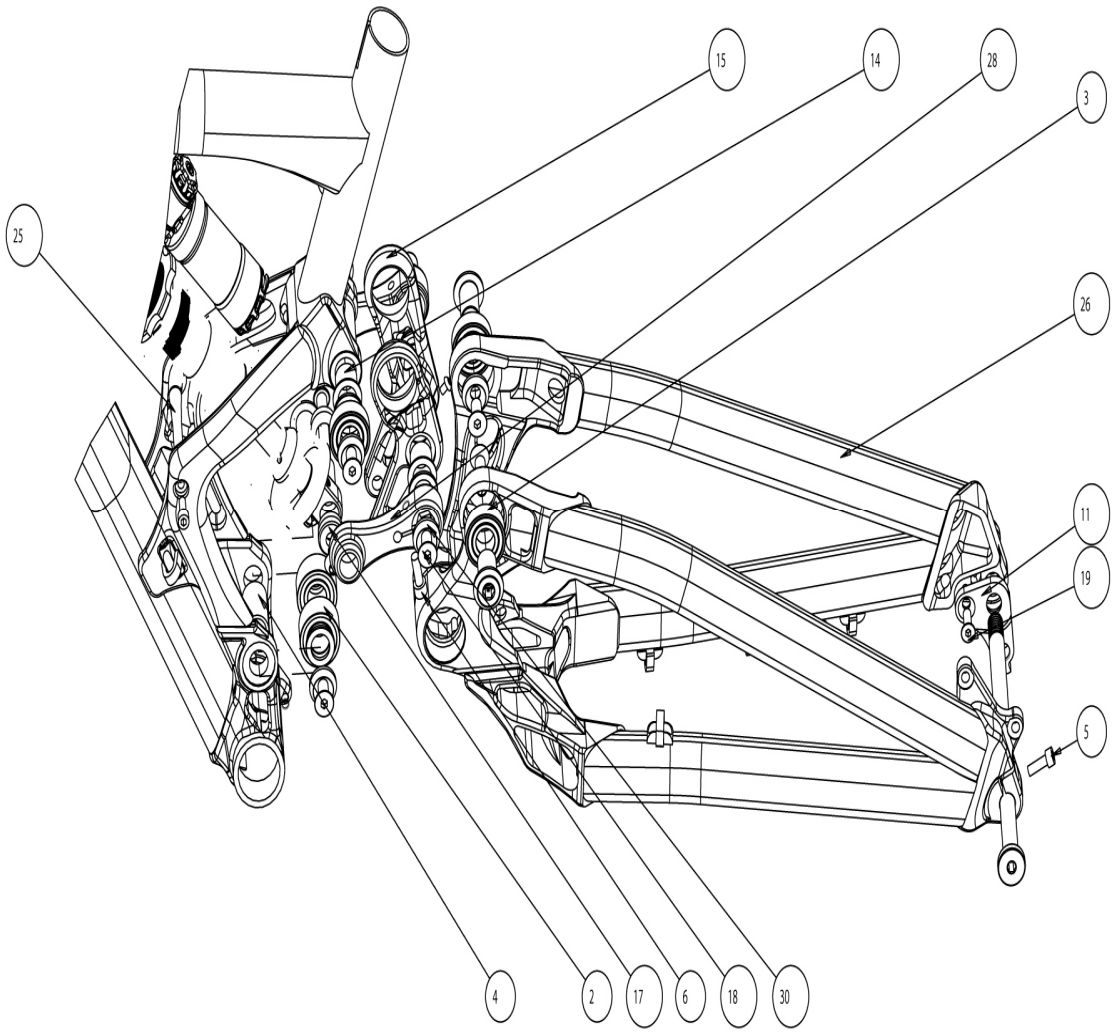


2012 Altitude 29 Small Parts:

#	QTY.	Part #	Description
1	1	181090	ALTITUDE 29 ALLOY LEFT LINK
2	1	181091	ALTITUDE 29 ALLOY RIGHT LINK
3	4	181063	BEARING - ID:12mm X OD:28mm X 8mm W (6001-2RS)
4	2	181064	BEARING - ID:12mm X OD:24mm X 6mm W (61901-2RS)
6	1	180400-088	CUSTOM BOLT, FLANGE HD. 12MM OD. M8X1.25 INT. 88MM LEN.
5	1	180400-074	CUSTOM BOLT, FLANGE HD. 12MM OD. M8X1.25 INT. 18MM LEN.
7	1	180400-070	BOLT - OD:12 x 70mm long / (HD:28); Internal M8x1.25 thread
9	1	180237	CHAIN RING BOLTS M8X0.75X8.5MM
10	1	1098095	2011 DERAILLEUR HANGER, FORGED, AL7075-T6
12	2	180334	IGUS INSERT, LFM-1214-12.
13	4	180335	IGUS LFM 12-14-5,5
14	2	180463-021	M6x21mm COUNTER SUNK BOLT
16	2	180354	Sleeve Bolt, M8 x 41 - with M6 x 14.5 Locking Cap Screw
17	2	180191-012	SCREW - FLAT HEAD, C'SUNK SOCKET SCREW; M6 X 12mm
18	3	180435-020	SCREW - Flat Head Hex Socket, C'sunk M8-1.25x20 - gr.10.9, ZP;
19	1	1051021	ALTITUDE 29 SEAT STAY
20	1	180502	SHOCK REDUCER
21	1	NA	SHOCK REDUCER
22	1	180354	Sleeve Bolt, M8 x 41 - with M6 x 14.5 Locking Cap Screw
23	1	180502	Sleeve Bolt, M8 x 31 - with M6 x 14.5 Locking Cap Screw
24	2	180204	CONICAL WASHER - ID:12mm X 4mm THK
25	2	180476	CONICAL C'SUNK WASHER, ID:6mm x OD:18mm x 3mm THK.
26	1	180499	BEARING CAP, CUSTOM - OD:28 (for M8 C'sunk Screw)

2011-2012 Flatline World Cup /WC Exploded Views:

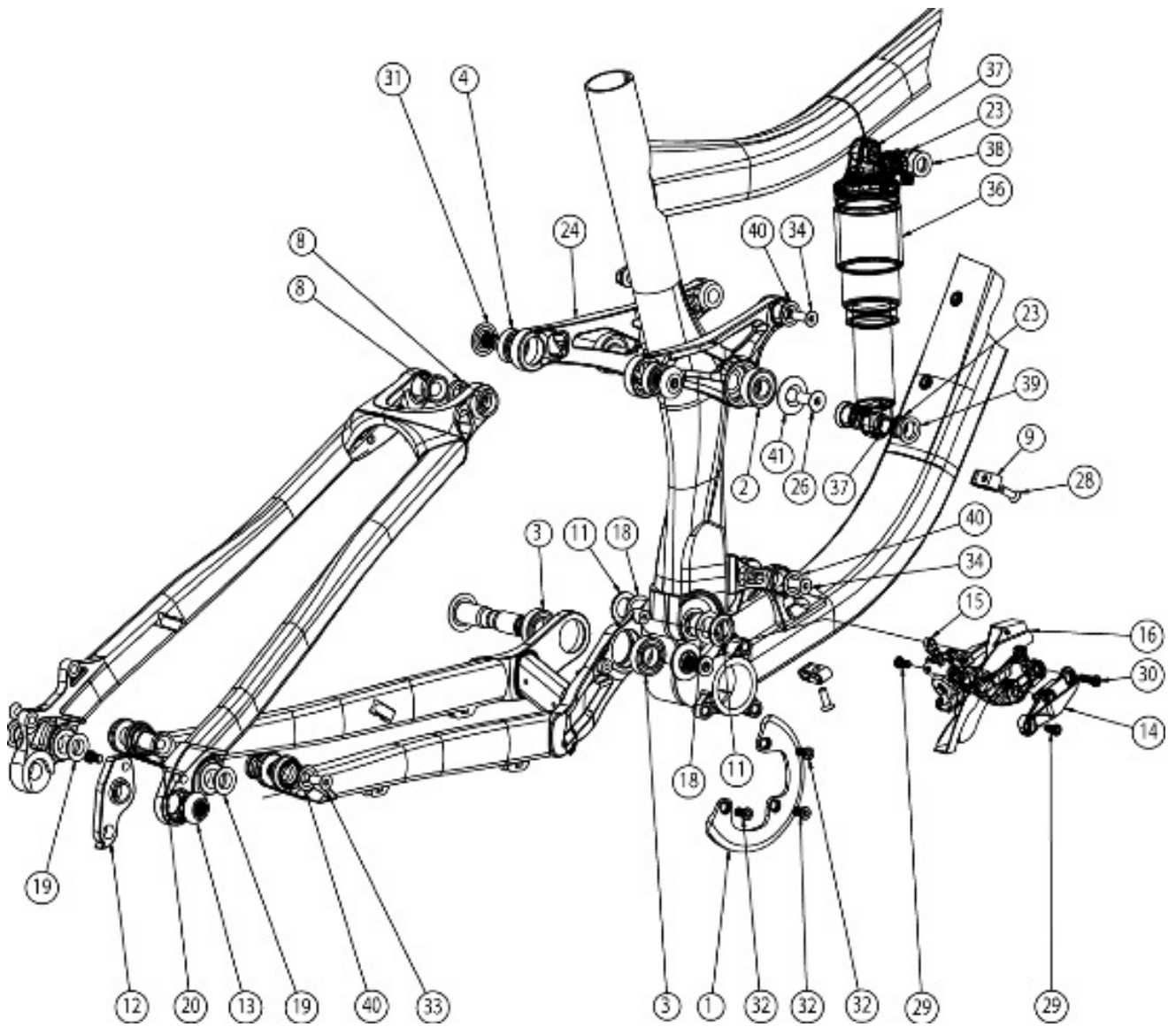


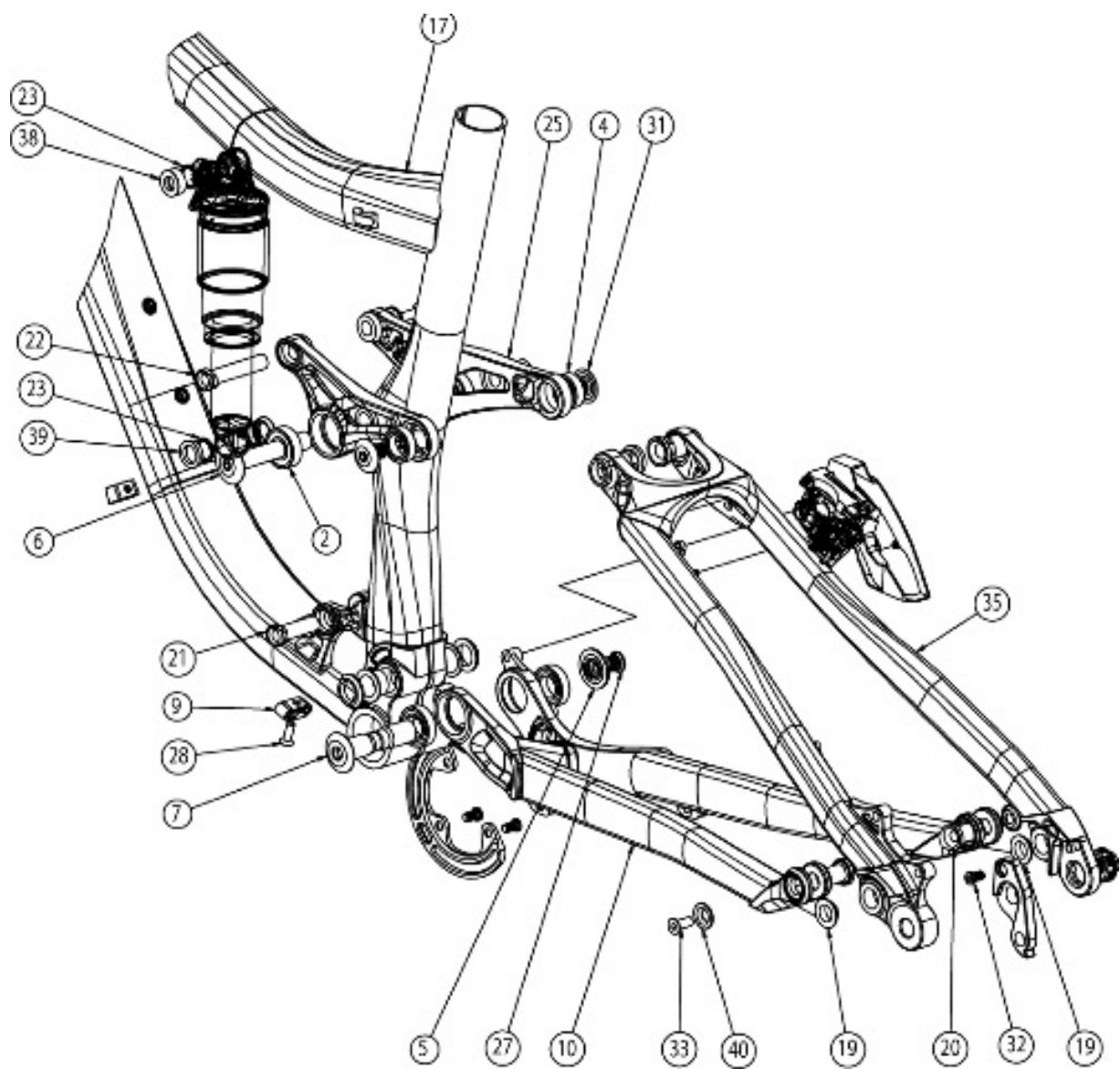


2011-2012 Flatline World Cup/ WC Small Parts:

#	QTY	Part. #	Description
1	2	180443	SOCKET HEAD CAP SCREW M5 X 0.8 X 10MM
2	2	181086	BEARING 15MM ID X 32MM OD X 13MM W
3	4	181087	BEARING 15MM ID X 32MM OD X 9MM W
4	1	180387	BEARING SPACER ID 15.5MM X 26.1 MM L, AL6061-T6
5	1	180238	SCREW (HEX SOCKET HEAD SH.) M5X16
6	2	180329	SOCKET HEAD CAP SCREW M6 X 1.0 X 16MM SHAFT LENGTH
7	11	109203	CABLE GUIDE COVER
8	2	180430-020	DH FLANGE BOLT 15MM OD X 20 MM LONG
9	1	180430-071	DH FLANGE BOLT 15MM OD X 71.5 MM LONG
10	1	180430-081	DH FLANGE BOLT 15MM OD X 81 MM LONG
11	1	180901	2010 FLATLINE WC DERAILLEUR HANGER
13	1	180454	10 DH HEXAGON AXLE
14	4	181088	IGUS BUSHING, LFM-1517-17
15	1	109073	10 TOP LINK FLT W/CUP
16	1	122971	AXEL FOR REAR HUB
17	4	180312	SHOCK SPACER REAR, AL6061-T6
18	6	180435-016	SCREW - FLAT HEAD SOCKET, C'SUNK. M8X1.25 X 16MM L
19	1	180359	HEX SOCKET COUNTERSUNK SCREW M6 X 16 MM
20	1	180438	SCREW - SOCKET HD CAP SCREW, M4x0.7 X 6mm LENGTH
21	1	180431	THREADED NUT M12 X 1.75
23	2	111990	SHOCK SLEEVE
24	2	180505	SLEEVE BOLT M6 X 0.8 X 46MM
25	1	180428	ALUMINUM STIFFENER ROD
27	1	1099023	TUG LINK FLATLINE AL7075-T6 (LH)
28	1	1099024	TUG LINK FLATLINE AL7075-T6 (RH)
29	6	180287	WASHER 15 MM ID X 2 MM W, AL6061-T6
30	6	180338	C'SUNK WASHER, M8 - OD:21.5 X 5mm THK

2011-2012 Slayer Exploded Views:





2011-2012 Slayer Small Parts:

#	QTY	Part No.	Description
1	1	1091041	ISCG'03 MOUNTED ANTI-CHAINDROP PLATE - 2011 SLAYER
2	2	181063	BEARING - ID:12mm X OD:28mm X 8mm; (6001-2RS)
3	2	181097	BEARING - ID:15mm x OD:28mm x 7mm; (6902-2RS MAX TYPE)
4	2	181111	BEARING - ID:15mm x OD:24mm x 7mm; (3802-2RS)
5	1	180477	BEARING CAP, CUSTOM - OD:28 (M10 screw / HD:14mm), FOR 15mm AXLE
6	1	180466-070	BOLT - OD:12 x 70mm long / (HD:28); Internal M8x1.25 thread
7	1	180467-064	BOLT - OD:15 x 64mm long / (HD:28); Internal M10x1.25 thread
8	2	180489-022	BOLT - C'SUNK HEX BOLT; OD:15mm x 22mm, INT M10-1.25 thread
9	3	1091033	CABLE GUIDE - BOLT-ON, 3 WAY
10	1	1051007	2011 SLAYER CHAINSTAY ASSEMBLY
11	2	180461	CONICAL WASHER - ID:15 x OD:23mm x 4mm THK.
12	1	1091027	DERAILLEUR HANGER - 2011 SLAYER (for SHIMANO)
13	1	180448	DROPOUT NUT, CUSTOM RH - 2011 SLAYER; (for SHIMANO system)
14	1	1091019	FD ADAPTER PLATE, E-TYPE - BOLT ON
15	1	180473	E-TYPE FD SLOT SPACER, M5 THRU x 4mm THK; AL6061-T6
18	2	180307	IGUS FLANGE BUSHING - ID:15mm OD:17mm L:12mm
19	4	180335	IGUS FLANGE BUSHING - ID:12mm OD:14mm L:5.5mm (CUSTOM)
20	2	180463-021	BOLT - KEY HEAD "L" BOLT. OD:12mm X 21mm; INT M6-1.0 thread
21	1	180464-038	SHOCK BOLT - KEY HEAD "L" BOLT; OD:10mm X 38mm; INT M6-1.0 thread
22	1	180464-056	SHOCK BOLT - KEY HEAD "L" BOLT; OD:10mm X 56mm; INT M6-1.0 thread
23	4	180522	SHOCK PIN O-RING
24	1	1091015	ROCKERPLATE, LEFT - 2011 SLAYER
25	1	1091016	ROCKERPLATE, RIGHT - 2011 SLAYER
26	1	180435-020	SCREW - Flat Head Hex Socket, C'sunk M8-1.25x20 - gr.10.9, ZP;
27	1	180470-020	SCREW - CUSTOM FLAT HEAD, C'SUNK. M10-1.25 X 20mm, HEAD OD:14mm
29	2	180474-010	SCREW - LOW FLAT HEAD, SHOULDER SCREW; M5 x 10mm
30	1	180474-016	SCREW - LOW FLAT HEAD, SHOULDER SCREW; M5 x 16mm
31	2	180486-014	SCREW - CUSTOM FLANGE HEAD (OD:24mm); M10-1.25 x 14mm
32	4	180487-010	SCREW - LOW FLAT HEAD, SHOULDER SCREW; M6-1.0 x 10mm
33	2	180191-016	SCREW - FLAT HEAD, C'SUNK SOCKET SCREW; M6 x 16mm
34	2	180191-020	SCREW - FLAT HEAD, C'SUNK SOCKET SCREW; M6 x 20mm
38	2	180509	SHOCK REDUCER - FOR ID:10x22.2mm STEEL PIN; 28mm OUTER SPAN
39	2	180516	SHOCK REDUCER - FOR ID:10x22.2mm STEEL PIN; 22.2mm OUTER SPAN
40	4	180476	CONICAL C'SUNK WASHER, ID:6mm x OD:18mm x 3mm THK.
41	1	180499	BEARING CAP, CUSTOM - OD:28 (for M8 C'sunk Screw)

WARRANTY

Warranty 2011-2012 Model Year

RMB covers frames to the original owner from the date of purchase of your new Rocky Mountain, conditional to proof of purchase, according to the frame material and intended use, against defects in materials and workmanship for the following duration:

Mountain Bike:	Warranty Period: limited*	Examples:
CroMoly Steel	Lifetime to Original Owner	Hammer/Blizzard
Aluminum (Hardtail)	5 years to Original Owner	Edge/Flare/Vapor/Soul/Fusion/Trailhead/Vertex
Aluminum (Dual Susp.)	5 years to Original Owner	** Element/Altitude/Slayer SXC/Element 29
Carbon (Hardtail and Dual Susp.)	5 years to Original Owner	Vertex RSL/Altitude RSL/Element RSL/MSL
Downhill / Freeride / DJ	3 years to Original Owner***	Flow/Slayer SS/Flatline/WC
Hybrids:		
Aluminum	Lifetime to Original Owner	Whistler/Metro/Metropolis/28"-700c
Road:		
CroMoly Steel / Aluminum / Carbon	5 years to Original Owner	Oxygen/Prestige/Solo/Boroughs/CX/Sherpa

What is Not Covered Under the Rocky Mountain Warranty

1. Normal Wear and tear on tires, tubes, brakes, cables, brakes pads, drivetrain etc. are not covered.
2. Improper assembly and/or lack of maintenance, frame modification (sandblasting, sanding, grinding, wire brushing, filing, welding, brazing, drilled holes, anodizing, repainting, chrome plating etc.) is not covered under your warranty and may void the warranty of the frame or individual component.
3. You take great personal risk and shall forfeit your warranty when you ride in extreme terrain as depicted in mountain bike videos, i.e. ride "trials" style courses, ride ramps, do stunts, ride on BMX tracks, ride down stairs or embankments or ride in other similar terrain. It is important to note that bent components, frames, forks, handlebars, seatpost, pedals, cranks or rims are a sign of accident or abuse and are not covered under warranty.
4. Labour costs are not covered by warranty
5. Consequential damage or any damage caused by accident, misuse, abuse, improper maintenance, or use of product outside of the intended use.

Definition of Intended Use by Category

Category	Examples	Intended Use	Outside of use
XC Recreational	Edge/ Flare/ Vapor/ Soul/ Fusion/ Trailhead/ Reaper	Light trail riding, road riding, commuting	No jumping. No racing. No freeriding. No trials riding. No downhill bike park riding.
XC Performance	Vertex/ Element/ Blizzard/ Hammer	Trail riding, road riding, commuting.	No jumping. No racing. No freeriding. No trials riding. No downhill bike park riding.
XC Race	Element Team/ Vertex FSL	Trail riding, road riding.	No jumping. No commuting. No freeriding. No trials riding. No downhill bike park riding.
XC Marathon	Altitude/ Altitude FSL	Trail riding, road riding.	No jumping. No commuting. No freeriding. No trials riding. No downhill bike park riding.
Super XC	SXC	Trail riding, road riding. Occasional downhill bike park riding (4 days / year).	No jumping over 60cm. No flat landings. No commuting. No trials riding.
DH/ FR/ DJ	Flow/ Sayer SS/ Flatline	Trail riding, road riding. Downhill bike park riding. Street / skate park riding. Dirt jumping.	No flat landings. No casing jumps. No commuting. No trials riding.
Road	Oxygen/ Prestige/ Solo/ Boroughs	Road riding, commuting.	No racks on carbon. No cyclocross. No offroad riding.
	CX	Road riding, commuting, cyclocross offroad (grass, smooth trails)	No racks on carbon. No jumping.
	Sherpa	Road riding, commuting.	No cyclocross. No offroad riding.
Hybrid	Whistler / Metro / Metropolis	Road riding, commuting.	No racks on carbon. No cyclocross. No offroad riding.

What will Void Your Warranty

1. Using the bicycle outside the use for which it was intended, as specified above.
2. Purchasing a Rocky Mountain Bicycle from an unauthorized dealer.
3. Competitive racing (unless specified) or any commercial activity i.e. rental fleets, courier use, Police or Security work.
4. Installing components other than those originally installed or recommended by Rocky Mountain.
5. Modifying or installing modified components.

NOTE: All Rocky Mountain Frames require a minimum of 100mm of seatpost insertion. Rocky Mountain bicycles are equipped with appropriately sized seatposts for the average user, for the appropriate category. Should a consumer fall out of the norm and require a different length, it is up to the end user to supply an appropriate length, and follow the above guideline.

Making a Warranty Claim

1. Provide proof the rider is the original owner by providing the original sales receipt.
2. If the frame is to be returned to Rocky Mountain, it must be stripped of all components including the bottom bracket and the headset cups.
3. Rocky Mountain Bicycles reserves the right to repair or replace valid warranty claims at its discretion.

Warranty of Components

All components, including suspension fork, rear shock, drivetrain, brakes, hubs, rims, tires, seatpost, handlebar, and stem etc., are covered by their respective manufacturer's warranty and any warranty should be dealt with through the manufacturer of the item.

*Limited warranty refers to the limitations stated in sections 4, 5, 6, 7 and 8 of the Rocky Mountain Owner's manual, also listed below. Paint and decals are covered against defects in workmanship and materials for a period of 1 year from the date of original purchase. Normal wear and tear on the paint surface is not covered. Chipping due to impact damage from rocks or others is not covered. Rocky Mountain will attempt to color match any replacement parts to the best of our abilities, depending on inventory, but is under no obligation to supply original color.

All frames are covered for external perforation and corrosion for one year from the original date of purchase, internal rust perforation on CroMoly steel frames is not covered under warranty

Rocky Mountain Bicycles warranty applies only to the original owner of the bicycle and is not transferable.

**Hardware, suspension pivots and bushings on XC dual suspension are covered for a period of 1 year

***Hardware, suspension pivots and bushings on FR/DH dual suspension are covered for a period of 6 months

WARRANTY – Element RSL and MSL Top Link Pivot Bolt Rotation

Issue

When cycling through the frame's travel, the upper top link bolt would rotate relative to front triangle during pivot rotation. This indicates that the pivot bearings are not functioning as designed. Some people have seen their sag indicator moving while riding, this is another indication that there is a problem with your top link, and it should be taken to your RMB dealer for servicing. If the bolt is not rotating, and the sag indicator is staying in place, then the top link pivot is working as intended.

2011-2012 RMB Bicycles Key Dimensions

	Seatpost Dia.	Band Clamp Dia.	BB Shell	O.L.D.	Rear Shock	Rear Shock (mm)	Shock Reducers	ISCG OLD
Sport Hardtails	27.2mm	31.8mm	73mm	135mm	N/A	N/A	N/A	NO
Vertex 10/LO	27.2mm	31.8mm	73mm	135mm	N/A	N/A	N/A	NO
Vertex Alloy	30.9mm	Direct Mount	BB92	135mm	N/A	N/A	N/A	NO
Vertex RSL29	27.2mm	34,9 High Clamp	BB92	142mm	N/A	N/A	N/A	NO
Element RSL	30.9mm	E-Type	BB92	135mm	6.5"x1.5"	165mm x 38mm	Custom	NO
Element MSL	30.9mm	E-Type	BB92	135mm	7.5"x2.0"	194mm x 50mm	Custom	NO
Element >2012	30.9mm	E-Type	BB92	135mm	7.5"x2.0"	194mm x 50mm	Custom	NO
Element 29 >2012	30.9mm	E-Type	BB92	142mm	6.0"x1.125"	152mm x 32mm	Custom	NO
Altitude Alloy	30.9mm	Direct Mount	73mm	135mm	7.875"x2.25"	200mm x 57mm	ID:8mm W:22.2mm,28mm	NO
Altitude 29	30.9mm	Direct Mount	73mm	135mm	7.875"x2.25"	200mm x 57mm	ID:8mm W:22.2mm,28mm	NO
Altitude RSL	30.9mm	Direct Mount	73mm	135mm	7.875"x2.25"	200mm x 57mm	ID:8mm W:22.2mm,28mm	NO
Slayer	30.9mm	E-Type	73mm	142mm	7.875x2.25"	200mm x 57mm	Custom	YES
Flatline WC	30.9mm	N/A	83mm	150mm	9.5"x3.0"	241mm x 76mm	22.2mm steel pin	YES
Flow	27.2mm	31.8mm Clamp	73mm	135mm	N/A	N/A	N/A	YES
Cyclocross	27.2mm	31.8mm	68mm	130mm	N/A	N/A	N/A	NO
Solo RSL	31.6mm	34.9mm	68mm	130mm	N/A	N/A	N/A	NO
Prestige	31.6mm	34.9mm	68mm	130mm	N/A	N/A	N/A	NO
Metropolis/ Metro	27.2mm	31.8mm	68mm	135mm	N/A	N/A	N/A	NO
Oxygen	31.6mm	34.9mm	68mm	130mm	N/A	N/A	N/A	NO

Edited Version; Bikeaction Fahrradhandelsges. mbH, by Marco Schröder Nov. 2011