

**2013**  
**ROCKY MOUNTAIN BICYCLES**  
**TECHNICAL MANUAL**  
**Dec 21<sup>th</sup> Revision**



## **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

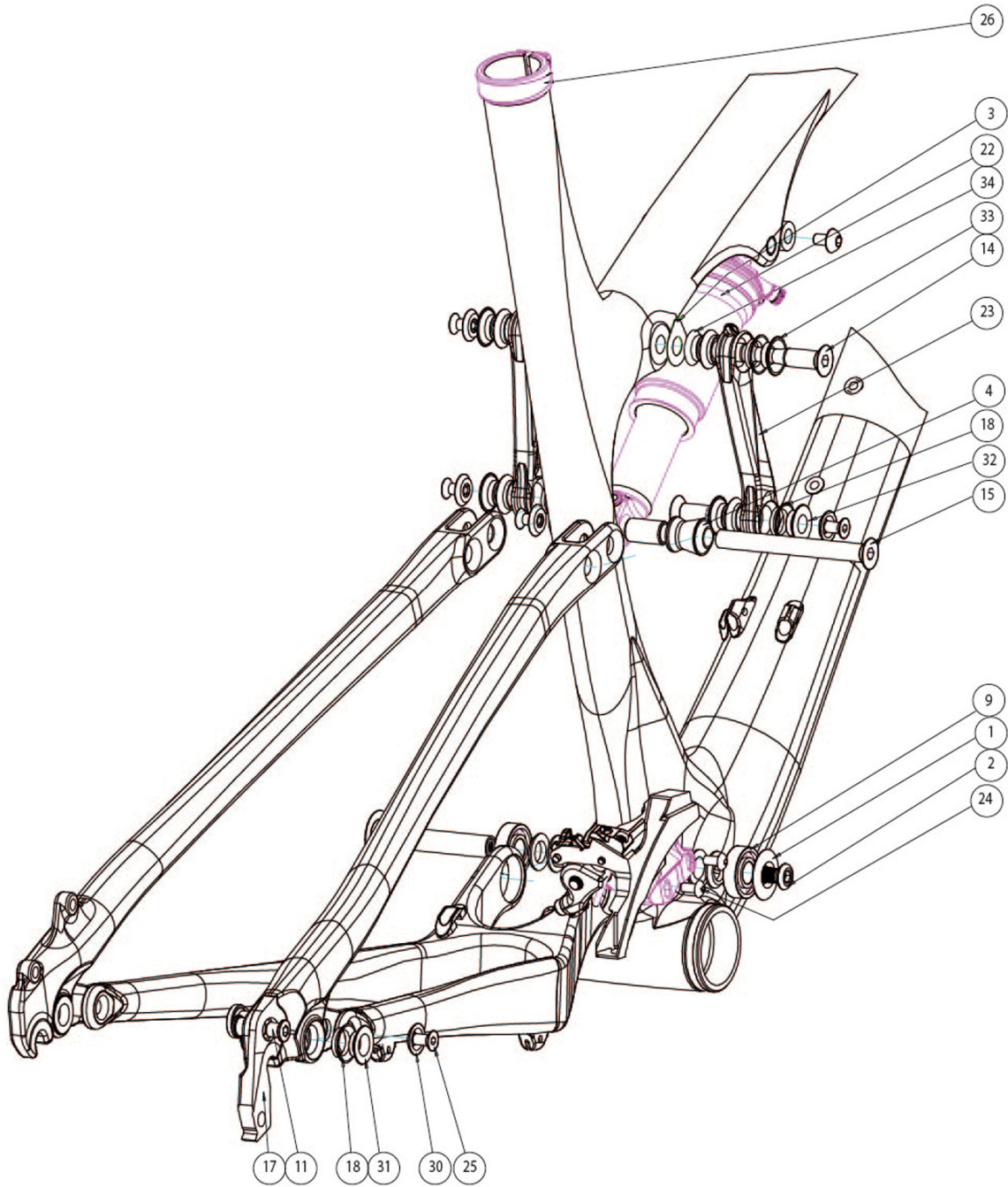
Rider Weight lbs.	Suggested Fork Air Spring Pressure Settings PSI							
	80 mm	100 mm	120 mm	140 mm	150 mm	160 mm	170 mm	180 mm
≤125	60	55	50	50	45	45	45	45
125 - 135	60	55	50	55	50	48	48	48
135 - 145	65	60	55	60	55	50	50	50
145 - 155	75	70	65	70-75	70	53	53	53
155 - 170	85	80	75	80	75	55	55	55
170 - 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 Part #	Fox 40 Coil Spring Settings		
	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

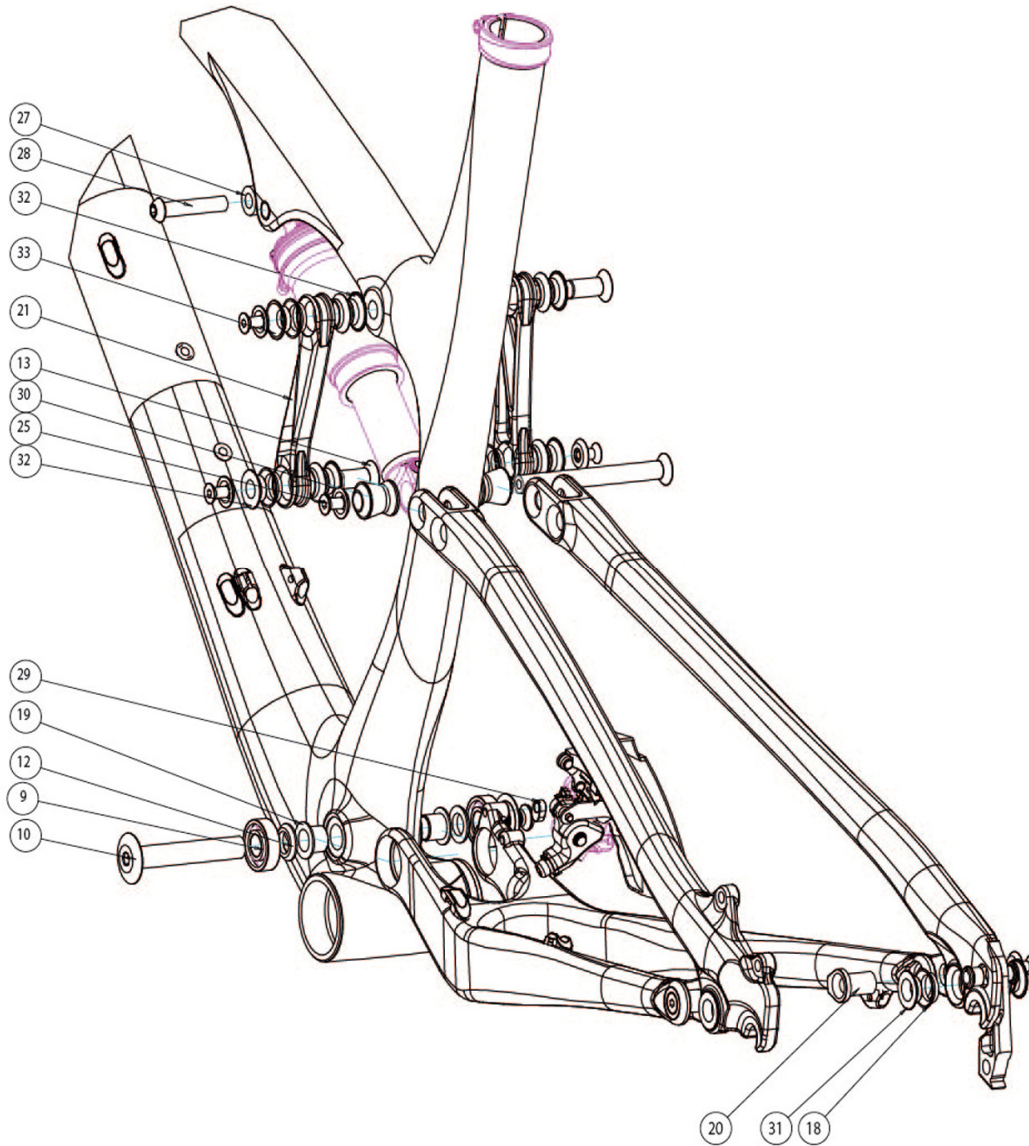
## Rock Shox Suspension

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

# 2013 Element MSL:



## 2013 Element MSL:

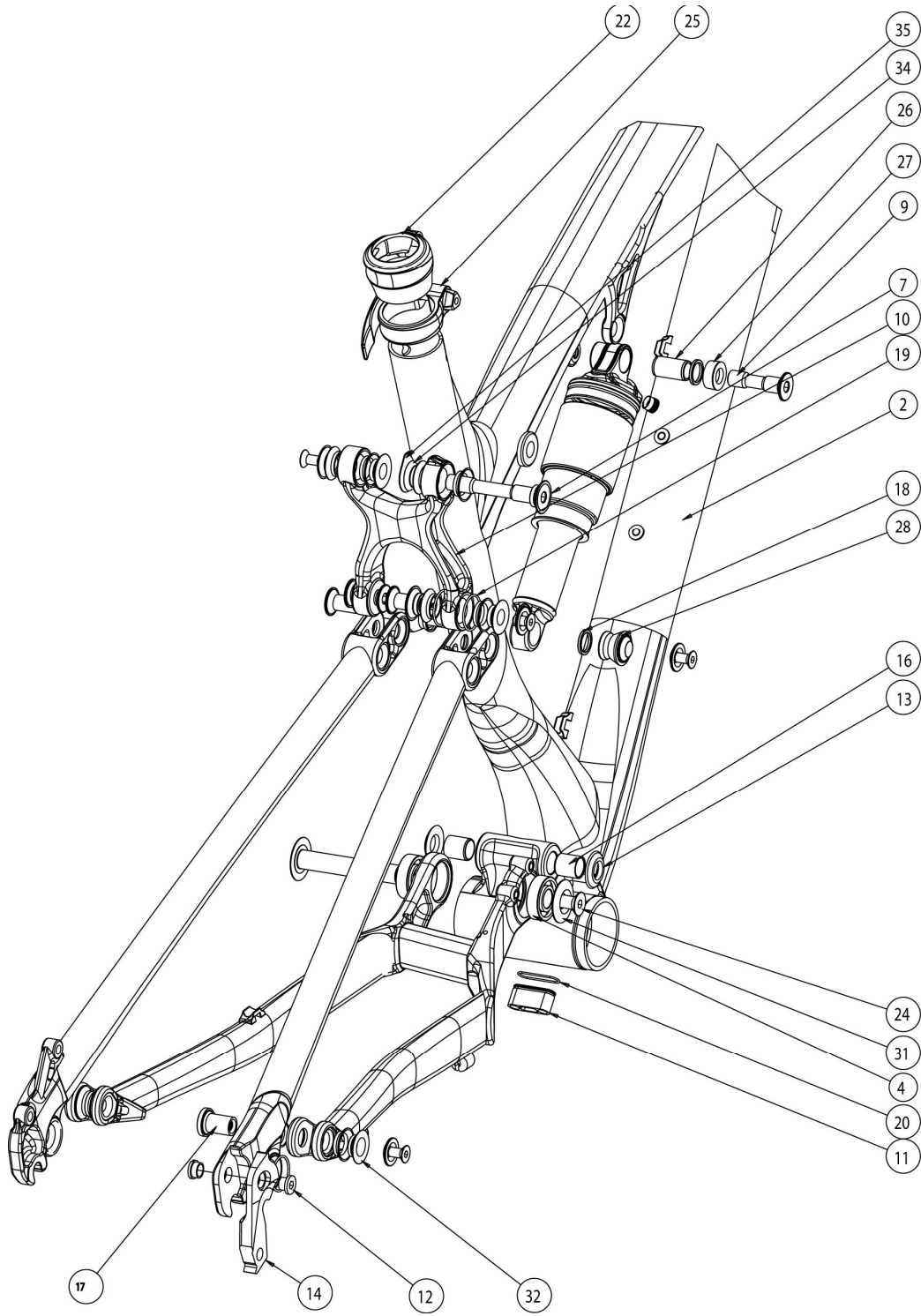




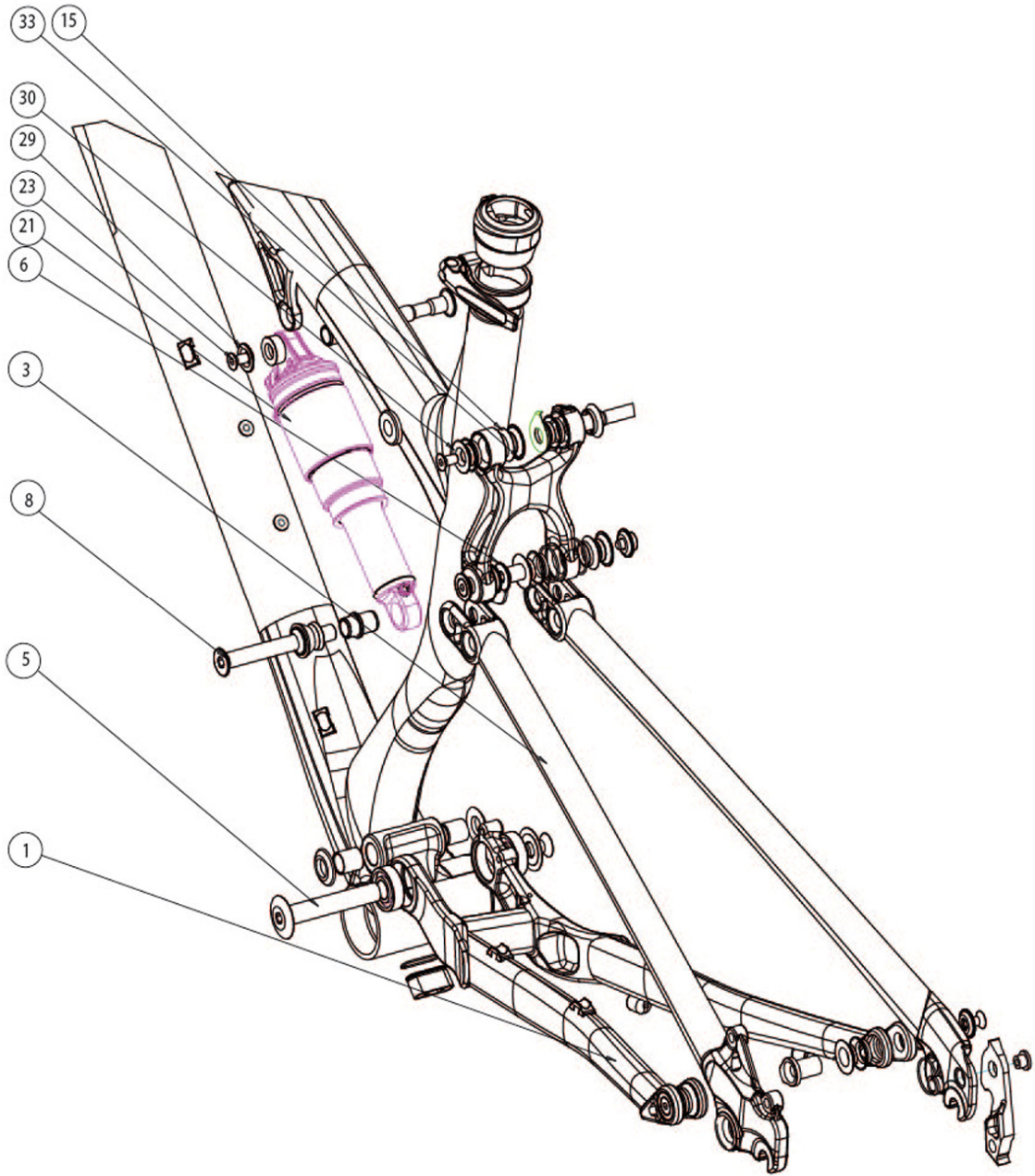
## 2013 Element MSL Small Parts:

#	QTY	PART NO.	DESCRIPTION
1	1	180499UAT	BEARING CAP - OD:28 FOR M8 SCREW,
2	1	180498UAT	C'SUNK HEAD CAP SCREW, M8X20.
3	1	180507UAT	SAG INDICATOR: STAINLESS STEEL, ANO: RED
4	2	180495UAT	2011 ELEMENT SHOCK SPACER
5	1	1058050PMG	2011 ELEMENT CARBON CHAINSTAY
9	2	181063	BEARING - 12X28X8; 6001-2RS
10	1	180466-070	FLANGE HD, THRU. BLT; INTERNAL M8X1.25 - OD:12X70mm
11	1	180237RUX	CHAINRING BOLT & NUT - M8X0.75 X 8.5mm
12	2	180437	CONICAL WASHER - ID:12mm, OD:20, 3.0mm THK.
13	2	180491UAT	C'SUNK HD, THRU BOLT. OD:10MM X 21, INT. M6 THREAD
14	1	180492UAT	C'SUNK HD, THRU BOLT. OD:12MM X 65, INT. M6 THREAD
15	1	180496UAT	C'SUNK HD, THRU BOLT. OD:10MM X 104, INT. M6 THREAD
16	1	111989	CUSTOM SHOCK INSERT, ID:10, OD:12.7, L:21.84 <b>not on drawing</b>
17	1	1098095	2009 DERAILLEUR HANGER
18	12	180444IGS	IGUS ANGULAR CONTACT BEARING, 5.15MM LEN
19	2	180334	IGUS BEARING - i-glide L280; ID:12 OD:14 L:12, 20lip
20	2	180463-021	KEY HD C'SUNK "L" BOLT - INT M6-1.0 THREAD; OD:12mm X 21mm.
21	1	181123UAT	2011 ELEMENT AL LINK, 95MM LEFT SIDE
22	1	N/A	REAR SHOCK, 7.5X2.0
23	1	181124UAT	2011 ELEMENT AL LINK, 95MM RIGHT SIDE
24	2	180429	DOME HEAD SCREW, M5X10MM
25	6	180449FBY	FLAT HD SOCKET CAP SCREW, M6-1.0 X 12mm. Gr. 8.8 steel, zinc plated
26	1	165374JDM	JD SEAT CLAMP, 34.9mm
27	1	N/A	SHOCK REDUCER, 27.94MM X 8MM
28	1	180354AIN	SLEEVE BOLT, M8 x 41 - with M6 x 14.5 Locking Cap Screw
29	1	180473	E-TYPE FD SLOT SPACER, FOR THRU BOLT
30	6	180476AST	C'SUNK WASHER for M6 screw ID:6 x OD:18 x 2.5mm THK
31	4	180490UAT	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:2.63
32	5	180493UAT	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:3.35
33	2	180494UAT	ALLOY WASHER FOR ANGULAR POLY. BRG, C'SUNK, ID:12, L:3.35
34	1	180506UAT	ALLOY WASHER FOR ANGULAR POLY. BRG, NO-FLANGE, ID:12, L:3.35

# 2013 Element Alloy 26":



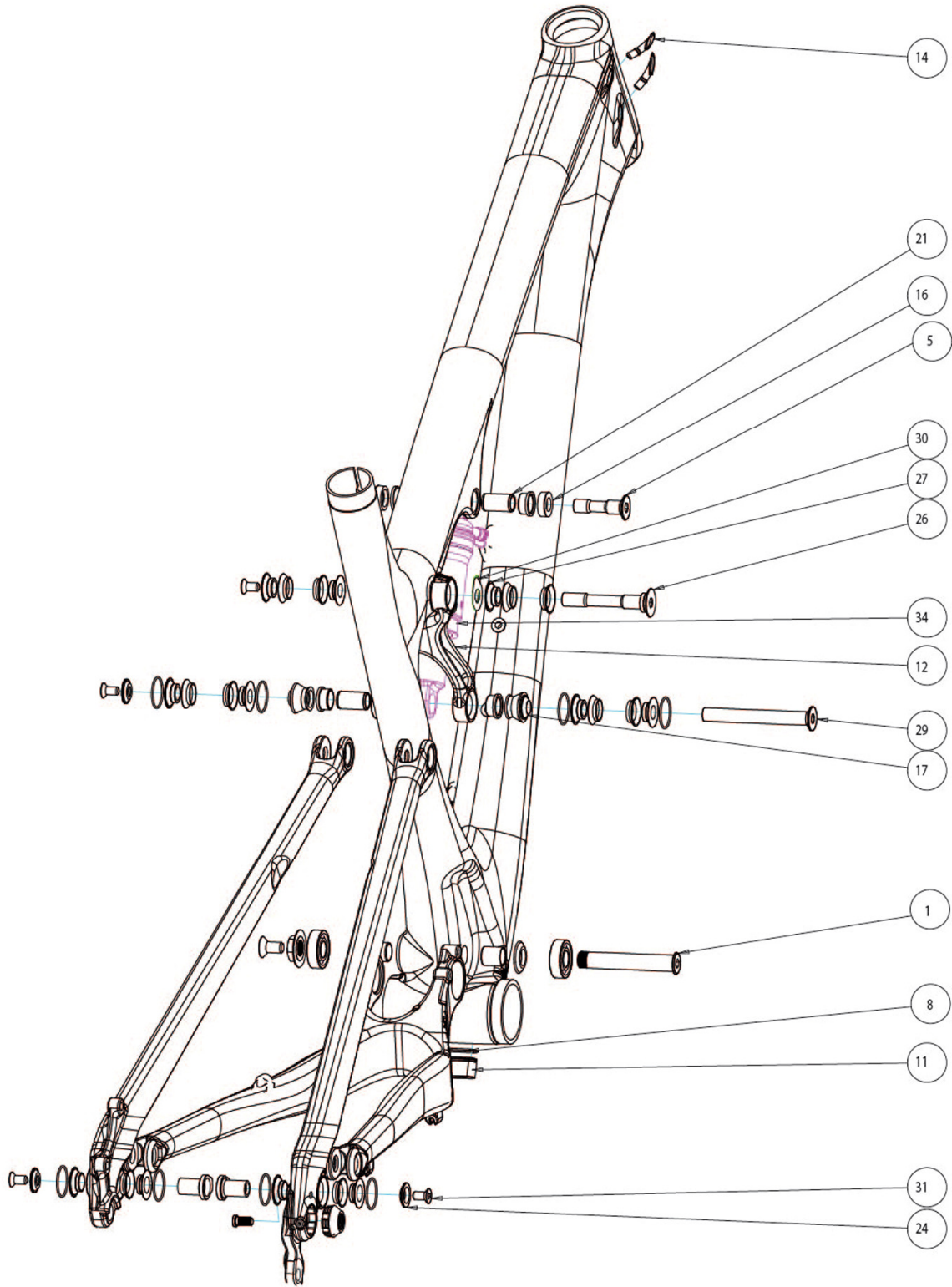
# 2013 Element Alloy 26":



## 2013 Element Alloy 26" Small Parts:

#	QTY	PART NO.	DESCRIPTION
4	2	181063	BEARING - 12X28X8; 6001-2RS
5	1	180466-070	FLANGE HD BOLT INTERNAL M8X1.25 - OD:12X70mm
6	2	18049AIAT	C'SUNK HD, THRU BOLT. OD:10MM X 21, INT. M6 THREAD
7	1	180492UAT	C'SUNK HD, THRU BOLT. OD:12MM X 68, INT. M6 THREAD
8	1	180496UAT	C'SUNK HD, THRU BOLT. OD:10MM X 85, INT. M6 THREAD
9	1	180527	ELEM WC SHOCK BOLT, OD:10MM, L: 41MM
10	1	1092180MEK	BONDED 2-PIECE ELEMENT ALLOY TOP LINK 95MM LONG
11	1	1092019MEK	INTERNAL CABLE STOP INSERT, AL7005
12	1	180510RUX	CHAINRING NUT&BOLT - M8-0.75 X 5mm BOLT
13	2	180545	CONICAL WASHER - ID:12mm, OD:24, 3.0mm THK
14	1	1098095AST	2009 DERAILLEUR HANGER
15	12	180444IGS	IGUS ANGULAR CONTACT BEARING, 5.15MM
16	2	180283IGS	IGUS BUSHING i-glide L280 SLEEVE, LSM-1214-15: ID:12, OD:14, L:15
17	2	180463-021	KEY HD C'SUNK "L" BOLT - INT M6-1.0 THREAD; OD:12mm X 21mm
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 RUBBER
21	1	N/A	FOX SHOCK, 7.5 X 2".
22	1	165383	2011 ELEMENT SEAT QR CLAMP RUBBER BOOTY
23	7	180566FBY-012	FLAT HEAD C'SUNK SOCKET SCREW, M6-1.0 X 12mm, A4/316 SS
24	1	180567FBY-016	FLAT HEAD C'SUNK SOCKET SCREW, M8-1.25 X 16mm, A4/316 SS
25	1	165382JDM	JD SEAT QR SEAT QR, 34.9mm
26	2	111989FOX	SHOCK PIN: ID:10 x 22.2mm STAINLESS STEEL
27	2	180509	SHOCK REDUCER - FOR ID:10, OD:12.7 x 22.2mm PIN
28	2	180495UAT	SHOCK REDUCER, REAR
29	6	180476	C'SUNK WASHER: ID:6 x OD:18 x 3.0mm THK
30	1	180494UAT	ALLOY WASHER FOR ANGULAR POLY. BRG, C'SUNK, ID:12, L:3.35
31	1	180499AST	BEARING CAP - OD:28 FOR M8 SCREW
32	4	180490PMG	ALLOY WASHER FOR ANGULAR POLY. BRG ID:12, L:2.65
33	5	180493UAT	ALLOY WASHER FOR ANGULAR POLY. BRG ID:12, L:3.35
34	1	180506UAT	ALLOY WASHER FOR ANGULAR POLY. BRGID:12, L:3.35
35	1	180507UAT	SAG INDICATOR STAINLESS STEEL, ANO: RED

2013 Element RSL 29”:

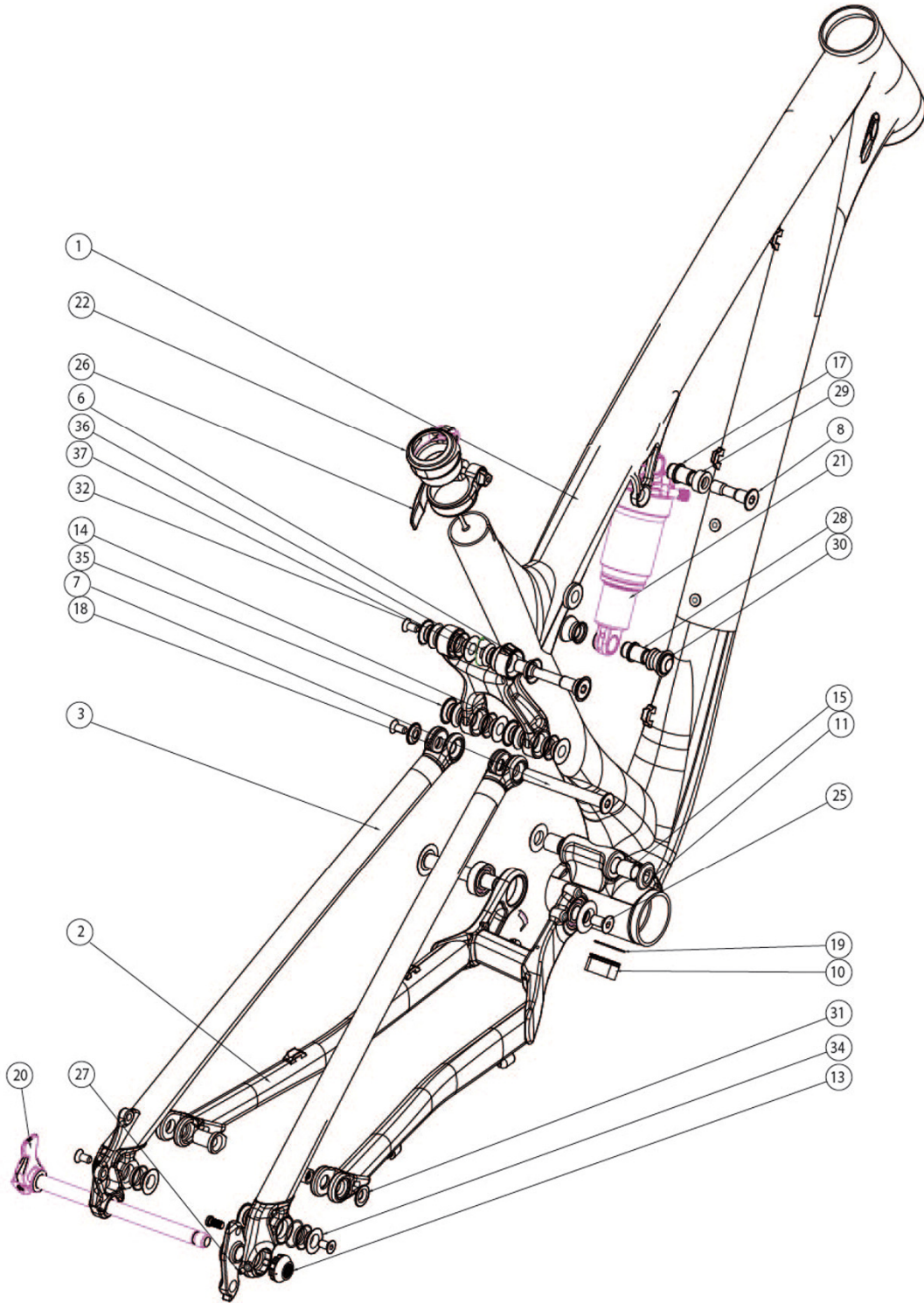




## 2013 Element RSL Small Parts:

#	QTY	PART NO.	DESCRIPTION
1	1	180350	FLANGE HD, THRU BOLT EXT M12 INT M8 X 75, LOCKING
2	1	180448	DROPOUT NUT M12-1.5, FOR SHIMANO 142mm O.L.D
3	2	180463-021	KEY HD C'SUNK "L" BOLT - INT M6-1.0 THREAD; OD:12mm X 21mm
4	1	180487-012	CUSTOM LOW FLAT HEAD SHOULDER SCREW; M6-1.0 X 12mm
5	1	180527	ELEM WC SHOCK BOLT, OD:10MM, L: 41MM
6	8	180543	O-RING, ID 20MM, W:1.25 NITRILE RUBBER
7	2	180545	CONICAL WASHER - ID:12mm, OD:24, 3.0mm THK
8	1	180572	O-RING ID:14MM, W:1.5MM, NITRILE RUBBER
9	2	181063	BEARING - 12X28X8; 6001-2RS
11	1	1092019	INTERNAL CABLE STOP INSERT
12	1	1092180	ELEMENT ALLOY TOP LINK, 95MM
13	1	1093000	INTERNAL CABLE GUIDE TT INS, RUBBER
14	2	1093001	CABLE PORT RUBBER PLUG13 CABLE PORT RUBBER PLUG <b>not on draw</b>
15	1	1803002-005	FLANGE NUT, M12X1 X7, OD: 27.5
16	2	3113000	SHOCK SPACER, FOR FOX IGUS, FRONT
17	2	3113001	SHOCK REDUCER, IGUS, REAR
21	2	111989FOX	SHOCK PIN: ID:10 x 22.2mm LONG
22	2	180283IGS	IGUS BUSHING L280 SLEEVE, LSM-1214-15: ID:12, OD:14, L:15
23	12	180444IGS	IGUS ANGULAR CONTACT BEARING, 5.15MM LEN.
24	4	180476AST	C'SUNK WASHER for M6 SCREW ID:6 x OD:18 x 3.0mm THK
25	4	180490PMG	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:2.65
26	1	180492UAT	C'SUNK HD, THRU BOLT OD:12MM X 68, INT M6 THREAD
27	6	180493UAT	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:3.35
28	1	180494UAT	ALLOY WASHER FOR ANGULAR POLY. BRG, C'SUNK, ID:12, L:3.35
29	1	180496UAT	C'SUNK HD, THRU BOLT OD:10MM X 85, INT. M6 THREAD
30	1	180507UAT	SAG INDICATOR STAINLESS STEEL
31	5	180566FBY-012	FLAT HEAD C'SUNK SOCKET SCREW, M6-1.0 X 12mm, A4/316
32	1	180567FBY-016	FLAT HEAD C'SUNK SOCKET SCREW, M8-1.25 X 16mm, A4/316
33	1	180571FBY	SET SCREW FLAT PT M4 x 0.7 x 5mm ZINC PLATED
34	1	N/A	REAR SHOCK 6.5 x 1.25

# 2013 Element Alloy 29":





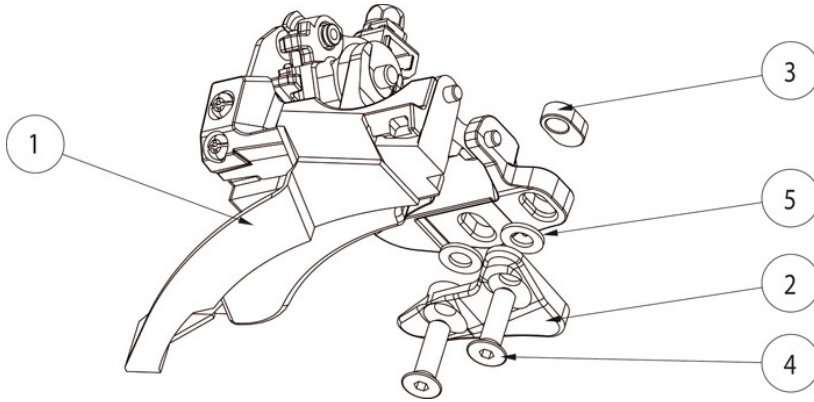


## 2013 Element Alloy 29" Small Parts:

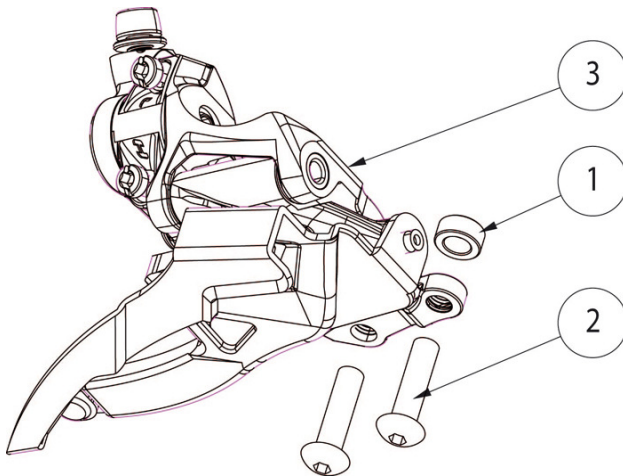
#	QTY	PART NO.	DESCRIPTION
4	2	181063	BEARING - 12X28X8; 6001-2RS
5	1	180466-070	FLANGE HD BOLT HD:28mm INTERNAL M8X1.25 - OD:12X70mm
6	1	180492UAT	C'SUNK HD, THRU BOLT. OD:12MM X 68, INT. M6 THREAD
7	1	180496UAT	C'SUNK HD, THRU BOLT. OD:10MM X 85, INT. M6 THREAD
8	1	180527	ELEM WC SHOCK BOLT, OD:10MM, L: 41MM
9	1	1092180MEK	BONDED 2-PIECE ELEMENT ALLOY TOP LINK, 95MM
10	1	1092019MEK	INTERNAL CABLE STOP INSERT, AL7005
11	2	180545	CONICAL WASHER - ID:12mm, OD:24, 3.0mm THK.
12	1	1092020	DER. HANGER FOR SHIMANO 12mm X 142mm O.L.D.
13	1	180448	DROPOUT NUT M12-1.5 FOR SHIMANO 142mm O.L.D.
14	12	10844IGS	IGUS ANGULAR CONTACT BEARING, 5.15MM
15	2	180283IGS	IGUS BUSHING L280 SLEEVE, LSM-1214-15: ID:12, OD:14, L:15
16	2	180463-021	KEY HD C'SUNK "L" BOLT - INT M6-1.0 THREAD; OD:12mm X 21mm
17	4	180522	RUBBER O-RING, FOR 12.7mm FOX SHOCK PIN
18	8	180543	O-RING, ID 20MM, W:1.25. NITRILE.
19	1	180572	O-RING ID:14MM, W:1.5MM, NITRILE RUBBER
20	1	N/A	SHIMANO 142 X 12MM QUICK RELEASE AXLE
21	1	N/A	REAR SHOCK, 6X1.25IN
22	1	165383	QR CLAMP RUBBER BOOTY. MAT: BLACK RUBBER
23	1	180487-012	CUSTOM LOW FLAT HEAD SHOULDER SCREW; M6-1.0 X 12mm
24	5	180566FBY-012	FLAT HEAD C'SUNK SOCKET SCREW, M6-1.0 X 12mm, A4/316
25	1	180567FBY-016	FLAT HEAD C'SUNK SOCKET SCREW, M8-1.25 X 16mm, A4/316
26	1	165382JDM	SEAT QR, 34.9mm
27	1	180571FBY	SET SCREW FLAT M4 x 0.7 x 5mmL. ZINC PLATED
28	2	111989FOX	SHOCK PIN: ID:10 x 22.2mm
29	2	180509	SHOCK REDUCER - FOR ID:10, OD:12.7 x 22.2mm PIN
30	2	180495UAT	SHOCK REDUCER, REAR
31	4	180476	C'SUNK WASHER for M6 SCREW ID:6 x OD:18 x 3.0mm THK
32	1	180494UAT	ALLOY WASHER FOR ANGULAR POLY. BRG, C'SUNK, ID:12, L:3.35
33	1	180499AST	BEARING CAP - OD:28 FOR M8 SCREW
34	4	180490PMG	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:2.65
35	5	180493UAT	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:3.35
36	1	180506UAT	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:3.35
37	1	180507UAT	SAG INDICATOR STAINLESS STEEL, ANO: RED

## 2013 Element Front Derailleur Small Parts:

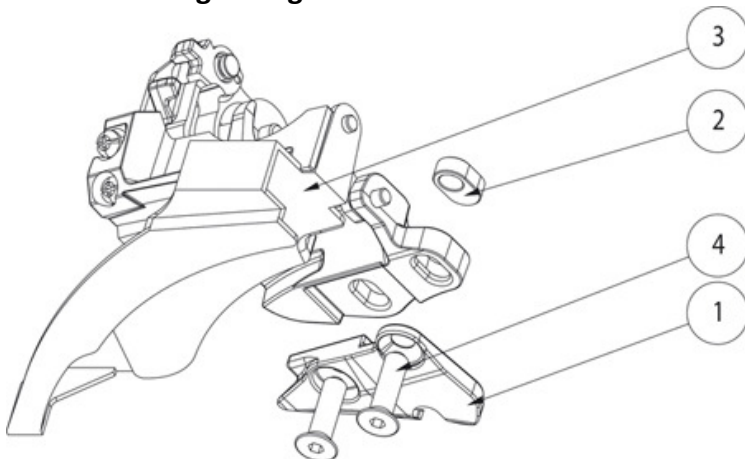
### Shimano 2 Ring Configuration:



### Sram 2 Ring Configuration:



### Shimano 3 Ring Configuration:



## 2012 Element Front Derailleur Small Parts:

### Shimano 2 Ring Configuration

#	QTY	Part No.	Description
1	1	N/A	SHIMANO E-MOUNT FD. 2 SPEED.
2	1	1091040	SHIMANO ANTI-CHAINDROP PLATE, E-MOUNT
3	1	180473	E-TYPE FD SLOT SPACER, FOR THRU BOLT
4	2	180565FBY-018	FLAT HEAD C'SUNK SOCKET SCREW, M5-0.8 X 18MM
5	2	180049FBY	STEEL WASHER

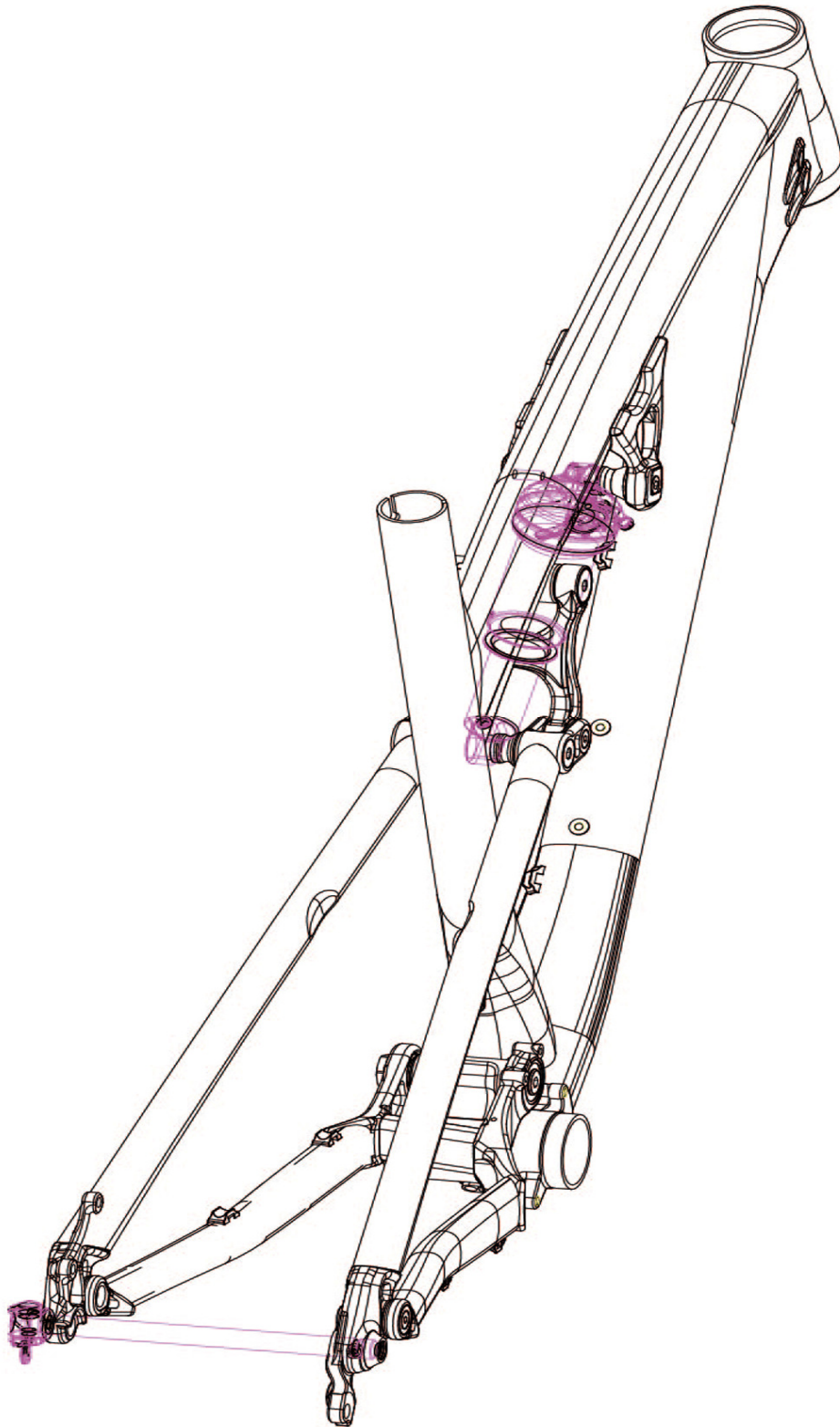
### Sram 2 Ring Configuration

1	1	180473	E-TYPE FD SPACER, FOR SRAM; AL6061-T6. OD:9; ID:5.2; T:4.
2	2	180574FBY	DOME HEAD CAP SCREW, M5X20MM
3	1	N/A	SRAM, 2-SPEED, E-TYPE FD

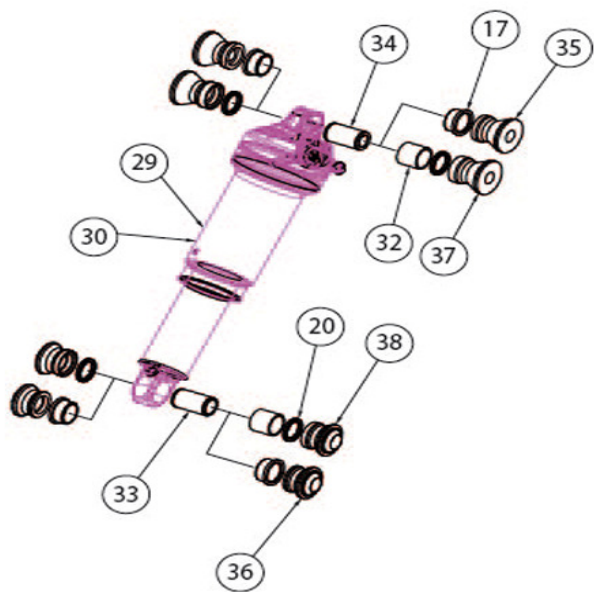
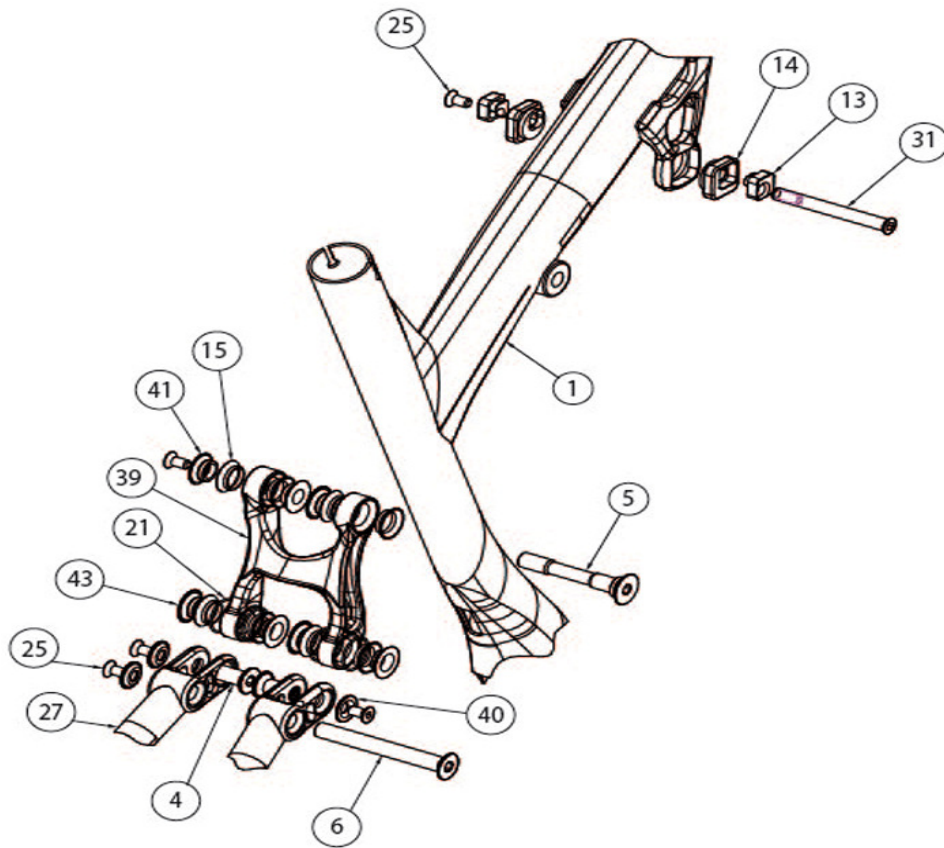
### Shimano 3 Ring Configuration

1	1	1091040	SHIMANO ANTI-CHAINDROP PLATE, 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

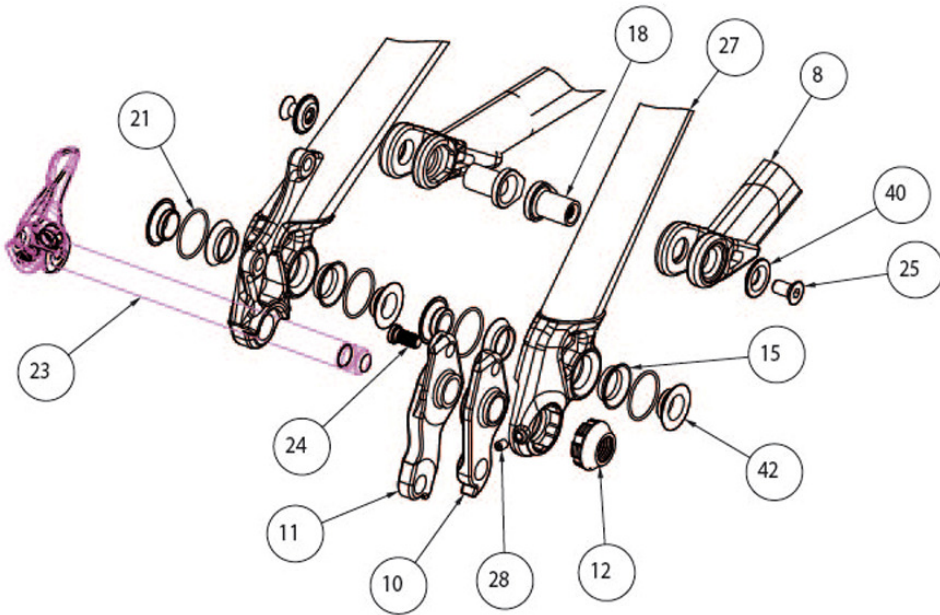
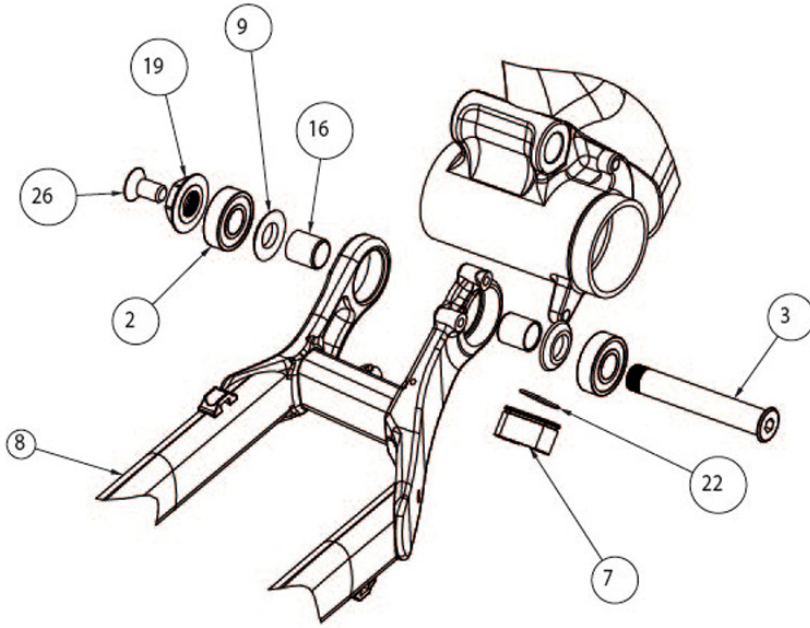
**2013 Instinct/Altitude:**



## 2013 Instinct/Altitude:



## 2013 Instinct/Altitude:

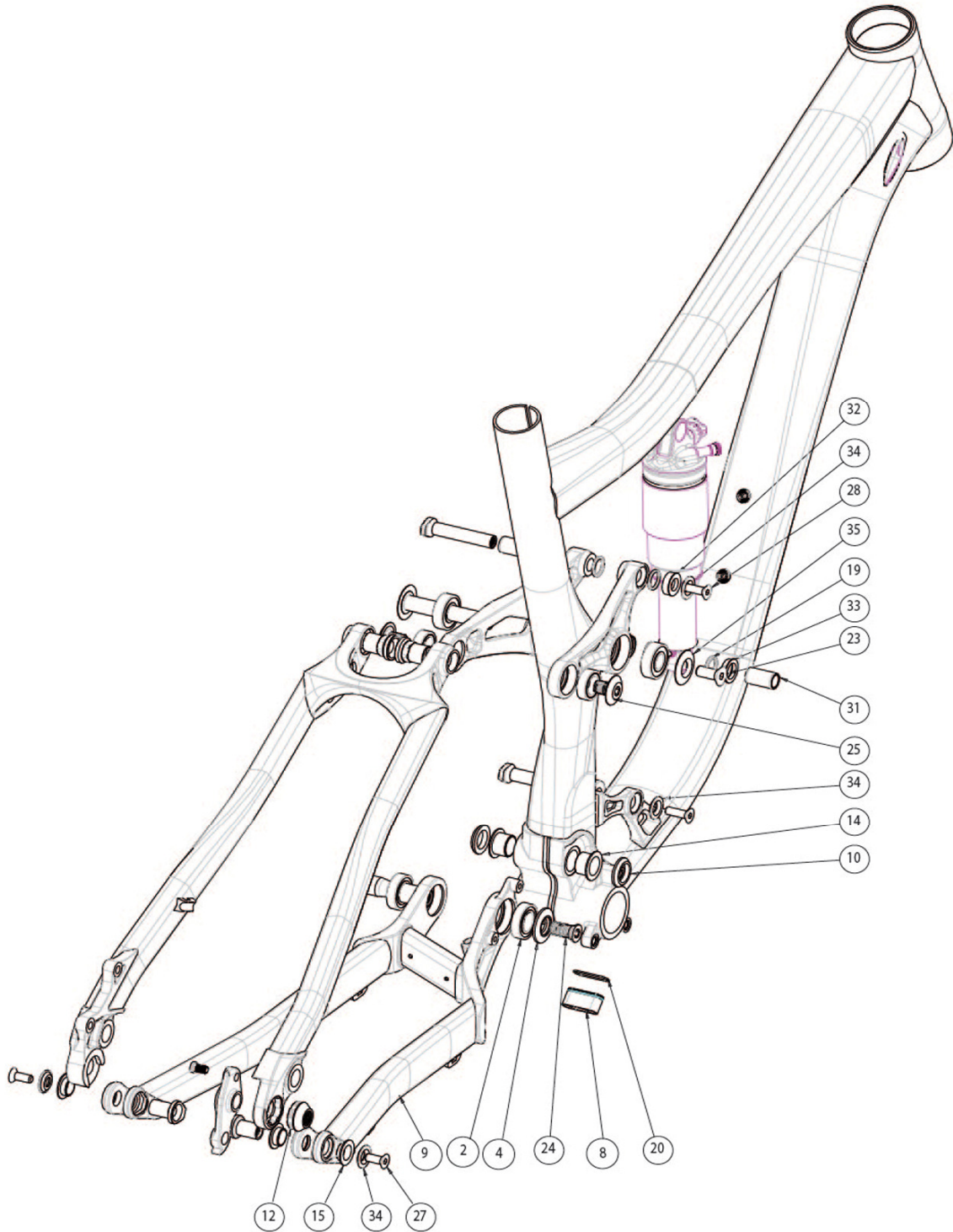


## 2013 Instinct/Altitude Small Parts:

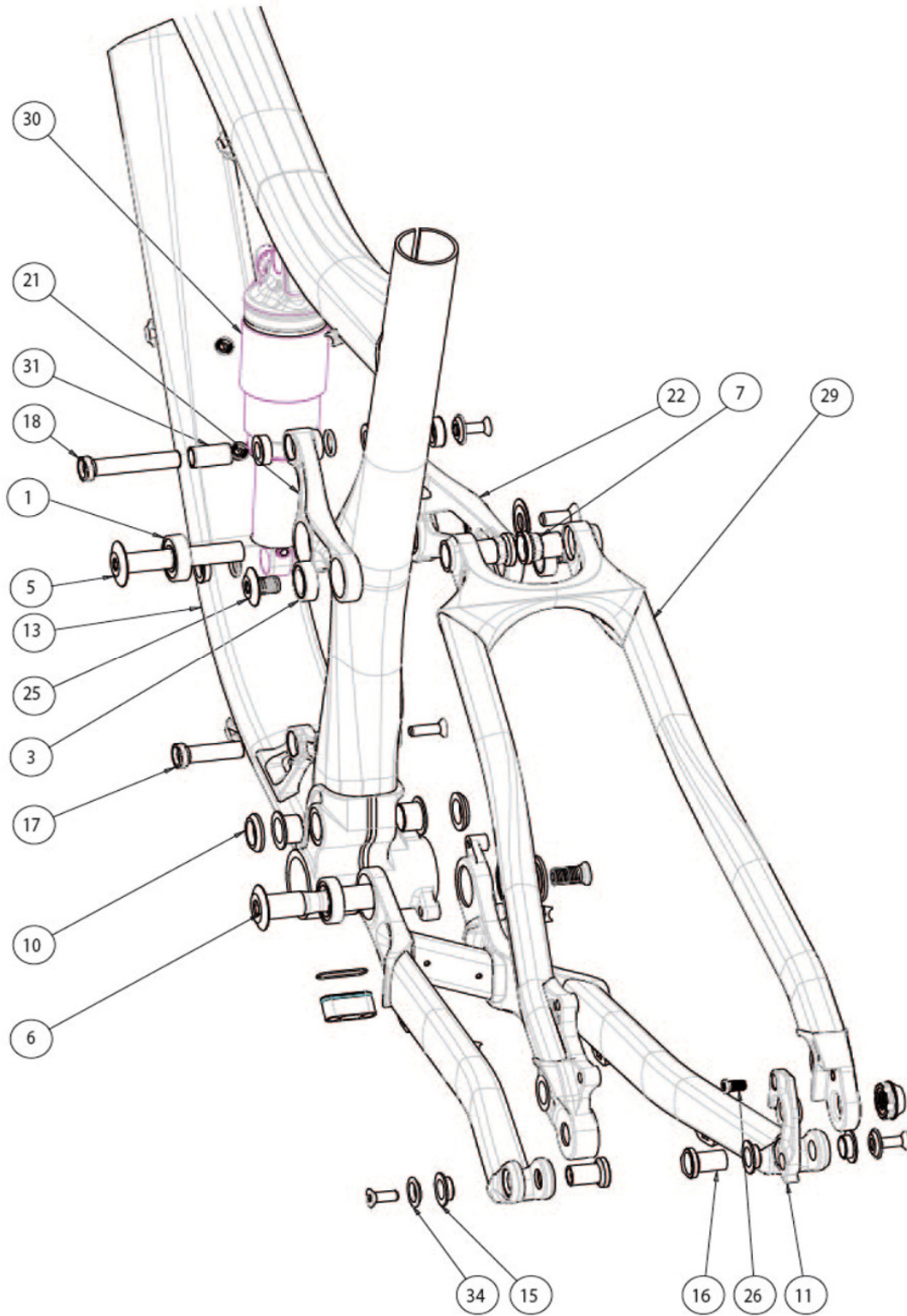
#	QTY	PART NO.	DESCRIPTION
2	2	181063	BEARING - 12X28X8; 6001-2RS
3	1	1803001-012	FLANGE HD, THRU. BLT. EXT M12. INT M8 X 75, LOCKING
4	2	180491UAT	C'SUNK HD, THRU BOLT. OD:10MM X 21, INT. M6 THREAD
5	1	180492UAT	C'SUNK HD, THRU BOLT. OD:12MM X 68, INT. M6 THREAD
6	1	180496UAT	C'SUNK HD, THRU BOLT. OD:10MM X 85, INT. M6 THREAD
7	1	1092019	INTERNAL CABLE STOP INSERT
8	1	1053130MEK	2013 ALTITUDE 650b CHAINSTAY
9	2	180545	CONICAL WASHER - ID, 12MM, OD-24, 3.0MM THK.
10	1	1092020	DER HANGER FOR SHIMANO 12mm X 142mm O.L.D.
11	1	1093002	DER. HANGER FOR SHIMANO 12mm X 142mm O.L.D. DIRECT MOUNT
12	1	180448	DROPOUT NUT M12-1.5 FOR SHIMANO 142mm O.L.D
13	2	180628	RIDE-9 CHIP INNER
14	2	180629	RIDE-9 CHIP OUTER
15	12	180444IGS	IGUS ANGULAR CONTACT BEARING, 5.15MM
16	2	180632IGS	IGUS BUSHING JVSM-1214-12: ID:12, OD:14, L:12
17	4	N/A	FOX IGUS BUSHING
18	2	180463-021	KEY HD C'SUNK "L" BOLT - INT M6-1.0 THREAD; OD:12mm X 21mm
19	1	1803002-005	FLANGE NUT, M12X1 X7, OD: 27.5
20	4	180522	RUBBER O-RING, FOR 12.7mm FOX SHOCK PIN
21	8	180543	O-RING, ID 20MM, W:1.25. NITRILE.
22	1	180572	O-RING ID:14MM, W:1.5MM, NITRILE RUBBER
23	1	N/A	SHIMANO 142 X 12MM QUICK RELEASE AXLE.
24	1	180487-012	CUSTOM LOW FLAT HEAD SHOULDER SCREW; M6-1.0 X 12mm
25	7	180566-012	FBY FLAT HEAD C'SUNK SOCKET SCREW, M6-1.0 X 12mm, A4/316
26	1	180567-016	FLAT HEAD C'SUNK SOCKET SCREW, M8-1.25 X 16mm, A4/316
27	1	1053132-3MEK	2013 ALTITUDE 650b SEAT STAYS, R&L
28	1	180571	SET SCR., FLT. PT., M4 x 0.7 x 5mmL. ZINC PLATED
29	1	N/A	REAR SHOCK, FOX, 7.875"x2.25" ALTITUDE, 7.5"x2.0" INSTINCT
30	1	N/A	REAR SHOCK, ROCK SHO, 7.875"x2.25" ALTITUDE, 7.5"x2.0" INSTINCT
31	1	180630	C'SUNK HD, THRU BOLT. OD:8 x 72, INT. M6x1.0
32	2	N/A	SHOCK BUSHING, ID:12.7mm, OD:15mm, L:12.7mm
33	1	111989	FOX SHOCK PIN: ID:10 x 22.2mm LONG
34	1	?	SHOCK PIN: ID:8 x 22.2mm LONG
35	2	180631	SHOCK REDUCER, FRONT, IGUS, ID:8mm, FOR 56mm W
36	2	3113001	SHOCK REDUCER, REAR, IGUS, ID:10mm
37	2	3113003	SHOCK REDUCER, FRONT, STD, ID:8mm, FOR 56mm W
38	2	180495UAT	SHOCK REDUCER, REAR, STD, ID:10mm
39	1	1093182	2013 ALTITUDE/INSTINCT TOP LINK, 95MM
40	5	180476AST	C'SUNK WASHER for M6 screw ID:6 x OD:18 x 3.0mm THK
41	1	180494UAT	ALLOY WASHER FOR ANGULAR POLY. BRG, C'SUNK, ID:12, L:3.35
42	4	180490PMG	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:2.65
43	6	180493UAT	ALLOY WASHER FOR ANGULAR POLY. BRG. ID:12, L:3.35



# 2013 Slayer:



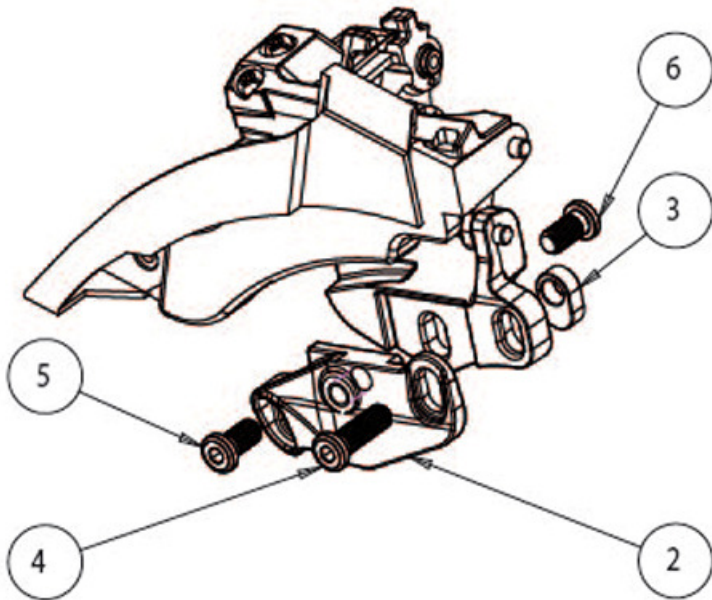
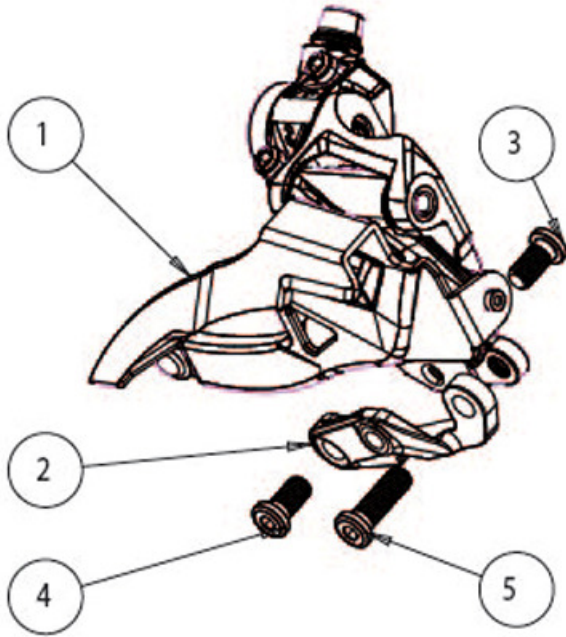
# 2013 Slayer:



## 2013 Slayer Small Parts:

#	QTY	PART NO.	DESCRIPTION
1	2	181063	BEARING - 12X28X8; 6001-2RS
2	2	181097	BEARING; Single Row, Angular contact - ID:15 OD:28X7mm
3	2	181111	BEARING; Double Row, Angular contact - ID:15 OD:24X7mm. 3802-2RS
4	1	180477	BEARING CAP - OD:28 x M10 SCREW (HD:14), FOR 15mm AXLE
5	1	180466-070	28mm FLANGE HD, THRU. BLT; INTERNAL M8X1.25 - OD:12X70mm
6	1	180467-064	FLANGE HD BOLT (HD:28mm); INTERNAL M10X1.25 - OD:15X64mm
7	2	180489-022	C'SUNK HEX BOLT - OD:15 X 22mm. INT M10X1.25 THREAD
8	1	1092019	INTERNAL CABLE STOP INSERT
10	2	180461	CONICAL WASHER - ID:15mm, OD:23, 4.0mm THK
11	1	1092020	DER HANGER FOR SHIMANO 12mm X 142mm O.L.D.
12	1	180448	DROPOUT NUT M12-1.5 FOR SHIMANO 142mm O.L.D
14	2	180307IGS	IGUS BUSHING - ID:15, OD:17 X 12mm
15	4	180335IGS	IGUS BUSHING - ID:12, OD:14 X 5.5mm
16	2	180463-021	KEY HD C'SUNK "L" BOLT - INT M6-1.0 THREAD; OD:12mm X 21mm
17	1	180464-038	KEY HD, SHK BLT - OD:10mm X 38mm; INT M6-1.0 THREAD
18	1	180464-056	KEY HD, SHK BLT - OD:10mm X 56mm; INT M6-1.0 THREAD
19	4	180522	RUBBER O-RING, FOR 12.7mm FOX SHOCK PIN
20	1	180572	O-RING ID:14MM, W:1.5MM, NITRILE RUBBER
21	1	1091015	2011 SLAYER: ROCKERPLATE (LH)
22	1	1091016	2011 SLAYER: ROCKERPLATE (RH)
23	1	180435-020	FLAT HD SOCKET CAP SCREW, M8-1.25 X 20mm
24	1	180470-020	CUSTOM FLAT HD OD:14mm, C'SUNK SCREW; EXT M10-1.25 X 20mm
25	2	180486-014	FLANGE HD SCREW HD:24mm, M10-1.25 X 14mm
26	1	180487-010	CUSTOM, LOW FLAT HEAD SHOULDER SCREW; M6-1.0 X 10mm
27	2	180191AST-016	FLAT HEAD C'SUNK SOCKET SCREW, M6-1.0 X 16mm
28	2	180191AST-020	FLAT HEAD C'SUNK SOCKET SCREW, M6-1.0 X 20mm
30	1	N/A	REAR SHOCK - 7.875" X 2.25"
31	2	111989FOX	SHOCK PIN: ID:10 x 22.2mm LONG
32	2	180509	SHOCK REDUCER - FOR ID:10, OD:12.7 x 22.2mm
33	2	180516	SHOCK REDUCER - FOR OD:12.7 x 22.2mm
34	4	180476AST	C'SUNK WASHER: for M6 screw ID:6 x OD:18 x 3.0mm THK
35	1	180499AST	BEARING CAP - OD:28 FOR M8 SCREW

## 2013 Slayer Front Derailleur:

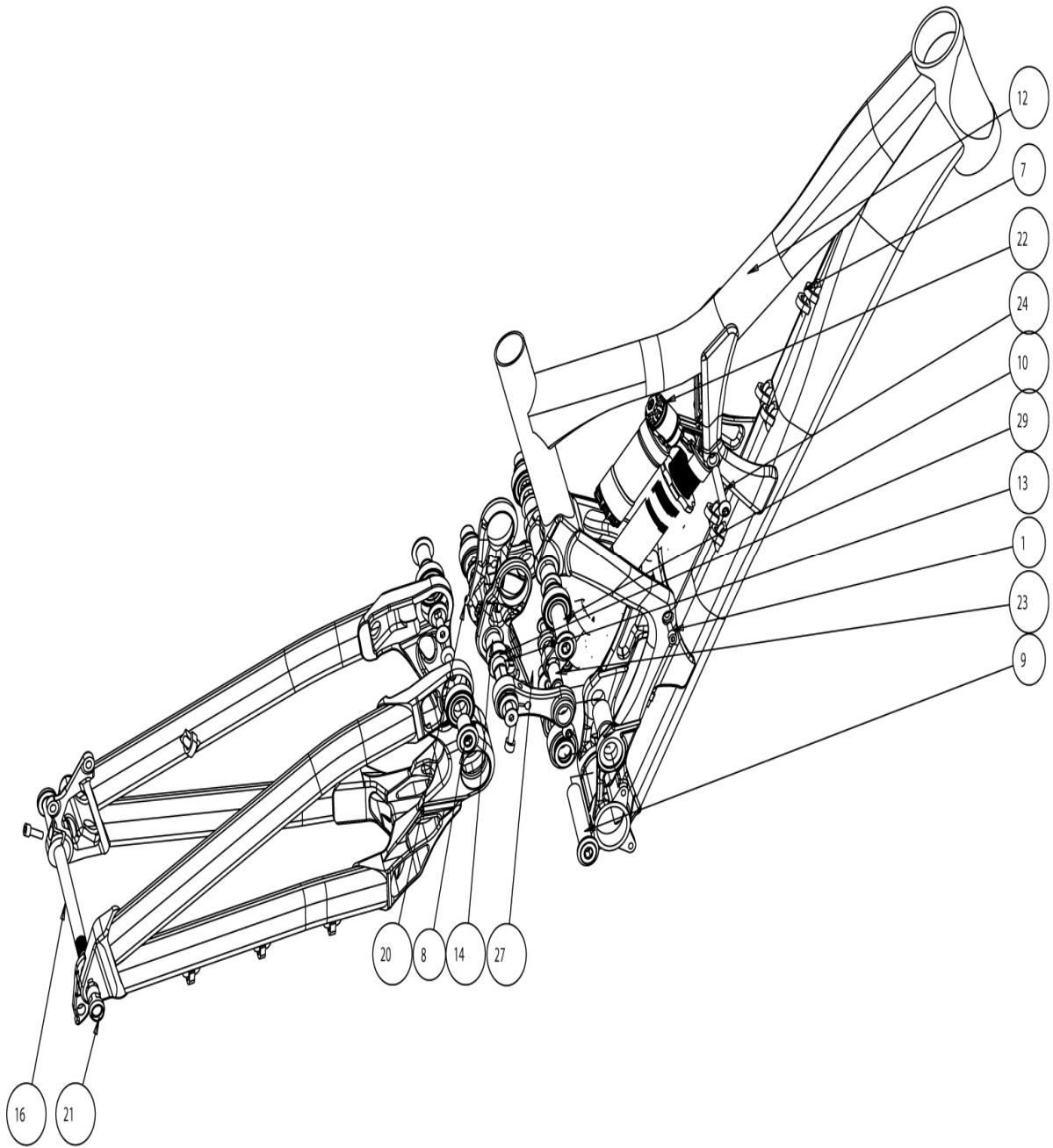


## 2013 Slayer Front Derailleur Small Parts:

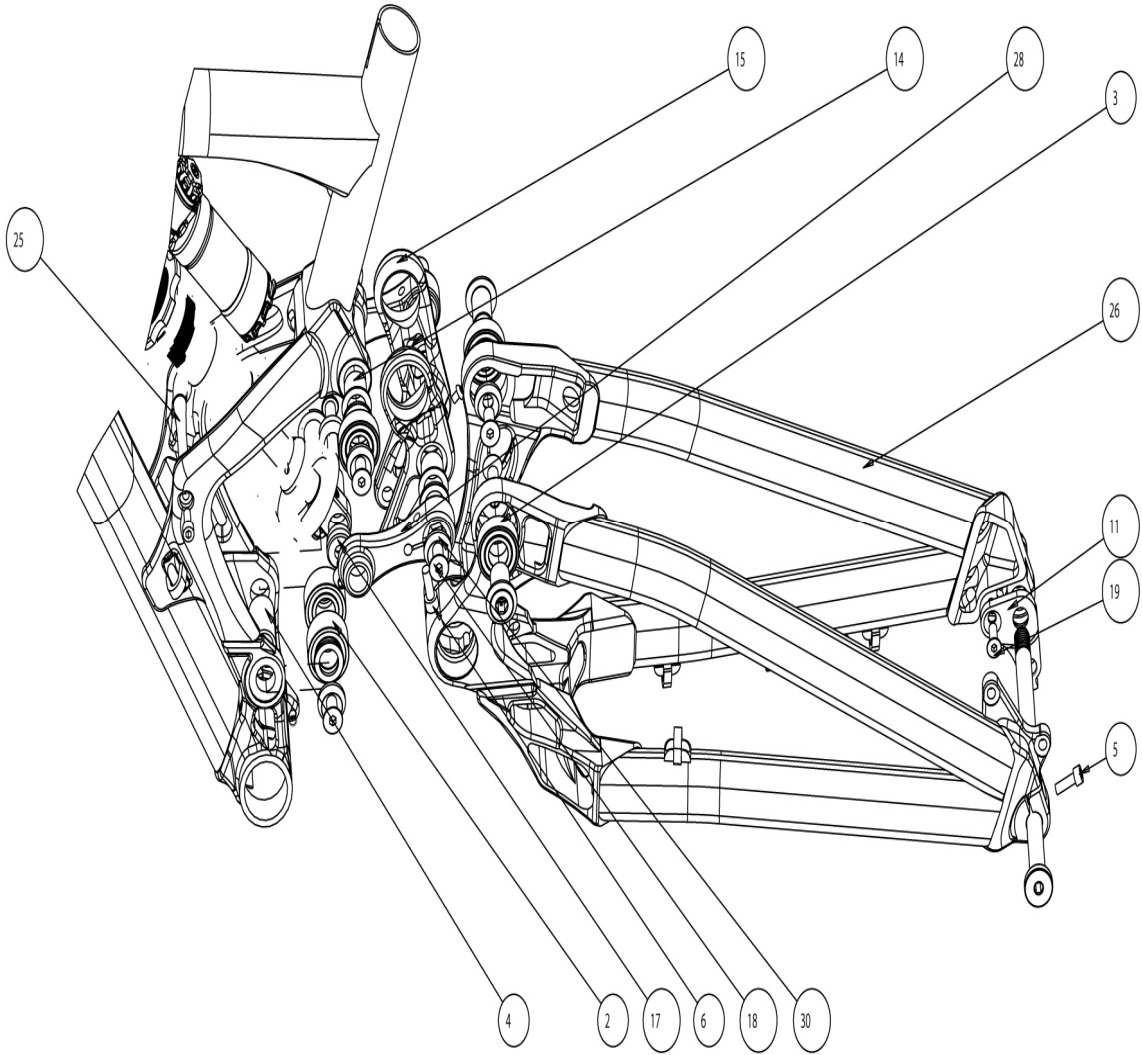
#	QTY	PART NO.	DESCRIPTION
1	1	N/A	SRAM 2X10 E-MOUNT FD. 2-SP.
2	1	1091028	SLAYER FD ADAPTER PLATE, E-TYPE // SRAM (S3)
3	1	180474-010	CUSTOM LOW FLAT HEAD, SHOULDER SCREW; M5-0.8 X 10mm
4	1	180474-010	CUSTOM LOW FLAT HEAD, SHOULDER SCREW; M5-0.8 X 10mm
5	1	180474-016	CUSTOM LOW FLAT HEAD, SHOULDER SCREW; M5-0.8 X 16mm

#	QTY	PART NO.	DESCRIPTION
1	1	N/A	SHIMANO E-TYPE FRONT DERAILLEUR, 2-SP.
2	1	1091019	E-TYPE FD ADAPTER PLATE, BOLT-ON, SHIMANO
3	1	180473AST	E-TYPE FD SLOT SPACER, FOR THRU BOLT; AL6061
4	1	180474-016	CUSTOM LOW FLAT HEAD, SHOULDER SCREW; M5-0.8 X 16mm
5	1	180474-010	CUSTOM LOW FLAT HEAD, SHOULDER SCREW; M5-0.8 X 10mm
6	1	180474-010	CUSTOM LOW FLAT HEAD, SHOULDER SCREW; M5-0.8 X 10mm

# 2013 Flatline World Cup:



# 2013 Flatline World Cup:



## 2013 Flatline World Cup Small Parts:

#	QTY	PART NO.	DESCRIPTION
1	2	180443UAT	M5 X 0.8 X10MM L ALUM. CAP SCREW
2	2	181086ABI	Ball Bearings: Main Pivot, 15-32-13, 3002-2RS
3	4	181087ABI	Ball Bearings: Top Link & Tug, 15x32x9, 6002 2RS
4	1	180387UAT	Bearing Spacer, ID: 15 x 26L
5	1	180238FBY	SOCKET HEAD CAP SCREW; M5X16
6	2	180329FBY	SOCKET HEAD CAP SCREW; M6X16
8	2	180430UAT-020	FLANGE HD, THRU. BLT. M8X1.25 INT., OD15X20
9	1	180430UAT-071	FLANGE HD, THRU. BLT. M8X1.25 INT., OD15X71
10	1	180430UAT-081	FLANGE HD, THRU. BLT. M8X1.25 INT., OD15X81
11	1	180901AST	CUSTOM FLATLINE DH HANGER
13	1	180454AST	HEXAGON AXLE, 15.05MM OD
14	4	181088IGS	IGUS BUSHING, LFM-1517-17
15	1	109073	TOP LINK, 2010 WC FLATLINE
16	1	122971MRL	2010 FLAT WC AXLE
17	4	180312	SHOCK SPACER, REAR
18	6	180435-016	FLAT HD SOCKET CAP SCREW, M8-1.25 X 16mm
19	1	180359FBY-012	FLAT HEAD C'SUNK SOCKET SCREW, M6-1.0 X 12mm
20	1	180438AST	SOCKET HEAD CAP SCREW, M4X0.7 X 6mm
21	1	180431SH	SHIMANO NUT THREADED, M12X1.75
22	1	N/A	REAR SHOCK
23	2	111990FOX	FOX STEEL SLEEVE, 8mm BOLT X 0.501 OD
24	2	180505AIN	SLEEVE BOLT, OD:8MM x 46MM - w/M6 x 14.5MM
25	1	180428	ALU. STIFFENER ROD, RED ANO
27	1	1099023AST	TUG LINK, LEFT
28	1	1099024AST	TUG LINK, RIGHT
29	6	180287	FLAT WASHER, 15mm X 2mm THK
30	6	180338	CUSTOM M8 C'SUNK WASHER FOR FLT HD CP SCREW



# Warranty

## Warranty 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:

<b>Mountain Bike:</b>	<b>Warranty Period: limited*</b>	<b>Examples:</b>
CroMoly Steel	Lifetime to Original Owner	Hammer/Blizzard
Aluminum (Hardtail)	5 years to Original Owner	Edge/Flare/Vapor/Soul/Fusion/Trailhead/Vertex/Reaper
Aluminum (Dual Susp.)	5 years to Original Owner **	Element/Altitude/Slayer SXC
Carbon (Hardtail and Dual Susp.)	5 years to Original Owner	Vertex RSL/Altitude RSL
Downhill / Freeride / DJ	3 years to Original Owner***	Flow/Slayer SS/Flatline
<b>Hybrids:</b>		
Aluminum	Lifetime to Original Owner	Whistler/Metro/Metropolis
<b>Road:</b>		
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
<b>XC Recreational</b>	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.
<b>XC Performance</b>	Vertex/ Element/ Blizzard/ Hammer	Trail riding, road riding, commuting.	No jumping. No racing. No freeriding. No trials riding. No downhill bike park riding.
<b>XC Race</b>	Element Team/ Vertex FSL	Trail riding, road riding.	No jumping. No commuting. No freeriding. No trials riding. No downhill bike park riding.
<b>XC Marathon</b>	Altitude/ Altitude FSL	Trail riding, road riding.	No jumping. No commuting. No freeriding. No trials riding. No downhill bike park riding.
<b>Super XC</b>	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.
<b>DH/ FR/ DJ</b>	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.
<b>Road</b>	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.
<b>Hybrid</b>	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

## 2013 Critical Dimensions Table 1 of 2:

Frame	Headset	Max Fork Length	Seat Post Ø	Front Derailleur / ISCG Standard	Bottom Bracket
Element 29" RSL	IS42   IS52	120mm	30.9mm	E type Low Direct Mount S3 Bottom Pull	Press Fit BB92
Element 29"	ZS44   ZS56	120mm	30.9mm	E type Low Direct Mount S3 Bottom Pull	Press Fit BB92
Element MSL	IS42   IS52	120mm	30.9mm	E type Low Direct Mount S3 Bottom Pull	Press Fit BB92
Element 26"	ZS44   ZS56	120mm	30.9mm	E type Low Direct Mount S3 Bottom Pull	Press Fit BB92
Vertex RSL	IS42   IS52	100mm	27.2mm	34.9mm Down Swing High Clamp Bottom Pull	Press Fit BB92
Vertex	ZS44   ZS56	100mm	27.2mm	31.8mm Top Swing Low Clamp Bottom Pull	Press Fit BB92
Slayer	ZS44   ZS56	170mm	30.9mm	E type Low Direct Mount S3 Bottom Pull / ISCG 03	73mm
Slayer SS	ZS44   ZS56	130mm	30.9mm	E type Low Direct Mount S3 Bottom Pull / ISCG 03	73mm
Altitude	ZS44   ZS56	150mm	30.9mm	E type Low Direct Mount S3 Bottom Pull / ISCG 05	Press Fit BB92
Instinct	ZS44   ZS56	120mm	30.9mm	E type Low Direct Mount S3 Bottom Pull / ISCG 05	Press Fit BB92
Flatline	ZS49   ZS49 or EC49 * for Fox 40	200mm	30.9mm	ISCG 03	83mm
Flow	IS42   IS42	100mm	27.2mm	N/A	68mm
Sport Hardtail 29"	ZS44   ZS44 or EC44 * for tapered	100mm	27.2mm	31.8mm Top Swing Low Clamp Top Pull	73mm
Sport Hardtail 26"	ZS44   ZS44 or EC44 * for tapered	100mm	27.2mm	31.8mm Top Swing Low Clamp Top Pull	73mm
Edge 24"	EC34   EC34	50mm	27.2mm	31.8mm Top Swing Low Clamp Top Pull	68mm
Edge 20"	EC34   EC34	50mm	27.2mm	N/A	68mm
Solo CX	ZS44   ZS44	N/A	31.6mm	34.9mm Down Swing High Clamp Bottom Pull	68mm
Solo RSL	IS42   IS52	N/A	27.2mm	Braze On Down Swing High Clamp Bottom Pull	BB30
Prestige	IS42   IS52	N/A	27.2mm	Braze On Down Swing High Clamp Bottom Pull	BB30
Oxygen	ZS44   ZS44	N/A	31.6mm	34.9mm Down Swing High Clamp Bottom Pull	68mm
Sherpa	EC34   EC34	N/A	27.2mm	29.8mm Down Swing High Clamp Bottom Pull	68mm
Metropolis	EC34   EC34	N/A	31.6mm	34.9mm Top Swing Low Clamp Top Pull	68mm
RC	ZS44   ZS44	N/A	31.6mm	34.9mm Top Swing Low Clamp Bottom Pull	68mm
Whistler	ZS44   ZS44	80mm	27.2mm	31.8mm Top Swing Low Clamp Bottom Pull	68mm
Metro	ZS44   ZS44	N/A	27.2mm	31.8mm Top Swing Low Clamp Bottom Pull	68mm

## 2013 Critical Dimensions Table 2 of 2:

Frame	Rear OLD	Shock Length	Shock Hardware	Disc Brake Standard	Max Tire Size **	Chainline
Element 29" RSL	142mm	6" x 1.25"	22.2 x M10 Both Ends	6" IS	29" x 2.25	50mm
Element 29"	142mm	6" x 1.25"	22.2 x M10 Both Ends	6" IS	29" x 2.25	50mm
Element MSL	135mm	7.5" x 2"	22.2 x M10 Both Ends	6" IS	26" x 2.35	50mm
Element 26"	135mm	7.5" x 2"	22.2 x M10 Both Ends	6" IS	26" x 2.35	50mm
Vertex RSL	142mm	N/A	N/A	6" IS	29" x 2.25	50mm
Vertex	135mm	N/A	N/A	6" IS	29" x 2.25	50mm
Slayer	142mm	7.875" x 2.25"	22.2 x M10 Both Ends	6" IS	26" x 2.5	50mm
Slayer SS	142mm	7.5" x 2"	22.2 x M10 Both Ends	6" IS	26" x 2.5	50mm
Altitude	142mm	7.875" x 2.25"	22.2 x M10 Shaft / 22.2 x M8 Air Can	6" IS	27.5" x 2.4	50mm
Instinct	142mm	7.5" x 2"	22.2 x M10 Shaft / 22.2 x M8 Air Can	6" IS	29" x 2.35	50mm
Flatline	150mm	9.5" x 3"	21.84 x M8 Both Ends	6" IS	26" x 2.5	57.9mm
Flow	135mm	N/A	N/A	6" IS	26" x 2.35	50mm
Sport Hardtail 29"	135mm	N/A	N/A	6" IS	29" x 2.25	50mm
Sport Hardtail 26"	135mm	N/A	N/A	6" IS	26" x 2.25	50mm
Edge 24"	135mm	N/A	N/A	6" IS	24" x 2.1	47.5mm
Edge 20"	135mm	N/A	N/A	6" IS	20" x 2.1	44mm
Solo CX	135mm	N/A	N/A	6" IS	700 x 35c	43.5mm
Solo RSL	130mm	N/A	N/A	N/A	700 x 28c * w/o fenders	43.5mm
Prestige	130mm	N/A	N/A	N/A	700 x 28c * w/o fenders	43.5mm
Oxygen	130mm	N/A	N/A	N/A	700 x 28c * w/o fenders	43.5mm
Sherpa	130mm	N/A	N/A	N/A	700 x 35c * w/o fenders	45mm
Metropolis	135mm	N/A	N/A	6" IS	700 x 38c * w/o fenders	50mm
RC	135mm	N/A	N/A	N/A	700 x 32c * w/o fenders	50mm
Whistler	135mm	N/A	N/A	6" IS	700 x 44c * w/o fenders	50mm
Metro	135mm	N/A	N/A	N/A	700 x 38c * w/o fenders	50mm

\*\*Please note: This is ONLY A GUIDELINE. ACTUAL tire widths vary greatly for the same size. ie a 2.35" Maxxis is MUCH smaller than a 2.35" Schwalbe. Also, ACTUAL tire size can vary with construction. Entry level tires can balloon up more. Tire clearance will also vary depending on FD spec (2x10, 3x10, Shimano, SRAM...). Consumers should personally check clearance at FD and chainstay to avoid damage.

