

**2010
ROCKY MOUNTAIN BICYCLES
TECHNICAL MANUAL**



July 24, 2009

TABLE OF CONTENTS

Introduction	3
Our Mission	3
Section I: General Installation Instructions for all Platforms	
1. 12mm Thru Bolt Assembly Instructions	4
2. Bearing Installation for all RMB Suspension Linkage and Frames	4
3. IGUS Bushings Explained	5
4. Seatpost Insertion Explained	5
5. Hardware & Torque Specification	6
6. Suspension Setup	6
Section II: Detailed Information on Each Platform	
1. Element	7
2. Altitude Alloy	9
3. Altitude RSL	12
4. Altitude 29	15
5. Flatline FR	18
6. Flatline WC	20
7. Slayer SS	23
8. Slayer SXC	26
Section III: Key Dimensions	28
Section IV: Warranty	30

INTRODUCTION

No two riders are alike. That's why at Rocky Mountain our bikes are hand 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 factory in Vancouver, BC, Canada, and you'll see this adherence to quality for yourself.

SECTION I: GENERAL INSTALLATION INSTRUCTIONS FOR ALL PLATFORMS

1. 2010 12mm (External-threaded) Thru Bolt Assembly Instructions.

Please be advised that all M10 internally threaded hardware found on 2007/2008 models has been replaced for 2010 with M8 internally threaded hardware.

The following assembly instructions are for frames that use custom 12MM O.D. thru-bolt hardware, both internally

Bolt lengths can found on the exploded view diagrams included with the Tech Manual. Torque specs are stated in Section 4 of this Tech Manual.

2010 Frames that use this custom hardware are:

**Element
Altitude
Altitude 29
Flatline FR
Flatline WC
Slayer SS
Slayer SXC.**

12mm Thru-Bolt Hardware Explained:

2009 -Each pivot requires: *One 12mm sleeve w/6mm flange head bolt, two conical washers; narrow side-bearing/wider side-frame or linkage.*

Conical Washers Explained:

There are TWO thicknesses of black conical washers: 4mm and 2.5mm. The dimensions are 4mm thick x 20mm (OD) x 12mm (ID) and 2.5mm thick x 18mm (OD) x 12mm (ID). Refer to the exploded view diagrams for each frame for a detailed description of where they can be found.

Lubrication:

Grease is required where the bolt contacts metal such as a bearing or the frame. On the Model Year 2007 frames we have installed IGUS bushings where the bolt contacts frame and no grease is required at this contact point but is required where it contacts the bearing. Grease is also used to torque the MY2007 bolts and screws.

2. 2010 BEARING INSTALLATION FOR ALL RMB SUSPENSION LINKAGE AND FRAMES

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. 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. For 2007 they will be used in an all-new capacity to assist the rotation of our custom 12mm thru-bolt hardware in the two 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.

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, the old "screwdriver and hammer trick" works best. Slip the bushing with the round starter edge towards the frame over the blade of a larger screwdriver, insert the screwdriver with the bushing against the base of the handle 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.

SEAT POST 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 & 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.**

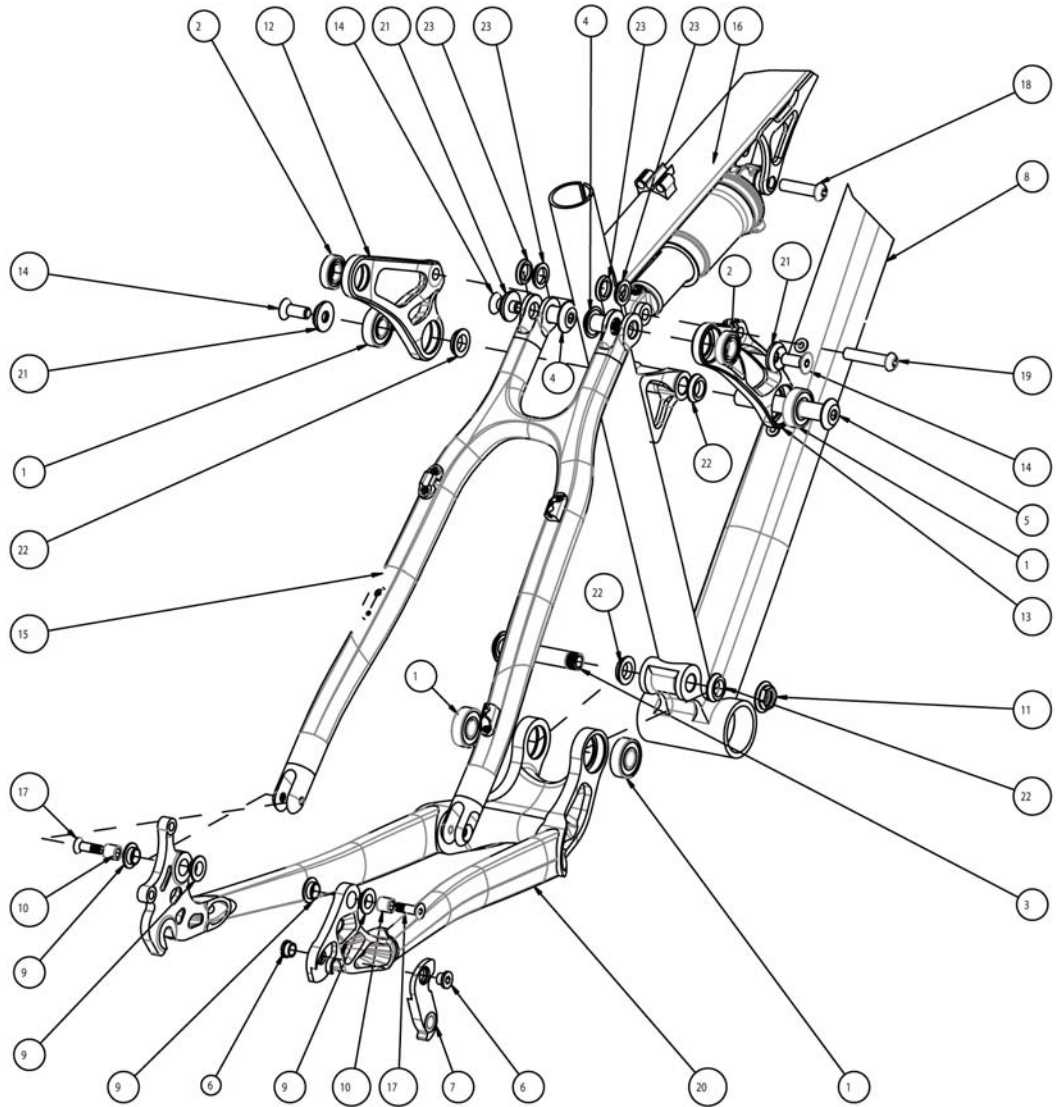
REAR SUSPENSION SETUP

To maximize suspension performance, the sag (the amount the shock compresses under rider weight) must be set correctly. We recommend the following sag percentages:

<u>Platform</u>	<u>Sag %</u>
Altitude	15-25%
Element	15-20%
Slayer SXC	25%
Slayer SS	25%
Flatline	25-30%

Please refer to your rear shock owner's manual for shock tuning information.

2010 ELEMENT EXPLODED VIEW:

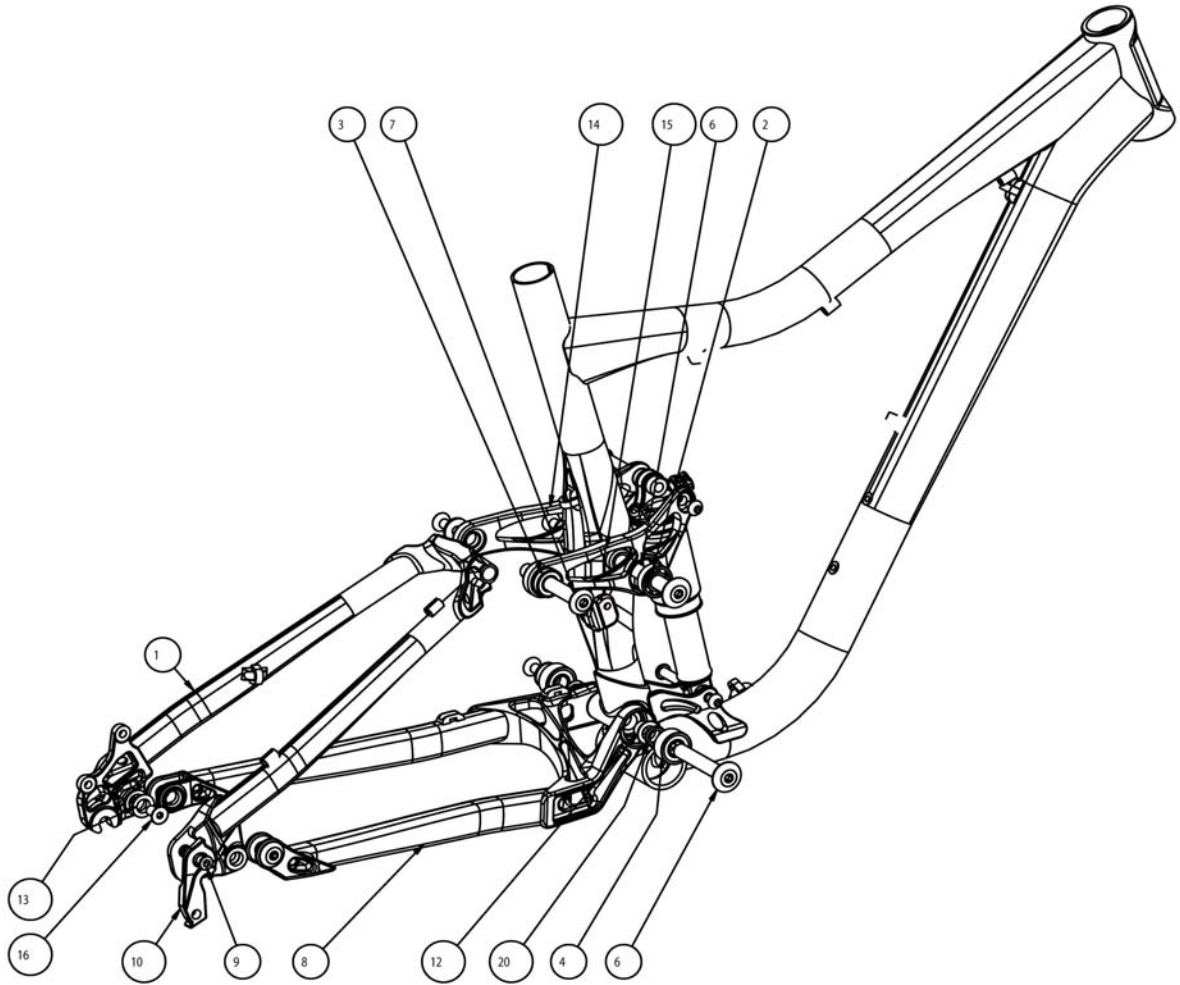


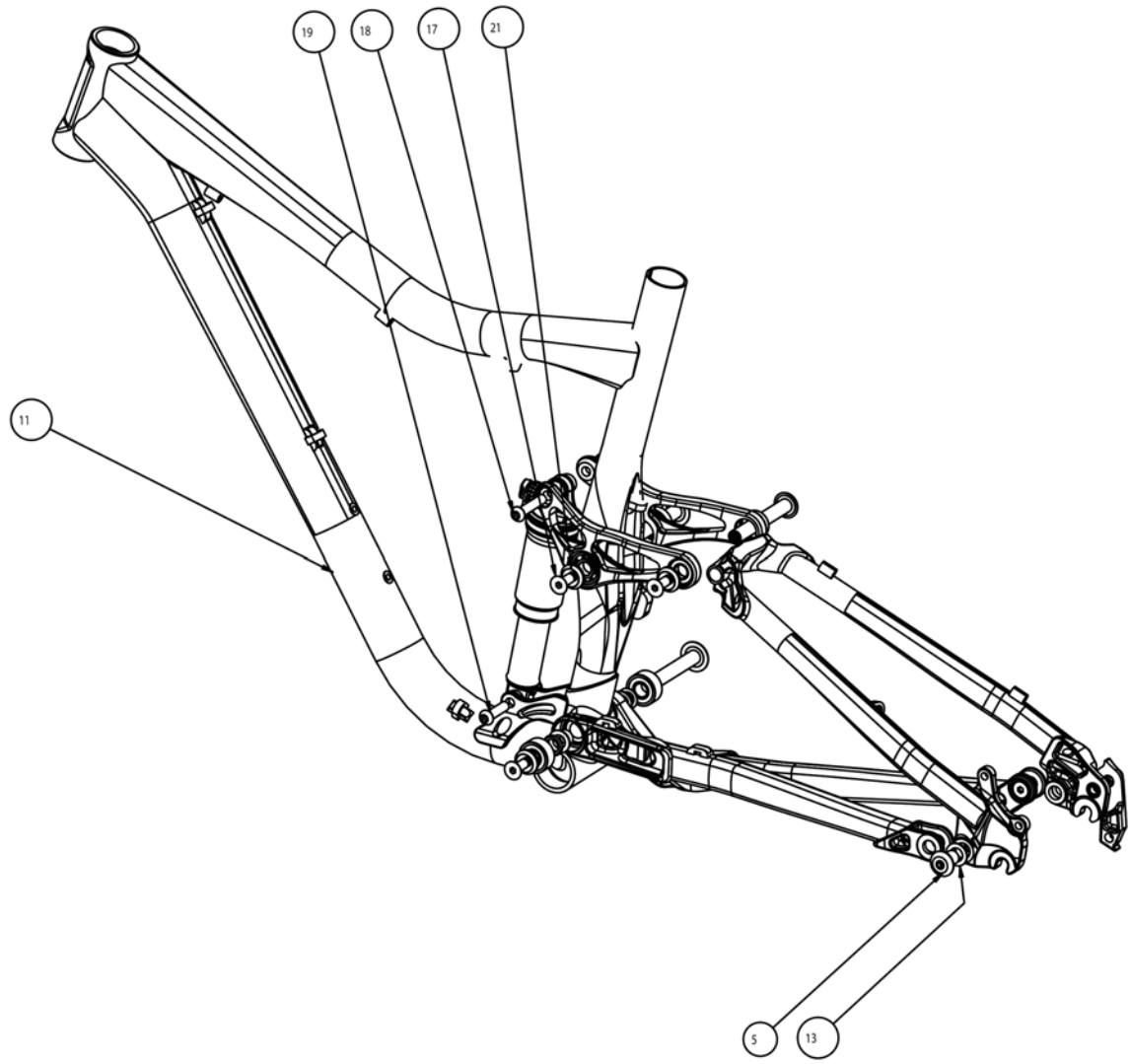
2010 ELEMENT SMALL PARTS:

#	QTY	PART NO.	DESCRIPTION
1	4	181063	BEARING - ID:12mm OD:28mm L:8mm (6001-2RS)
2	2	181064	BEARING - ID:12MM OD:24MM L:6MM (61901-2RS)
3	1	180350-065	BOLT - OD:12 THRU BOLT, EXTERNAL M12x1.0 X 65mm
4	2	180400-017	BOLT - OD:12 X 17MM THRU BOLT, INTERNAL M8
5	1	180400-077	BOLT - OD:12 X 77 MM THRU BOLT, INTERNAL M8
6	1	180510	CHAINRING NUT AND BOLT - M8X0.75 L:5MM, w/.4MM LONG NUT
7	1	109834	06/07/08/09 DERAILEUR HANGER
8	1		FRONT TRIANGLE
9	4	180281	IGUS FLANGE BUSHING, ID:10 X OD:12 X 5mm
10	2	180026	INNER RING FOR IGUS PIVOT
11	1	180370-006	FLANGE NUT, M12x1.0 THREAD X 6mm THK
12	1	181103	ELEMENT ROCKERPLATE, LEFT, SMALL - FOR SIZES 13.5, 15.0, 16.5
12	1	181105	ELEMENT ROCKERPLATE, LEFT, LARGE - FOR SIZES 18.5, 19.0, 20.5
13	1	181104	ELEMENT ROCKERPLATE, RIGHT, SMALL - FOR SIZES 13.5, 15.0, 16.5
13	1	181106	ELEMENT ROCKERPLATE, RIGHT, LARGE - FOR SIZES 18.5, 19.0, 20.5
14	3	180435-020	FLAT HEAD CAP SCREW M8X1.25X20MM
15	1	105045	SEAT STAY ASSEMBLY FOR SIZES 13.5, 15.0, 16.5
15	1	105046	SEAT STAY ASSEMBLY FOR SIZES 18.0, 19.5
15	1	105047	SEAT STAY ASSEMBLY FOR SIZE 20.5
17	2	180271	SHOULDER SCREW - M6x1.0 X 20MM LENGTH
18	1	180502	SLEEVE BOLT, OD:8MM L:31MM - w/ M6X14.5 LOCKING CAP SCREW
19	1	180514	SLEEVE BOLT; OD:8MM L:37MM - w/ M6X14.5 LOCKING CAP SCREW
20	1	1058500	SWINGARM ASSEMBLY
21	3	180338	C'SUNK WASHER, M8 - OD:21.5 X 5mm THK
22	4	180204	CONICAL WASHER - ID:12mm X 4mm THK
23	4	180205	CONICAL WASHER - ID:12mm X 2.5mm THK



2010 ALTITUDE ALLOY EXPLODED VIEWS:

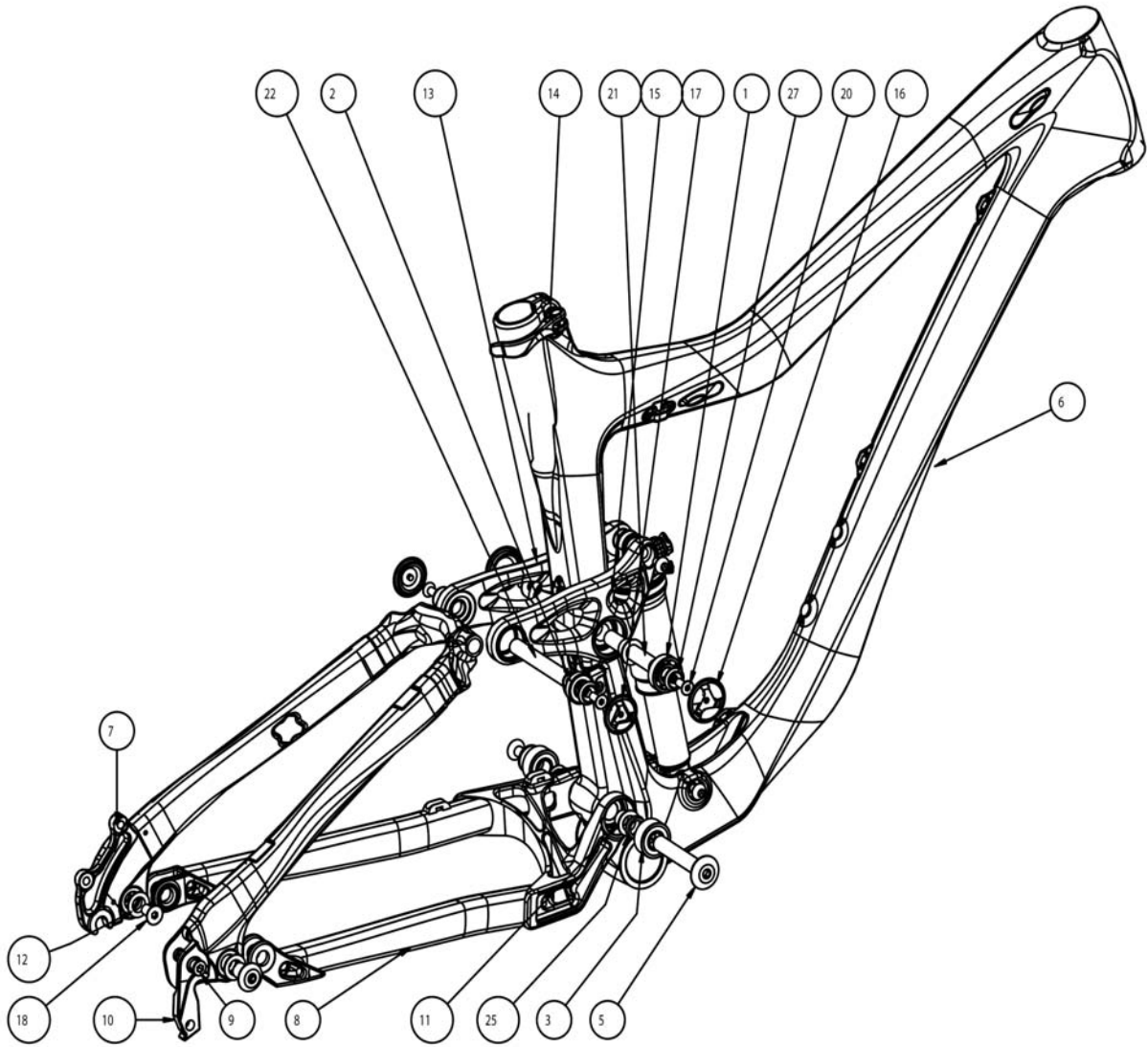


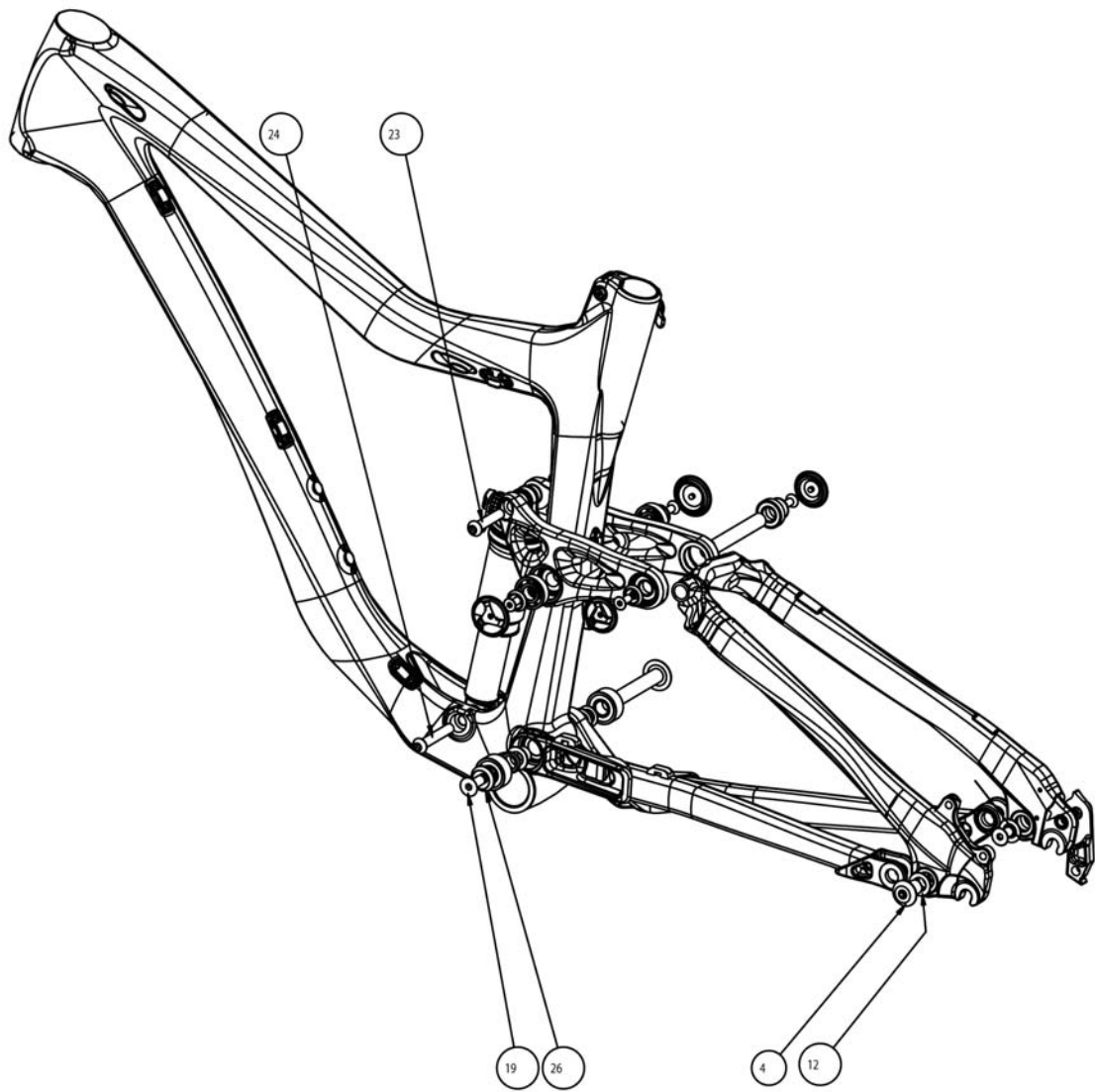


2010 ALTITUDE ALLOY SMALL PARTS

#	QTY	PART NO.	DESCRIPTION
1	1	1058020	ALTITUDE ALLOY SEATSTAY
2	2	181063	BEARING - ID:12MM OD:28MML:8MM (6001-2RS)
3	2	181064	BEARING - ID:12MM OD:24MM L:6MM (61901-2RS)
4	2	181081	BEARING - ID:12MM OD:28MM L:12MM (3001-2RS)
5	2	180400-018	BOLT - OD:12 X 18MM THRU BOLT, INTERNAL M8
6	2	180400-074	BOLT - OD:12 X 74.5MM THRU BOLT, INTERNAL M8
7	1	180400-088	BOLT - OD:12 X 88MM THRU BOLT, INTERNAL M8
8	1	1058019	ALTITUDE ALLOY CHAINSTAY
9	1	180237	CHAINRING BOLT - M8x0.75x8.5
10	1	1098095	DERAILLEUR HANGER
11	1		ALTITUDE ALLOY FRONT TRIANGLE
12	2	180334	IGUS SLEEVE BUSHING , ID:12 OD:14 L:12
13	4	180335	IGUS FLANGE BUSHING ID:12MM OD:14MM L: 5.5MM
14	1	181093	TOP LINKAGE (LH) ALTITUDE
15	1	181094	TOP LINKAGE (RH) ALTITUDE
16	2	180435-016	FLAT HEAD SOCKET SCREW, M8X1.25 L:16MM
17	3	180435-020	FLAT HEAD SCREW M8x1.25 L:20MM
18	1	180354	BOLT - OD:8MM L:41MM w/ M6 x 14.5MM LOCKING CAP SCREW
19	1	180502	BOLT - OD: 8MM L:31MM w/ M6 x 14.5MM LOCKING CAP SCREW
20	2	180205	CONICAL WASHER - ID:12MM X 2.5MM THK
21	3	180338	FLAT HEAD CAP SCREW M8 WASHER

2010 ALTITUDE RSL EXPLODED VIEWS:

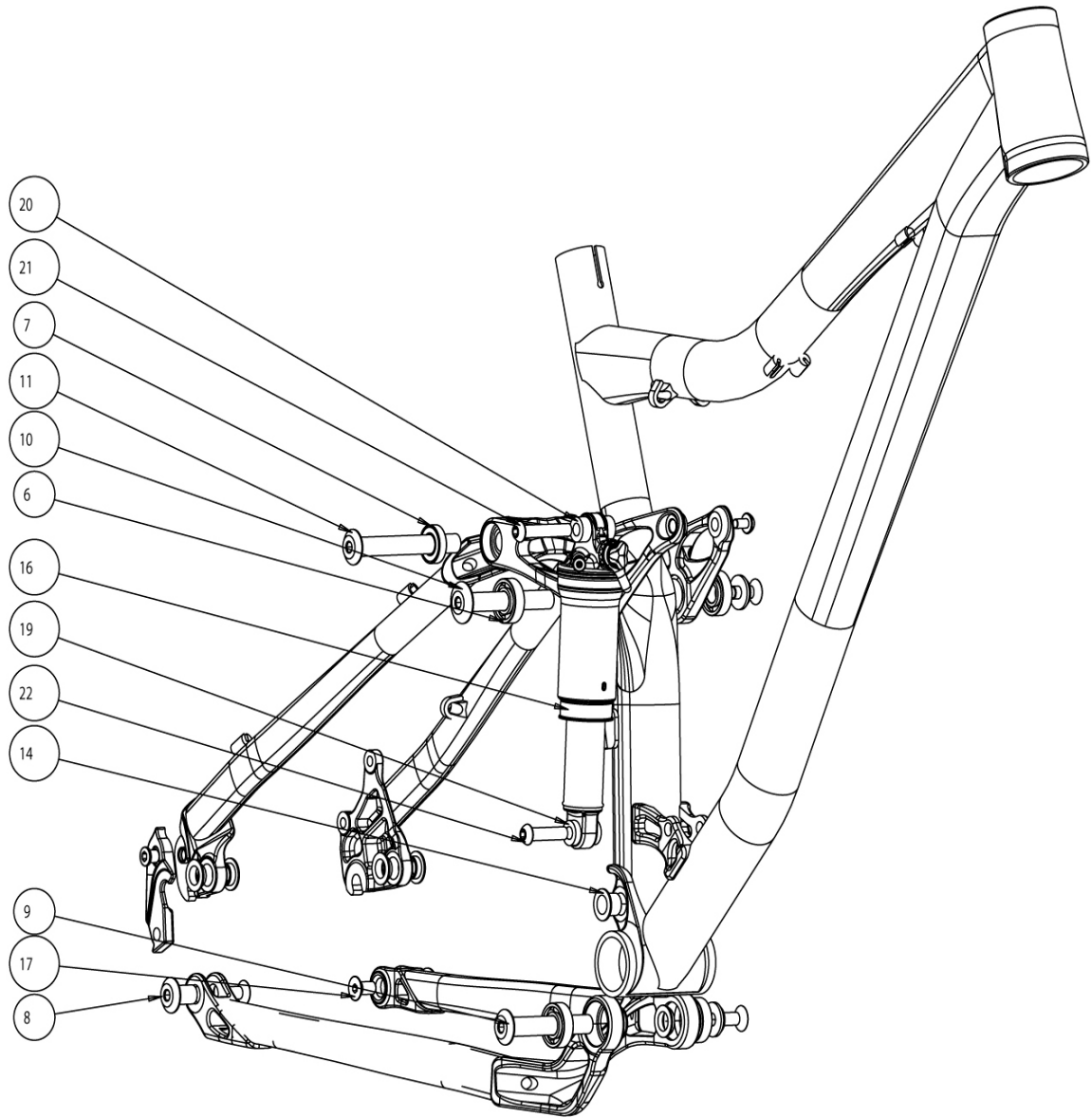


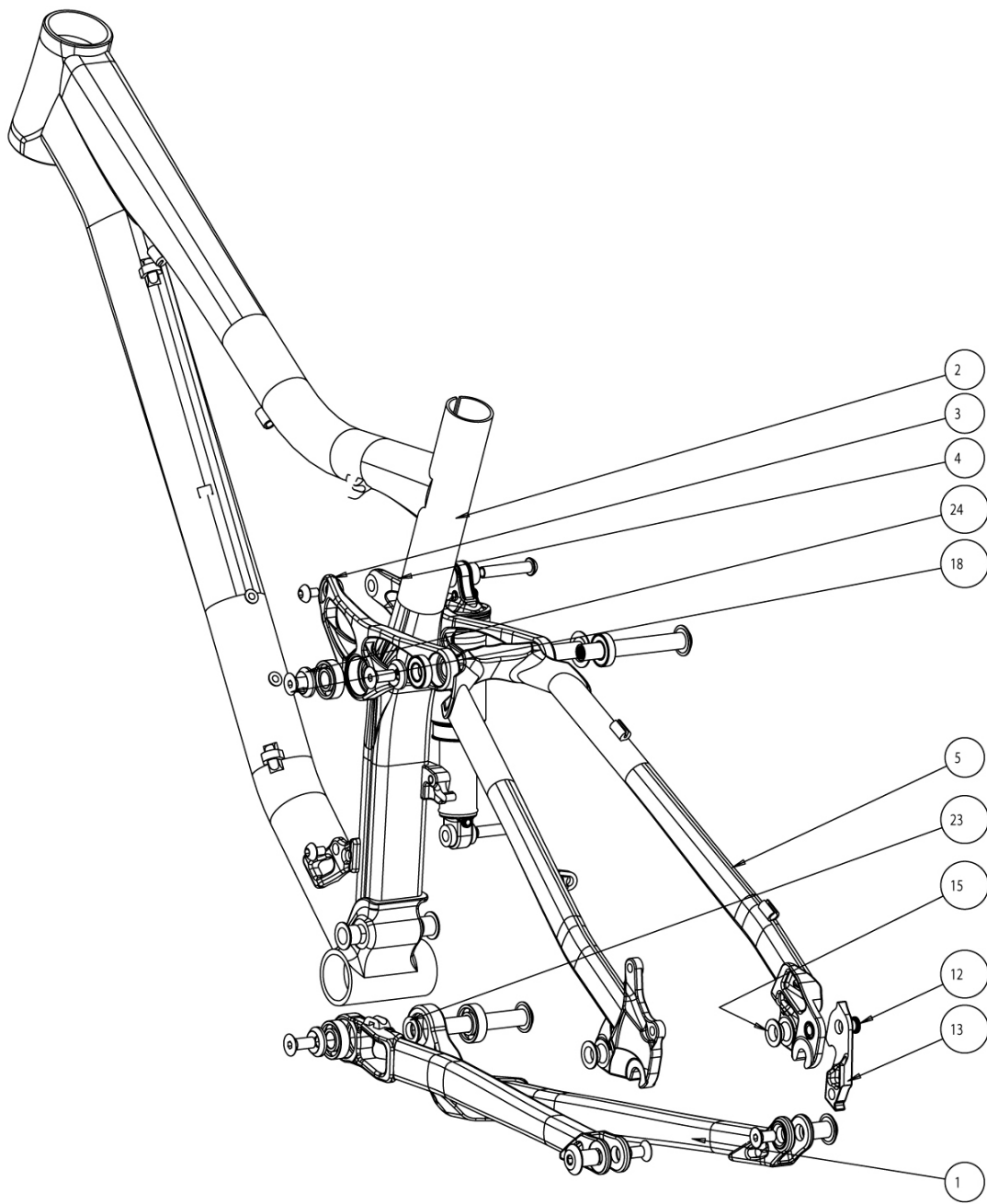


2010 ALTITUDE RSL SMALL PARTS

#	QTY	PART NO.	DESCRIPTION
1	2	181081	BEARING - ID:12MM OD:28MM L:12MM (3001-2RS)
2	2	181064	BEARING - ID:12MM OD:24MM L:6MM W (61901-2RS)
3	2	181063	BEARING - ID:12MM OD:28MM L:8MM (6001-2RS)
4	2	180400-018	BOLT - OD:12 X 18 mm THRU BOLT, INTERNAL M8
5	1	180400-074	BOLT - OD:12 X 74.5 mm THRU BOLT, INTERNAL M8
6	1		CARBON FRONT TRIANGLE
7	1	105000	CARBON SEATSTAY W/ ALLOY YOKE
8	1	1058019	ALLOY CHAINSTAY
9	1	180237	CHAINRING BOLT - M8x0.75x8.5
10	1	1098095	DERAILLEUR HANGER
11	4	180334	IGUS INSERT, LFM-1214-12 ID:12MM OD:14MM: L:12MM
12	4	180335	IGUS FLANGE BUSHING ID:12MM OD:14MM L: 5.5MM
13	1	181095	CARBON TOP LINKAGE - LEFT
14	1	165335	QUICK RELEASE FOR CARBON FIBER FRAME
15	1	181096	CARBON TOP LINKAGE - RIGHT
16	2	180482	CARBON LINKAGE RUBBER PLUG, LARGE
17	2	180483	CARBON LINKAGE RUBBER PLUG, SMALL
18	1	180435-020	FLAT HEAD SOCKET CAP SCREW M8x1.25x16MM
19	2	180336	FLAT HEAD CAP SCREW M8 X 16MM
20	4	180359	HEX SOCKET COUNTERSUNK SCREW M6 X 16 MM
21	1	180480-075	SHAFT BOLT 12MM OD X 75L X M6
22	1	180480-089	SHAFT BOLT 12MM OD X 89L X M6
23	1	180354	SLEEVE BOLT, M8 x 41 - with M6x14.5 LOCKING CAP SCREW
24	1	180355	SLEEVE BOLT M8 x 49 - with M6x14.5 LOCKING CAP SCREW
24	1	180338	C'SUNK WASHER, M8 - OD:21.5 X 5MM THK
25	4	180481	CUSTOM M6 COUNTERSUNK WASHER

2010 ALTITUDE 29 EXPLODED VIEWS:

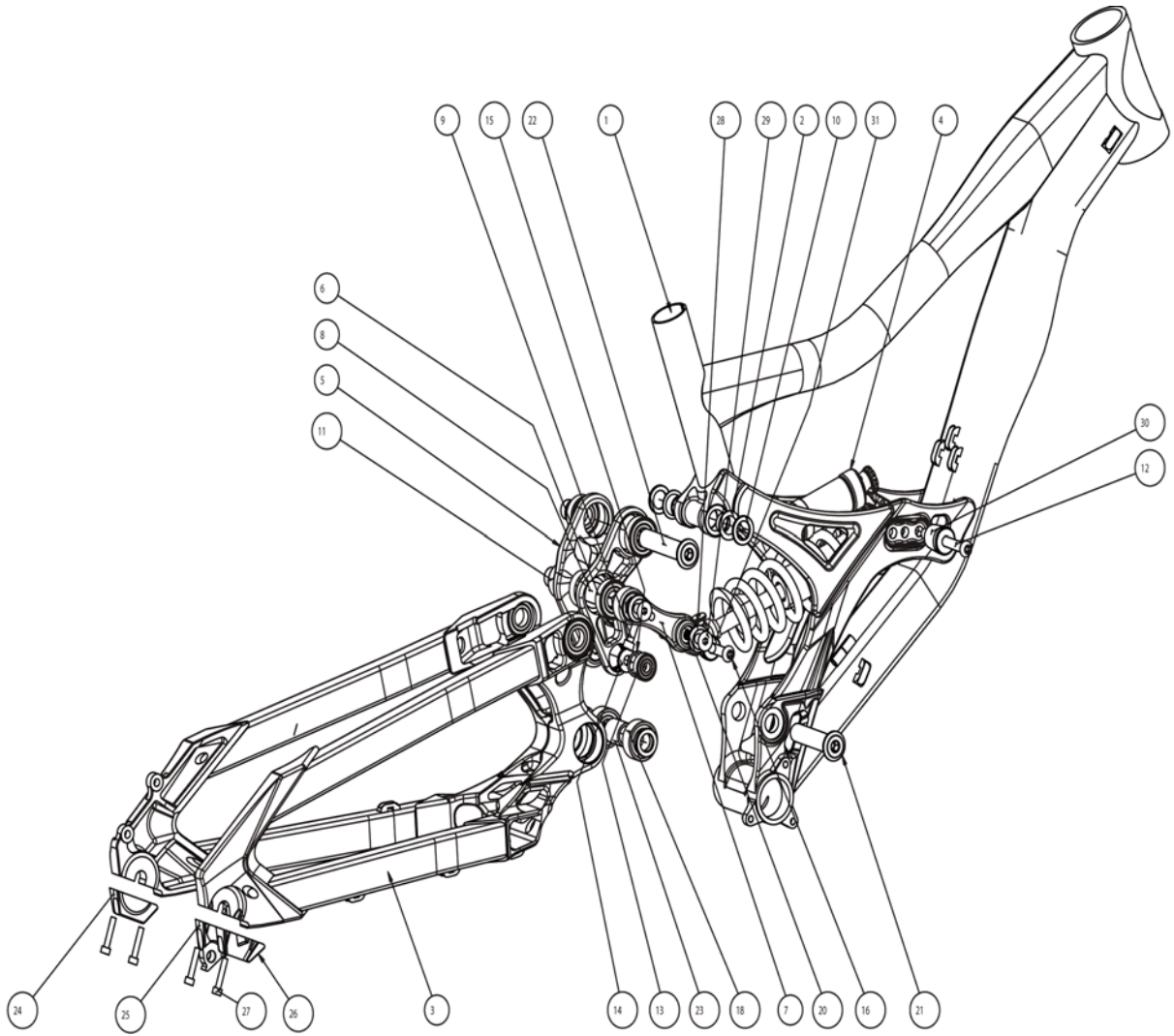




2010 ALTITUDE 29 SMALL PARTS

1	1059003	SUB. ALTITUDE 29'ER CHAINSTAY WLDMNT. ALL SIZES
2		ALTITUDE 29'ER FRONT TRIANGLE
3	181090	TOP LINKAGES (RIGHT) 29'ER ALTITUDE
4	181091	TOP LINKAGES (LEFT) 29'ER ALTITUDE
5	1058021	SUB. ALTITUDE 29'ER SEAT STAY WLD. ALL SIZES.
6	181063	BEARING - ID:12mm X OD:28mm X 8mm W (6001-2RS)
7	181064	BEARING - ID:12mm X OD:24mm X 6mm W (61901-2RS)
8	180400-018	CUSTOM BOLT, FLANGE HD. 12MM OD. M8X1.25 INT. 18MM LEN.
9	180400-071	BOLT - OD:12 X 71 mm THRU BOLT, INTERNAL M8
10	180400-074	CUSTOM BOLT, FLANGE HD. 12MM OD. M8X1.25 INT. 74.5MM LEN.
11	180400-088	CUSTOM BOLT, FLANGE HD. 12MM OD. M8X1.25 INT. 88MM LEN.
12	180237	CHAIN RING BOLTS M8X0.75X8.5MM
13	1098095	DERAILLEUR HANGER, FORGED, AL7075-T6
14	180334	IGUS INSERT, LFM-1214-12.
15	180335	BEARING CUSTOM ID:12MM OD:14MM DEPTH: 5.5MM
17	180435-016	SCREW - FLAT HEAD SOCKET, C'SUNK. M8X1.25 X 16MM L
18	180435-020	09 Custom flat head cap screw M8x1.25x20 - gr.10.9, ZP;
21	180354	Sleeve Bolt, M8 x 41 - with M6 x 14.5 Locking Cap Screw
22	180502	Sleeve Bolt, M8 x 31 - with M6 x 14.5 Locking Cap Screw
23	180204	CONICAL WASHER - ID:12mm X 4mm THK
24	180338	C'SUNK WASHER, M8 - OD:21.5 X 5mm THK

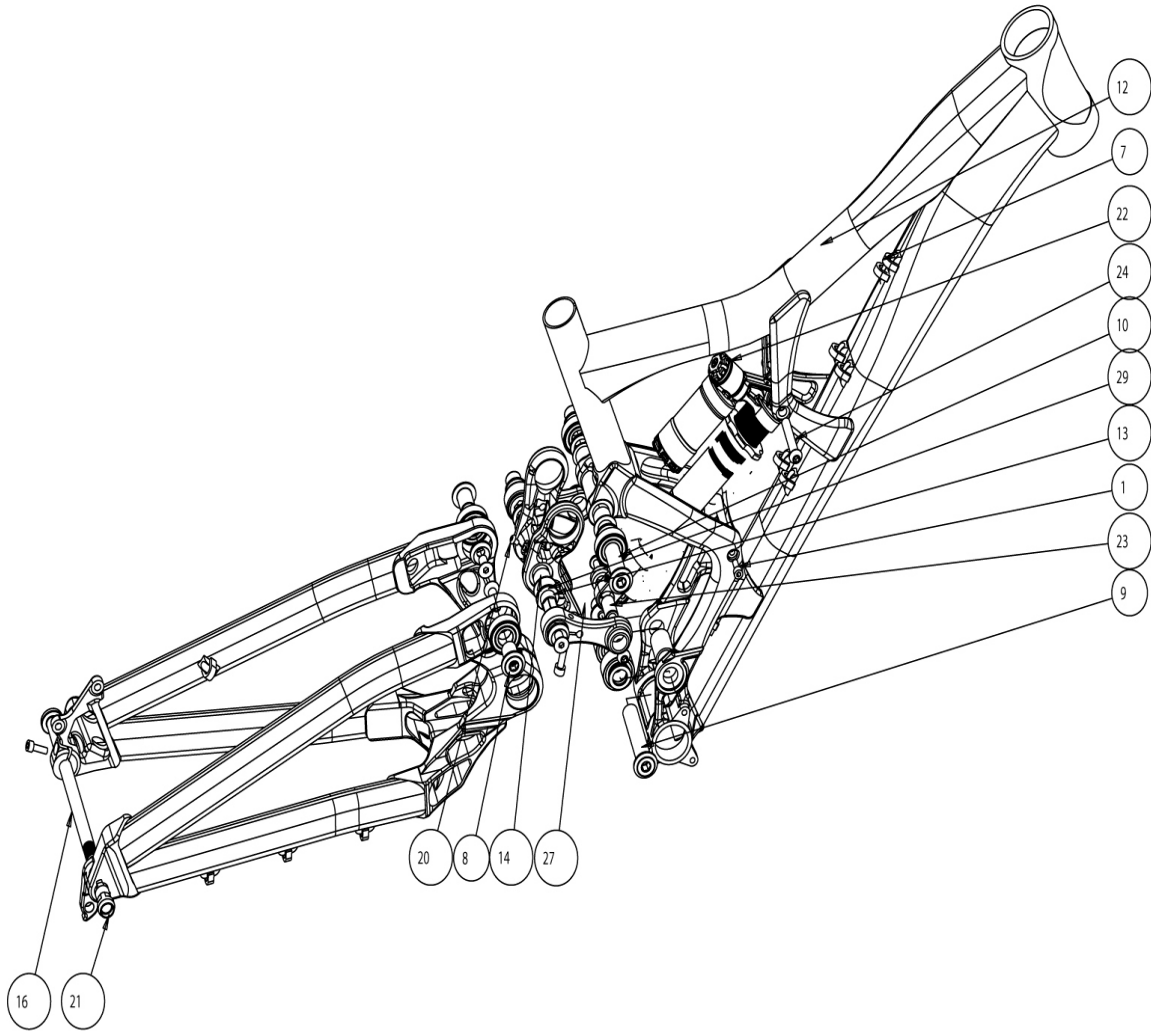
2010 FLATLINE FR EXPLODED VIEWS:

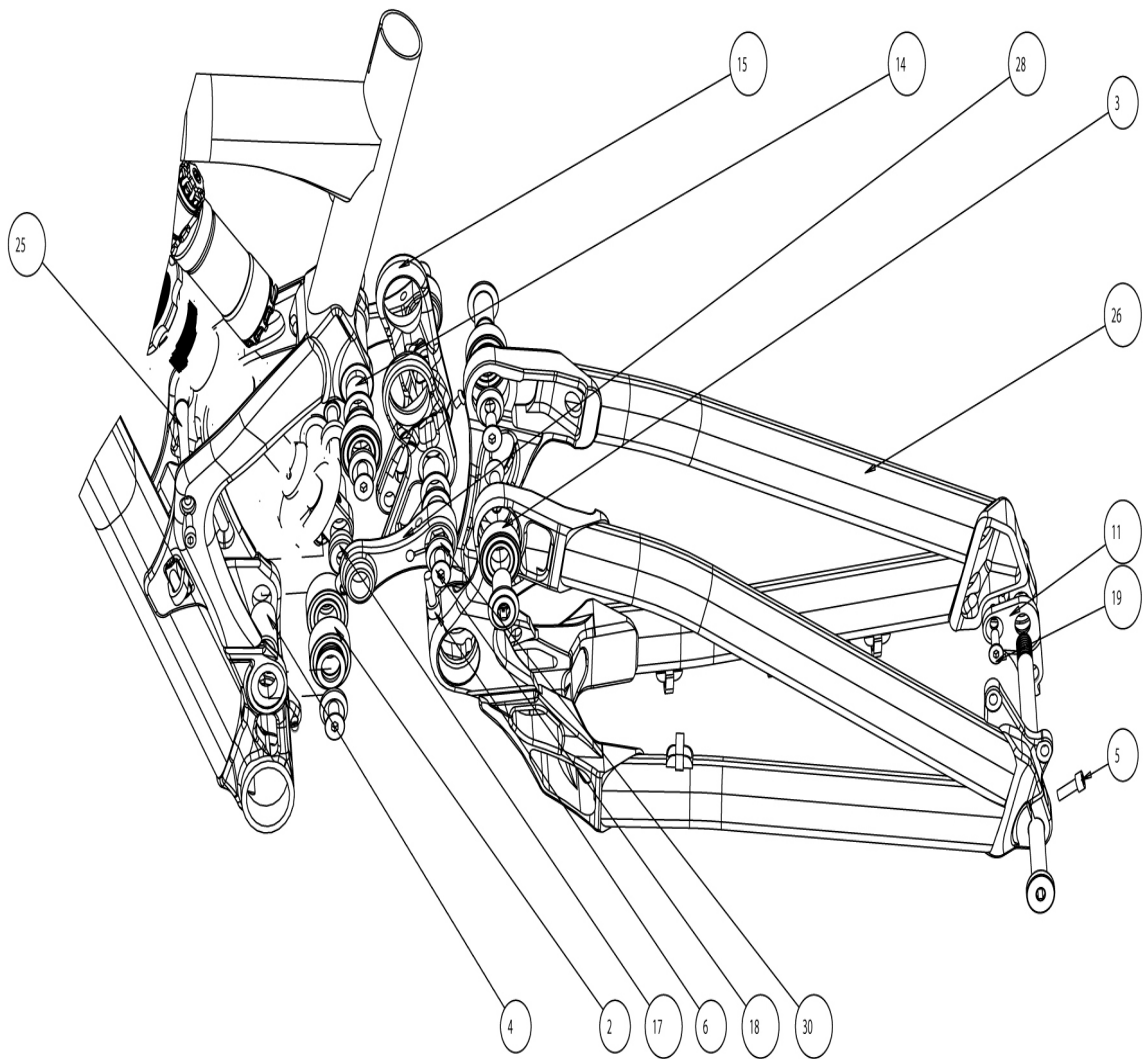


2010 FLATLINE FR SMALL PARTS

#	QTY	PART NO.	DESCRIPTION
1	1		09 FLATLINE FRONT TRIANGLE
2	2	180307	BUSHING - IGUS iglide ID:15 OD:17 L:12
3	1	1058007	SWINGARM FLATLINE AL7005-T6
4	1	N/A	REAR SHOCK
5	1	1098011	09 FLATLINE TOP LINK
6	6	181087	BEARING ID:15 OD:32 L:9 (6002-2RS)
7	2	1099023	09 FLATLINE TUG LINK LH
8	1	180286	DH HEXAGON AXLE OD:17MM L: 78MM
9	2	180329	SOCKET HEAD CAP SCREW M6 X 1.0 X 16MM SHAFT LENGTH
10	4	180287	WASHER - ID:15MM, 2MM THK, AL6061-T6
11	1	1099024	09 FLATLINE TUG LINK RH
12	1	180504	SLEEVE BOLT, M8X29MM, w/ M6X14.5 LOCKING CAP SCREW
13	2	181074	BEARING TOP LINK AT SHOCK ID:8MM OD:22MM L:7MM (608-2RS)
14	2	180313	SHOCK BEARING SPACER ID 8.0MM, AL6061-T6
15	2	180309	O RING 0.614 INCHES DIA.
16	1	180310	SLEEVE BOLT M6 INT X OD:8MM, L:52MM
18	2	181086	BEARING - ID:15MM OD:32MM L:32MM (3002-2RS)
19	2	181086	BEARING - ID:15MM OD:32MM L:32MM (3002-2RS)
20	2	180430-020	DH FLANGE BOLT OD:15MM L:20MM
21	1	180430-071	DH FLANGE BOLT OD:15MM L:71.5MM
22	1	180430-081	DH FLANGE BOLT OD:15MM L:81MM
23	1	180387	BEARING SPACER ID: 15.5MM X 26.1 MM L, AL6061-T6
24	1	1098008	HANGER LEFT AL7005-T6
25	1	1098009	HANGER RIGHT AL7005-T6
26	1	1098010	HANGER RIGHT SAINT AL7005-T6
27	4	180328	SOCKET HEAD CAP SCREW HEX M5 X 0.8 X 25MM
28	6	180338	M8 FLAT HEAD CAP SCREW
29	6	180435-020	HEXA C'SUNK SOCKET HEAD SCREW M8 X 1.25 X 20.0MM
30	2	180311	SHOCK SPACER FRONT, AL6061-T6
31	2	180312	SHOCK SPACER REAR, AL6061-T6

2010 FLATLINE WC EXPLODED VIEW

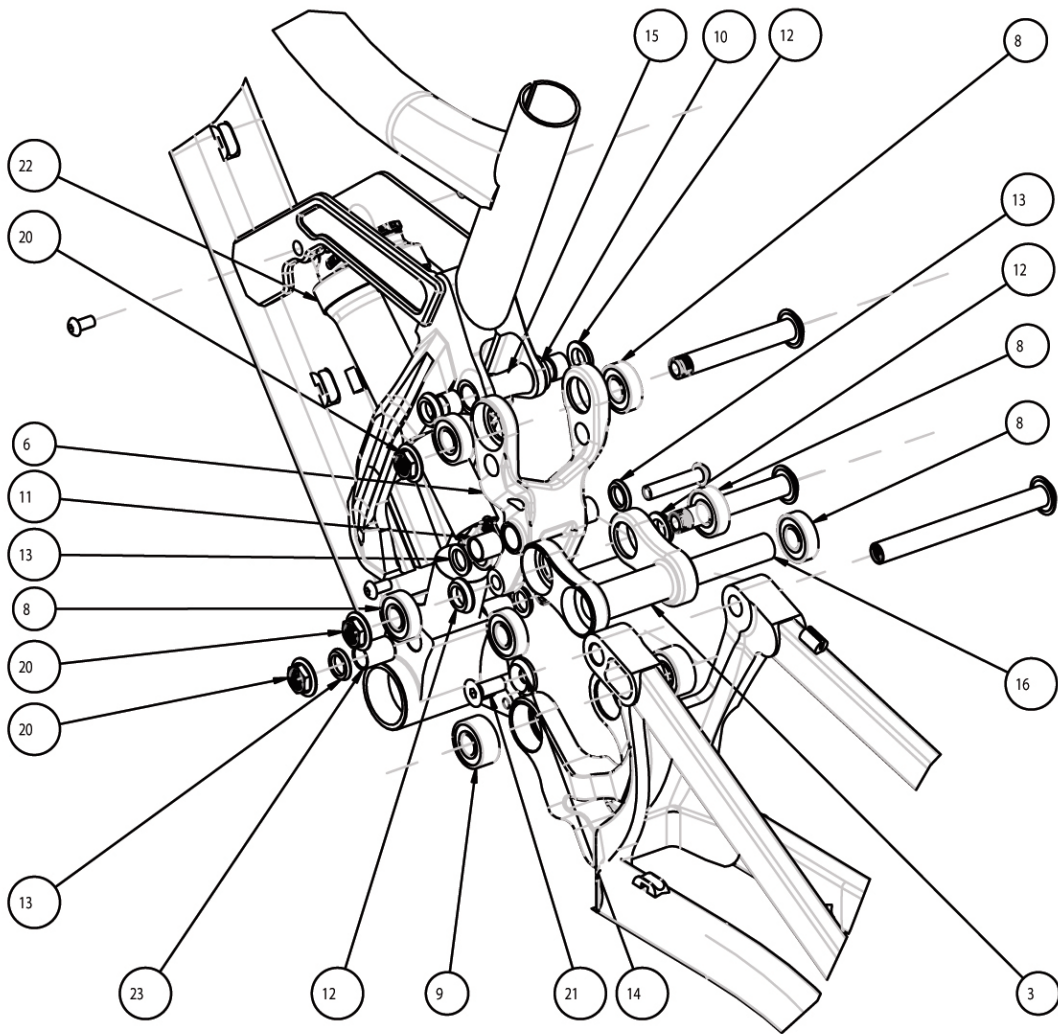


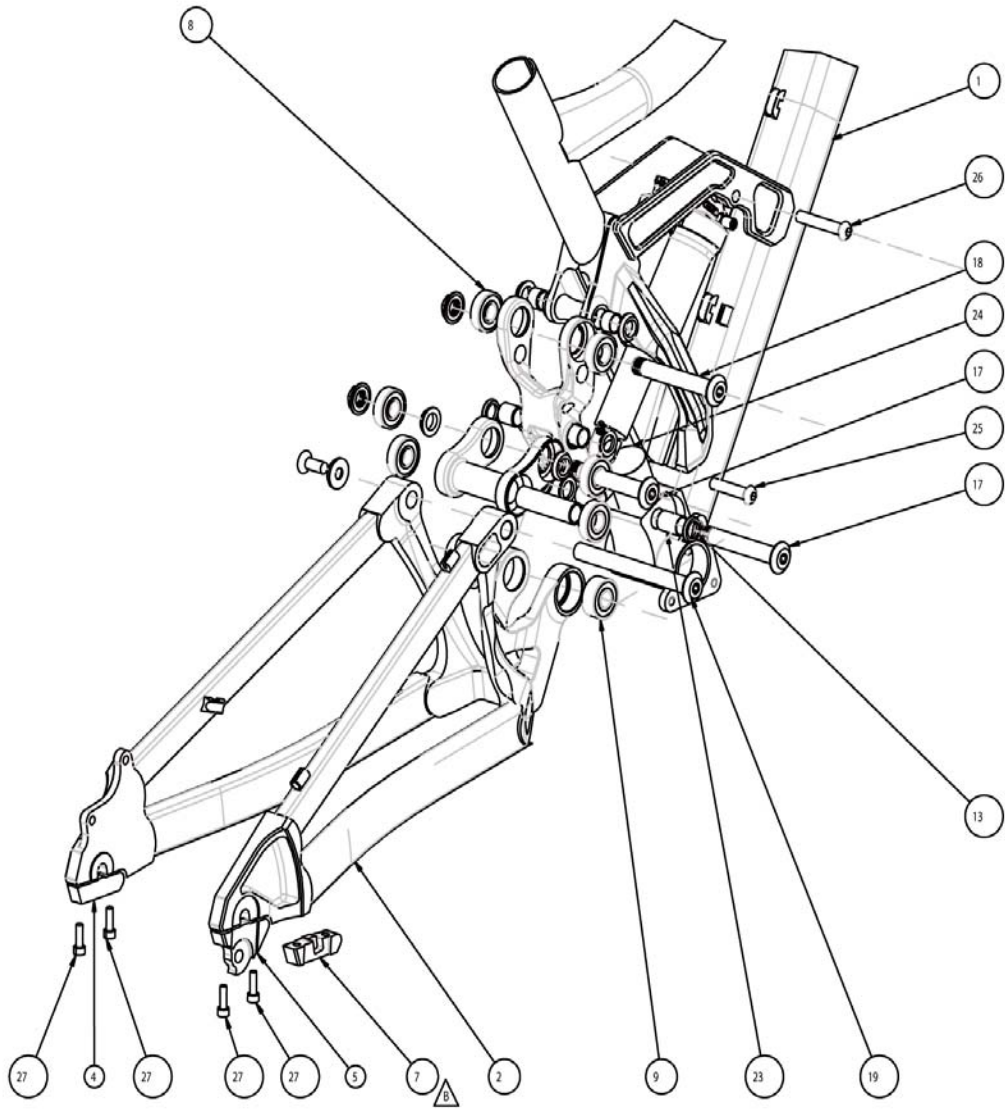


2010 FLATLINE WC SMALL PARTS

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

2010 SLAYER SS EXPLODED VIEWS:

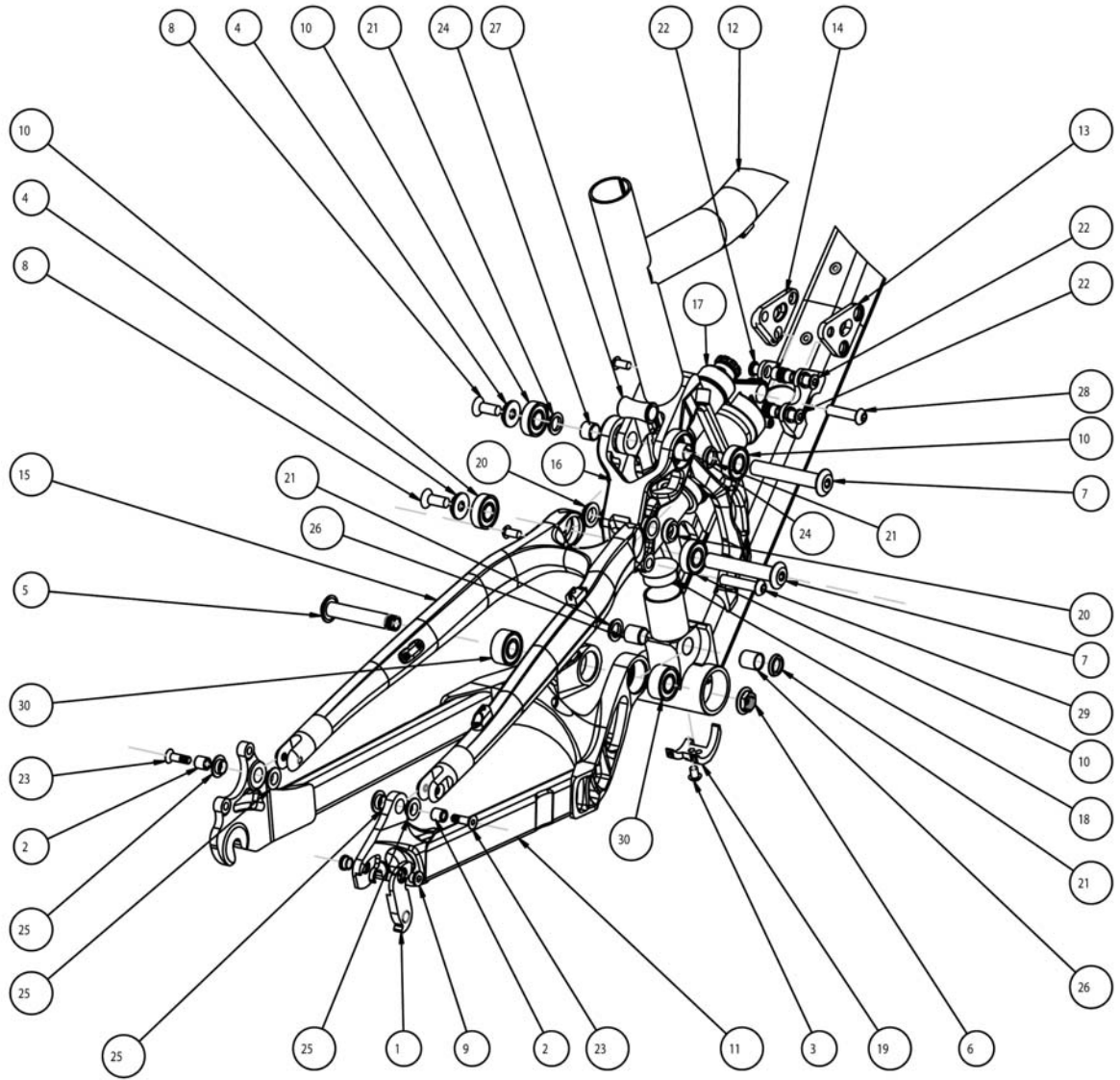




2009 SLAYER SS SMALL PARTS

#	QTY	PART NO.	DESCRIPTION
1	1		09 SLAYER SS FRONT TRIANGLE
2	1	1056017	09 SLAYER SS SWINGARM ASSEMBLY
3	1	1098025	09 SLAYER SS THRUST LINK
4	1	1099020	09 SLAYER SS, LH AXLE CLAMP
5	1	1099021	09 SLAYER SS, RH AXLE CLAMP
6	1	1098024	09 SLAYER SS, TOP LINK
7	1	1099022	09 SS RT SAINT AXLE CLAMP
8	6	181063	BEARING - ID:12MM OD:28MM L:8MM (6001-2RS)
9	2	181081	BEARING - ID:12MM OD:28MM L:12MM (3001-2RS)
10	2	180279	BUSHING - IGUS SLEEVE i-glide L280, ID:12, OD:14, L:10
11	2	180283	BUSHING - IGUS SLEEVE i-glide L280, ID:12, OD:14, L:15
12	4	180204	CONICAL WASHER, ID:12MM X 4MM THK
13	4	180205	CONICAL WASHER, ID:12MM X 2.5MM THK
14	1	180338	WASHER - M8 C'SUNK - FOR FLAT HEAD CAP SCREW
15	1	180284	IGUS SLEEVE BUSHING, ID:12MM X L: 30MM
16	1	180318	IGUS SLEEVE BUSHING, ID:12MM X L: 55MM
17	2	180350-077	BOLT - ID:12MM L:77MM THRU BOLT; EXTERNAL THREAD
18	1	180350-081	BOLT - ID:12MM L:81MM THRU BOLT; EXTERNAL THREAD
19	1	180400-117	BOLT - ID:12MM L:117MM INTERNAL THREAD M8X1.25
20	3	180370-006	FLANGE NUT, M12 X 1.0 X 6MM THK.
21	1	180435-020	FLAT HEAD SOCKET SCREW, M8X1.25X20MM
22	1		REAR SHOCK
23	2	180327	BUSHING - IGUS iglide L280 RING, ID:12 OD:14 L:20
24	1	133021	PLASTIC PLUG, 28MM
25	1	180514	SLEEVE BOLT, OD:8MM X 37MM w/ M6 X 14.5MM LOCKING CAP SCREW
26	1	180505	SLEEVE BOLT, OD:8MM X 46MM w/ M6 X 14.5MM LOCKING CAP SCREW
27	4	180238	SOCKET HEAD CAP SCREW; M5X16MM

2010 SLAYER SXC EXPLODED VIEW:



2009 SLAYER SXC SMALL PARTS

#	QTY	PART NO.	DESCRIPTION
1	1	109834	DERAILLEUR HANGER - 10MM, AL7075-T6
2	2	180026	INNER RING FOR IGUS PIVOT
3	1	180105	DOME HEAD SCREW, M6 X 8MM
4	2	180338	M8 C'SUNK WASHER
5	1	180350-067	BOLT FLANGE HD, THRU.BLT EXTERNAL M12X67
6	1	180370-006	FLANGE NUT, M12 X 1.0 X 6 OD:22.2MM
7	2	180400-070	BOLT FLANGE HD, THRU.BLT INTERNAL M8 X 1.25 OD:12 X 70
8	2	180435-020	FLAT HEAD SOCKET CAP SCREW, M8 X 20MM
9	1	180510	CHAINRING NUT AND BOLT - M8X0.75 L:5MM, w/.4MM LONG NUT
10	4	181063	BEARING - ID:12MM OD:28MM L:8MM (6001-2RS)
11	1	1058017	09 SLAYER SXC SWINGARM ASSEMBLY
12	1	1067031	09 SLAYER FRONT TRIANGLE
13	1	1097005-3	09 SXC SHOCK PLATE LEFT
14	1	1097005-3	09 SXC SHOCK PLATE RIGHT
15	1	105042	09 SXC CARBON SEATSTAY ASSEMBLY
16	1	1097001	SLAYER SXC TOP LINK
17	1		REAR SHOCK
18	1	133021	PLASTIC PLUG - 28MM
19	1	133043	SHIMANO BB CABLE GUIDE
20	2	180204	CONICAL WASHER, 12MM X 4MM THK
21	4	180205	CONICAL WASHER, 12MM X 2.5MM THK
22	4	180237	CHAINRING BOLT AND NUT - M8X0.75 X 8.5MM
23	2	180271	FLAT HEAD SOCKET SHOULDER SCREW - M6X20MM
24	2	180279	BUSHING - IGUS SLEEVE i-glide ID:10 OD:14 L:10
25	4	181281	BUSHING - IGUS FLANGE i-glide ID:10 OD:12 L:5
26	2	180283	BUSHING - IGUS SLEEVE i-glide ID:12 OD:14 L:15
27	1	180284	SLEEVE - 12MM ID X 30MM LENGTH
28	1	180502	SLEEVE BOLT, OD: 8MM X 31MM - w/M6 X 14.5 LOCKING CAP SCREW
29	1	180514	SLEEVE BOLT, OD: 8MM X 37MM - w/M6 X 14.5 LOCKING CAP SCREW
30	2	181081	BEARING - ID:12MM OD:28MM L:12MM (3001-2RS)