

# Rocky Mountain Altitude Technical Manual

Date: August 17<sup>th</sup>, 2016

Rev B



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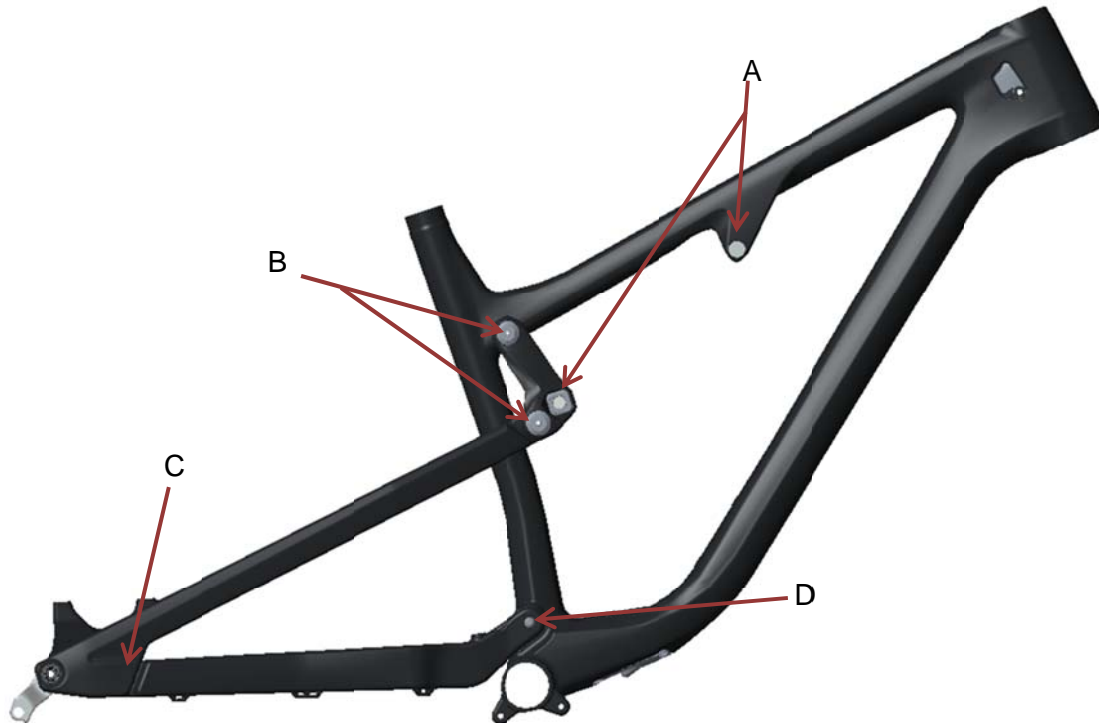
## Materials Required

- Rocky Mountain Altitude or Instinct Frame MY 2017
- 6900 Bearing Tool
- Loctite 243 (blue)
- Grease
- Torque Wrench
  - o 2.5mm, 3mm, 4mm, and 6mm Hex Key Bits
- 4mm and 5mm Hex Keys
- Isopropyl Alcohol
- Clean Rags
- Blind Puller (10mm OD)

# Suspension Pivot Torque Guide

**Note:** All Torque values are +/- 10%

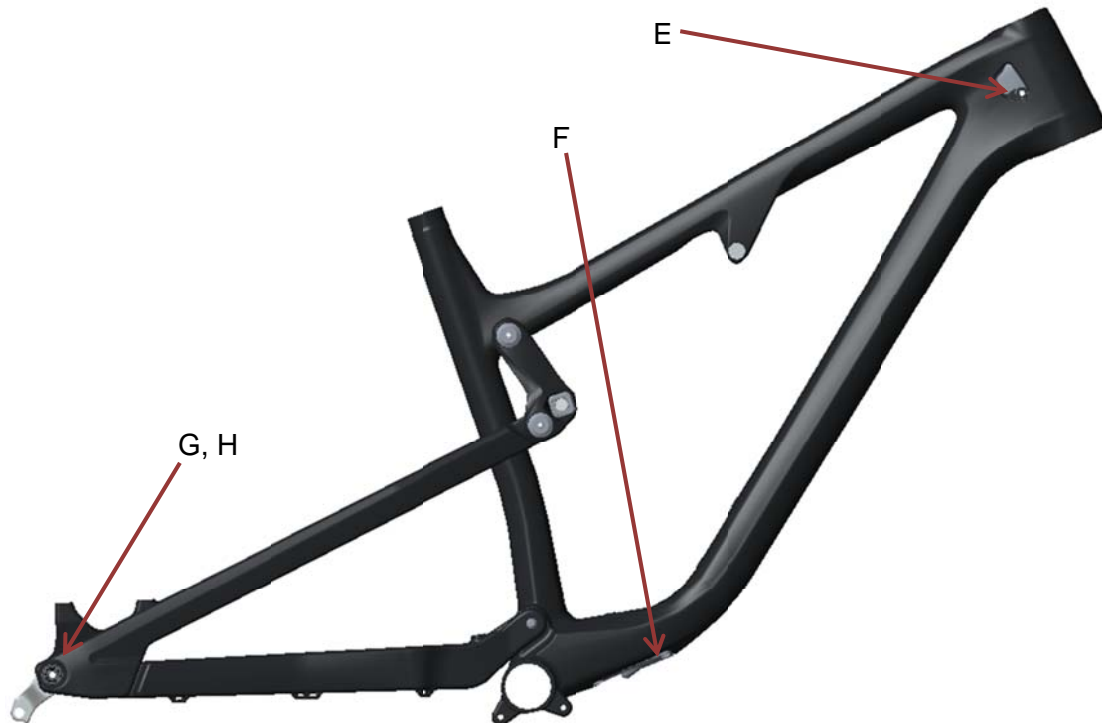
Description		Part #	Location	Tool	Torque			Notes
					kg-cm	Nm	lb-in	
A	Shock Bolts & Screws	1807049 & 180566-016 FBY	Top Link	5mm & 4mm Hex Keys	80	8	70	Torque only with correct shock and hardware installed. Apply grease to shock bolts, and Loctite 243 (blue) to screw threads.
		1807062 & 180566-012 FBY	Front Triangle	Two 4mm Hex Keys				
B	Top Link Bolts & Screws	1807060 & 180566-012 FBY	FT-TL Pivot	6mm & 4mm Hex Key	80	8	70	Apply grease to pivot bolts, and Loctite 243 (blue) to screw threads.
		1807061 & 180566-012 FBY	SS-TL Pivot					
C	Dropout Pivot Screws	1807046	Dropouts	6mm Hex Key	175	17	152	Apply Loctite 243 to female seat stay threads.
D	Main Pivot Bolt	1807029	Main Pivot	6mm Hex Key	175	17	152	Apply grease to inner bearing races and Loctite 243 to female chain stay threads.



# Small Parts Torque Guide

**Note:** All Torque values are +/- 10%


Description		Part #	Location	Tool	Torque			Notes
					kg-cm	Nm	lb-in	
E	Counter Sunk M5-0.8x16mm	180472-010	Head Tube Cable Port	3mm Hex Key	<9	<1	<8	Loctite 243 (blue). Tighten until snug.
F	Counter Sunk M4x16mm	1805077	Downtube Cable Port	2.5mm Hex Key	<9	<1	<8	Loctite 243 (blue). Tighten until snug.
G	Rear Axle Nut	1807046	Drive-Side Dropout	6mm Hex Key	204	20	177	Left hand thread, apply Loctite 243 (blue) to male threads.
H	Rear Axle	1807045	Non-Drive-Side Dropout	6mm Hex Key	104	10	90	Apply grease to axle shaft and threads. Use Stainless Steel Washer (3227006) on non-drive-side.




# Assembly Instructions

## 1) Bearing Installation


### 1.1 Main Pivot

	
1) Using 6900 Bearing Press, install non-drive-side Enduro 6900 2RS MAX (1807042) Bearing.	2) Grease exterior of Main Pivot Spacer (1807038), slide into main pivot.
3) Using 6900 Bearing Press, install drive-side Enduro 6900 2RS Max Bearing.	4) Inspect bearings for proper seating against frame.

### 1.2 Top Link & Chain Stay Bearing Installation

		
1) Grease top link bearing bores.  Do not grease chain stay bearing bores.	2) Using 6900 Bearing Press, install Enduro 6900 2RS MAX (1807042) Bearings into each pivot.  <b>Note:</b> Bearings press into chain stay from inboard side.	3) Inspect bearings for proper seating against component.

### 1.3 Shock Eyelet Bearing Installation

		
1) Grease Eyelet Bearing Sleeve (1807028).	2) Using a vice with soft jaws, press in the Eyelet Bearing Cups (1807026) and Sleeve into the shock.  <b>Note:</b> Install the eyelet bearings into the link side of the shock.	3) Inspect bearings for proper seating against shock.


## 2) Frame Assembly

### 2.1 Chain Stay Installation


		
<p>1) Grease outside of main pivot bearing inner races, and outer surface of Main Pivot Bolt (1807029).</p> <p>Apply Loctite 243 (blue) to female threads on the drive-side of the chain stay yoke.</p>	<p>2) Slide chain stay over front triangle main pivot.</p>	<p>3) Install Main Pivot Bolt.</p> <p>Torque to 17 Nm.</p>




## 2.2 Top Link Installation

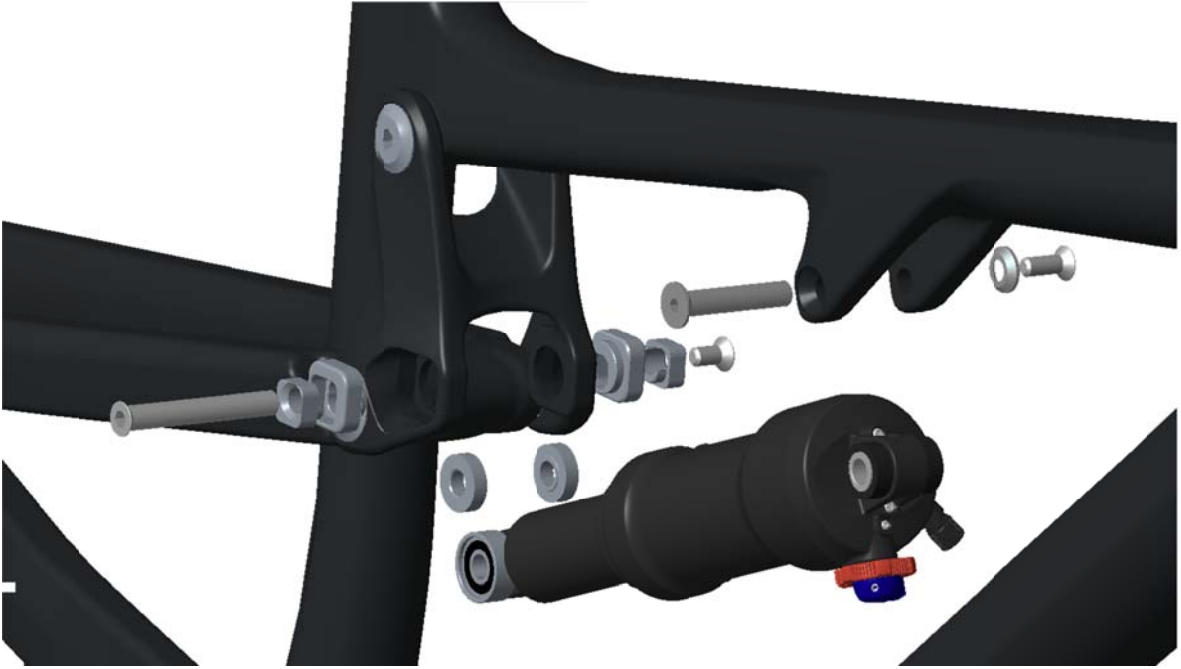
	
<p>1) Grease outside of TL-FT Pivot Bolt (1807060), small faces of 6900 Bearing Spacers (1807044), and small inner face of 6900 Bearing Cap (1807043).</p> <p>Apply Loctite 243 (blue) to M6-1.0 x 12mm SS Screw (180566-012 FBY) threads.</p>	<p>2) Insert 6900 Bearing Spacers so that small faces contact the inboard inner races of the top link bearings.</p>
<p>3) Slide top link and 6900 Bearing Spacers over front triangle. Install TL-FT Pivot Bolt.</p>	<p>4) Pass M6-1.0 x 12mm SS Screw through 6900 Bearing Cap, and thread into TL-FT Pivot Bolt.</p> <p>Torque to 8 Nm.</p>

## 2.3 Seat Stay Installation

	
<p>1) Grease outside of TL-SS Pivot Bolt (1807061), small faces of 6900 Bearing Spacers (1807044), and small inner face of 6900 Bearing Cap (1807043).</p> <p>Apply Loctite 243 (blue) to M6-1.0 x 12mm SS Screw (180566-012 FBY) threads.</p>	<p>2) Insert 6900 Bearing Spacers so that small faces contact the inboard inner races of the top link bearings.</p>
<p>3) Slide seat stay around the seat tube, and into top link. Install TL-SS Pivot Bolt.</p>	<p>4) Pass M6-1.0 x 12mm SS Screw through 6900 Bearing Cap, and thread into TL-SS Pivot Bolt.</p> <p>Torque to 8 Nm.</p>

	
<p>5) Apply Loctite 243 (blue) to inside of threaded seat stay inserts.</p>	<p>6) Pass Dropout Pivot Screws (1807046) through chain stay bearings, and thread into seat stay.</p> <p>Torque to 17 Nm.</p>

## 2.4 Shock Installation

	
<p>1) Grease outside of Link (1807049) and FT (1807062) Shock Bolts, Bearing Spacers (1807099), and the outside of Outer (1807003) and Inner (1807004) Ride-9 Chips.</p> <p>Apply Loctite 243 (blue) to M6-1.0 x 16mm (180566-016 FBY) and M6-1.0 x 12mm (180566-012 FBY) SS Screw threads.</p>	<p>2) Slide shock, with correct hardware (see exploded diagram) into front triangle, slide in FT Shock Bolt from the drive-side.</p>
<p>3) Select Ride-9 Position using the Outer and Inner Ride-9 Chips.</p>	<p>4) Seat bearing spacers with narrow inner faces against bearings, and slide shock into link</p> <p>Pass Link Shock Bolt through Ride-9 Chips, top link, and shock from the drive-side.</p> <p><b>Note:</b> If the shock is a tight fit, loosen the TL-SS and TL – FT Pivot Bolts prior to inserting the shock. Re-torque the Pivot Bolts after installing the shock.</p>
<p>5) Pass M6-1.0 x 16mm SS Screw through M6 Counter-Sunk Washer (1807064), and thread into FT Shock Bolt.</p> <p>Torque to 8 Nm.</p>	<p>6) Pass M6-1.0 x 16mm SS Screw through non-drive-side Ride-9 Chip, and thread into Link Shock Bolt.</p> <p>Torque to 8 Nm.</p>

### 3) Plastic Component Installation


#### 3.1 Downtube Cable Port

1) Apply Loctite 243 (blue) to Counter Sunk M4x16mm (1805077) and Counter Sunk M4x8mm (1807068) Screw threads.	2) Pass M5-0.8x16mm Screws through Downtube Cable Port (1805056) and thread into front triangle.  Torque to snug (<1 Nm).
3) Clamp cables with the Upper (1807067) and Lower (1807066) Cable Ports by threading in the Counter Sunk M4x8mm Screw.  Torque until snug (<1 Nm).	4) Slip O-Ring over clamped cables and Cable Port, and then slip the assembly into the Downtube Cable Port.

#### 3.2 Head Tube Cable Ports

1) Apply Loctite 243 (blue) to Counter Sunk M5-0.8x10mm (180472-010) Screw threads.	2) Pass M5-0.8x10mm Screws through Drive-Side (1097140) and Non-Drive-Side (1097136) Head Tube Cable Ports and thread into front triangle.  Torque to snug (<1 Nm).

### 3.3 Chain Stay Protector

	
1) Clean drive-side chain stay with isopropyl alcohol and a clean rag.	2) With the Chain Stay Protector (3708001) aligned on the chain stay; mark the leading edge with masking tape to use as an installation guide.
3) Remove backing paper from Chain Stay Protector, and using the masking tape guide, install the protector on the chain stay.  Press and hold the Chain Stay Protector firmly, to ensure proper adhesion.	4) Remove masking tape guide, and clean any residue with isopropyl alcohol and a clean rag.

#### 4) Rear Axle & Rear Derailleur Hanger

	
<p>1) Apply Loctite 243 (blue) to Axle Nut (3227001) threads.</p> <p><b>Note:</b> Axle Nut and derailleur hanger are left hand (reverse) threaded! Turn counter-clockwise to tighten.</p>	<p>2) Pass Axle Nut through seat stay, and thread into derailleur hanger.</p> <p><b>Note:</b> Select the correct rear derailleur hanger, either Shimano Direct Mount (3227002) or Standard Mount (1097132).</p> <p>Torque to 20 Nm.</p>
<p>3) Grease Rear Axle (3227009) body and threads.</p>	<p>4) Pass Rear Axle through Stainless Steel Washer (3227006), seat stay, hub, and thread into Axle Nut.</p> <p>With hub installed, torque to 10 Nm.</p>

## 5) Cable Routing

### 5.1 Internal Cable Noise Damping Hose

We recommend our riders install our Foam Tubes to damp cable noise within the frame.

**Note:** Only the one cable is shown in this image for clarity.



- 1) Pour isopropyl alcohol down Foam Tube to lubricate foam tube.

Foam Tube for 4mm Housing (3337001).

Foam Tube for 5mm Housing (3337002).

- 2) Slide one Foam Tube over each internal cable, prior to routing cables through frame.

**Note:** The Foam Tubes do not fit through either the head tube or down tube cable ports.

## 5.2 Cable Port Sizing

### Colour Coding:

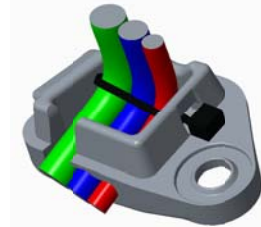
Green – 5mm Hose (hydraulic lines or smaller)

Blue – 4mm Housing (mechanical shift cable housing or smaller)

Red – 3mm Cable (electronic cables or smaller)

### Head Tube Cable Ports

**Note:** Use a zap-strap to affix cables before installing port, as shown.



### Down Tube Cable Port



## 5.3 Cable Routing



### Colour Coding:

Green – Brake Hose

Pink – Rear Derailleur Cable

Purple – Shock Remote

**Note:** Internal dropper post cable runs internally through the down tube and up the seat tube.



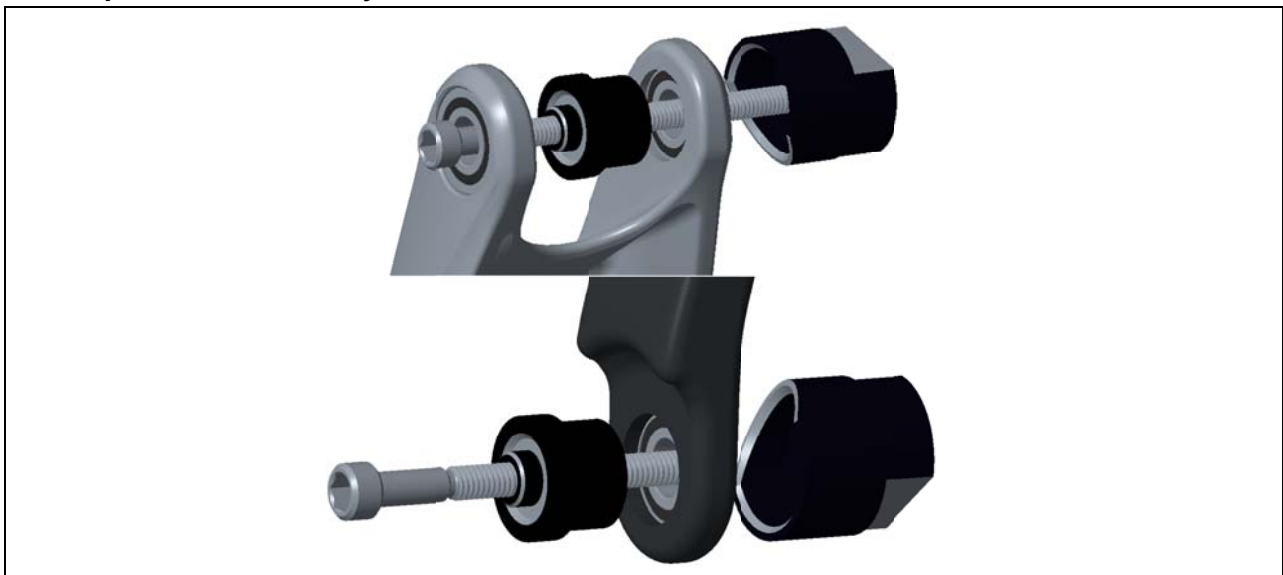
## 6) Bearing Removal

### 6.1 Main Pivot



- 1) Use a blind puller seated against the bearing inner races to remove main pivot bearings.

### 6.2 Top Link & Chain Stay



- |   |  |                                    |
|---|--|------------------------------------|
| 1) Align 6900 Bearing Press against bearing inner race (inboard for link, outboard for chain stay). | 2) Pass bolt through 6900 Bearing Press, and thread into 6900 Bearing Cup. | 3) Tighten bolt to remove bearing. |
|---|--|------------------------------------|