# ENDURO


## USER MANUAL

# CONTENTS




**SPECIALIZED BICYCLE COMPONENTS**
15130 Concord Circle, Morgan Hill, CA 95037 (408) 779-6229
0000139644_UM_R1, 05/19


We may occasionally issue updates and addendums to this document. Please periodically check www.specialized.com or contact Rider Care to make sure you have the latest information.
Info: ridercare@specialized.com / 877-808-8154

# 1. INTRODUCTION

This user manual is specific to your Specialized Enduro FSR bicycle. It contains important safety, performance and technical information, which you should read before your first ride and keep for reference. You should also read the entire Specialized Bicycle Owner's Manual ("Owner's Manual"), because it has additional important general information and instructions which you should follow. If you do not have a copy of the Owner's Manual, you can download it at no cost at www.specialized.com, or obtain it from your nearest Authorized Specialized Retailer or Specialized Rider Care.

Additional safety, performance and service information for specific components such as suspension or pedals on your bicycle, or for accessories such as helmets or lights, may also be available. Make sure that your Authorized Specialized Retailer has given you all the manufacturers' literature that was included with your bicycle or accessories. If there is a difference between the instructions in this manual and the information provided by the component manufacturer, please refer to your Authorized Specialized Retailer.

When reading this user manual, you will note various important symbols and warnings, which are explained below:

| | |
|---|---|
|  | **WARNING!** The combination of this symbol and word indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death. Many of the Warnings say "you may lose control and fall." Because any fall can result in serious injury or even death, we do not always repeat the warning of possible injury or death. |
|  | **CAUTION:** The combination of the safety alert symbol and the word CAUTION indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury, or is an alert against unsafe practices.<br><br>The word CAUTION used without the safety alert symbol indicates a situation which, if not avoided, could result in serious damage to the bicycle or the voiding of your warranty. |
|  | **INFO:** This symbol alerts the reader to information which is particularly important. |
|  | **GREASE:** This symbol means that high quality grease should be applied as illustrated. |
|  | **CARBON FRICTION PASTE:** This symbol means that carbon friction paste should be applied as illustrated to increase friction. |
|  | **TORQUE:** This symbol highlights the correct torque value for a specific bolt. In order to achieve the specified torque value, a quality torque wrench must be used. |
|  | **TECH TIP:** Tech Tips are useful tips and tricks regarding installation and use. |

## 1.1. INTENDED USE

The Enduro FSR bicycles are intended and tested for Mountain Bike (condition 4) use only. For more information on intended use and structural weight limits for the frame and components, please refer to the Owner's Manual.

## 1.2. WARRANTY

Please refer to the written warranty provisions provided with your bicycle, or visit www.specialized.com. A copy is also available at your Authorized Specialized Retailer.

## 2. GENERAL NOTES ABOUT ASSEMBLY

This manual is not intended as a comprehensive assembly, use, service, repair or maintenance guide. Please see your Authorized Specialized Retailer for all service, repairs or maintenance. Your Authorized Specialized Retailer may also be able to refer you to classes, clinics or books on bicycle use, service, repair, and maintenance.

**WARNING! Due to the high degree of complexity of the Enduro FSR, proper assembly requires a high degree of mechanical expertise, skill, training and specialty tools. Therefore, it is essential that the assembly, maintenance and troubleshooting be performed by an Authorized Specialized Retailer.**

**WARNING! Many components on the Enduro FSR, including, but not limited to the rear suspension, are proprietary to the Enduro FSR. Only use originally supplied components and hardware at all times. Use of other components or hardware will compromise the integrity and strength of the assembly. Enduro FSR specific components should only be used on the Enduro FSR and not on other bicycles, even if they fit. Failure to follow this warning could result in serious injury or death.**

**WARNING! Never modify your frame or components in any way. Do not sand, drill, file, or remove parts. Do not install incompatible forks or suspension parts. An improperly modified frame, fork, or component, can cause you to lose control and fall.**

**In order to successfully build the Enduro FSR bicycles, it is very important to follow the order of operations as outlined in this manual. Modifying the order of assembly will result in a longer build process.**

### 2.1. FORK/HEADSET/STEM

- The headset uses a 1 1/8" (41.8mm x 30.5 x 8mm, 45x45°) Campagnolo Standard compatible upper bearing and a 1.5" (52mm x 40 x 7mm, 45x45°) lower bearing. Ensure that replacement bearings are compatible with the Specialized headset specification. No tools are needed for installation or removal of both bearings. Grease bearing surfaces before installation.
- Inspect the fork, stem, seatpost and seat tube, to ensure that there are no burrs or sharp edges. Remove any burrs or sharp edges using fine grit sandpaper.
- All edges of the stem in contact with the steerer tube should be rounded out to eliminate any stress points.

**WARNING! Burrs and sharp edges can damage the carbon and alloy surfaces of the components. Any deep scratches or gouges in the stem or fork can weaken the components.**

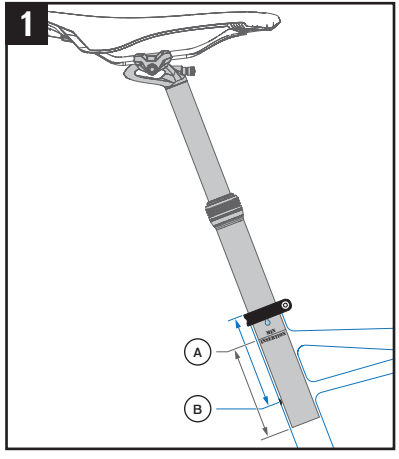
### 2.2. SEATPOST

**SEATPOST MINIMUM INSERTION:**

To prevent damage to the frame and/or seatpost, it is important to have a minimum amount of seatpost insertion in the seat tube. This minimum insertion must meet the following requirements:

- The seatpost must be inserted into the frame deep enough so the minimum insertion/maximum extension (min/max) mark on the seatpost is not visible (fig.1 A).
- The seatpost must also be inserted into the seat tube deep enough to meet or exceed the 100mm minimum measured insertion depth (fig.1 B) required by the frame.
- If the seatpost and frame minimum insertion requirements differ from each other, always use the longer minimum insertion. For example, if the frame requires 100mm, but the seatpost requires 90mm, then 100mm is the minimum insertion required.

1




If the seatpost is at the min/max mark and the seatpost does not meet or exceed the minimum measured insertion depth of the frame, the seatpost is not inserted deeply enough into the seat tube and should be lowered until it meets or exceed the frame insertion requirement. This may result in the saddle being too low. If so, the seatpost must be replaced with a longer seatpost.

WARNING! For general instructions regarding the installation of the seatpost, refer to the appropriate section in the Owner's Manual. Riding with an improperly tightened seatpost can allow the saddle to turn or move and cause you to lose control and fall.

WARNING! Failure to follow the seatpost and frame minimum insertion requirements may result in damage to the frame and/or seatpost, which could cause you to lose control and fall.

WARNING! Inspect the seatpost and seat tube to ensure that there are no burrs or sharp edges. Remove any burrs or sharp edges using fine grit sandpaper.

Do not apply grease to the contact surfaces between the seatpost and the seat tube. Grease reduces the friction, which is critical to proper seatpost grip. Specialized recommends the application of carbon assembly compound (fiber paste), which can increase friction between carbon surfaces. Please visit your Specialized Authorized Retailer for additional information.

## 2.3. BOTTOM BRACKET

Enduro FSR models have a threaded 73mm width bottom bracket shell and is compatible with any BSA threaded outboard bearing bottom bracket. Please refer to the crank manufacturer documentation for bottom bracket compatibility.

CAUTION (CARBON FRAME): Do not face the bottom bracket shell! Chasing the threads is acceptable if necessary.

## 2.4. REAR AXLE

Enduro FSR models are equipped with 148mm Boost rear hub spacing and require a 148mm Boost compatible rear wheel.

## 2.5. FLIP CHIP

All models are assembled with the Flip Chip in the Low position. Switching to the High position raises the bottom bracket height by approximately 7mm and steepens the head tube angle by approximately 0.4 degrees.

Place a rag between the upper link and the seat tube to make sure the link doesn't make contact with the seat tube.

- Remove the forward shock eye bolts and the extension bolt, then remove the shock from the bike.
- Remove the Flip Chip halves from the rear shock eye.
- Rotate the two Flip Chips 180 degrees then push them back into the rear shock eye.
- Place the rear shock eye into the extension and install the rear shock eye bolt (do not torque at this time).
- Place the forward shock eye into the frame between the forward shock eye bearings.
- Install the forward shock eye bolts.
- Torque the forward and rear shock eye bolts to specification.

# 3. GENERAL NOTES ABOUT MAINTENANCE

The Enduro FSR is a high performance bicycle. All regular maintenance, troubleshooting, repair and parts replacement must be performed by an Authorized Specialized Retailer. For general information regarding maintenance of your bicycle, please refer to the Owner's Manual. In addition, routinely perform a mechanical safety check before each ride, as described in the Owner's Manual.

- Great care should be taken to not damage carbon fiber or composite material. Any damage may result in a loss of structural integrity, which may result in a catastrophic failure. This damage may or may not be visible in inspection. Before each ride, and after any crash, you should carefully inspect your bicycle for any fraying, gouging, scratches through the paint, chipping, bending, or any other signs of damage. Do not ride if your bicycle shows any of these signs. After any crash, and before you ride any further, take your bicycle to an Authorized Specialized Retailer for a complete inspection.

- While riding, listen for any creaks, as a creak can be a sign of a problem with one or more components. Periodically examine all surfaces in bright sunlight to check for any small hairline cracks or fatigue at stress points, such as welds, seams, holes, and points of contact with other parts. If you hear any creaks, see signs of excessive wear, discover any cracks, no matter how small, or any damage to the bicycle, immediately stop riding the bicycle and have it inspected by your Authorized Specialized Retailer.
- Lifespan and the type and frequency of maintenance depends on many factors, such as use, rider weight, riding conditions and/or impacts. Exposure to harsh elements, especially salty air (such as riding near the ocean or in the winter), can result in galvanic corrosion of components such as the crank spindle and bolts, which can accelerate wear and shorten the lifespan. Dirt can also accelerate wear of surfaces and bearings. The surfaces of the bicycle should be cleaned before each ride. The bicycle should also be maintained regularly by an Authorized Specialized Retailer, which means it should be cleaned, inspected for signs of corrosion and/or cracks and lubricated. If you notice any signs of corrosion or cracking on the frame or any component, the affected item must be replaced.
- Regularly clean and lubricate the drivetrain according to the drivetrain manufacturer's instructions.
- Do not use a high pressure water spray directly on the bearings. Even water from a garden hose can penetrate bearing seals and crank interfaces, increasing bearing and crank wear. Use a clean, damp cloth and bicycle cleaning agents for cleaning.
- Do not expose the bicycle to prolonged direct sunlight or excessive heat, such as inside a car parked in the sun or near a heat source such as a radiator.

**WARNING! Failure to follow the instructions in this section may result in damage to the components on your bicycle and will void your warranty, but, most importantly, may result in serious personal injury or death. If your bicycle exhibits any signs of damage, do not use it and immediately bring it to your Authorized Specialized Retailer for inspection.**

**WARNING! When placing the frame and/or bicycle in a repair stand, clamp the stand to the seatpost and not the frame. Clamping the frame can cause damage to the frame that may or may not be visible, and you may lose control and fall.**

## 4. SPECIFICATIONS

| FRAME SIZE | S2 | S3 | S4 | S5 |
|---|---|---|---|---|
| STACK (low BB) (mm) | 616 | 620 | 629 | 638 |
| REACH (low BB) (mm) | 437 | 464 | 487 | 511 |
| HEAD TUBE LENGTH (mm) | 95 | 100 | 110 | 120 |
| HEAD TUBE ANGLE (low BB) (°) | 63.9 | 63.9 | 63.9 | 63.9 |
| HEAD TUBE ANGLE (high BB) (°) | 64.3 | 64.3 | 64.3 | 64.3 |
| BB HEIGHT (low BB) (mm) | 347 | 347 | 347 | 347 |
| BB HEIGHT (high BB) (mm) | 354 | 354 | 354 | 354 |
| BB DROP (low BB) (mm) | 28 | 28 | 28 | 28 |
| BB DROP (high BB) (mm) | 21 | 21 | 21 | 21 |
| TRAIL (low BB) (mm) | 132 | 132 | 132 | 132 |
| FORK LENGTH (full) (mm) | 581 | 581 | 581 | 581 |
| FORK RAKE/OFFSET (mm) | 46 | 46 | 46 | 46 |
| FRONT CENTER (low BB) (mm) | 777 | 806 | 833 | 862 |
| CHAINSTAY LENGTH (mm) | 442 | 442 | 442 | 442 |
| WHEELBASE (mm) | 1217 | 1246 | 1274 | 1302 |
| TOP TUBE LENGTH (horizontal) (mm) | 591 | 619 | 644 | 670 |
| SEAT TUBE LENGTH (mm) | 400 | 420 | 440 | 465 |
| SEAT TUBE ANGLE (low BB) (°) | 76 | 76 | 76 | 76 |
| SEAT TUBE ANGLE (high BB) (°) | 76.4 | 76.4 | 76.4 | 76.4 |

## 4.2. GENERAL SPECIFICATIONS

| ITEM | PART # | SPECIFICATION |
|---|---|---|
| HEADSET | S182500005 | 1 1/8" UPPER / 1.5" LOWER DROP-IN BEARINGS |
| SEAT COLLAR DIAMETER | S184700004 | 38.6mm |
| SEATPOST DIAMETER | | 34.9mm |
| DERAILLEUR HANGER | S172600001 | HGR MY18 MTB THRU AXLE DER HANGER |
| BOTTOM BRACKET SHELL | | BSA THREADED 73mm |
| CHAINGUIDE TABS | | ISCG05 |
| REAR HUB SPACING | S170200003 | AXL MY17 EPIC HT THRU-AXLE 148mm X 12mm |
| FRONT TIRE | | 29 x 2.6" |
| REAR TIRE | | 29 x 2.3" |
| MAX TIRE WIDTH | | 66mm |
| SHOCK TRAVEL / STROKE | | 170mm / 205 x 60mm |
| MAX FORK TRAVEL | | 170mm |
| MIN / MAX CHAINRING SIZE | | 28 - 36t |
| MIN REAR BRAKE ROTOR SIZE | | 180mm |

**WARNING!** Specialized frames are compatible **ONLY** with forks that have a specific range of travel. Use of different styled forks or forks with longer travel may result in catastrophic failure of the frame which may result in serious personal injury or death.

**WARNING!** While the Enduro frame is generally compatible with tires up to 29 x 2.6, tire dimensions can vary depending on the manufacturer, and not all forks are designed to accept a larger tire. Always check with the fork manufacturer regarding required clearances.

**CAUTION:** Certain rear shocks do not fit inside the frame due to shock shapes. Verify clearance through the range of travel to ensure there is no interference with the frame.

**CAUTION:** Certain 36t chainrings may not have adequate clearance with the chainstay. If running a 36t chainring, verify spacing and chainline before using it.

## 4.3. TOOLS REQUIRED

| | |
|---|---|
| ■ 2.5, 3, 4, 5, 6, 8mm ALLEN (HEX) KEYS | ■ BLUE THREADLOCKER (LOCTITE 242) |
| ■ T10, T25 TORX | ■ GREEN THREADLOCKER (LOCTITE 603) |
| ■ TORQUE WRENCH | ■ HIGH QUALITY GREASE |
| ■ HIGH PRESSURE SHOCK PUMP | ■ CABLE AND HOUSING CUTTERS |

## 4.4. BOLT SIZE / TOOLS / TORQUE SPECIFICATIONS

**WARNING!** Correct tightening force on fasteners (nuts, bolts, screws) on your bicycle is important for your safety. If too little force is applied, the fastener may not hold securely. If too much force is applied, the fastener can strip threads, stretch, deform or break. Either way, incorrect tightening force can result in component failure, which can cause you to lose control and fall.

Where indicated, ensure that each bolt is torqued to specification. After your first ride, and consistently thereafter, recheck the tightness of each bolt to ensure secure attachment of the components. The following is a summary of torque specifications in this manual:

### GENERAL TORQUE SPECS:

| LOCATION | TOOL | TORQUE (in-lbf) | TORQUE (Nm) |
|---|---|---|---|
| SEAT COLLAR | 4mm HEX | 55 | 6.2 |
| WATER BOTTLE BOSS | 3mm HEX | 25 | 2.8 |
| 12MM REAR AXLE | 6mm HEX | 133 | 15.0 |
| DERAILLEUR HANGER | 2.5mm HEX | 7 | 0.8 |
| CHAINSTAY PROTECTOR | T25 TORX | 7 | 0.8 |
| DOWN TUBE PROTECTOR | T25 TORX / 3mm HEX | 7 | 0.8 |
| SWAT LATCH | T10 TORX | 0.5 [3] | 0.006 [3] |
| ISCG TABS | 4mm HEX | 55 | 6.2 |

[3] **CAUTION:** Tighten SWAT latch screws intermittently until there is no more wiggling of the latch, then turn each screw another ¼ turn.

**CAUTION:** Ensure all bolt and axle contact surfaces are clean and greased.

## BEARING SPECIFICATIONS

| | QTY | LOCATION | DIMENSION | BEARING |
|---|---|---|---|---|
| A | 2 | FORWARD SHOCK EYE | 15 ID x 24 OD x 5 W | 6802-2RS |
| B | 1 | NON-DRIVE SIDE MAIN PIVOT | 15 ID x 26 OD x 7 W | 15267-2RS |
| C | 1 | DRIVE SIDE MAIN PIVOT | 17 ID x 26 OD x 5 W | 6803V |
| D | 2 | LOWER LINK @ MAIN PIVOT | 17 ID x 28 OD x 6 W | 17286-2RS |
| E | 2 | EXTENSION PIVOT | 12 ID x 21 OD x 5 W | 6801-2RS |
| F | 2 | SEATSTAY @ UPPER LINK PIVOT | 12 ID x 21 OD x 5 W | 6801-2RS |
| G | 2 | UPPER LINK @ SEAT TUBE PIVOT | 15 ID x 26 OD x 7 W | 15267-2RS |
| H | 2 | MID LINK @ LOWER LINK PIVOT | 12 ID x 24 OD 6 W | 6901-2RS |
| I | 2 | MID LINK @ UPPER LINK PIVOT | 12 ID x 24 OD 6 W | 6901-2RS |
| J | 4 | DROPOUT (HORST LINK) PIVOTS | 12 ID x 21 OD x 5 W | 6801-2RS |

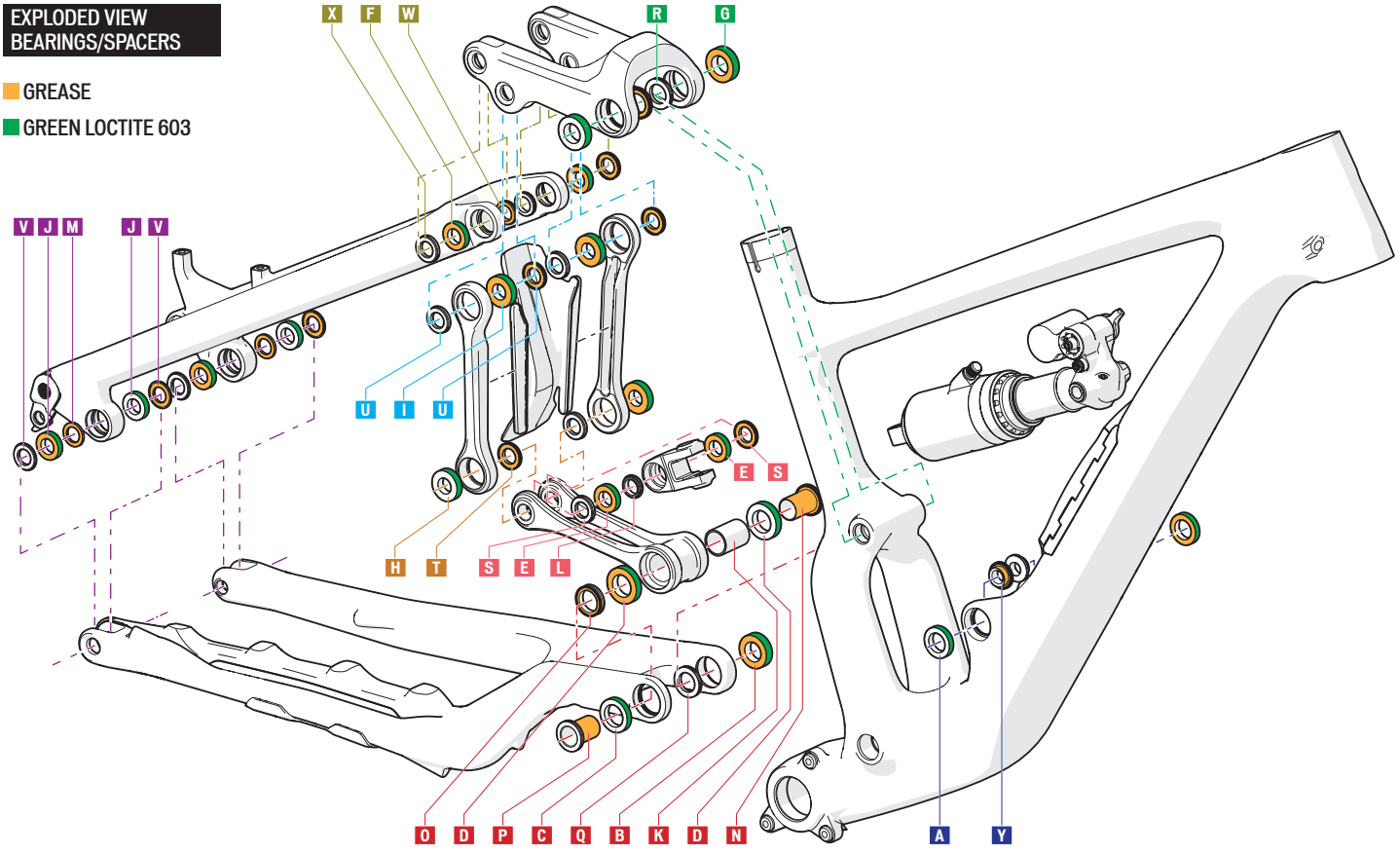
## SPACER/AXLE/BOLT SPECIFICATIONS

| | QTY | LOCATION / ITEM | DIMENSIONS | TOOL | TORQUE (in-lbf/Nm) |
|---|---|---|---|---|---|
| K | 1 | LOWER LINK SLEEVE | 17 ID x 20 OD x 27.5 W | | |
| L | 1 | EXTENSION INNER SPACER | 12 ID x 17.6 OD x 5 W | | |
| M | 2 | DROPOUT INNER SPACER | 12 ID x 18 OD x 2 W | | |
| N | 2 | MAIN PIVOT NON-DRIVE SIDE SLEEVE | 15 ID x 23.5 OD x 27.1 W | | |
| O | 1 | MAIN PIVOT DRIVE SIDE SPACER | 17.1 ID x 23 OD x 4.5 W | | |
| P | 1 | MAIN PIVOT DRIVE SIDE SLEEVE | 15 ID x 23.5 OD x 27.1 W | | |
| Q | 1 | MAIN PIVOT NON-DRIVE SIDE SPACER | 15.1 ID x 23.5 OD x 3 W | | |
| R | 2 | UPPER LINK @ SEAT TUBE SPACER | 15.1 ID x 23.5 OD x 3 W | | |
| S | 2 | EXTENSION OUTER SPACER | 12.1 ID x 20 OD x 3 W | | |
| T | 2 | MID LINK @ LOWER LINK INNER SPACER | 12.1 ID x 20 OD x 3 W | | |
| U | 4 | MID LINK UPPER SPACER | 12.1 ID x 20 OD x 3 W | | |
| V | 4 | DROPOUT OUTER SPACER | 12 ID x 21 OD x 2.5 W | | |
| W | 2 | UPPER LINK @ SEATSTAY INNER SPACER | 12.1 ID x 17.5 OD x 4 W | | |
| X | 2 | UPPER LINK @ SEATSTAY OUTER SPACER | 12.1 ID x 20 OD x 3 W | | |
| Y | 2 | FORWARD SHOCK EYE SPACER | 10.1 ID x 15 OD x 7.5 W | | |
| Z | 1 | MAIN PIVOT AXLE | 15 OD x 82.9 L | 8MM HEX | |
| AA | 1 | MAIN PIVOT BOLT | M12 x 6 L | 6MM HEX | 160 / 18 |
| BB | 1 | MAIN PIVOT WEDGE | M6 x 30 L | 4MM HEX | 62 / 7 |
| CC | 2 | UPPER LINK @ SEAT TUBE BOLT | M15 x 20 L | 8MM HEX | 177 / 20 |
| DD | 1 | MID LINK @ LOWER LINK PIVOT AXLE | 12 OD x 61 L | | |
| EE | 1 | MID LINK @ LOWER LINK PIVOT BOLT | M8 x 16 L | 6MM HEX | 160 / 18 |
| FF | 1 | MID LINK @ LOWER LINK PIVOT SPACER | 8.5 ID x 23.5 OD x 6 W | | |
| GG | 2 | MID LINK @ UPPER LINK AXLE | 12 OD x 17.5 L | | |
| HH | 2 | MID LINK @ UPPER LINK BOLT | M9 x 14 L | 5MM HEX | 106 / 12 |
| II | 2 | DROPOUT (HORST LINK) BOLT | M11 (12 OD) x 30 L | 6MM HEX | 160 / 18 |
| JJ | 2 | UPPER LINK @ SEATSTAY AXLE | 12 OD x 17.5 L | | |
| KK | 2 | UPPER LINK @ SEATSTAY BOLT | M9 x 14 L | 5MM HEX | 106 / 12 |
| LL | 2 | FLIP CHIP SPACER | 8 ID x 15 OD x 6.5 W | | |
| MM | 1 | REAR SHOCK EYE WASHER | 8.3 ID x 13 OD x 0.5 W | | |
| NN | 1 | REAR SHOCK EYE BOLT | M8 x 29 L | 6MM HEX | 160 / 18 |
| OO | 2 | FORWARD SHOCK EYE BOLT | M10 x 15 L | 6MM HEX | 160 / 18 |

EXPLODED VIEW
BEARINGS/SPACERS

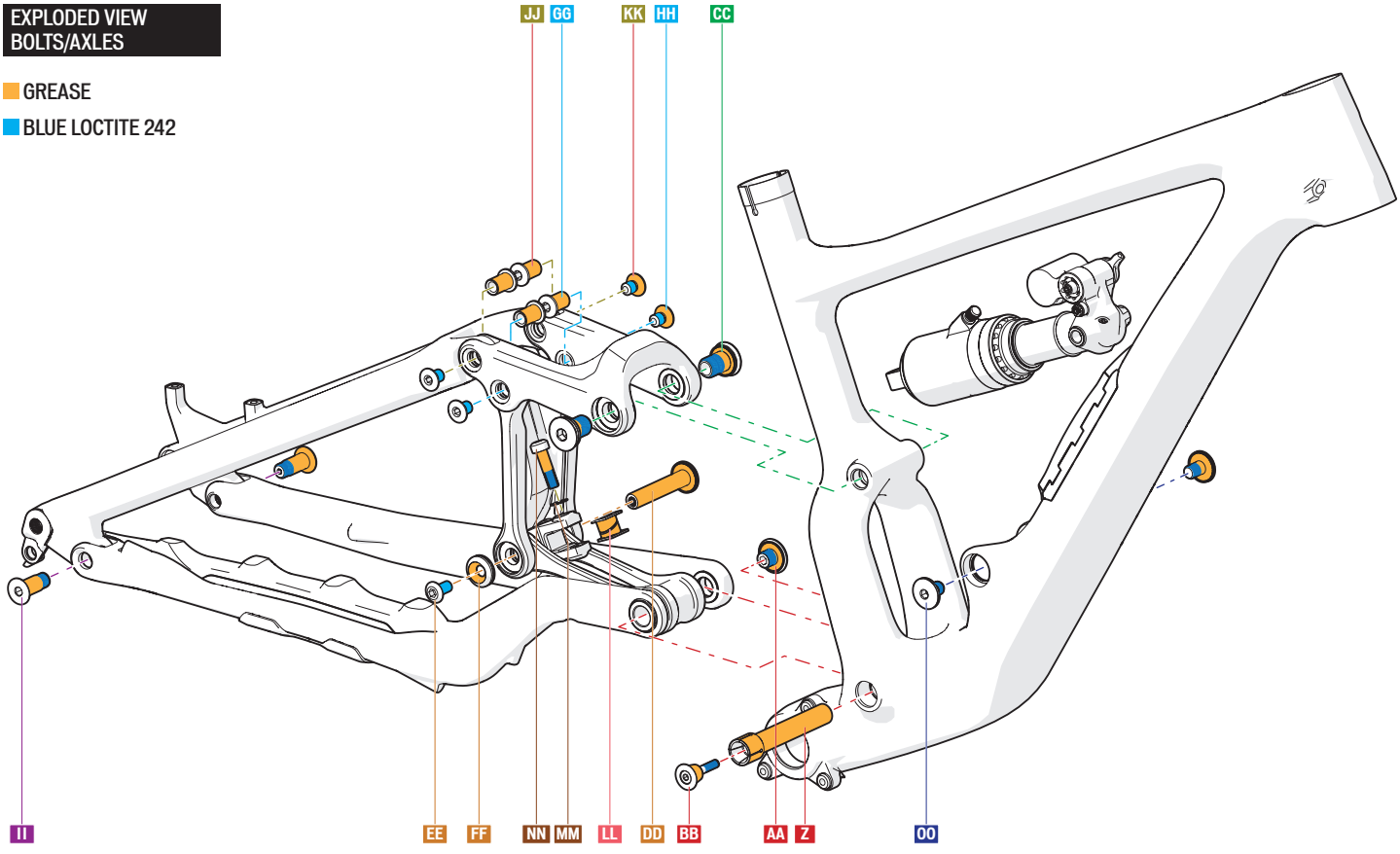
GREASE

GREEN LOCTITE 603



## EXPLODED VIEW BOLTS/AXLES

- GREASE
- BLUE LOCTITE 242



## 5. REAR TRIANGLE PIVOT ASSEMBLY

In order to successfully build the Enduro FSR rear triangle, it is very important to follow the order of operations as outlined in this manual. Modifying the order of assembly will result in a longer build process.

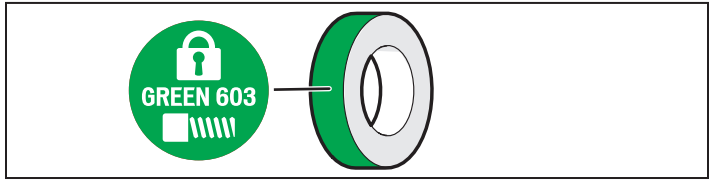
Grease all bearing surfaces before placing the spacers against the bearings. This helps keep the spacers in place when assembling each pivot. Always place the smaller (tapered) surface and/or the spacer seal against the bearing, and the wider surface against the frame or stay.

All pivot bolts are factory treated with a Nylock patch on the threads. If the patch wears off, apply a new coat of Loctite 242, or install new bolts.

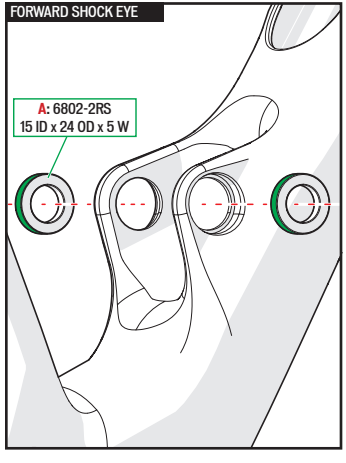
Only apply grease to the unthreaded portion of the bolt shaft and the inner bolt head surface (orange highlighted portion of bolts as shown in the step-by-step assembly illustrations).

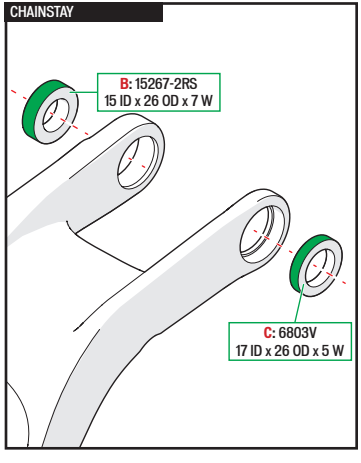
For best alignment results, torque the main pivot axle and wedge assembly first, but do not torque any of the other rear triangle pivot and shock bolts until the rear triangle is fully assembled to the front triangle. Always torque the rear shock eye bolt last.

### 5.1. BEARING INSTALLATION

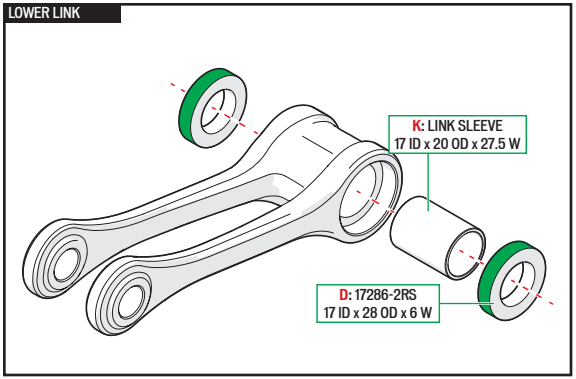



Apply green loctite to all the bearing/bore interface surfaces, then press all the bearings into their respective pivot locations:

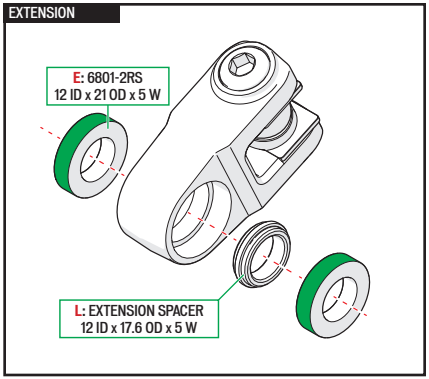


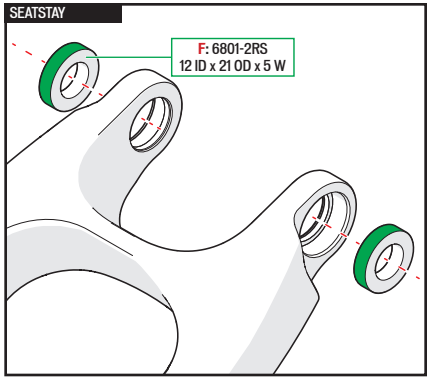
## LOWER LINK



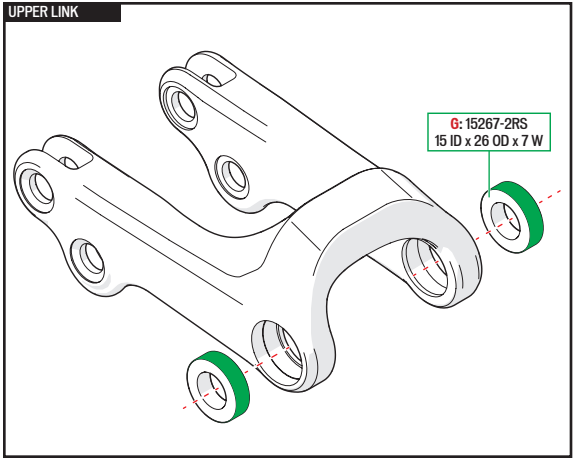

## EXTENSION



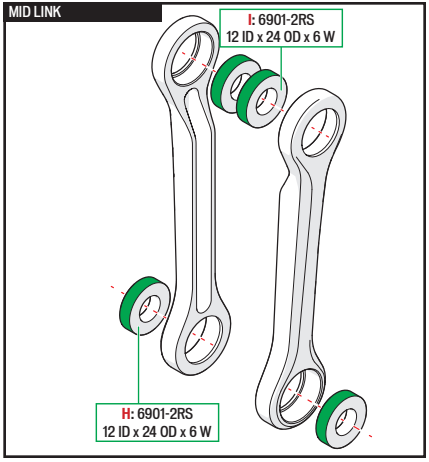

## SEATSTAY



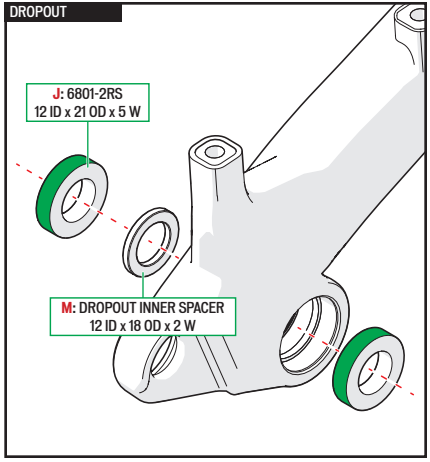

## UPPER LINK



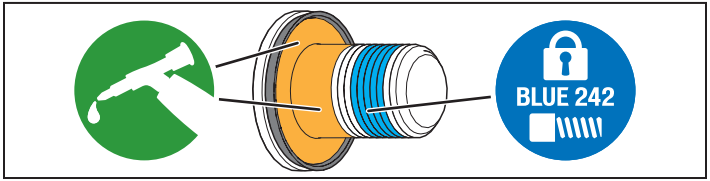

## MID LINK



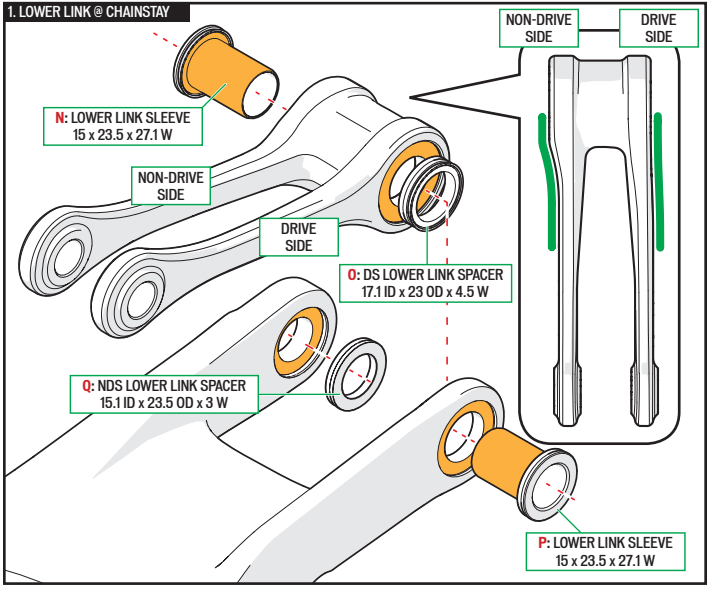

## DROPOUT



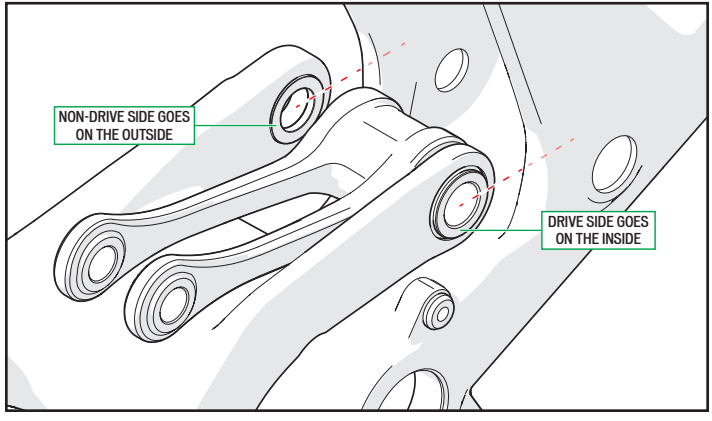
## 5.2. PIVOT ASSEMBLY




To properly assemble the Enduro, grease the surfaces of unthreaded bolt shafts, and spacers that interface with bearings (highlighted ORANGE). Follow the specific order as listed below:

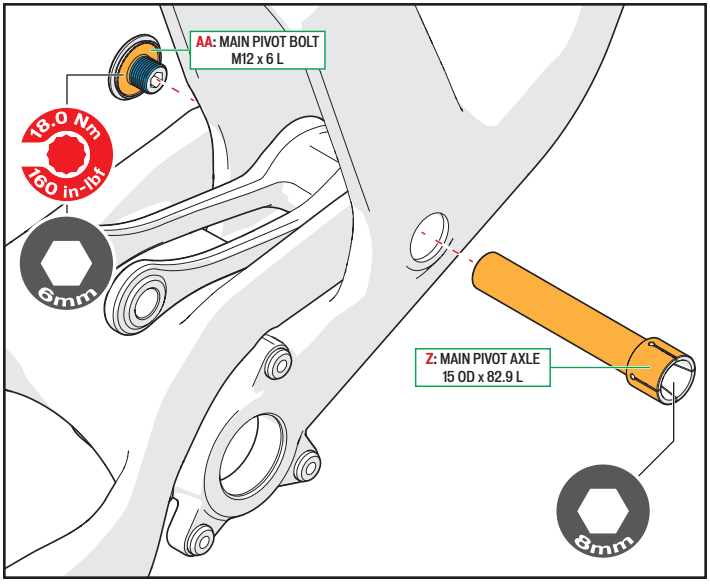



- Grease, then insert the non-drive side sleeve **N** into the link. Please note the link is non-drive side / drive side directional.
- Grease, then place spacer **O** against the drive side bearing, align the link and spacer against the drive side of the seatstay, then grease and slide the drive side sleeve **P** through the drive side main pivot bearing and into the link.
- Grease, then place spacer **Q** against the non-drive side main pivot bearing.

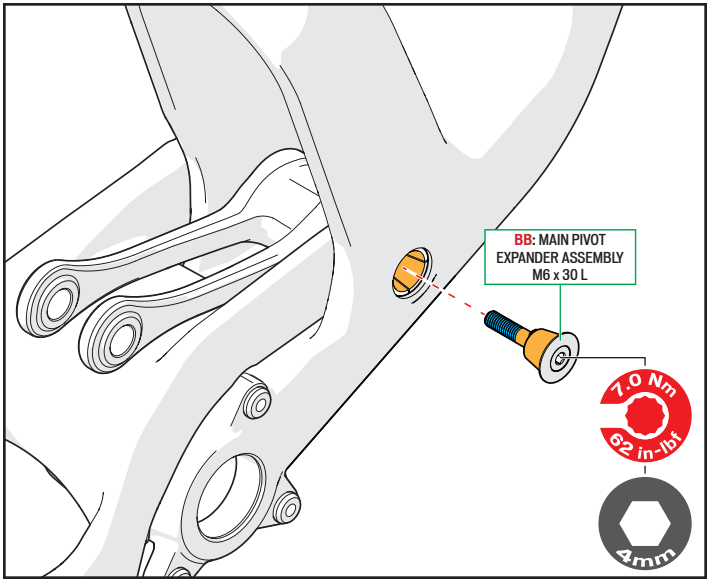



- Align the main pivot of the chainstay and link assembly with the frame's main pivot bore.

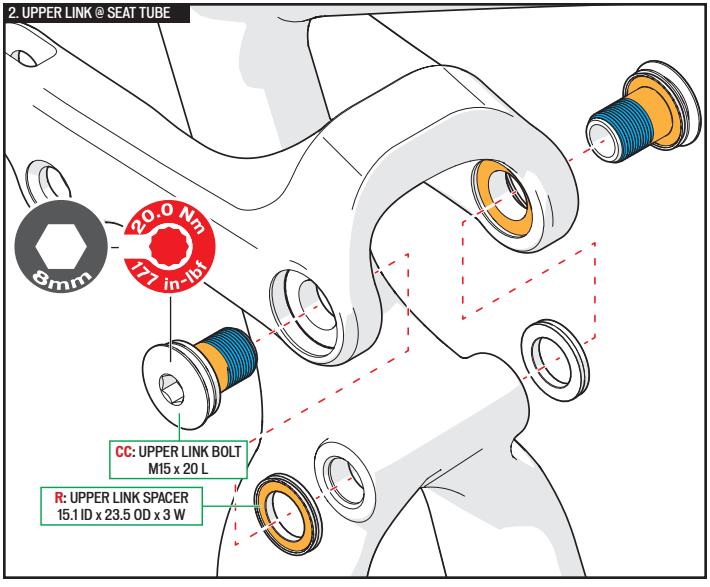
**The drive side portion of the chainstay goes against the inside of the frame, while the non-drive side portion of the chainstay goes on the outside of the frame.**

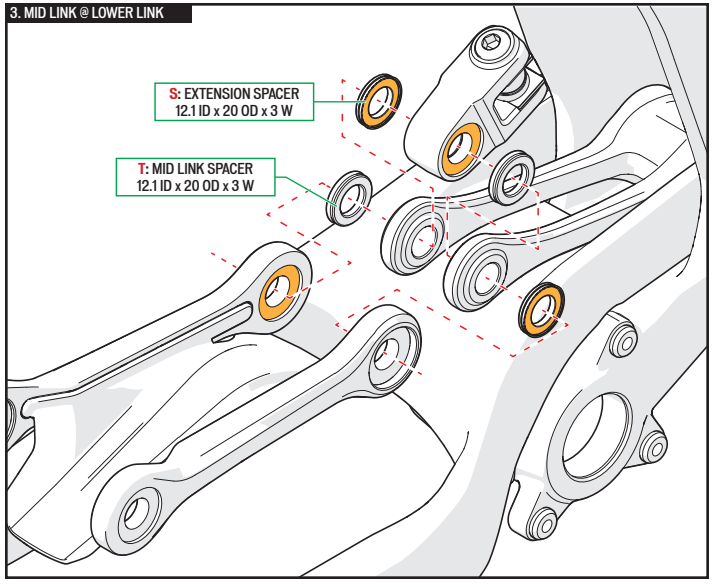



- Grease, then insert the main pivot axle **Z** into the frame.
- Thread the non-drive side main pivot bolt **AA** into the axle. Torque the main pivot bolt to **160 in-lbf / 18 Nm**.




- Grease, then thread the expander assembly **BB** into the main pivot axle and torque the bolt to **62 in-lbf / 7 Nm**.

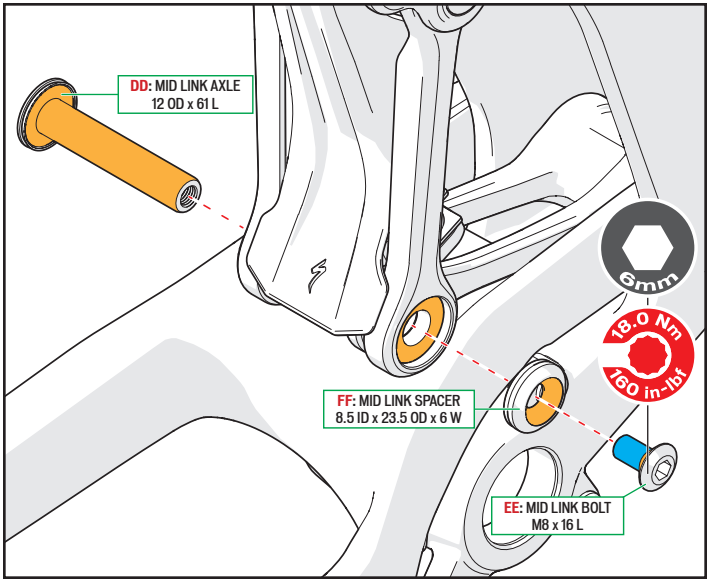


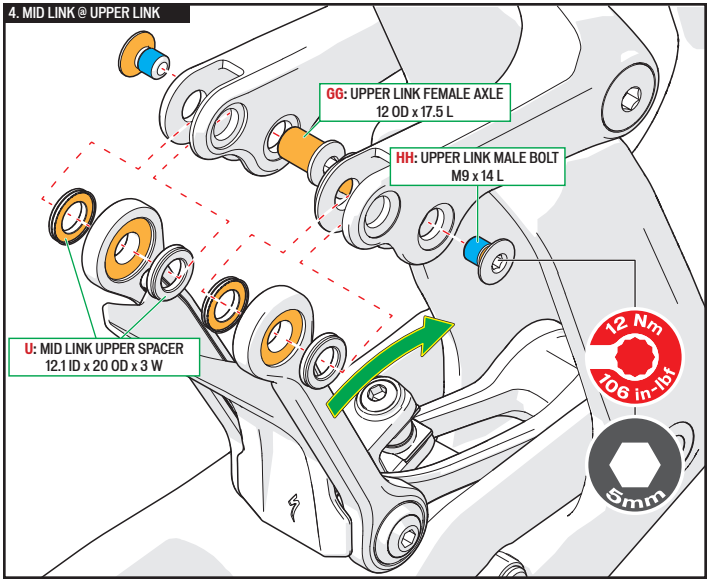

- Grease, then place the upper link spacers (x2) **R** against the upper link bearings.
- Align the upper link with the seat tube pivot bore, then thread the upper link bolts (x2) **CC** into the frame.

**Place a small rag between the upper link and seat tube to prevent any damage to the seat tube.**

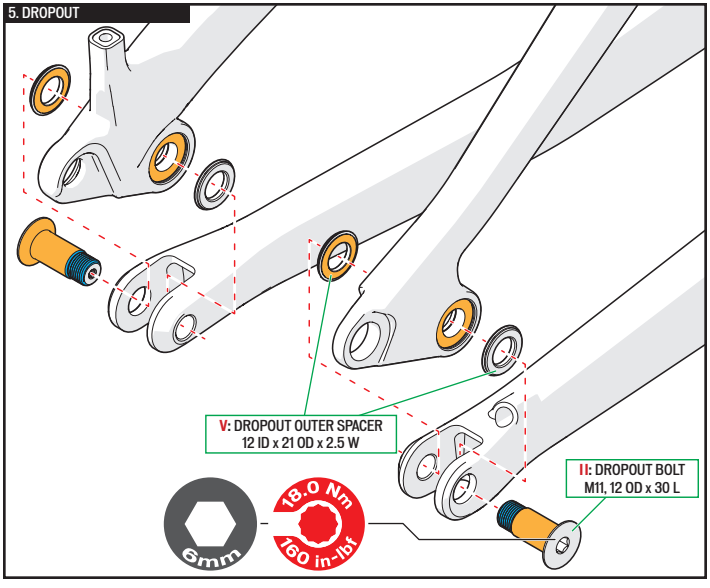
- Grease, then place the extension spacers (x2) **S** against the extension bearings.
- Grease, then place the lower mid link spacers (x2) **T** against the inside surface of the lower mid link bearings.
- Align the mid link and extension with the lower link bore.



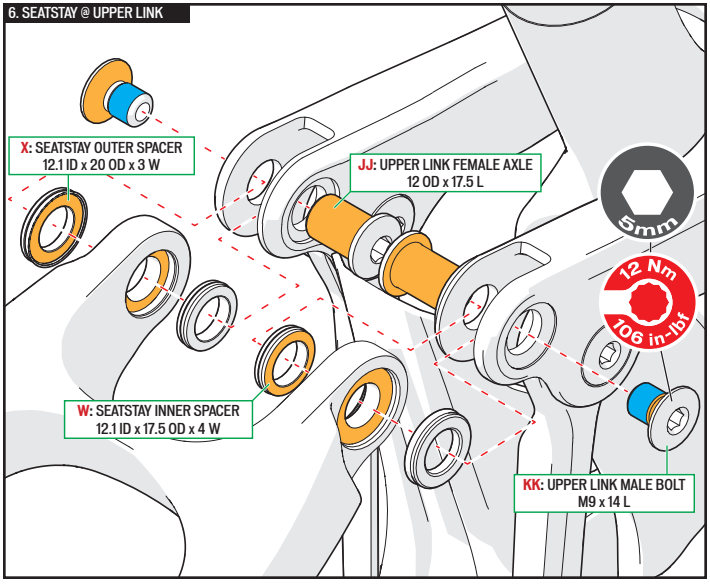

- Grease, then insert the mid link axle **DD** into the non-drive side mid link, place the drive side bolt **EE** through the drive side spacer **FF**, then thread it into the mid link axle.



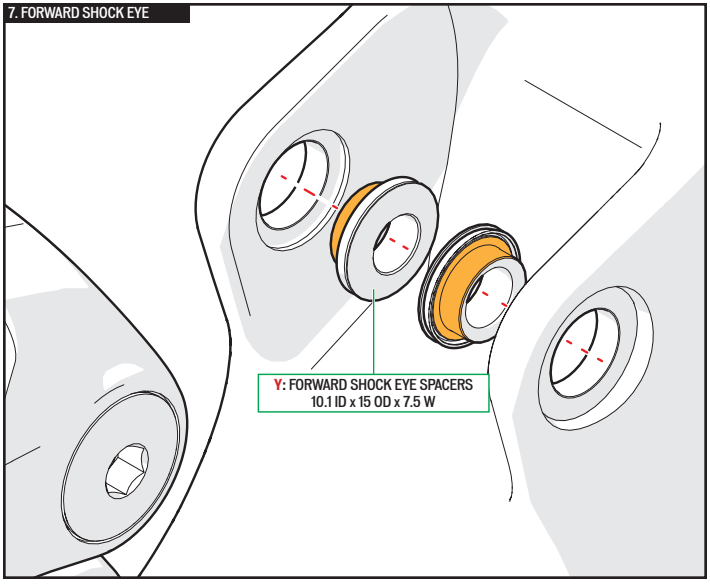

- Grease, then place the upper spacers (x4) **U** against the mid link upper bearings, then rotate the mid link into position to align with the middle bore of the upper link.
- Grease, then slide the upper link axles (x2) **GG** into the upper link middle bore from the inside, then thread the upper link bolts (x2) **HH** into the axles.



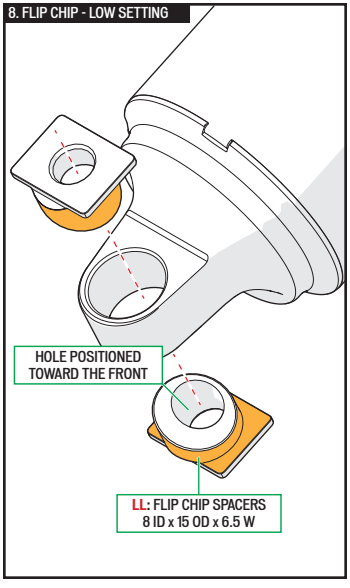

- Grease. then place the dropout (x4) **V** spacers against the dropout bearings, then align the seatstay with the chainstay bore.
- Thread the dropout bolts (x2) **II** into the dropouts.

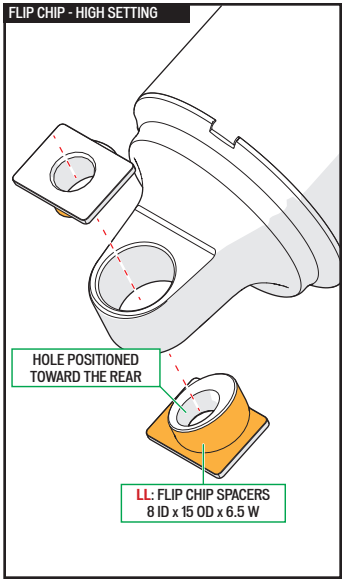



- Grease, then place the inner spacers (x2) **W** and outer spacers (x2) **X** against the seatstay bearings, then align the seatstay with the upper link.
- Grease, then slide the upper link axles (x2) **JJ** into the upper link from the inside, then thread the upper link bolts (x2) **KK** into the axles.

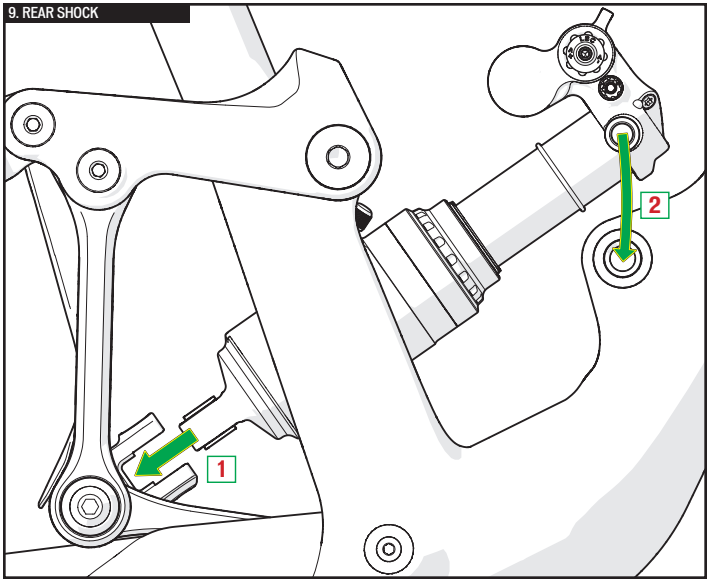



- Grease, then install the forward shock eye spacers (x2) **Y** into the bearings.

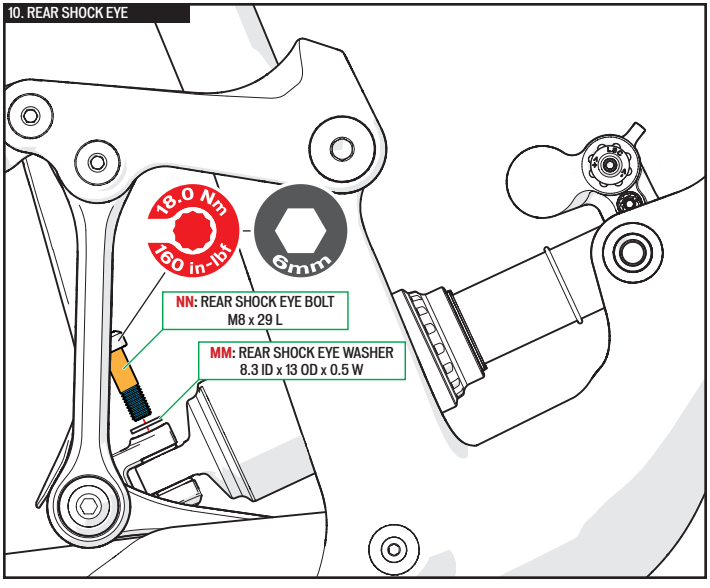


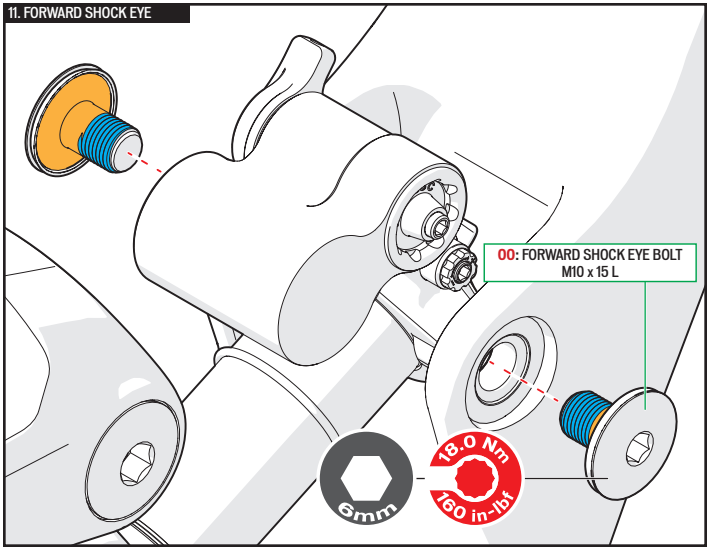

- Grease, then install the Flip Chip spacers (x2) **LL** into the rear shock eye. Choose the high or low chip position.




- Slide the rear shock eye **1** into the extension, then guide the forward shock eye **2** into position between the forward shock eye spacers.




- Grease, then install the rear shock eye washer **MM** and bolt **NN** into the extension. Do not torque until the end.




- Grease, then install the forward shock eye bolts (x2) **OO** into the forward shock eye.
- Torque the pivot bolts to the specs listed below and on P.6, in the following order:
  - **Z/AA**: Main pivot axle/bolt (160 in-lbf / 18 Nm. Already torqued at time of installation)
  - **BB**: Main pivot wedge bolt (62 in-lbf / 7 Nm. Already torqued at time of installation)
  - **CC**: Upper link @ seat tube (177 in-lbf / 20 Nm)
  - **DD/EE**: Mid link @ lower link (160 in-lbf / 18 Nm)
  - **GG/HH**: Mid link @ upper link (106 in-lbf / 12 Nm)
  - **II**: Dropout (160 in-lbf / 18 Nm)
  - **JJ/KK**: Upper link @ Seatstay (106 in-lbf / 12 Nm)
  - **OO**: Forward shock eye (160 in-lbf / 18 Nm)
  - **NN**: Rear shock eye (160 in-lbf / 18 Nm)

## 6. INTERNAL ROUTING

- All housings are routed internally through integrated frame and chainstay tubes.
- Rear brake and shifter housings should be routed starting at the rearward chainstay housing ports until they exit the chainstay ports near the main pivot. The housings then go directly into the corresponding housing ports on the down tube until the exit at the head tube.
- Dropper post housing routing is easiest when starting at the head tube. The integrated housing tube will guide the housing up into the seat tube until it exits the top of the seat tube.
- There are no cable guides needed on the Enduro frames.

## 7. SWAT BIKE EQUIPMENT

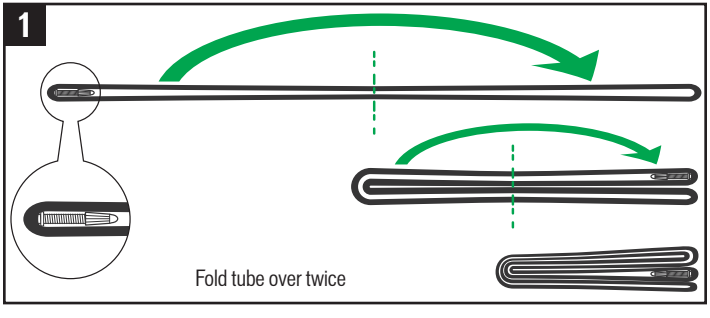
Enduro FSR frames are compatible with certain SWAT (Storage, Water, Air, Tools) components. SWAT components are listed below:

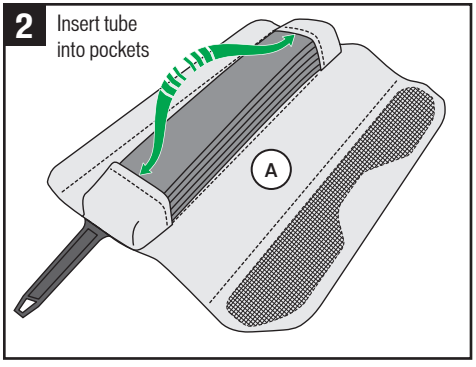
### 7.1. SWAT CC

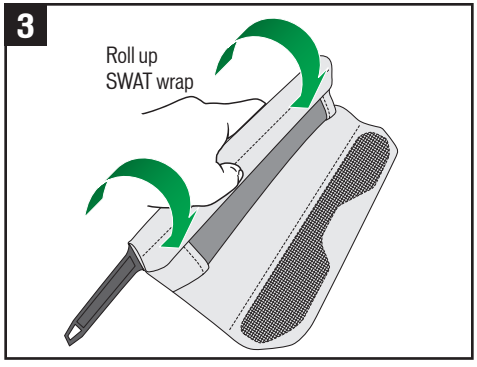
- The **SWAT CC (Conceal Carry) tool includes the** top cap, chain tool and custom EMT mini tool that fits inside the steerer tube. Refer to the SWAT CC User Manual for assembly instructions.

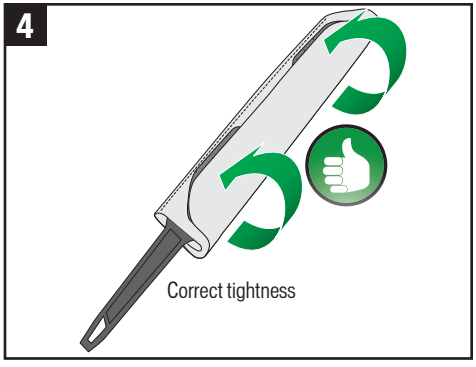
### 7.2. SWAT DOWN TUBE STORAGE

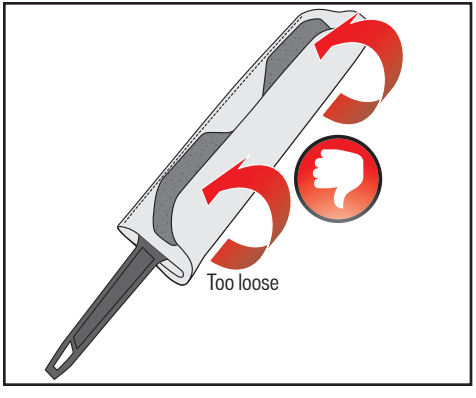
- The SWAT Down Tube Storage is a pair of soft wraps designed to contain a tube, pump and two CO2 cartridges. The wraps fit inside the down tube, through an access port at the base of the down tube to store essentials (Carbon models only).
- The down tube SWAT cavity has a "bulkhead" device to block off the lower part of the down tube. The bulkhead can be positioned in the down tube by slightly loosening the down tube protector upper bolt, sliding the bulkhead forward or backward, then tightening the down tube protector bolt to 7 in-lbf / 0.8 Nm.

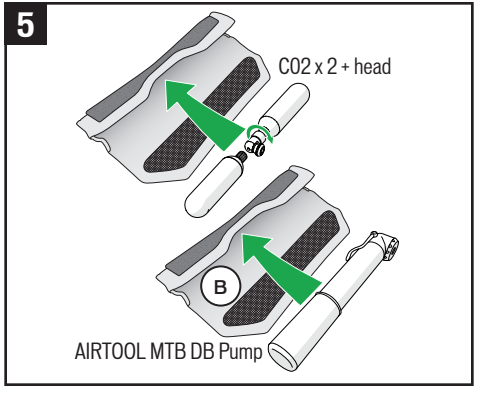


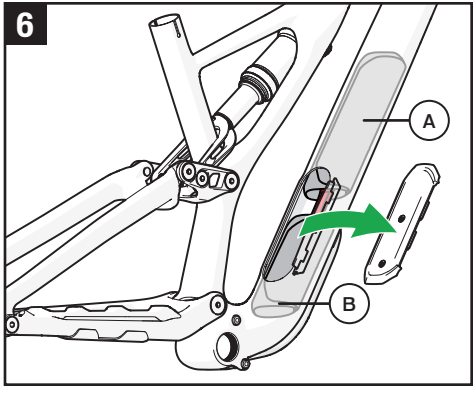

2
Insert tube
into pockets
A


3
Roll up
SWAT wrap


4
Correct tightness


Too loose


5
CO2 x 2 + head
B
AIRTOOL MTB DB Pump


6
A
B

# 8. AIR SHOCK SETUP

When setting suspension, always set the shock first and fork second for air pressure, rebound, then compression.

Make sure you're wearing all gear that would normally be worn on a ride (shoes, helmet, hydration pack if used, etc.).

Please visit the suspension calculator tool at www.specialized.com. The suspension calculator provides a personalized baseline suspension setup recommendation based upon your specific height and weight. The baseline information should be considered as a suspension setup starting point. Adjust your suspension as needed based on your experience/preference and terrain conditions.

## 8.1. SETTING AIR PRESSURE

1. Set the shock compression lever or knob (blue) to the full open or off position, and set the rebound knob to the middle of the click range.
2. Attach a high-pressure shock pump to the air valve and set your shock pressure based on the personalized baseline suspension setup from the suspension calculator.
3. To check the sag %, push the o-ring against the seal, then mount the bicycle while propped up against a wall and sit in the saddle in a normal riding position, without bouncing the suspension. Do not set sag while riding!

Sag is measured as the distance between the o-ring and the shock body's seal, after the rider's weight has been applied to the bike, with no bounce. When the pressure is correctly set, sag should measure approximately 25-30% of stroke, depending on rider experience/preference and terrain conditions. If the rider is approaching 300lbs, sag may exceed the bike's prescribed amount.

To equalize the air pressure, cycle the shock or fork anytime after the air pressure has been adjusted.

CAUTION: Do not exceed the shock manufacturer's maximum pressure. Refer to the shock manufacturer specifications for maximum shock pressures.

## 8.2. ADJUSTING REBOUND

Rebound damping (red knob) controls the rate at which the shock returns after it has been compressed. Each rear shock has a range of rebound clicks to fine-tune the rebound return rate.

- Adjust the rebound based on the range provided in the suspension setup tool for your bike setup and rider weight, as well as other factors like rider experience/preference and terrain conditions, then fine-tune during the ride if necessary. If you do not have access to the suspension setup tool, start in the middle of the click range.
- Clockwise for slower rebound (heavier riders, slow speed, bigger hits).
- Counter-clockwise for faster rebound (lighter riders, higher speeds, small bumps, more traction).

It is best not to veer too far from the recommended clicks, since being too far out of the accepted range can negatively impact the ride experience.

## 8.3. ADJUSTING COMPRESSION

Compression damping (blue knob) controls the amount of support of the shock platform. In other words, the shock's ability to resist low-speed pedaling forces while still being able to absorb high-speed compression forces.

Please refer to the suspension manual for specifics about the compression options provided by your suspension. Typically, a suspension is equipped with some or all of the following settings:

- **OPEN:** Low-speed compression setting optimized for the perfect balance of control and plushness for steep, aggressive descents.
- **PEDAL:** Moderate low-speed compression setting is activated for an optimal blend of pedaling efficiency and bike control on variable terrain.
- **LOCK:** The firmest low-speed compression setting is activated for maximum pedaling efficiency.

## 9. SETUP DATA

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | | | | | | |
| RIDER WEIGHT | | | | | | |
| FORK PSI | | | | | | |
| FORK REBOUND (# of clicks from full slow) | | | | | | |
| FORK COMPRESSION (# of clicks from full firm) | | | | | | |
| SHOCK PSI | | | | | | |
| SHOCK REBOUND (# of clicks from full slow) | | | | | | |
| SHOCK COMPRESSION (# of clicks from full firm) | | | | | | |

## 10. SMALL PARTS

| ITEM | DESCRIPTION |
|---|---|
| S182500005 | HEADSET ASSEMBLY - 1 1/8" / 1.5" |
| S189900088 | THROUGH AXLE 148MM SPACING, 172MM LENGTH, 12MM |
| S184700004 | SEATPOST CLAMP - 38.6MM FOR 34.9MM SEATPOSTS |
| S172600001 | THRU AXLE DER HANGER |
| S199900096 | MYLAR PROTECTOR SHEET |
| S199900093 | SWAT DOOR ASSEMBLY |
| S199900094 | SWAT DOOR LATCH KIT |
| S199900091 | DOWN TUBE PROTECTOR |
| S199900092 | MID LINK FENDER |
| S199900090 | DOWN TUBE BULKHEAD |
| S190600004 | ENDURO BEARING KIT |
| S194200052 | ENDURO BOLT KIT |
| S196300002 | SHOCK EXTENSION KIT |
| S194200053 | SHOCK HARDWARE KIT |
| S194300008 | LOWER LINK ASSEMBLY (alloy) |
| S194300009 | LOWER LINK ASSEMBLY (carbon) |
| S194300010 | MID LINK ASSEMBLY (alloy) |
| S194300011 | MID LINK ASSEMBLY (carbon) |
| S194300012 | UPPER LINK ASSEMBLY (alloy) |
| S194300013 | UPPER LINK ASSEMBLY (carbon) |

**SPECIALIZED BICYCLE COMPONENTS**
15130 Concord Circle, Morgan Hill, CA 95037 (408) 779-6229