

# Scalpel

## Owner's Manual Supplement

 **WARNING**

**READ THIS SUPPLEMENT AND YOUR  
CANNONDALE BICYCLE OWNER'S MANUAL.**

Both contain important safety information.

Keep both for future reference.



## Safety Messages

In this supplement, particularly important information is presented in the following ways:



### WARNING

Indicates a hazardous situation which, if not avoided, may result in death or serious injury.

### NOTICE

Indicates special precautions that must be taken to avoid damage.

The following symbols are used in this manual:

Symbol	Name	Description
	NGLI-2 synthetic grease	Apply NGLI-2 synthetic grease.
	Carbon gel	Apply carbon gel (friction paste) KF115/
	Medium-strength removable thread lock	Loctite® 242, Loctite® 243

## Cannondale Supplements

This manual is a “supplement” to your [Cannondale Bicycle Owner’s Manual](#).

This supplement provides additional and important model specific safety, maintenance, and technical information. It may be one of several important manuals/supplements for your bike; obtain and read all of them.

Please contact your Authorized Cannondale Dealer immediately if you need a manual or supplement or have a question about your bike. You may also contact us using the appropriate country/region/location information.

You can download Adobe Acrobat PDF versions of any manual/supplement from our website: <http://www.cannondale.com>.

## Contacting Cannondale

### Cannondale USA

Cycling Sports Group, Inc.  
1 Cannondale Way  
Wilton, CT 06897 USA  
1-800-726-BIKE (2453)

### CSG Europe (Woudenberg)

Cycling Sports Group Europe B.V.  
Geeresteinselaan 57  
3931JB Woudenberg  
The Netherlands  
PH: 00.31.541.200374

### International Distributors

Consult our website to identify the appropriate Cannondale Dealer for your region.

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## Your Cannondale Dealer

To make sure your bike is serviced and maintained correctly, and that you protect applicable warranties, please coordinate all service and maintenance through your Authorized Cannondale Dealer.

### NOTICE

Unauthorized service, maintenance, or repair parts can result in serious damage and void your warranty.

## SAFETY INFORMATION

### Important Composites Message

#### **WARNING**

Your bike (frame and components) is made from composite materials also known as “carbon fiber.”

All riders must understand a fundamental reality of composites. Composite materials constructed of carbon fibers are strong and light, but when crashed or overloaded, carbon fibers do not bend, they break.

For your safety, as you own and use the bike, you must follow proper service, maintenance, and inspection of all the composites (frame, stem, fork, handlebar, seat post, etc.) Ask your Cannondale Dealer for help.

We urge you to read PART II, Section D. “Inspect For Safety” in your [Cannondale Bicycle Owner’s Manual](#) BEFORE you ride.

**You can be severely injured, paralyzed or killed in an accident if you ignore this warning.**

### Inspection & Crash Damage Of Carbon Frames/Forks

#### **WARNING**

##### **After A Crash Or Impact:**

Inspect frame carefully for damage. See PART II, Section D. Inspect For Safety in your [Cannondale Bicycle Owner’s Manual](#).

Do not ride your bike if you see any sign of damage, such as broken, splintered, or delaminated carbon fiber.

##### **Any of the following may indicate a delamination or damage:**

- An unusual or strange feel to the frame
- Carbon which has a soft feel or altered shape
- Creaking or other unexplained noises,
- Visible cracks, a white or milky color present in carbon fiber section

**Continuing to ride a damaged frame increases the chances of frame failure, with the possibility of injury or death of the rider.**

## Intended Use



The intended use of all models is ASTM CONDITION 3, Cross-Country.

### WARNING

Please read your [Cannondale Bicycle Owner's Manual](#) for more information about Intended Use and Conditions 1-5.

## Servicing

### WARNING

**This supplement may include procedures beyond the scope of general mechanical aptitude.**

Special tools, skills, and knowledge may be required. Improper mechanical work increases the risk of an accident. Any bicycle accident has risk of serious injury, paralysis or death.

**To minimize risk we strongly recommend that owners always have mechanical work done by an Authorized Cannondale Dealer.**

## Tightening Torques

Correct tightening torque for the fasteners (bolts, screws, nuts) on your bicycle is very important to your safety. Correct tightening torque for the fasteners is also important for the durability and performance of your bicycle. We urge you to have your dealer correctly torque all fasteners using a torque wrench. If you decide to torque fasteners yourself always use a torque wrench.

### Find Tightening Torque Information:

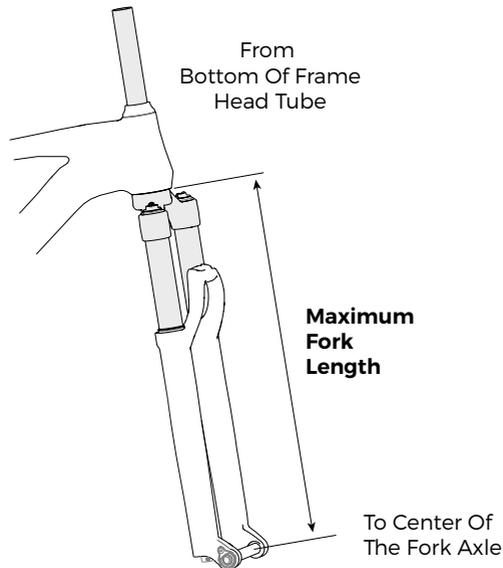
The wide range of bicycle models and components used means that a listing of tightening torque would be out of date by the time it was published. Many fasteners should be installed with a thread locking adhesive such as Loctite®.

**To determine correct tightening torque and any adhesive application for a fastener we ask you to check:**

- Many components are marked. On-product marking is becoming common.
- Torque specs in the component manufacturers instructions shipped with your bicycle.
- Torque specs listed on the websites of component manufacturers.
- With your dealer. Dealers have access to current data and have experience with correct torque for most fasteners.

## Maximum Fork Length

Maximum Fork Length is an important frame safety testing specification for front suspension mountain bikes. You must observe the measurement when installing headset parts, headset adapters, installing and adjusting a fork, and selecting replacement forks.



### **WARNING**

You must select a replacement fork not only based on head tube diameter but the critical factor of frame maximum fork length.

Do not exceed maximum fork length. Exceeding the **MAXIMUM FORK LENGTH** limit can overload the frame causing it to break while riding. Your retailer **MUST** follow and observe this specification for your bike.

You can be severely injured, paralyzed or killed in an accident if you ignore this warning.

## Rear Shocks

### **WARNING**

Select only compatible shocks and forks for your bike. Do not modify your bike in any way to mount one.

Have your shock or fork installed by a professional bike mechanic

Riding with the wrong rear shock can damage the frame. You could have a serious accident. Make sure the total travel, eye-to-eye length, and stroke length of the rear shock you select meet the "Specifications" listed in this manual.

When selecting different shocks or forks for your bike, make sure that the shock or fork you select is compatible with your bike's design and how you will use your bike.

**You can be severely injured, paralyzed or killed in an accident if you ignore this warning.**

## Minimum Seat Post Insert

### **WARNING**

**Make sure at least 100 mm of the seat post is inserted into the frame at all times.**

Failure to insert the seat post at least 100 mm can place a very high stress on the seat tube top tube junction causing the frame to fail while riding.

Remove the seat post. Measure 100 mm from the bottom of the seat post. Use a permanent marker to mark the post at 100 mm.

When adjusting the seat post height in the seat tube, never adjust the seat post so that the line you mark is above the top edge of the seat tube.

You must also be aware that bicycle seat posts are permanently marked by the manufacturer with a "minimum insert" line on the seat post itself. You must not rely on this marking as an indication of the proper minimum seat post insertion depth.

**You can be severely injured, paralyzed or killed in an accident if you ignore this warning.**

## Tire Size x Maximum Width

### WARNING

**Observe the Tire Size x Maximum Width for your bike found in the “Specifications” page of this manual.**

Mounting the wrong size tires can result in the tires hitting the fork or frame when riding. If this happens, you can lose control of your bike and you can be thrown off, a moving tire can be stopped because it touches the fork or frame.

Do not mount oversized tires, ones that rub or hit the fork or frame, ones that result in too little clearance, or ones that can hit the fork or frame, saddles, seat post, or seat post clamps seat post when the suspension is fully compressed or when riding.

Take care that the tires you select are compatible with your bike’s fork or frame design. Also, be sure to follow the manufacturer’s recommendations of your front fork and rear shocks.

When you are considering tires for your bike consider...

The actual measured size of a tire may be different than its sidewall marking. Each time you mount a new tire, take the time to inspect the actual clearance between the rotating tire and all parts of the frame. The U.S. Consumer Product Safety Commission (CPSC) requires at least 1/16” (1.6 mm) tire clearance from any part of the bike. Allowing for lateral rim flex and a wheel or rim that is out-of-true will likely mean choosing a rear tire that provides even more clearance than the CPSC recommends.

**Ask your authorized brand retailer for the right tires for your bike and its particular components! You can be severely injured, paralyzed or killed in an accident if you ignore this warning.**

## Serial Number

The serial number is located on the bottom bracket. It is a 7-character barcode (1). Use this serial number to register your bike.

To register your bike: go to the **Product Registration** section of our website at [www.cannondale.com](http://www.cannondale.com)



1. Serial Number
2. Product Codes

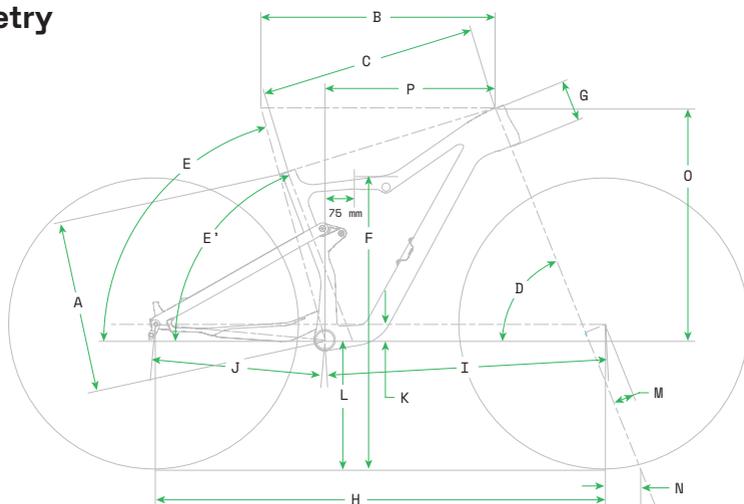
## TECHNICAL INFORMATION

### Specifications

Item	Specification
Rear Travel	100 mm, SE: 120 mm
Head Tube	UPR: 1-1/8", LWR: 1-1/2"
Headset	FSA Orbit C-40-ACB No. 42
Bottom Bracket: Type/ Width	PF30 / 83 mm
Front Derailleur	N/A
Seat Post: Dia./Binder	31.6 mm / 34.9 mm
▲ Min. Seat Post Insert	100 mm
▲ Tire Size x Max. Width	622 × 61 mm
▲ Max. Fork Length	532 mm
Rear Shock: Eye-To-Eye / Stroke / Bushing Width	190 mm / 40 mm / FT: M8 × 25 mm, RR: None SE: 190 mm / 45 mm / FT: M8 × 25 mm , RR: None
Sag	25%, 10 mm SE: 25%, 11 mm
Chain Guide	Integrated w/ Main Pivot
Rear Brake: Mount Type / Min/Max Rotor Dia	Post Mount / 160 mm / 180 mm
Rear Axle: Type/Length	Collection 2022: M12 × 1.0p x 179mm Overall Length MY20-CY21: M12 × 1.0p x 176mm Overall Length
Rear Wheel	Collection 2022 : 148 mm boost spacing MY20-CY21: 3 mm Boost Ai Offset to NDS/ Hollowgram SpideRing: Ai Offset / SRAM Chaining: +6 mm Offset
▲ Intended Use	ASTM Condition 3, Cross Country, Marathon, Hardtails
▲ Max. Weight Limit Total (rider+all equipment):	305 lbs. / 138 kg.

All Specifications subject to change without notice.

## Geometry



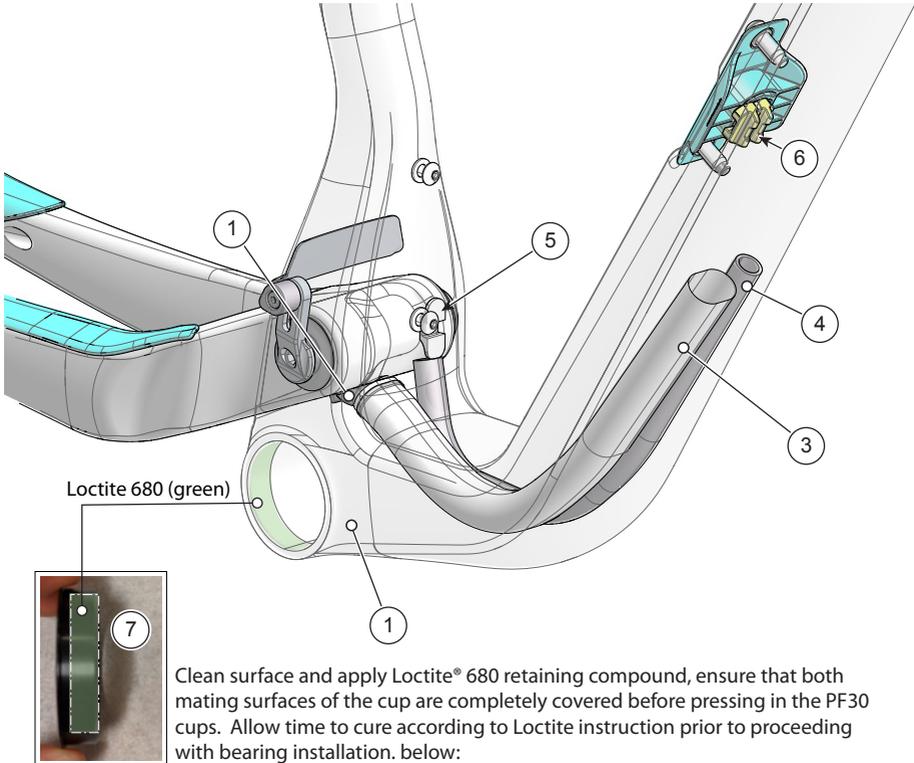
### SCALPEL

### SCALPEL SE

Size	SCALPEL				SCALPEL SE			
	S	M	L	XL	S	M	L	XL
Wheel Size (in)	29				29			
A Seat Tube Length (cm)	43	44	48	52	43	44	48	52
B Top Tube Horizontal (cm)	56.7	59.9	62.2	64.4	58	60.2	62.5	64.8
C Top Tube Actual (cm)	53.1	55.3	57.7	60.3	53.1	55.3	57.7	60.3
D Head Tube Angle	68				67			
E Seat Tube Angle Effective	74.5				75.5			
E' Seat Tube Angle Actual	68.8	69.3	69.6	70	67.8	68.3	68.7	69.1
F Standover (cm)	74.3	73.9	74	73.7	75.5	75.6	75.8	76.0
G Head Tube Length (cm)	9.5	10.5	11.5	12.5	9.5	10.5	11.5	12.5
H Wheelbase (cm)	112.8	115.1	117.5	119.9	112.5	114.8	117.2	119.6
I Front Center (cm)	69.5	71.8	74.2	76.6	69	71.4	73.8	76.2
J Chain Stay Length (cm)	43.6				43.6			
K Bottom Bracket Drop (cm)	4				3.2			
L Bottom Bracket Height (cm)	33.1				34.4			
M Fork Rake (cm)	5.5				4.4			
N Trail (cm)	9				11.2			
O Stack (cm)	58.2	59.1	60.1	61	59.2	60.2	61.1	62.1
P Reach (cm)	41.5	43.5	45.5	47.5	40.4	42.4	44.4	46.4
Head Tube Height (cm)	51.2	51.2	51.2	51.2	53.2	53.2	53.2	53.2
Rear Travel (cm)	10				12			
Shock Eye-to-Eye (mm)	19				19			
Rear Stroke (mm)	40				45			
Recommended Sag 25% (mm)	10				11			

Specifications subject to change without notice.

## Bottom Bracket - PF30 / 83 mm MTB



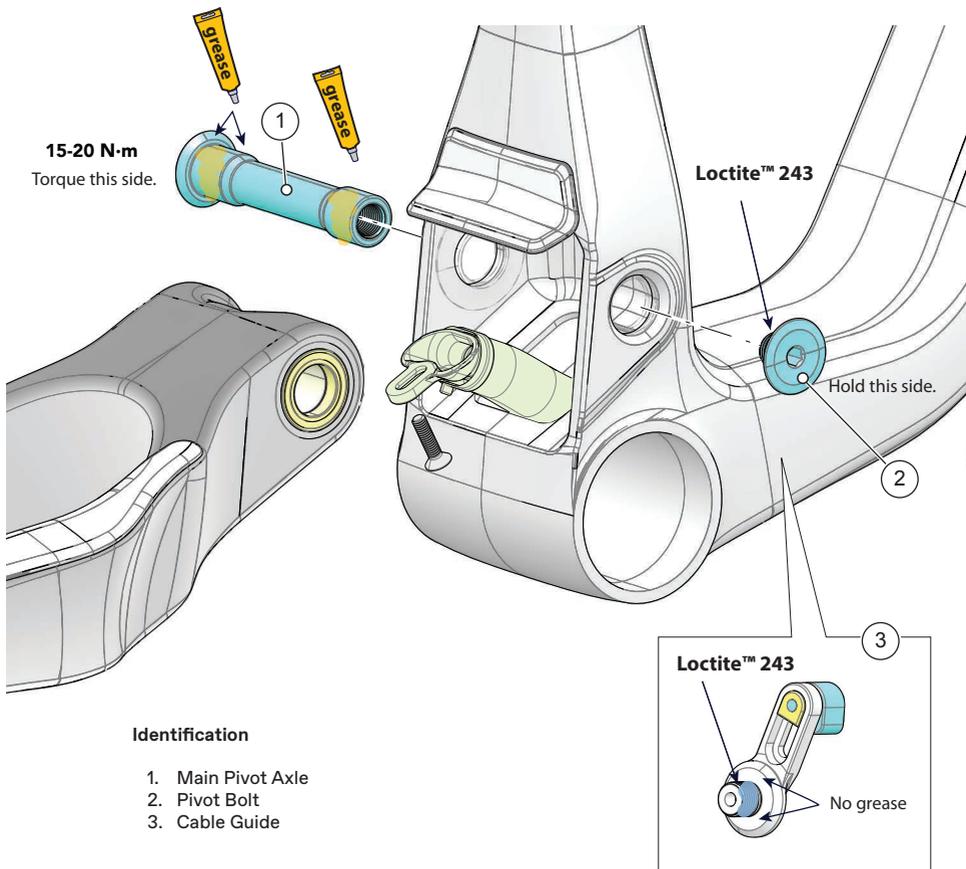
### Identification

- |                   |   |
|-------------------|---|
| 1. Frame BB Shell | 5. Internal Dropper cable guide           |
| 2. Cable Funnel   | 6. Cable Sheath and Dropper Zip Tie Mount |
| 3. Cable Sheath   | 7. Bearing Cup                            |
| 4. Dropper Foam   |   |

### NOTICE

To avoid serious damage to the frame, follow the manufacturer's instruction for assembly and installation of the bearing system. Use the specified bottom bracket tools when servicing. Consult with your Cannondale Dealer on the quality and compatibility of any proposed replacement component. Do not use chemical solvents to clean. Do not remove frame material or use surfacing tools on bottom bracket shell. Frame damage, caused by improper components, component installation or removal is not covered by your warranty.

## Main Pivot



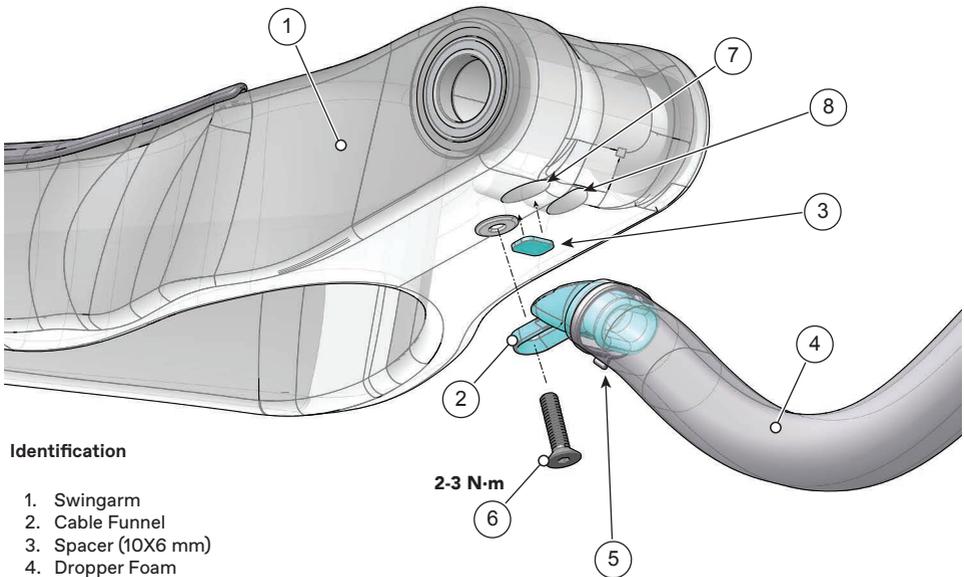
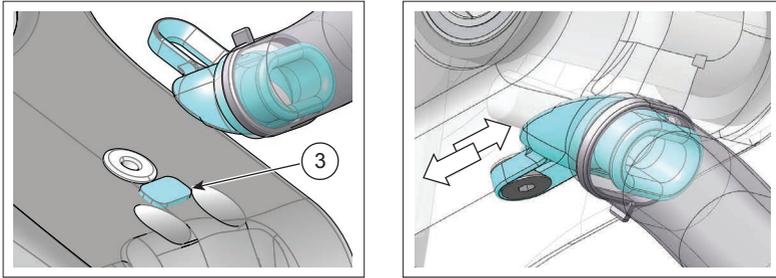
Lightly apply grease to outside surfaces of the main pivot axle (1).

Insert the main pivot axle into non-drive side.

Apply Loctite 243 to either the pivot bolt (2) or the chain guide (3) threads. Do not use grease on the chainguide. Grease could result in unwanted rotation of this part.

**Important: Hold the pivot bolt and tighten main pivot axle to the specified torque.**

## Swingarm Cable Funnel

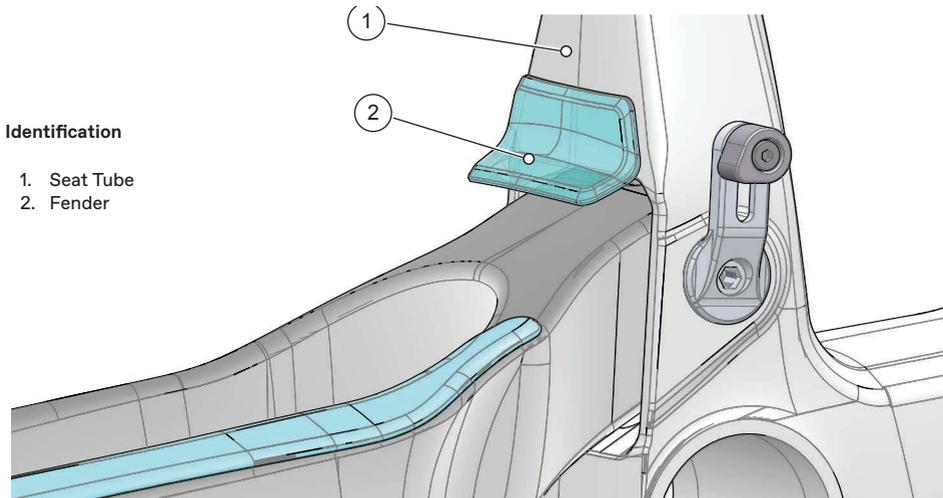


### Identification

1. Swingarm
2. Cable Funnel
3. Spacer (10X6 mm)
4. Dropper Foam
5. Tie
6. Bolt
7. Rear Derailleur
8. Rear Brake

Item (3), installed before the cable funnel (2) is installed prevents chain funnel rotation while cable are installed. Center this part on the swingarm in front of the rivnut (9).

## Seat Tube Fender



### Identification

1. Seat Tube
2. Fender

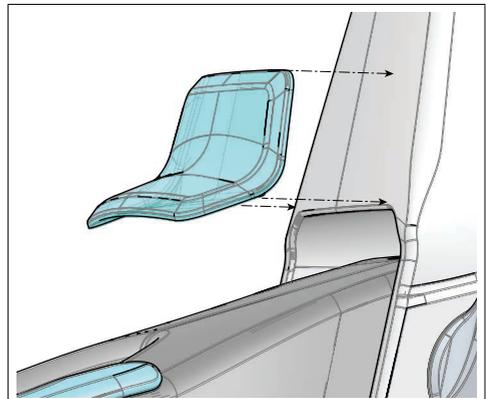
The fender (2) shields the frame opening from intrusion and accumulation of dirt, debris and water thrown by a rotating tire.

The fender has adhesive tape on the seat tube (1) facing surface.

If the fender is damaged, the fender should be removed by carefully lifting the fender progressively around its entire edge from the frame with a plastic or other non-marring tool to prevent damage to the frame finish.

Before applying a new fender, clean the frame and wipe the area behind the fender with isopropyl alcohol and allow it to dry.

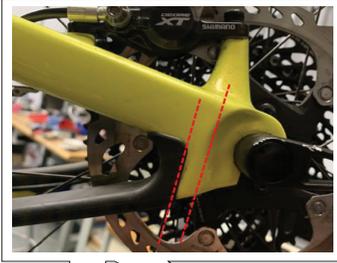
Center the new fender on the opening and align the bottom edge with the opening.



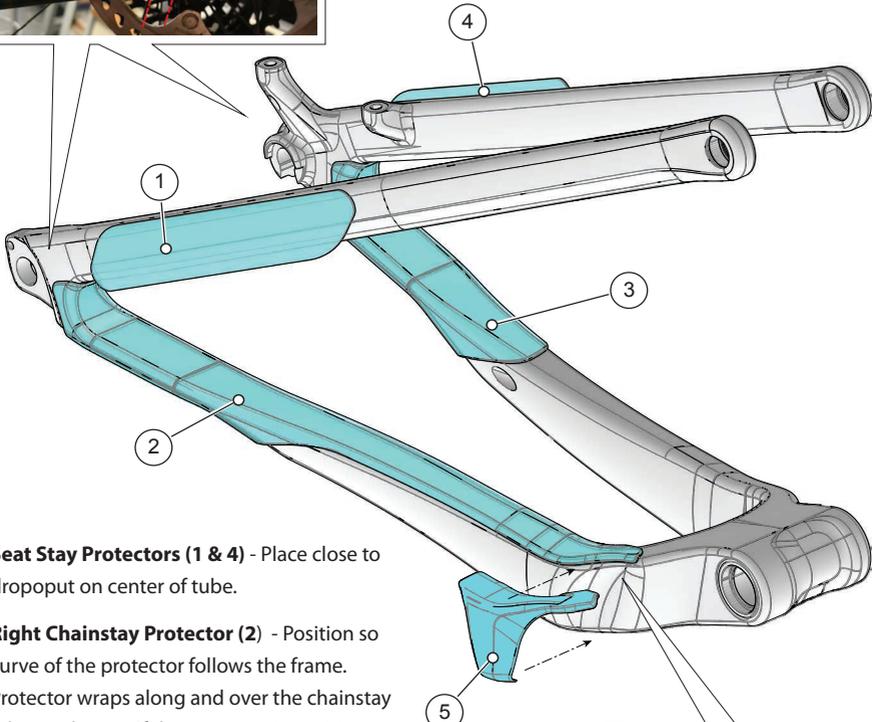
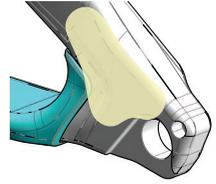
### NOTICE

Check and replaced if necessary as part of Pre-Ride and Routine maintenance checks. See "Replacement Parts."

## Seat Stay / Chain Stay Protectors



This inside surface is a chain controlling surface. Incidental chain contact can result in normal wear leading to paint chipping or light scratches.



**Seat Stay Protectors (1 & 4)** - Place close to dropout on center of tube.

**Right Chainstay Protector (2)** - Position so curve of the protector follows the frame. Protector wraps along and over the chainstay edge as shown. If the protector is position too far back, the chain may chip the paint finish.

**Chainstay Protectors (2 & 3)** - Make sure the rearward edge of the protectors are parallel with edge of the dropout.

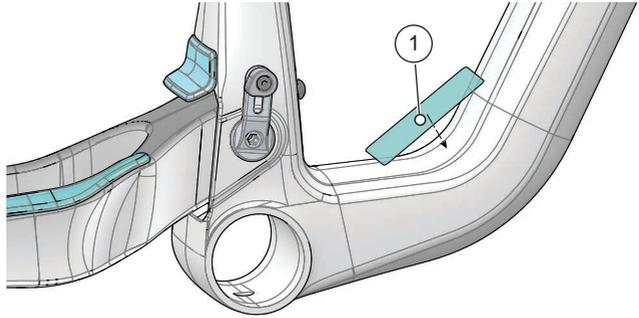
**Chainstay Protector (5)** - Position under item (2).



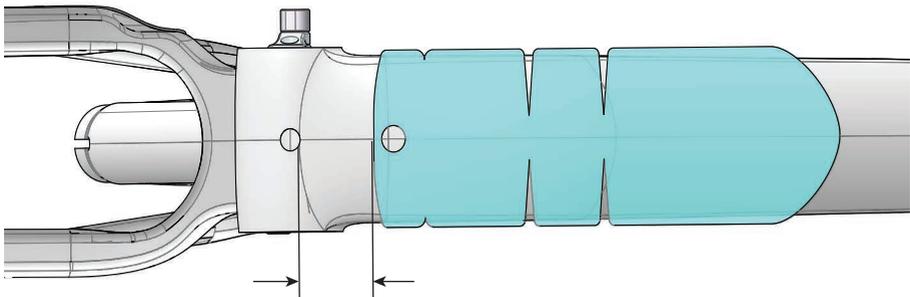
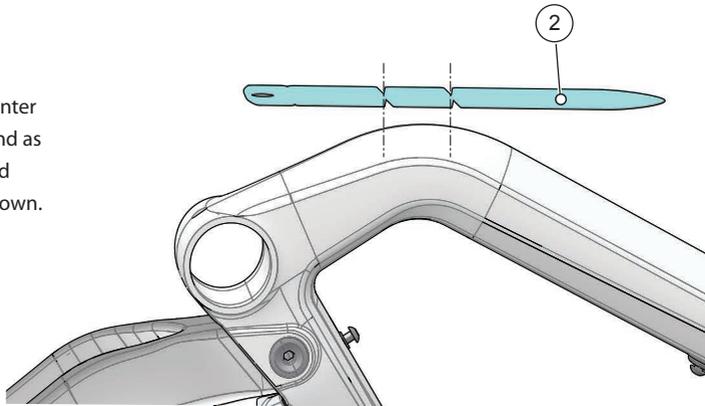
## Downtube Protectors

### Upper Protector (1)

Place in middle of bend in center of tube. Item not used on size SM.



**Lower Protector (2)** Center relief cuts over tube bend as shown. Position forward from BB shell hole as shown.



Appx. 40 mm

## Cable Routing

The Scalpel has tube in tube routing in the rear triangle, which feeds into a rubber hose that is inside the downtube of the front triangle.

Steps for installation:

1. Both the fork and the swingarm should be disconnected from the main frame to allow cable routing access.
2. Install the dropper post according to the manufacturer's recommendation.
  - a. Route the cable for the dropper post from the seat tube into the downtube. Ensure that the cable routes over the bottom bracket rather than around it.
  - b. Route the portion of the dropper cable inside the downtube within the 9mm I.D. foam tube, similar to what is seen in the image below.



CBRT-1

- c. There is a cable tie guide located on the back wall of the “garage” inside of the front triangle. Cable tie the dropper cable to this guide. This makes sure the cable does not rub on the front of the chainstay during suspension movement.



CBRT-2

- d. TIP: run this cable guide slightly loose so that the cable can slide through it for dropper post height adjustments.
3. Install the “cable funnel” onto the bottom of the chainstay.

- a. Tighten the cable funnel into place with the funnel shifted all the way forward in its adjustment slot.
- b. Attach the rubber hose to the cable funnel with a 5mm wide cable tie. Use the cable tie to cinch the rubber tube down onto the cable funnel. Slightly tug on the rubber hose to make sure it is secured to the funnel.
- c. Side Notes:
  - i. The Cable Funnel Tubing and Tie is un-shrunk shrink wrap tubing with a 16 × 650 mm diameter. If stock is unavailable, you can use also use a light-weight road bike tube cut and sized to fit.



CBRT-3

install the rear triangle onto the front triangle and assemble the main pivot.

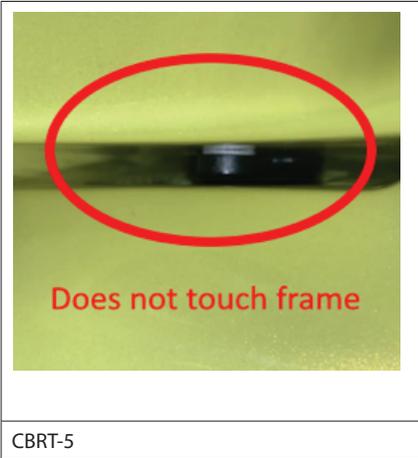
- d. Side Notes:



CBRT-4

5. When the main pivot is installed, make sure the cable funnel does not make contact with the front triangle.
  - a. Check to make sure that the water bottle fixing bolt does not contact the rear triangle. (CBRT-5) The water bottle fixing bolt is a button head M5 × 0.8 × 20mm.

4. Keeping the rear triangle off the bike, install both the shift housing and brake hose, Install both the shift housing and brake line into the tube in tube cable ports on the inside of the chainstays.
  - a. Ensure the cable routes into the cable funnel and rubber.
  - b. Once the cables have traveled most of the way through the rubber hose,



6. Once the main pivot is installed, route the shift cable housing and brake line into the desired head tube cable port, allowing the cable to exit the frame.
  - a. Make sure the cables will not come into contact with the fork steerer tube. Photo taken at inside headtube showing cable entrance, avoiding steerer tube.



7. The final step is to secure all of the

cables in the downtube to the cable guide on the bottom of the tool holder.

- a. This is secure the cables within the frame and prevent cable rattle.
- b. Unbolt and remove the tool holder on the down tube, exposing the hole underneath.
- c. Thread a zip tie around the dropper cable and rubber hose (which contains the shift and brake housing) in the downtube.



- e. Thread the cable tie through the cable guide on the bottom of the tool storage piece.



CBRT-7e



CBRT-7f

- g. The cable sleeve and foam tube should be checked for wear at least once per season. If significant wear is seen, replace the affected components.



CBRT-7e2

- f. Tighten the zip tie, holding the end of the zip tie off to one side of the frame. Tighten the zip tie until it is snug around the cables and hose. Clip the end of the zip tie and proceed to install the tool holder to the frame.

## Chain Guide Setup

1. To set up the chain guide:

a. Shift into the largest cog on the cassette.



b. Align the chain guide so that it is perpendicular (90 degrees) to the chain.



c. Torque the main pivot to 15Nm.



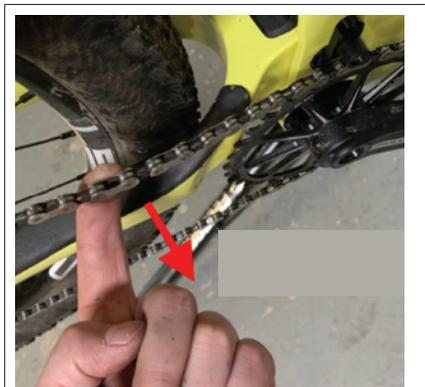
2. Hold the chain guide in place while torquing.

d. The lower surface of the chain guide should be 3mm above the chain.

Place a 3mm allen key flat on top of the chain and lower the chain guide into the allen key, then torque to spec.



- e. Confirm the chain guide is operating properly by pulling the chain towards the outside of the bike, attempting to derail the chain, while pedaling it forward (by hand) in the work stand. The chain should not come off of the guide. If the chain does come off of the guide, slightly lower the guide until it does not.



CNG-5

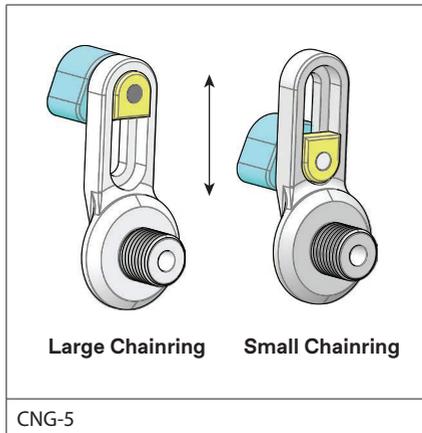
- f. Confirm the chain guide does not rub while the rider is pedaling the bike in the largest cassette cog, with the correct sag at the shock (sag at the shock is 10mm).

If the guide rubs on the chain when sag is set, the angle of the back plate can be rotated forward another 5 to 10 degrees.

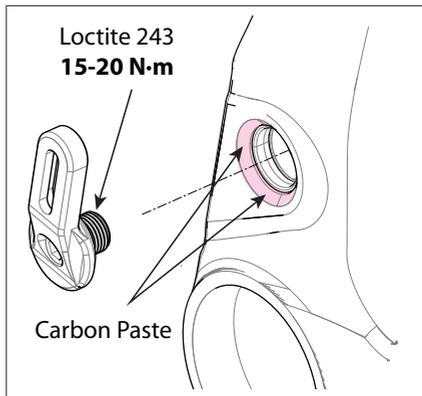
You are able to rotate the angle of the back plate forwards another 5 to 10 degrees.

### **WARNING**

Keep fingers away from chain ring.

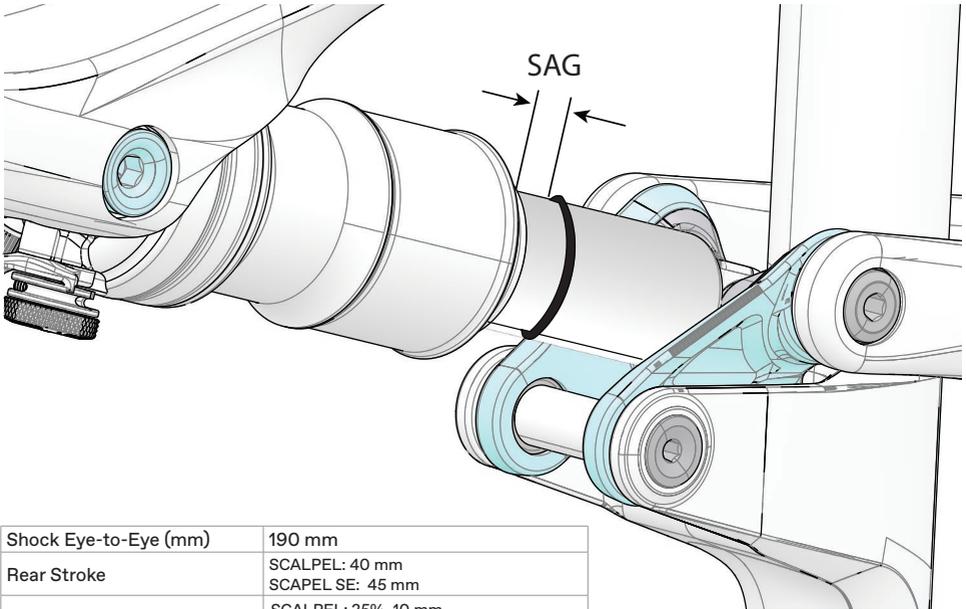


### If guide rotates:



1. Remove and clean guide parts with isopropyl alcohol. Allow to dry.
2. Apply a drop of Loctite 243 to the bolt threads. Clean and apply carbon paste to frame interface.
3. Install the chainguide and tighten the bolt. Tighten to 15 Nm. Increase to 20Nm if required.
4. Allow Loctite to cure fully before riding.

## Rear Shock



Shock Eye-to-Eye (mm)	190 mm
Rear Stroke	SCAPEL: 40 mm SCAPEL SE: 45 mm
Recommended Sag	SCAPEL: 25%, 10 mm SCAPEL SE: SE: 25%, 11 mm

## Setting Sag

1. Set the air pressure according to for you body weight. Follow the shock manufacturer's instruction for pressurizing the shock.
2. Slide the O-ring against the shock wiper seal.
3. Sit on the bike in a normal riding position with your hands on the handlebar and feet on the pedals so that your weight compresses the rear shock.
4. Measure the SAG. Adjust the air pressure in the shock to achieve the correct SAG measurement.

Add air to decrease sag.

Release air to increase sag.

## Shock Link

### NOTICE

Mount shocks in orientation shown: controls forward and facing down as shown.

Front Shock Bolt (14) & Small Washer (15) - Ensure the small washer (15) is used. Ensure the front shock bolt inserts through the shock eyelet when you insert the bolt.

Link Shock Pin (4) - The link is designed for use with shocks with DU bushings. The bolted shock pin is specified for use with both Rockshox and Fox shocks utilizing DU bushings.

If the pin is removed from the rear shock, a new DU bushing must also be installed in the eyelet to prevent play. DU bushings are wear items. Expect to replace them regularly. **DO NOT APPLY GREASE ON THE CENTER OF PIN. ONLY GREASE PIN ENDS WHEN FIXING TO LINK.**

Eyelet Centering Spacers (6) - Make sure to place the two 1.6mm thick shock spacers on both sides of the shock eyelet. This centers the eyelet and prevents wander and uneven wear of the DU bushing.

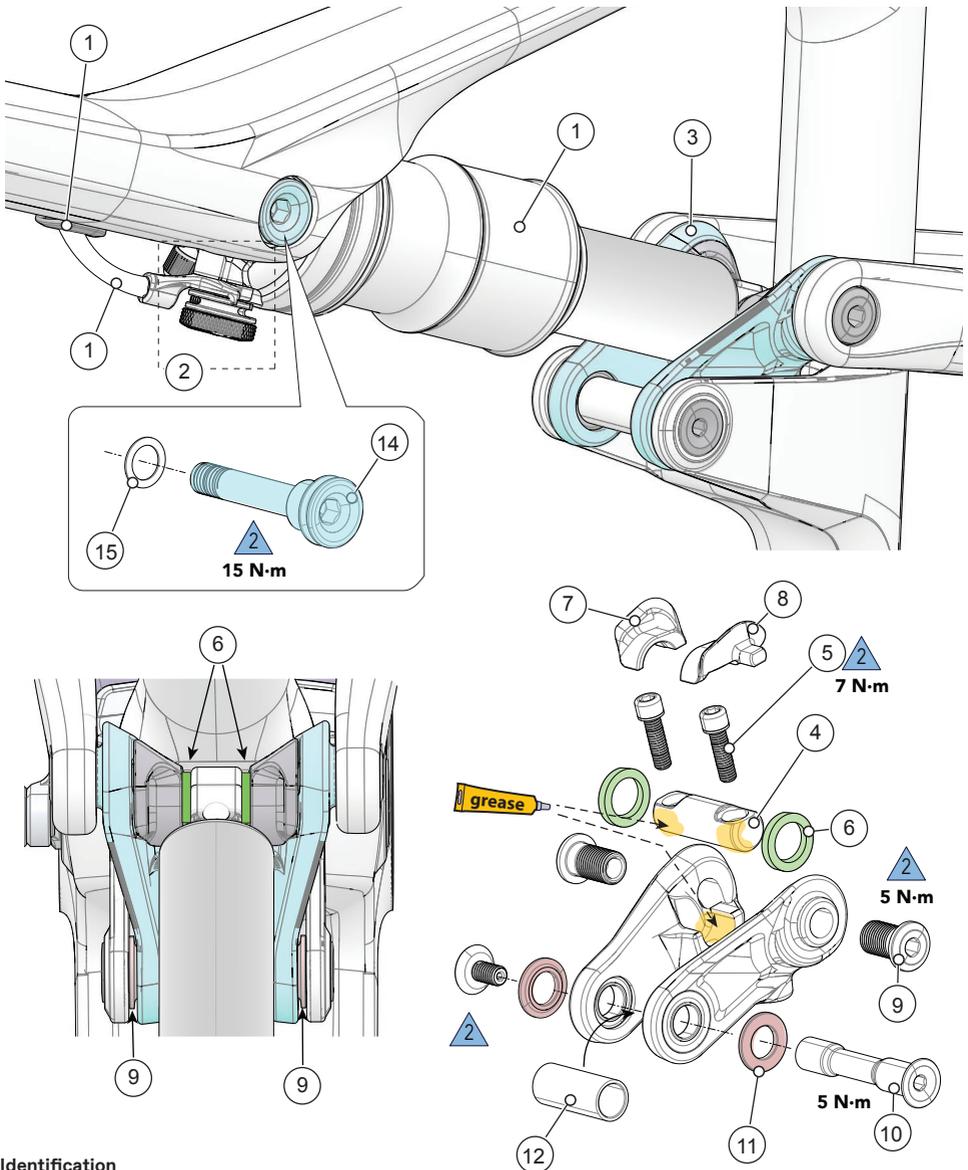
Shock Pin Bolt Covers (7 & 8) - Keep the shock pin bolt link covers in place to prevent corrosion that may result from water collecting in the bolt heads.

#### To Install the Covers:

1. Loosen the seatstay link bolt.
2. Place the covers on on the link.
3. Hold the covers in place while tightening the seatstay link bolt to the specified torque.

**Please Note:** Pressing the covers into place without following the outlined steps can cause the rubber to deform, making the covers difficult to reinstall later."

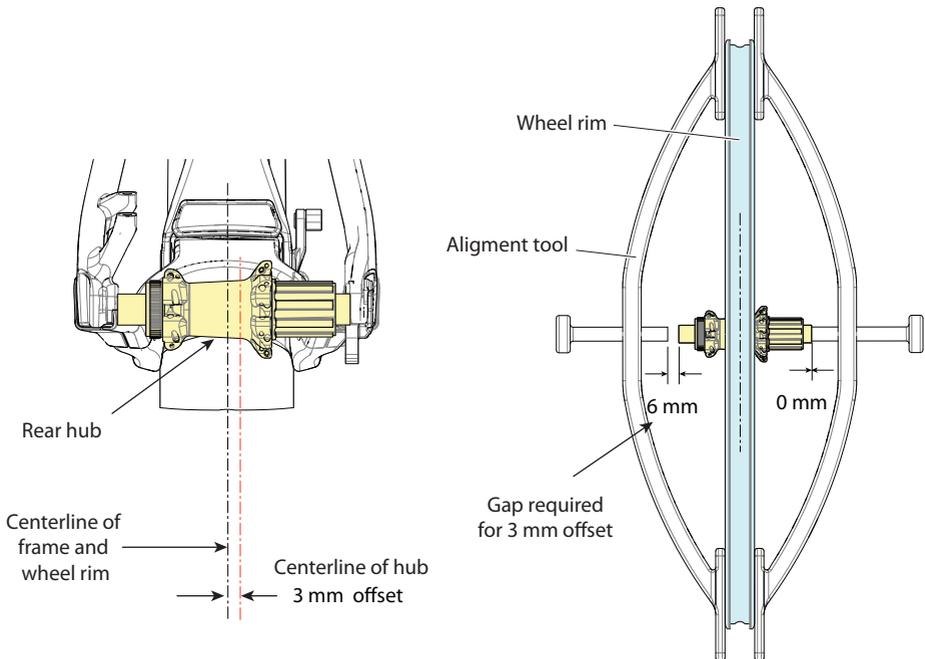




Identification

- |                         |                             |                                |
|-------------------------|-----------------------------|--------------------------------|
| 1. Rear Shock           | 6. Eyelet Centering Spacers | 11. Spacer                     |
| 2. Rear Shock Adjusters | 7. Left Cap Cover           | 12. Bearing Spacer             |
| 3. Shock Link Assy      | 8. Right Cap Cover          | 13. Pivot Axle Bolt            |
| 4. Link Shock Pin       | 9. Seat Stay Pivot Bolt     | 14. Front Shock Bolt           |
| 5. Pin Bolts w/washers  | 10. Frame Pivot Axle        | 15. Small Washer (0.5mm thick) |

## Asymmetric Integration - Ai Offset



2020-2021 models with the K33001 rear derailleurs require a 3 mm offset.

2022 models with the UDHuniversal derailleur hanger do not require the offset.

To produce the offset, a 6 mm gap should be present using the wheel alignment tool, shown above right.

Wheels for this frame will have nearly equal spoke angles and tension on both sides of the hub.

### NOTICE

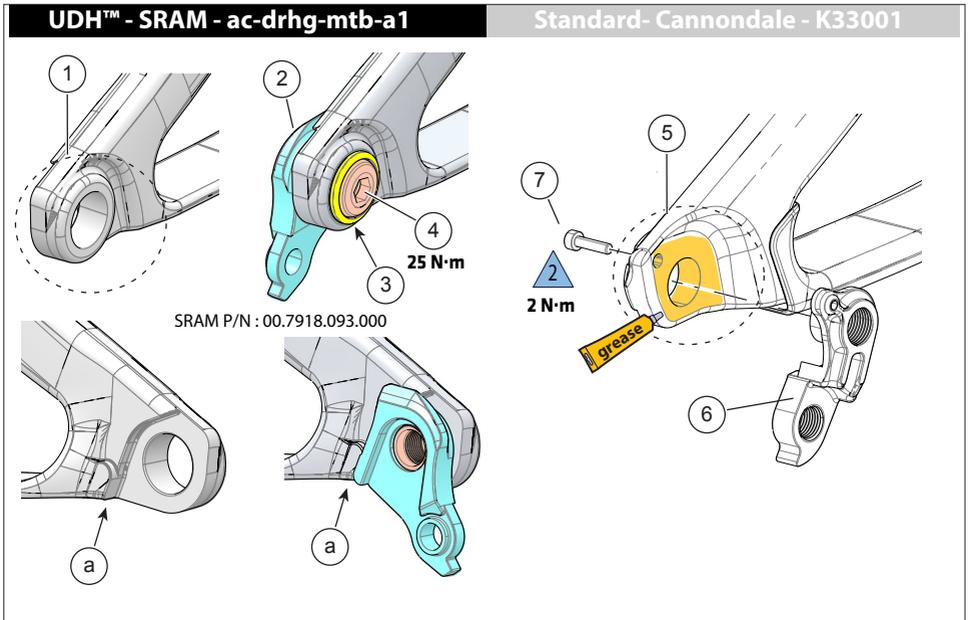
Use only 6 mm offset rear wheels. Incorrect wheel offset can damage your frame.

A standard-dish rear wheel assembled on this frame will result in insufficient tire clearance, leading to rubbing and serious frame damage. This kind of damage is not covered by the Cannondale Limited Warranty.

**Building/Truing a Wheel:**

If you choose to build or to true a rear wheel for use on this bike, make sure the 3 mm offset is present. Consult with your Cannondale Dealer if you have any questions.

## Rear Derailleur Hangers (RD)



### Identification

- |                |                     |                      |
|----------------|---------------------|----------------------|
| 1. UDH dropout | 4. UDH Bolt         | 7. Standard Bolt     |
| 2. UDH hanger  | 5. Standard dropout | a. UDH rotation stop |
| 3. UDH washer  | 6. K33001 hanger    |                      |

### Replacement

Before installing a new /replacement hanger, sure to clean any dirt or debris on the dropout with a nylon brush (old toothbrush). Inspect the area for any damage especially after and crash or impact. Take corrective action when required. Apply any grease or thread lock as indicated by the frame/hanger manufacturer. Use a good-quality torque wrench and tighten to the specified torque.

### NOTICE

Follow the manufacturer instructions when mounting the UDH hanger to the frame. SRAM - <https://www.sram.com/en/sram/models/ac-drhg-mtb-a1>

## Down Tube - Cover/Tool Carrier

The downtube of the Scalpel supports the use of a tool carrier (3) developed specifically for the frame. The tool carrier is an optional item. A water bottle cage can be mounted above the carrier. The tool carrier contains a specific multi-tool (4), a tire repair plug tool (5), and a mounting for a CO2 tire inflation device (6). The carrier position on the down tube can be adjusted. Notice the ovalized mounting holes. See **Replacement Parts** for ordering information.

A blank cover (2) is in place when the optional tool carrier is not present. Do not ride the bike without either the cover or the tool carrier securely attached to the downtube.

Both the cover and tool carrier also function to secure internally routed cables. A small cable guide is attached to the underside of both. Setup for this guide is explained in the Cable Routing section of this manual.

### To install the multi-tool:

1. Slide out the tool tray (a) until it stops.
2. Insert the multi-tool (4) onto the tray behind the tray lip (b).
3. Slide the tray and tool back into the tool body until the latch (e) (located on the underside of the sliding tray), clicks or latches into the tool body. You can feel the click when latched.

Confirm that the tray is latched by lightly pulling the tray. the tray, when latched should not slide out easily.

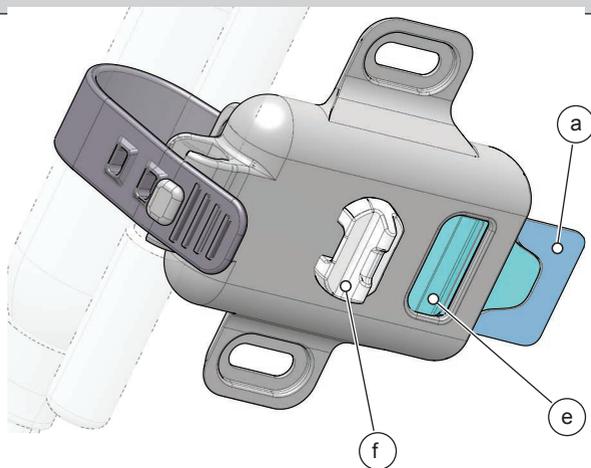
### NOTICE

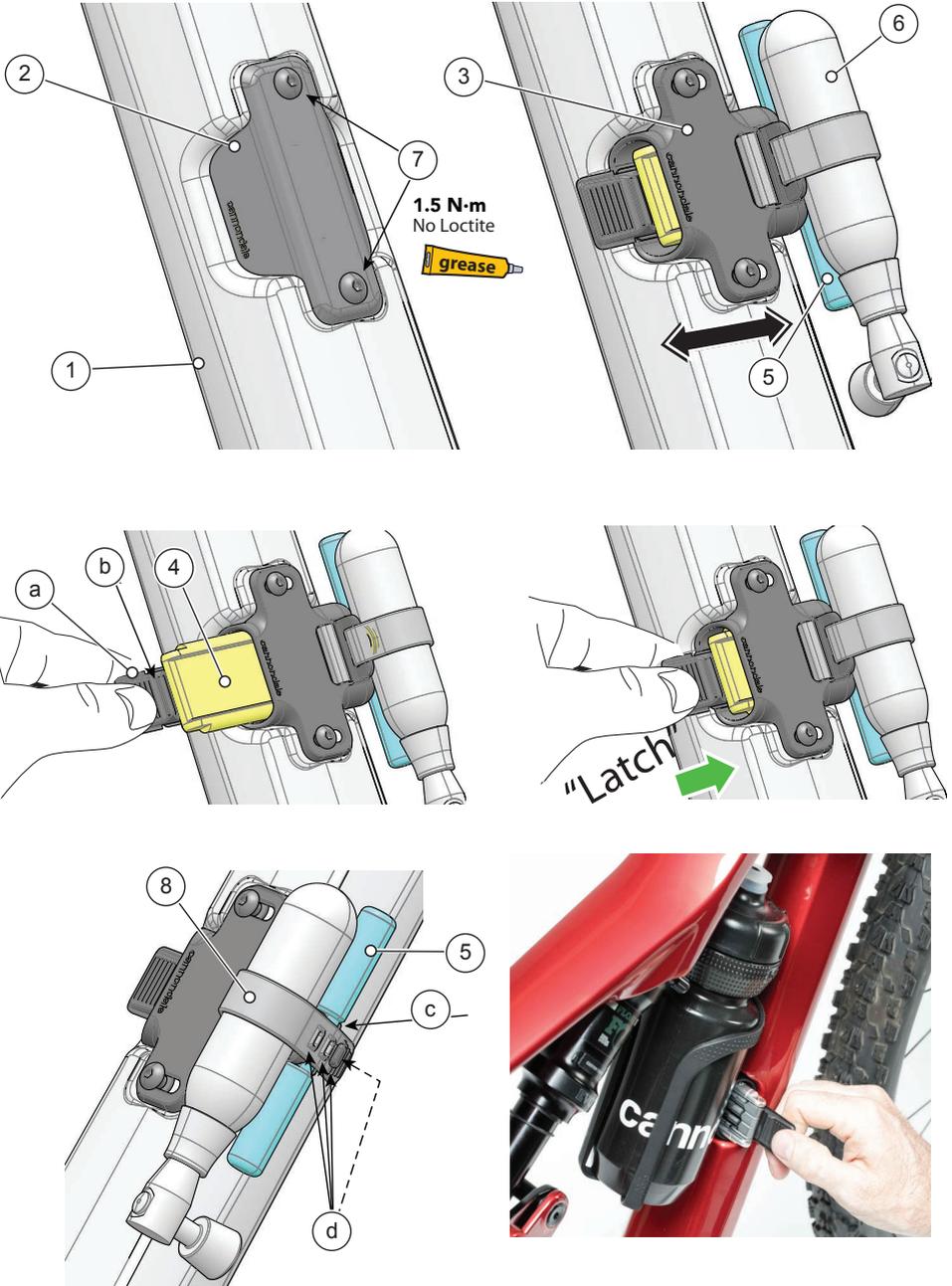
Make sure the tool tray is always latched. If the tray is not latched correctly, the tool will not be captured securely and may be lost during a ride.

### Identification

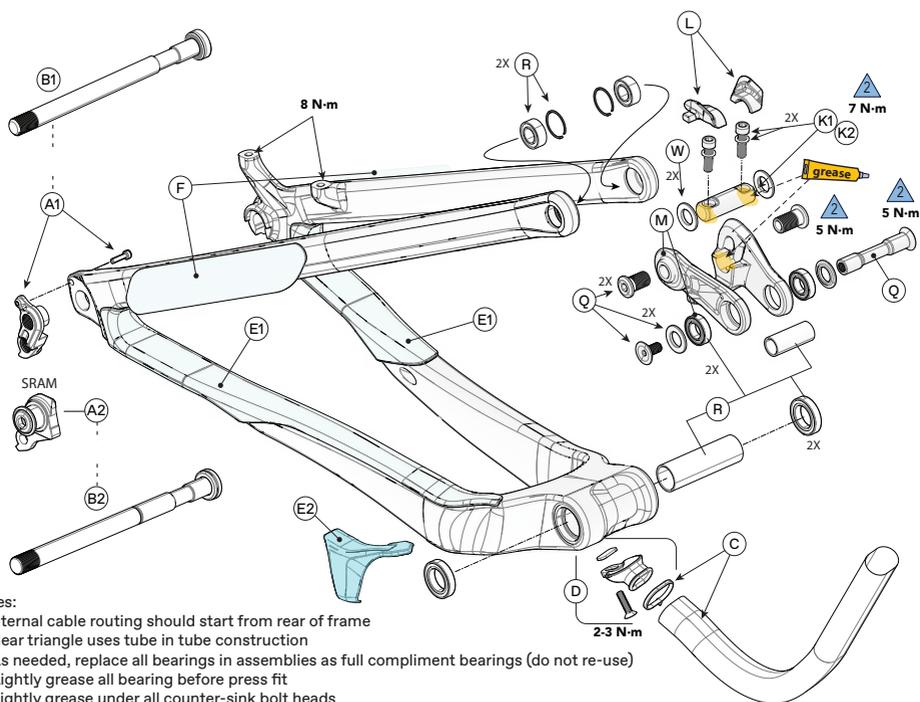
1. Down Tube
2. Cover
3. Tool Carrier
4. Multi-Tool (Fabric)
5. Dyna Plug Tire Repair Tool
6. CO2
7. Retaining Screws
8. CO2 Strap

- a. Tool Tray
- b. Tray Lip
- c. Tire Tool Clip
- d. Strap Tensioning
- e. Tray Latch
- f. Cable guide





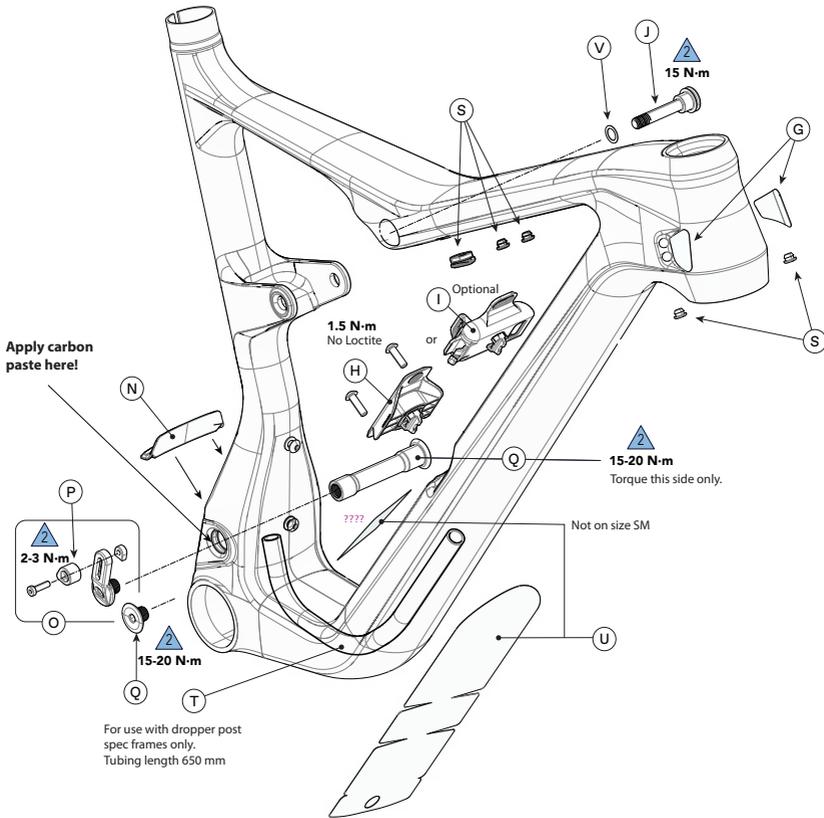
### REPLACEMENT PARTS



**Notes:**

1. Internal cable routing should start from rear of frame
2. Rear triangle uses tube in tube construction
3. As needed, replace all bearings in assemblies as full compliment bearings (do not re-use)
4. Lightly grease all bearing before press fit
5. Lightly grease under all counter-sink bolt heads
6. First assembled with bolts using pre-applied NYLOK blue patch. After removal, check patch material. If necessary, clean off residue, clean threads and re- apply medium-strength thread locker (e.g. Loctite™ 242 or 243 (blue). Apply 180 degrees of bolt diameter.

ID	Part Number	Description
A1	K33001	Derailleur Hanger TA ST SS 078
A2	K33062	Derailleur Hanger TA ST UDH 089
	SRAM P/N	00.7918.093.000
B1	K83061	Speed Release TA 148x12 176 mm M12x1.0P
B2	K83041	UDH Speed Rel TA 148x12 179mm M12x1.0P
C	K32011	Cable Funnel Tubing and Tie
D	K32001	Cable Funnel w/ Bolt
E1	K34001	CS Flex Covers NDS and DS
E2	K34662	Scalpel Crb UDH Chainsuck Protector
F	K34021	SS Inboard Frame Protector
G	K34031	HT Rub Guard Clear Protectors
H	K32021	DT Blank Cable Guide
I	K32031	DT Tool Cable Guide w/ CO2 Retainers



ID	Part Number	Description
J	K91001	Scalpel Shock Bolt Upper
K1	K91011	<b>Scalpel 12.72 RS Shock</b> Reducer Lower
K2	K91091	<b>Scalpel 12.73 FOX Shock</b> Reducer Lower
L	K34011	Scalpel Link Covers Right and Left
M	K91021	Scalpel Suspension Link 29 /w brgs
N	K11001	Scalpel Rear Fender
O	K11011	Scalpel Chainguide Complete
P	K11021	Scalpel Chainguide Top
Q	K91031	Scalpel Pivot Hardware
R	K91041	Scalpel Pivot CS SS Link Bearings
S	K32041	Scalpel Frame Grommets
T	K32051	Scalpel Dropper Tubing
U	K34051	DT Frame Protector
V	K91081	Scalpel Shock Bolt Washer
W	K36041	Scalpel Shock Pin Spacers Qty 2

### MAINTENANCE

The following table lists only supplemental maintenance items. Please consult your [Cannondale Bicycle Owner's Manual](#) for more information on basic bike maintenance.

Item	Frequency
<p>Cable Routing - Make sure control cables are in place, undamaged and attached securely.</p> <p>Frame Protection - Check the various frame protectors (downtube, headtube, chainstay, swingarm on your bike. Make sure they are in place and in good condition.</p>	<p>Before first ride</p>
<p>Damage Inspection - Clean and visually inspect entire bike frame/swing arm/linkage assembly for cracks or damage.</p>	<p>Before and after each ride</p>
<p>Check Tightening Torques - In addition to other component specific tightening torques for your bike. tighten according to the "Tightening Torques" information listed in this supplement.</p>	<p>Every few rides</p>
<p>Disassemble, clean, inspect, re-grease, replace worn or damaged parts in the following assemblies:</p> <ul style="list-style-type: none"> <li>• Shock Link</li> <li>• Pivot Axles</li> <li>• Frame Pivot Bearings</li> </ul>	<p>In wet, muddy, sandy conditions every 25 hrs.</p> <p>In dry, conditions every 50 hrs.</p>
<p>Fork and Shock- Consult the manufacturer's owner's manual for maintenance requirements.</p>	

#### **WARNING**

**Any part of a poorly maintained bike can break or malfunction leading to an accident where you can be killed, severely injured or paralyzed.**

Frequent checks are necessary to identify the problems that can lead to an accident. See "Inspect For Safety" in your [Cannondale Bicycle Owners Manual](#).



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2020-2022 Scalpel OMS

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