English

Topstone Carbon

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.

cannondale®

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.

Symbols:

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

ABOUT ILLUSTRATIONS: Throughout this manual, all product images, graphics, and figures shown are for illustration purposes only and may not be an exact representation of the product.

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

1 Cannondale Way
Wilton, CT 06897, USA
1-800-726-BIKE (2453)

Cannondale Europe

Geeresteinselaan 57
3931JB Woudenberg
The Netherlands

International Distributors

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

CONTENTS

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 or 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 2, General Purpose Riding.

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.

Disc Brakes on Road Bikes

WARNING

Relative to conventional rim brakes, disc brakes are less affected by water, do not wear or heat the rims, and therefore are more consistent. Disc brakes also may be more powerful.

To minimize risk of injury or accidents:

- Understand that road bikes have a relatively small tire contact patch (part of the tire that touches the road). In order to apply the brakes safely and effectively, you may need more or less braking force in different situations. You need to take into account various road and weather conditions that can affect traction.
- Disc brakes are excellent but not some kind of magic. Take some time riding your new disc brake road bike in lower risk circumstances to get used to the feel and performance of the disc brakes and tires.

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

Using a Trainer

Follow the trainer manufacturer instructions for the use of any required adapters.

Be particularly cautious with a carbon frame or fork. Carbon is relatively soft and not abrasion resistant. If there is any relative movement, carbon will wear quickly.

If you ride a trainer a lot, consider using an old bike: Corrosion from sweat will take its toll. Weight is irrelevant. Save wear on your expensive components.

Ask your dealer for help with trainers, the right one, and the correct way to use it.

NOTICE

TRAINERS - Improperly mounting a bike in a trainer or using one that is not compatible with your particular bike frame can cause serious damage.

This kind of damage is not covered by the Cannondale Limited Warranty.

See "2-in-1 Trainer Thru Axle Installation Instructions 138252.pdf" at www.cannondale.com

Water Bottles

Side impacts to a water bottle or cage can result in damage to threaded inserts due to the leverage on a very small area. In a crash, certainly the last thing you should be worried about is saving the threaded inserts in your frame. However, when you are storing or transporting your bike, take steps to prevent situations where a water bottle may be hit or bumped by a strong force that would cause damage. Remove the bottle and cage when you are packing your bike for travel.

Periodically check the attachment of the bottle cage; tighten the cage bolts if necessary. Don't ride with a loose bottle cage.

A loose cage will damage the insert and possibly lead to the inserts pulling out.

It may be possible to repair a loose insert or to install another insert only if the frame is undamaged. Replacement requires the use of a special tool. If you notice damage to the threaded insert, please ask your Cannondale Dealer for help.

NOTICE

An impact, crash, or loose bottle cage can result in damage to your frame. This kind of damage is not covered by the Cannondale Limited Warranty.

Building Up A Frameset

Before building up a frameset, consult with your Cannondale Dealer and the component manufacturers and discuss your riding style, ability, weight, and interest in and patience for maintenance.

Make sure the components chosen are compatible with your bike and intended for your weight and riding style.

Generally speaking, lighter weight components have shorter lives. In selecting lightweight components, you are making a trade-off, favoring the higher performance that comes with less weight over longevity. If you choose lighter-weight components, you must inspect them more frequently. If you are a heavier rider or have a rough, abusive, or "go for it" riding style, buy heavy-duty components.

Read and follow the component manufacturers warnings and instructions.

Tightening Torques

Correct tightening torques for the fasteners on your bicycle (e.g., bolts, screws, and nuts) are important for your safety and to maintain 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 torques 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 the correct tightening torque and any adhesive application for a fastener, we ask you to check the following:

- On-product torque markings.
- Torque specs in the component manufacturer's 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 torques for most fasteners.

TECHNICAL INFORMATION

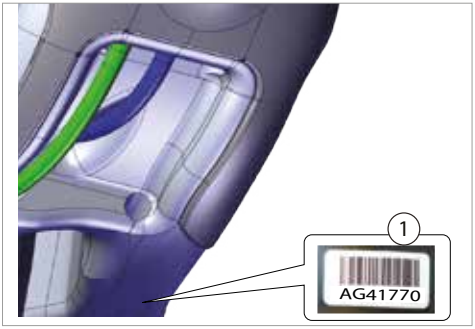
Specifications

Item	Specification
Head Tube	UPR: 1-1/2", LWR: 1-1/2"
Headset	Top: S52/28.6 https://acros-components.com/en/headsets/is52-upper-part-for-integrated-cable-routing-icr?c=219
	Bottom: https://acros-components.com/en/headsets/is52-headset-lower-part?c=219 Rigid Fork/ Alloy Lefty Spec: 45° crown race Carbon Lefty Spec: 36° degree crown race
Bottom Bracket: Type/Width	BSA Threaded/68mm
Front Derailleur	Braze-on, removable K33015 Mount
Seat Post: Dia./Binder	27.2mm/31.8mm
⚠ Min. Seat Post Insert	65mm
Max. Seat Post Insert	48cm: 135mm, 51-61cm: 170mm
Tire Size x Max. Tire Width	700×47mm (measured)
Brakes: Mount Type / Min./Max. Rotor Dia.	RR: Flat Mount/160mm/180mm
	FT: Flat Mount/160mm/180mm
Axles: Type/Length	RR: Syntace M12×142×1.0P, 163mm overall length
	FT: Syntace TA M12×100×1.0P 118mm overall length
Fork Offset	55mm
⚠ Intended Use	ASTM CONDITION 2: General Purpose Riding
⚠ Max. Weight Limit: Total (Rider+All Equipment)	305lbs/138kg
Additional Technical Features	SmartSense compatibile, StashPort, Kingpin Rear Suspension

Serial Number

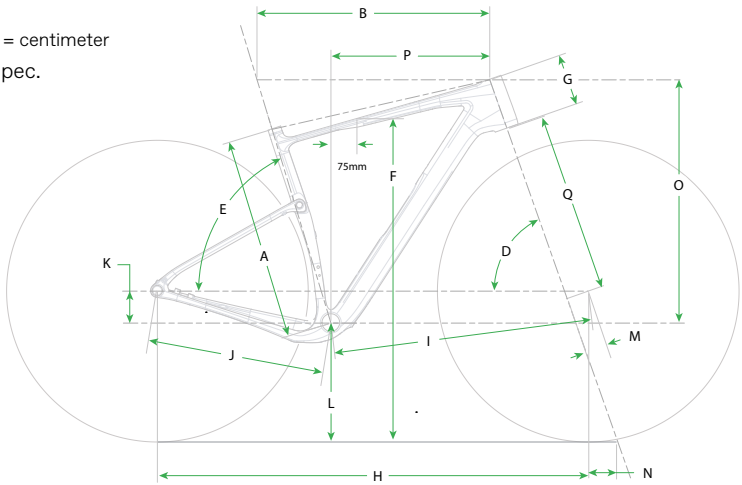
Use the 7-digit serial number label (1) located on the bottom bracket to register your bike.

Product Registration
www.cannondale.com



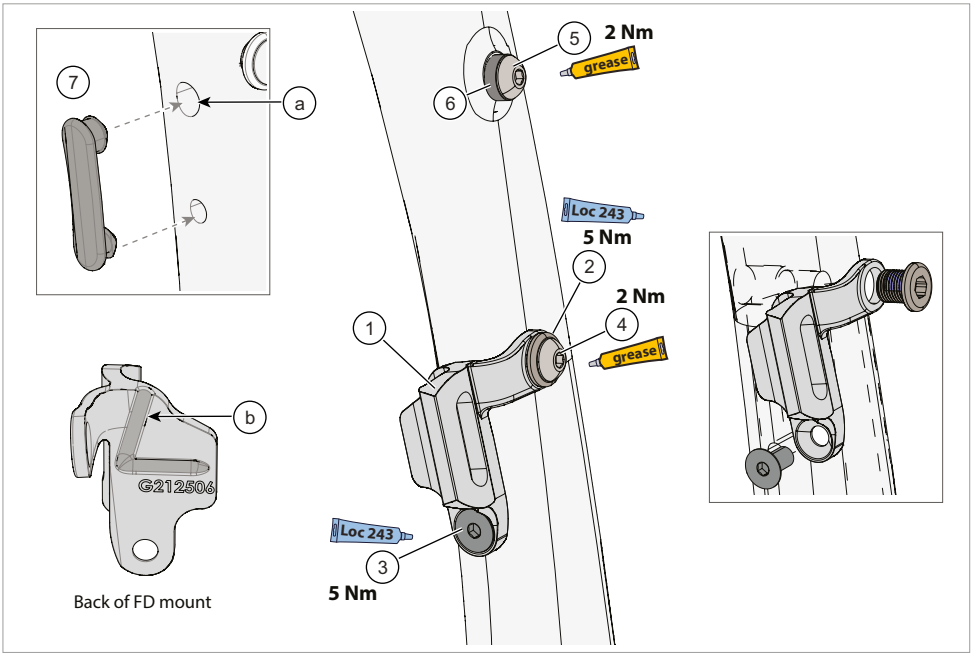
Geometry

Dimensions = centimeter
* = same spec.



	Size	47	51	54	56	58	61
∅	Wheel Size	700c	700c	700c	700c	700c	700c
A	Seat Tube Length	41.0	44.6	48.2	51.8	55.4	59.0
B	Top Tube Horizontal	53.2	54.3	55.4	56.4	57.6	59.3
C	Top Tube Actual	51.0	52.0	53.1	54.3	55.7	57.4
D	Head Tube Angle	69.9°	70.7°	70.7°	70.7°	70.7°	70.7°
E	Seat Tube Angle Effective	73.1°	73.1°	73.1°	73.1°	73.1°	73.1°
E'	Seat Tube Angle Actual	71.7°	71.7°	71.6°	71.5°	71.4°	71.3°
F	Standover	71.6	74.1	77.2	80.0	83.1	86.4
G	Head Tube Length	9.7	10.1	12.3	14.2	16.4	19.6
H	Wheelbase	100.9	101.2	102.6	103.6	105.0	106.9
I	Front Center	60.1	60.5	61.7	62.8	64.1	65.9
J	Chain Stay Length	42.0	42.0	42.0	42.0	42.0	42.0
K	Bottom Bracket Drop	7.9	7.9	7.6	7.6	7.4	7.4
L	Bottom Bracket Height	28.0	28.0	28.3	28.3	28.5	28.5
M	Fork Rake	5.5	5.5	5.5	5.5	5.5	5.5
N	Trail	7.3	6.7	6.7	6.7	6.7	6.7
O	Stack	55.4	56.1	57.9	59.7	61.5	64.6
P	Reach	36.4	37.3	37.8	38.3	38.9	39.7
	Head Tube Height	42.9	42.9	42.9	42.9	42.9	42.9

Front Derailleur Mount



Identification

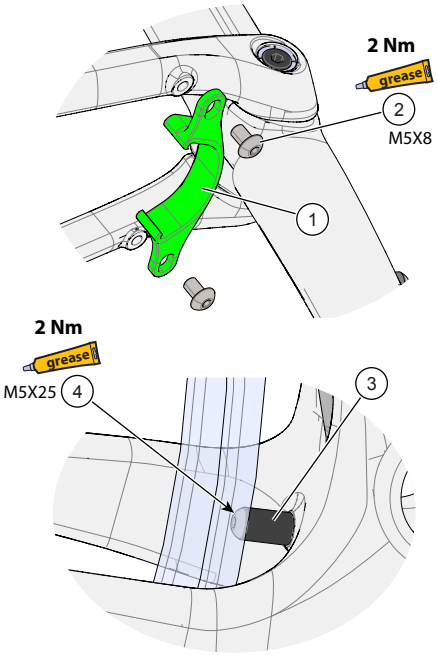
1. FD Hanger
2. Double-threaded bolt
3. Lower FD mounting bolt
4. Lower bolt
5. Upper bolt
6. 3mm spacer
7. 1X plug

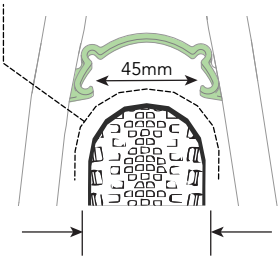
a. Wire port
b. Wire channel

Key points:

- For 1X drivetrains (no front derailleur mount installed), the double-threaded bolt is installed directly into seat tube and torqued to 5Nm. The internal threads provide the lower seattube water bottle mounting location. The 1X plug should be inserted to prevent water intrusion.
- For 2X drivetrains (front derailleur mount installed), position the double-threaded bolt through the FD mount and thread into the frame hole and tighten loosely. Install the lower FD mounting bolt and tighten to 5 Nm. Then tighten the double-threaded bolt to 5 Nm. In this configuration, the 3mm spacer is used at the upper seattube water bottle mount to provide spacing for the cage.

Rear Fender Support





The wheel rim and tire models, and fender shape used will affect the fender clearance.

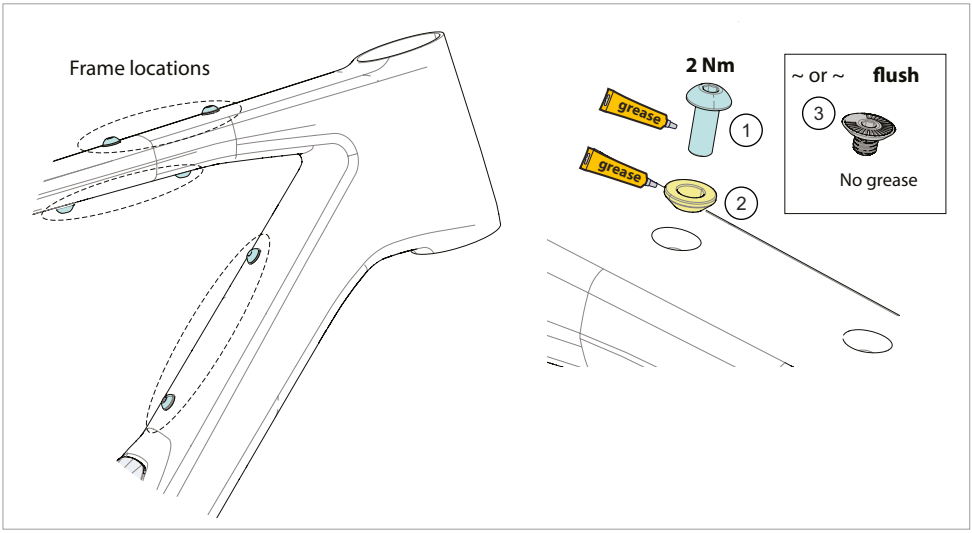
Identification

1. Fender support
2. Support screws
3. Fender spacer
4. Spacer screw

Key points:

- Check tire clearance with the tire fully inflated.
- Mounting a tire with a smaller profile, one smaller than the maximum tire size for the frame, or currently on the wheel may be required to fit a compatible fender.
- Any fender must be secured by the support and should not be loose.
- Do not modify any parts or the frame in order to install a fender.

Countersunk Accessory Mounts



Identification

1. Screw
2. Nylon beveled standoff washer
3. Screw plug

On the frame and on the fork (see Replacement Parts) there are locations that utilize countersunk mounting hardware.

- When no accessory is to be mounted at the location, the countersunk screw plugs (3) are installed without any application of grease or Loctite using a 2.5mm hex key. The plugs shall be threaded only (no torque) until flush with top of frame surface.
- When an accessory is to be mounted at the location, the plugs are removed. The countersunk washers (2) are fitted into the frame and M5 screws (1) with grease applied are used. The washers provide standoff clearance between the frame and accessory. Actual available clearance should be checked and adjusted in order to prevent damage. The accessory mounting screws should be torqued to 2 Nm when mounting a water bottle mounting fixture.

NOTICE

Use the indicated accessory mounting hardware. Damage resulting from use of incorrect or unauthorized parts is not covered by the Cannondale Limited Warranty.

Stash Bags

Designed capacity: 1- butyl tube or 2 TPU tubes 700×45 size or smaller + 16G CO2 cartridge + 2 tire levers. Alternative items of equal size can be used totaling up to a maximum 450g/1lb.

Pack the Stash Bag so that it can slide easily upward into the storage cavity

NOTICE

Do not over-fill the storage bag. Do not pack with sharp, flammable, or liquid contents. Do not force a StashBag into the port. Pack enclosed items neatly to avoid distorting the bag shape. A loaded StashBag should slide into the downtube somewhat easily. Forcing an over-loaded bag into the downtube may result in damage to internal frame components and will void your frame's warranty.

StashPort

The StashPort is located within the frame downtube.

By opening then removing the StashPort door (3), the area within the upper portion of the downtube can be used to contain a Cannondale StashBag (5) designed to be compatible with the frame. The lower inside area of the downtube contains a floor bracket (2) and although the interior of the downtube extends to the bottom bracket, this area is not intended to accept stash bags or any other internal storage. Do not ride without the floor bracket installed.

To open the stash door:

Slide the door latch (4) to “UNLOCKED” and lift the door from the downtube.

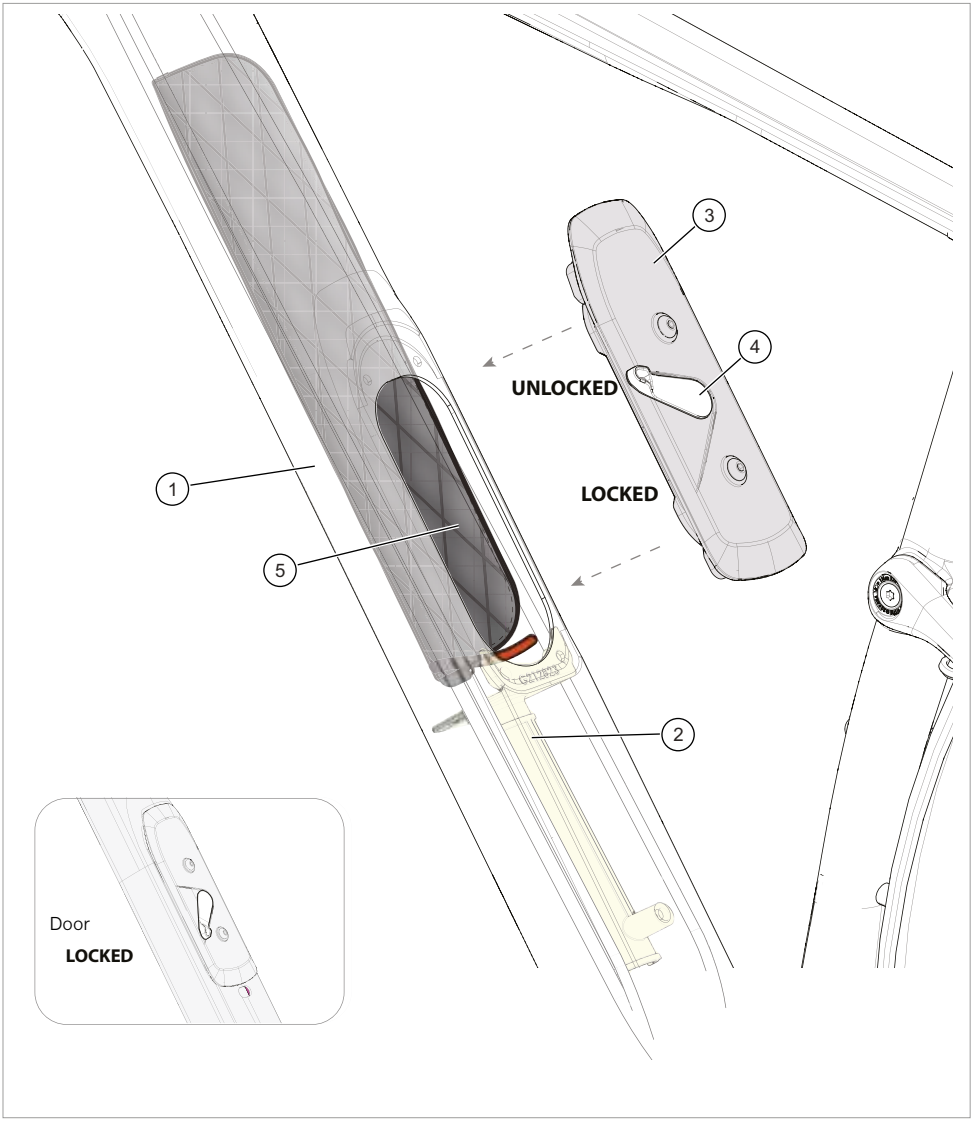
To close the stash door:

With the door latch in the “UNLOCKED” position, align and lower the stash door on to the frame port opening. Hold the door down lightly with your hand and slide the door latch to the “LOCKED” position. The door mechanism will engage with the frame and remain attached to the frame.

NOTICES

The StashPort feature of this frame is NOT INTENDED to accept items directly without placing them in the designated StashBag. Placing items loosely in the StashPort (no bag) can result in damage to the frame. Loose items could become difficult to retrieve or cause noise and vibrations. Do not place anything inside the StashPort without selecting the items appropriate for the bag and packing them carefully within it.

Anytime the bike will be unattended or stored for a longer period and to prevent theft or loss, remove any sensitive items stored in the StashBag(s) and locate the contents appropriately outside the frame.



Identification

1. Downtube
2. Floor bracket
3. StashDoor
4. Door latch
5. StashBag

Seat Post

Removal

1. Loosen the the seat binder.
2. When bolt is loose, carefully lift the seat. post up and out of the seat tube.

Installation & Adjustment

1. Before inserting the seat post into the seat tube, use a clean shop towel to wipe off the seat post and any residual carbon gel paste from the inside of the seat tube.
2. Apply fresh carbon friction paste to the surface of the inserted length of a seat post.
3. Clean and apply light grease to the seat tube area under the seat binder and to the binder bolt threads.
4. Position the seat binder onto the seat tube so that the slots are 180° opposite each other. See next figure.
4. Insert the seat post, set the saddle height and tighten the clamp bolt to the specified torque with a torque wrench.

Maintenance

Periodically remove the seat post and the seat post binder to clean, to inspect for damage, and to renew the application of grease and/or carbon paste.

Minimum Insert

Minimum insert is the length of a seat post that must be inserted within the seat tube at all times. The minimum insert for all frame sizes is 65mm.

Maximum Insert

Maximum insert (B) is the length of a seat post that may be inserted inside the seatube.

Frame Size	Maximum Insert
48 cm	135mm
51 - 61 cm	170mm

Sizing a Seat Post

NOTICES

Always use a seat post that has been correctly-sized/fitted for the frame.

Also, do not insert a seatpost which will result in it bottoming-out inside the frame. A seat post should have 5mm of clearance.

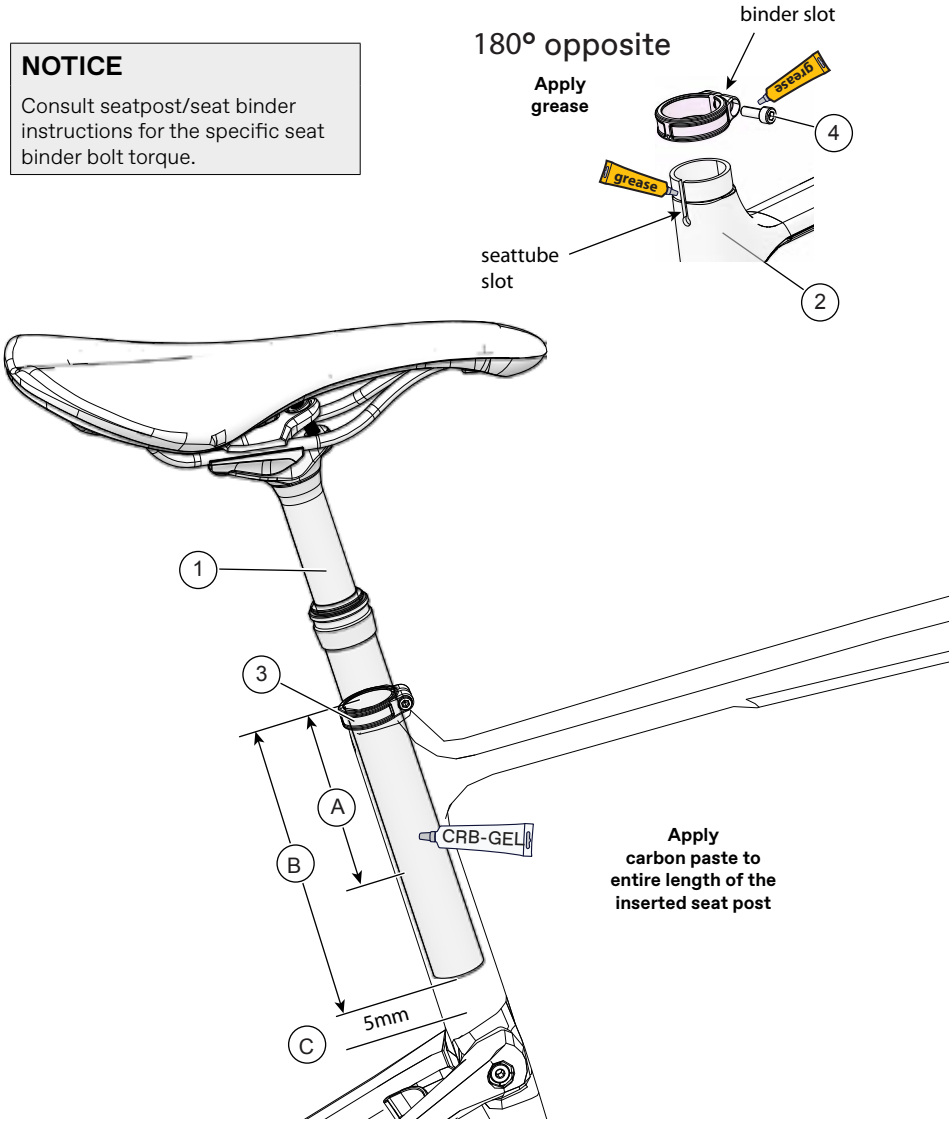
⚠ WARNING

The seat post must only be cut by a professional bike mechanic. Incorrectly cutting the seat post can result in damage leading to an accident.

For more information about seat posts your Cannondale Bicycle Owner's Manual.

NOTICE

Consult seatpost/seat binder instructions for the specific seat binder bolt torque.



Identification

1. Seatpost
2. Seat tube
3. Seat binder
4. Binder bolt

A. Minimum insert
B. Maximum insert
C. Bottom out

Kingpin Axle

Installation

1. Place the bike in a workstand and remove the rear wheel to reduce handled weight.
2. Fully disassemble Kingpin axle (2) and clean all parts. Inspect the parts for damage (e.g., burrs, scratches, deformity, wear). Replace with a new part if any damage is found.
3. **Apply a light coating of a white lithium grease to surfaces of the parts as indicated in next figure. Also, grease on the interior surfaces of the seat stay ends where the kingpin axle interfaces.** Do not apply any grease on axle surfaces that mate with the bearings (1)
5. Install the washer (3) onto the Kingpin axle FACE OUT, as shown next figure.
6. Align the seatstay ends and install the axle through the non-drive side and washer through the frame bushings.
5. Thread the Kingpin axle lightly into the opposite seatstay end and then tighten it to 1 Nm using a 6mm hex key fitted to a torque wrench.

> **NOTICE**
>
> Do not exceed 1 Nm.

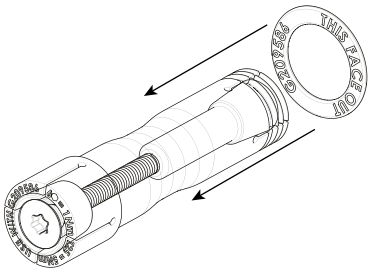
6. Insert the wedge nut (5) into the drive side of the axle and insert the small end of the wedge (4) into the non-drive side axle head.
7. Apply Loctite 243 360° to a minimum of the first 10 threads and maximum of 20 threads of the screw (6). Insert and thread the screw into the wedge nut and tighten to 5.0 Nm.

Removal

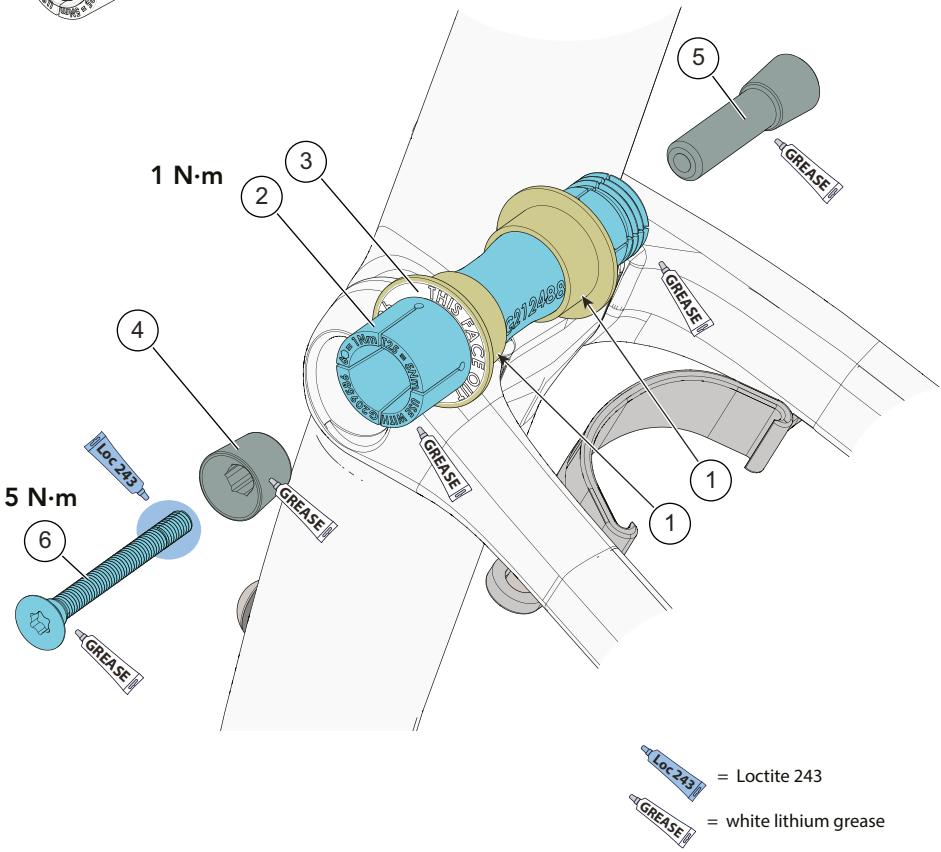
1. Place the bike in a workstand and remove the rear wheel to reduce handled weight.
2. Loosen the screw (6) 4-6 turns using a T25 Torx key.
3. Tap head of screw (6) with a rubber mallet to un-seat the wedge bolt (5) located on the opposite side.
4. Remove the screw (6) and wedge bolt (5) from the still-installed axle (1).
5. If the wedge did not come out with the screw, insert a 5 mm hex key and turn to free and remove it. If wedge still sticks, insert a wooden or plastic dowel into the drive side and drive it out.
6. To remove the axle (2), insert a 6 mm hex key into the axle on the non-drive side and turn counter-clockwise until it can be removed.

Bearings

> **NOTICE**
>
> The Kingpin axle should always slide easily and rotate smoothly within the bearings. There should not be binding or excessive play. It is only necessary to remove and replace the bearings and or the Kingpin axle if they become damaged. Always renew/replace both bearings and Kingpin axle assembly as a set.



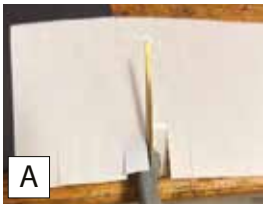
- Do not install an assembled Kingpin axle into the frame. Install parts individually.
- No grease on axle surfaces that mate with the I bearings

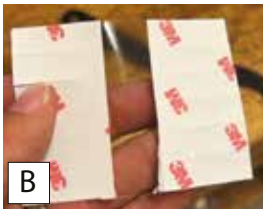


Identification

1. Bearing
2. Kingpin axle
3. Washer
4. Wedge
5. Wedge nut
6. Screw

Steerer Protection





Assembly Instructions:

1. Check steerer tube for burrs, bumps, and sharp edges, file them away if needed
2. Clean steerer tube with acetone
3. Trim protector so it is ~10 mm below the upper headset bearing by cutting at the nearest trim line. Trim lines are spaced at 10mm.

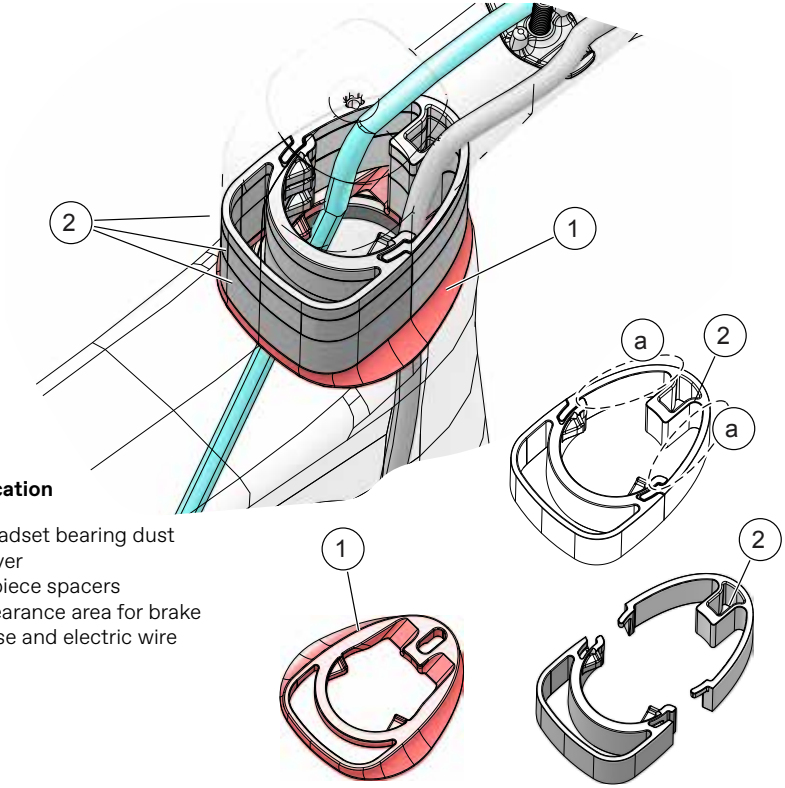
Frame Size	Protector Length
48 cm	60 mm
51 cm	70 mm
54 cm	90 mm
56 cm	110 mm
58 cm	130 mm
61 cm	160 mm

4. Remove center section of backing paper
5. Adhere protector to front of steerer tube w/ bottom edge just above lower headset bearing seat
6. Carefully remove backing paper from sides of protector and wrap around steerer tube – allowing the sections to conform to the tapered shape as needed.
7. Confirm protector is fully adhered with no wrinkles or peeling edges.

⚠ WARNING

The steerer protection applied to thefork steerer is required. Any installed fork will require the material explained here to be sized and positioned on the fork steerer to prevent direct contact with internally routed cables and wires. Installation is only to be performed by a professional bicycle mechanic.

Routing



Identification

1. Headset bearing dust cover
2. 2-piece spacers
a. Clearance area for brake hose and electric wire

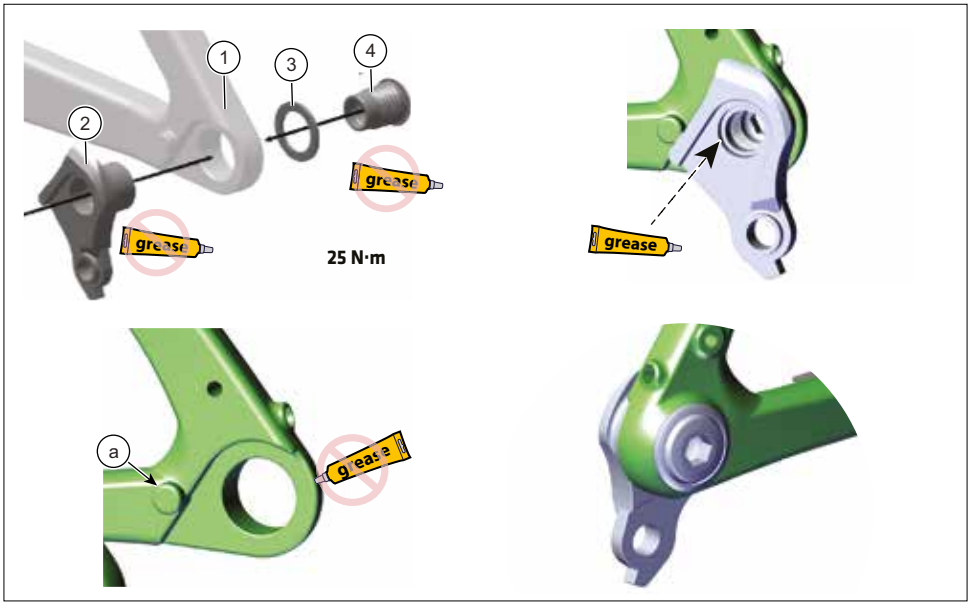
NOTICE

Hose lengths must be carefully selected. Avoid both too long and too short. Incorrect lengths can limit steering angle and damage hoses.

⚠ WARNING

This system requires a careful inspection of the internal routing, headset components, and the frame for wear every 6 mos. & for damage after impact or a rotation (spin) of the handlebar. To identify any potential damage, the inspection should be performed by a professional bicycle mechanic under the disassembled condition of the headset and fork.

Universal Derailleur Hanger (UDH)



Identification

1. Right, dropout
2. Hanger
3. Hanger washer
4. Hanger bolt
a. rotation stop

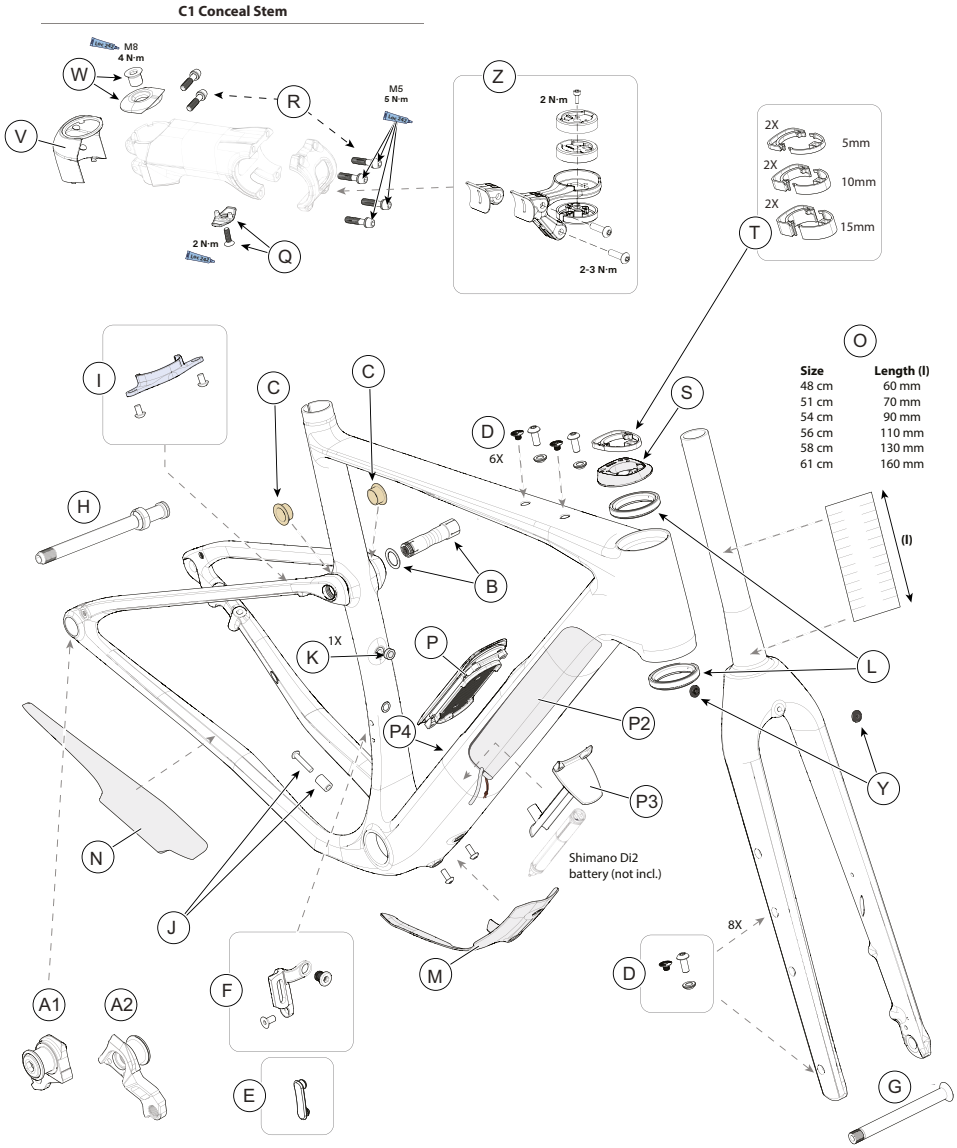
Replacement

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

NOTICE

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

REPLACEMENT PARTS



ID	Part Number	Description
A1	Univ. Der. Hgr.	SRAM P/N: 00.7918.093.000
A2	K33025	Derailleur Hanger TA DM UDH 093
B	K36095	LockR Pivot Hardware 65mm HardAno V2
C	K36162	Topstone Crb ST Plain Bearing Qty2
D	K34275	Countersunk Accessory Plugs Qty6
E	K34285	Topstone Crb FD Delete Cover
F	K33015	Topstone Crb FD Mount
G	K8300410	Syntace TA 100×12 118mm M12×1.0P SL RAW
	K8302410	Syntace TA 100×12 118mm M12×1.0P BLK
H	K8301410	Syntace TA 142×12 163mm M12×1.0P SL RAW
	K8303410	Syntace TA 142×12 163mm M12×1.0P BLK
I	K76092	Topstone Crb Rear Fender Mount v2
J	K18045	Topstone Crb Fender Mount Hardware
K	K18055	M5×10×3 Spacer Qty5
L	K35045	1.5 Int Hdset 28.6/52-52/40 45 Deg No CR (crown race)
	K35113	1.5 Int Hdset 28.6/52-52/40 w/45 Deg CR
	K35064	1.5 Int Hdset 28.6/52-52/40 **36 Deg** No CR
M	K34335	Topstone DT Protector
N	K34345	Topstone CS Protector
O	K34395	Adhesive Steerer Armor 200×80mm
P	K18005	Stash Port Door Assembly
P2	K16005	StashBag standard
P3	K18015	Stash Port Di2 Battery Holder
P4	K32035	Stash Port USB-C Port Cover
Q	K28072	C1 Conceal Cable Clamp
R	K28082	C1 Stem Bolts Qty6
S	K28052	Conceal Bearing Cap
T	K28062	Conceal Spacer Kit
U	K35051	Conceal Delta Expander Plug
V	K28142	C1 Conceal Cover
W	K35042	Conceal Top Cap+Compression Bolt
Y	K32155	M6 Fork Crown Plug Qty2
Z	K18053	C1 Conceal Accessory Mount

“--” - Item not pictured

Cannondale Help Center

Our online Help Center contains helpful resources to consult about our bikes.

https://cannondale.zendesk.com/hc/en-us

Bike Registration

To register your bike:
Go to the Product Registration section of our website at www.cannondale.com

www.cannondale.com

Topstone Carbon OMS
195452 (02/25)

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