

SuperSix EVO CX/SE

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.

Symbols:

Symbol	Name	Description
	NGLI-2 synthetic grease	Apply NGLI-2 synthetic grease.
	Medium-strength removable thread lock	Apply Loctite® 242 (blue) or equivalent.

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

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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 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.

Trainers

If you ride a trainer that requires removal of the front wheel and clamps the fork dropouts: Be sure your fork quick release is tight! Relative movement will wear parts, weaken and damage your bike.

If you ride a trainer that holds the bike up by clamping the rear quick release between two cones: Take off the lightweight quick release that came with your bike. Substitute a heavy, classic all steel quick release and clamp it tight! Relative movement will wear parts, weaken and damage your bike. Note that many modern quick releases will not fit the clamping cones in this kind of trainer because their shapes are incompatible.

For thru axles, make sure you 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, 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.

WATER BOTTLES - An impact, crash, or loose bottle cage can result in damage to your frame.

These kinds of damage is not covered by the Cannondale Limited Warranty.

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 to 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.

Building Up A Frame Set

Before building up a frame set, 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 more lightweight 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) is 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.

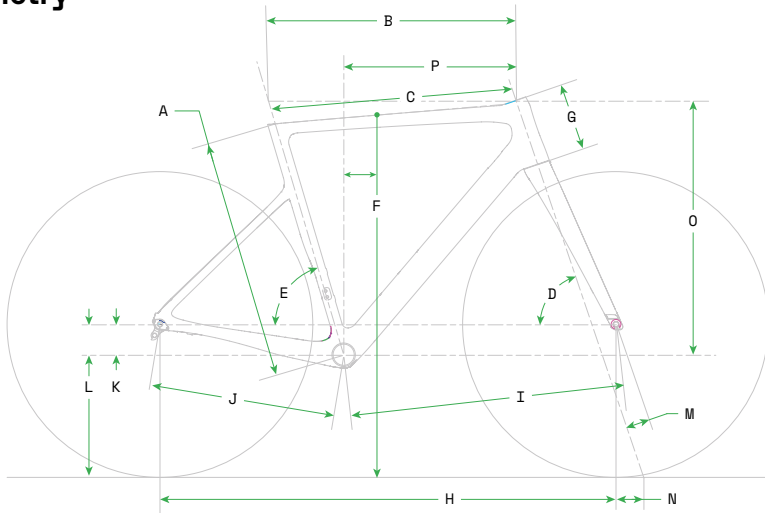
TECHNICAL INFORMATION

Specifications

Item	Specification
Head Tube	UPR: 1-1/8 in LWR: 1.5 in
Headset	Integrated 1-1/8 in - 1.5 in
Bottom Bracket: Type/Width	PF30A/83mm
Front Derailleur	Braze-on
Seat Post: Dia./Binder /torque	27 KNØT/Internal Wedge/ 6 Nm
▲ Min. Frame Seat Post Insert	65 mm
Max. Frame Seat post Insert Depth	44cm/190mm 51cm/230mm 54cm/237mm 56cm/260mm 58cm/268mm
Tire Size x Max. Tire Width (measured)	700c x 44mm
Brakes: Mount Type / Min./Max. Rotor Dia.	FT:Flat Mount 140mm/160mm RR:Flat Mount 140mm/160mm
Axles: Type/Length	FT:100×12 Speed Release, 119mm Overall Length RR: 142×12 Speed Release, 167mm Overall Length
Ai Offset	Rear wheel: 6mm Offset to NDS
Fork Offset	55mm
Steerer Length	300mm
▲ Intended Use	ASTM Condition 2, General Purpose Riding
▲ Max. Weight Limit: Total (Rider+All Equipment)	330lbs/150kg

All Specifications subject to change without notice.

Geometry

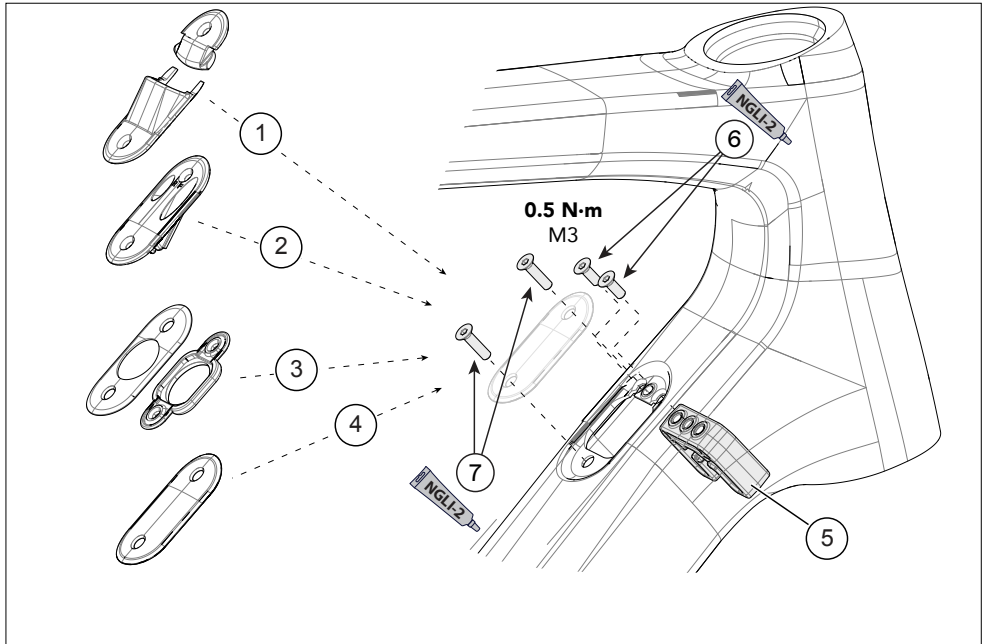


Dimensions = centimeter

* = same spec.

Item	Frame Size	46	51	54	56	58
A	Seat Tube Length	44.9	48.8	52.4	54.6	56.6
B	Top Tube Horizontal	50.7	52.4	53.7	55.5	56.8
C	Top Tube Actual	N/A				
D	Head Tube Angle	70.0°	71.0°	*	*	*
E	Seat Tube Angle Effective	74.6°	74.0°	74.0°	73.5°	73.5°
F	Standover	74.3	77.3	80.2	82.2	84.3
G	Head Tube Length	9.3	11.0	13.2	15.3	17.5
H	Wheelbase	100.2	100.5	102.0	103.4	104.8
I	Front Center	59.0	59.3	60.7	62.1	63.5
J	Chain Stay Length	42.2	*	*	*	*
K	Bottom Bracket Drop	7.0	*	6.9	*	6.8
L	Bottom Bracket Height	63.0	*	63.1	*	63.2
M	Fork Rake	5.5	*	*	*	*
N	Trail	6.9	6.2	6.2	6.2	6.2
O	Stack	51.5	53.5	55.5	57.5	59.5
P	Reach	36.5	37.1	37.8	38.5	39.2

Downtube (DT) Port Guides / Routing



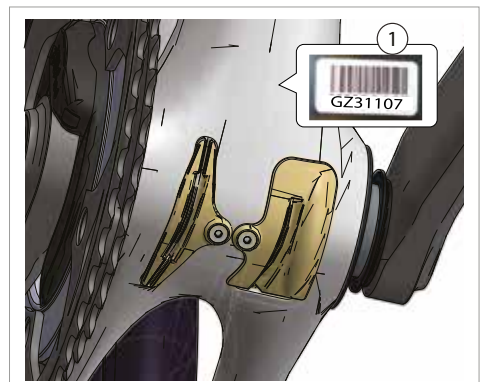
Identification

- | | | |
|---------------------------|-------------------------|--------------------------|
| 1. 4 cable switch cover | 4. Sram eTap cover | 7. Cover screws, M3 × 12 |
| 2. Mechanical shift cover | 5. Internal cable guide | |
| 3. Shimano Di2 port cover | 6. Guide screws, M3 × 8 | |

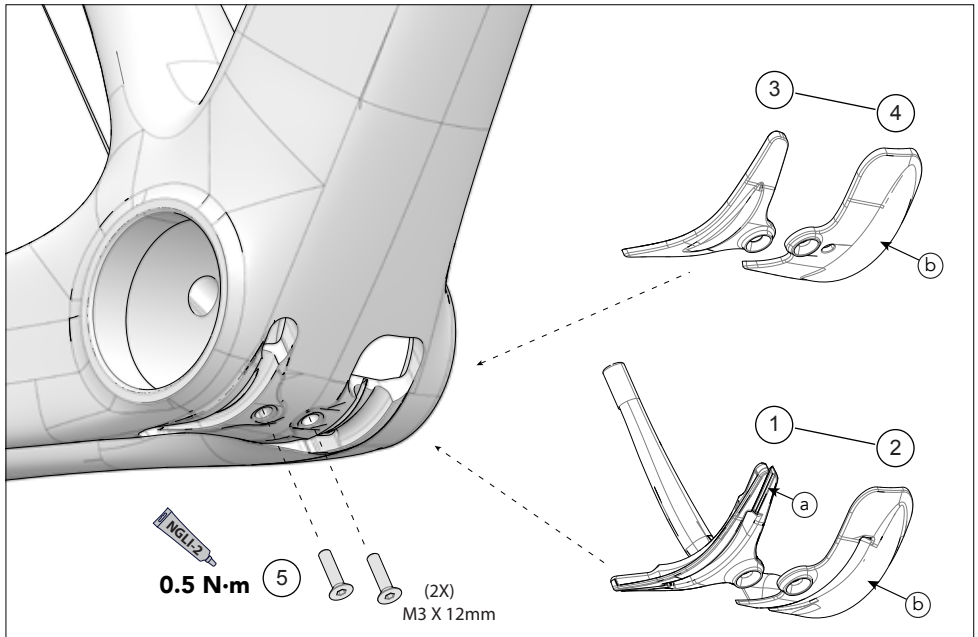
Serial Number

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

To register: go to the **Product Registration** section of our website at www.cannondale.com



Bottom Bracket (BB) Cable Guides / Routing

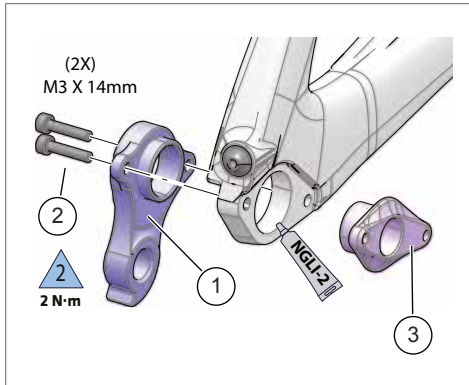


Identification

- | | | |
|-------------------------|--------------------------|-----------------------|
| 1. RD / Shimano Di2 | 4. Blanking plate, right | a. Slot for Di2 cable |
| 2. FD/RB guide | 5. Screws, M3 × 12 | b. RB hose trough |
| 3. Blanking plate, left | | |

Cables must not touch the spindle. Use a BB bearing assembly with a sleeve between the bearings to protect the spindle from wear due to cables touching it. The interior of the BB Shell is to remain free of any cable housings, hydraulic hoses or electrical wires. These items must be captured by the cable guides as they emerge from the downtube and exit to the chainstays and seat tube.

Rear Derailleur Mount (RD)



- | | |
|--------------|--------|
| 1. RD Hanger | 3. Cap |
| 2. Screw | |

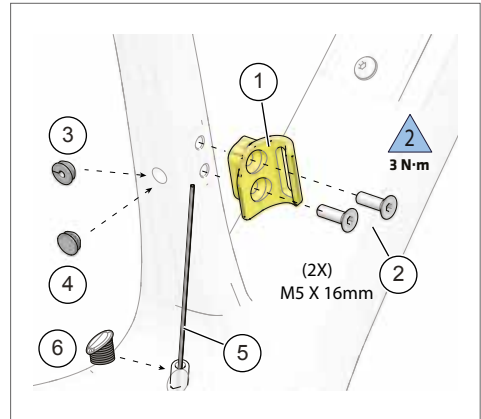
To replace:

1. Remove the rear axle.
2. Remove the screws (2).
3. Remove the hanger (1) and cap (3).
4. Clean the area around the dropout and inspect the frame carefully for any cracks or damage. If you find damage, have the frame inspected by your Cannondale Dealer .

If the frame is not damaged, apply a light film of grease between the frame and hanger. This will help minimize any noise or “creaking” that might result from slight movement between the frame and hanger during movement of the derailleur.

5. Slide the new hanger and cap onto the frame.
6. Apply Loctite® 242 (or medium strength thread lock) to the screw threads and tighten to the specified torque. Do not over-tighten.

Front Derailleur Mount (FD)

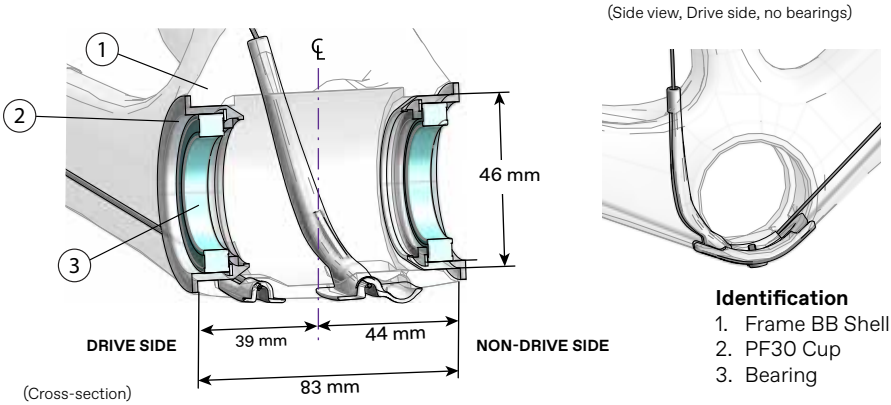


- | | |
|--------------------|------------------------|
| 1. FD mount | 5. FD mechanical cable |
| 2. FD cable screws | 6. Plug |
| 3. Di2 cable plug | |
| 4. Frame plug | |

Key points:

- When installing, clean and apply the specified thread lock to the screw threads and tighten screws to the specified torque. Do not over-tighten.
- When using a mechanical FD system or SRAM eTap, install item (4) to reduce the intrusion of water or debris into the frame.
- When using a FD with an electrical wire, such as Di2, use item (3).
- Add the BB plug, item (6), that fills hole of FD cable guide exit when not in use.
- Check the mount periodically for any damage. Replace with a new one if damage is found.

Bottom Bracket (BB) - PF30A / 83 mm



Maintenance

Have the bearings inspected annually, anytime the crankset is removed, or if a problem is indicated. With crankset removed, rotate the inner bearing race of both bearings; rotation should be smooth and quiet. Excessive play, roughness, or corrosion indicates a damaged bearing.

Replacement

Bearings are not removable from the PF30 cup systems pressed into the bottom bracket shell. Therefore, both bearing and cup must be removed and together replaced as a new set.

Before installing any new bearing units into the shell, thoroughly clean the inside surface of the bottom bracket shell with a clean, dry shop towel. Also, make sure both bearing units and the BB shell surfaces are clean and dry. Do not apply grease.

Follow the manufacturer's instruction for assembly and installation of the bearing system using a headset press such as a Park Tool HHP-2.

Select the appropriate press and adapters to ensure that force is only applied to the cup and not to the bearing inside. Press until both cup flanges are mated to the BB shell edge.

NOTICE

- 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 the bottom bracket shell.
- Frame damage caused by improper components, component installation, or removal is not covered by your warranty.

Seat Post

Installation & Adjustment

Before installing:

- To ensure good clamping and avoid creaking, remove all residual carbon gel paste in the wedge/frame interface. Use a clean cloth and rubbing alcohol and wipe the frame and wedge. Wipe again using a clean area of the cloth and repeat until the cloth comes away clean. Apply fresh grease to the wedge as indicated in the illustration.
- Apply fresh carbon friction gel to the seat post and place a little bit inside the seat tube.
- Make sure the cover is in good condition and in place on the seat post.

To adjust:

1. Insert the prepared seat post into the frame.
2. Set the saddle height. Maintain the specified minimum insert.
3. Insert a 4 mm hex through the underside seat tube opening as shown.
4. Tighten the binder screw to the specified torque.
5. Slide the cover against the frame.
5. If the saddle angle adjustment is required, loosen the saddle clamp bolts, adjust the saddle, and tighten to the specified torque.

NOTICE

- Use only solvents specified in the instructions." Use only a clean, dry shop towel.
- Do not exceed the specified torque. If you over-tighten the binder bolt, you will damage the binder, seat post, or frame.

Minimum Insert

The minimum insert depth the seat post must be inserted into the frame is 65mm.

Maximum Insert

The total length of seat post that may be inserted will vary with the frame size and should be checked in each frame.

To check, carefully slide a seat post into the frame until it stops; then lift it up 5mm.

NOTICE

A seat post should not be bottomed out inside the frame at any time. If necessary, have your Cannondale dealer cut the seat post appropriately.



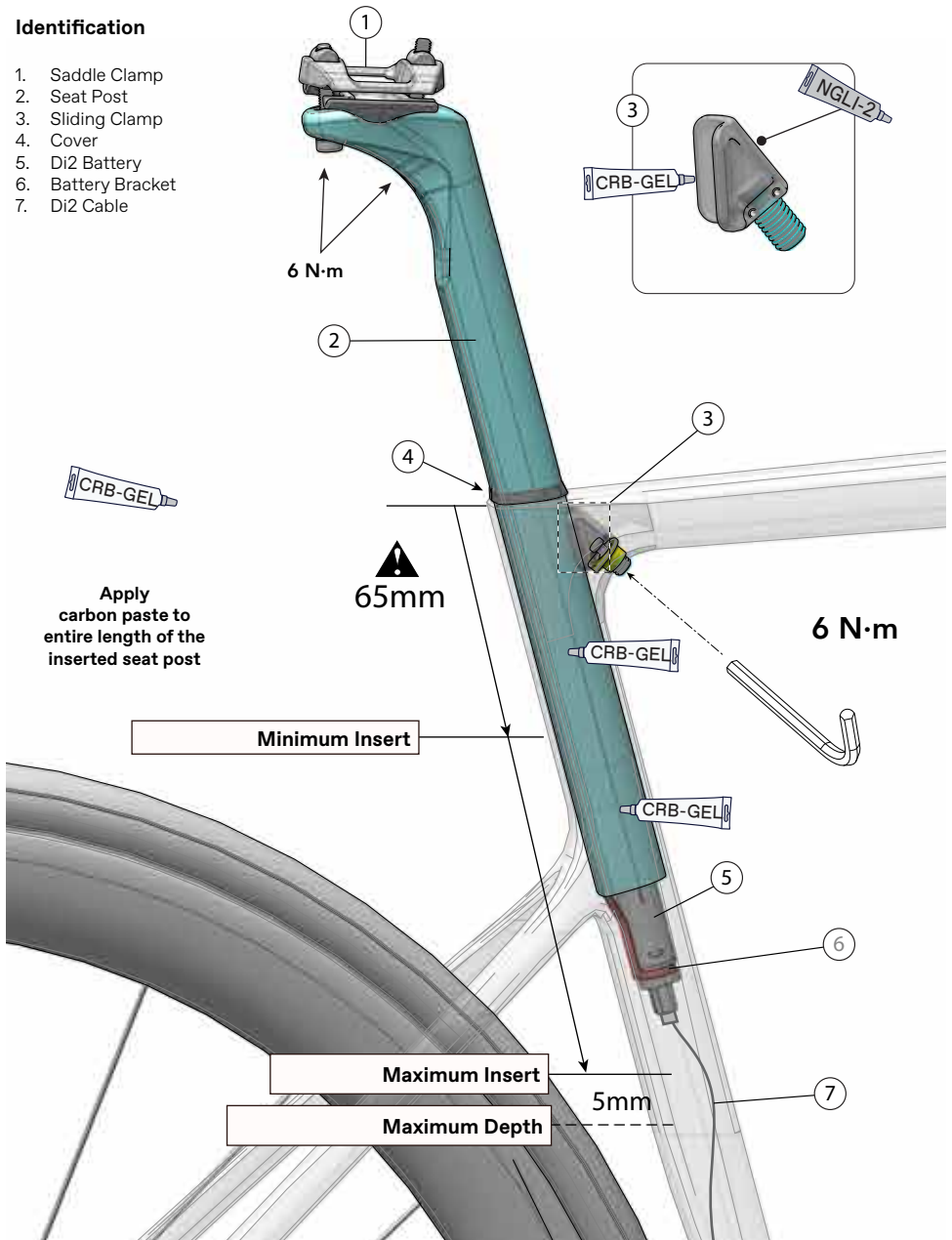
WARNING

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 carbon fiber seat posts, see also "Care and Maintenance of Carbon Fiber Seat Posts" in your [Cannondale Bicycle Owner's Manual](#).

Identification

1. Saddle Clamp
2. Seat Post
3. Sliding Clamp
4. Cover
5. Di2 Battery
6. Battery Bracket
7. Di2 Cable



Apply carbon paste to entire length of the inserted seat post

Seat Binder

Key points:

- The internal seat binder system consists of a sliding clamp assembly (1) and a nut base (2) permanently bonded into the frame.
- Periodically, the seat binder should be removed and both the seat binder and the frame serviced.

To service the binder:

1. Remove the seat post, see previous page.
2. Use a 4 mm hex key and turn grub screw (d) slowly clockwise until the seat binder (1) is disengaged from the nut base (2).
3. Use the 4 mm hex to push the clamp out through the seat tube opening.
4. Clean the clamp, inside of the frame with a clean shop towel wetted with rubbing alcohol. Take care not to soak the clamp where the grub screw is assembled.

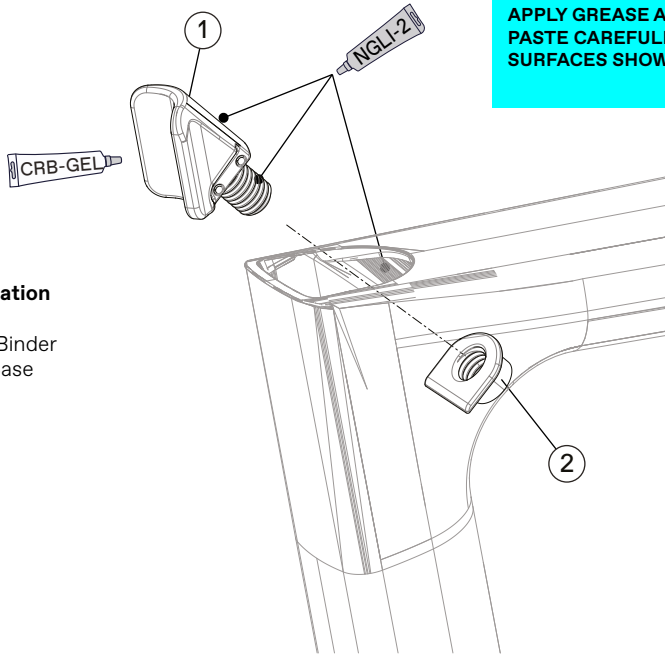
NOTICE

Solvents will wash out the lubricant and the assembly will have to be re-greased which will require disassembly.

5. Check the condition of the seat binder, the seat post and frame opening. All surfaces should be smooth. If they are not, the seat binder (1) should be replaced.

To re-install the seat binder:

1. Re-apply grease and carbon paste as indicated on the next page. Take care to not apply grease to the face of the binder.
2. Returning the seat binder (1) to the frame opening, using the 4 mm hex to guide it to the nut base.
3. Turn the grub screw (d) counter-clockwise until the clamp just touches the nut base (1), then turn the grub screw (d) clockwise half a turn. This frees the seat binder (1) to move out of the way of the seatpost during installation.



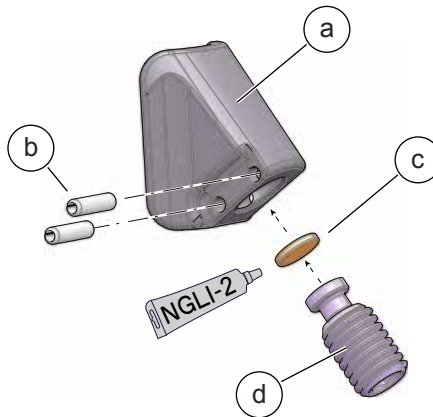
Identification

- 1. Seat Binder
- 2. Nut Base

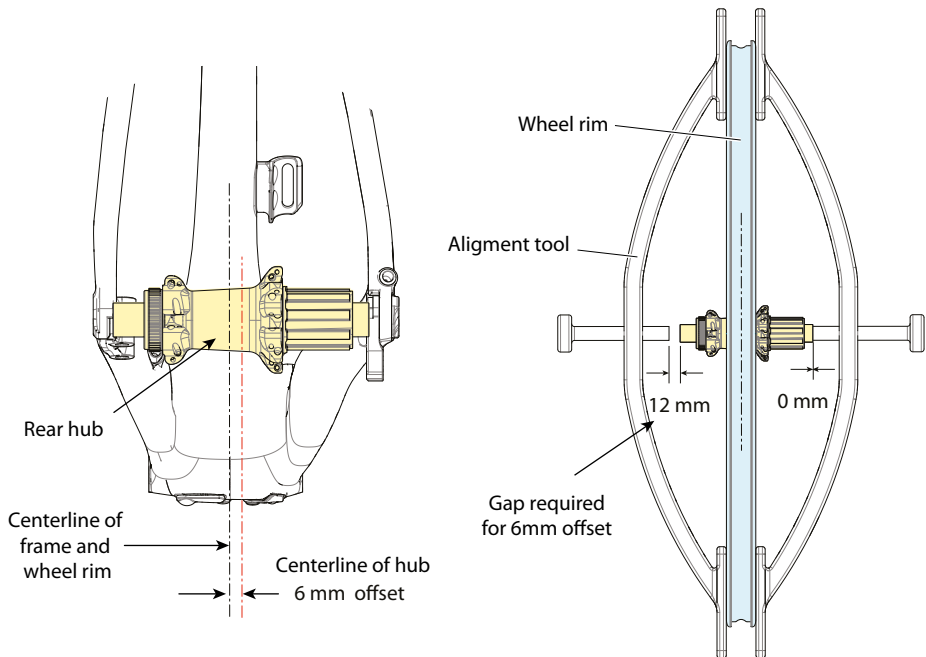
Seat binder shown disassembled for clarity

Identification

- a. Sliding Clamp
- b. Roll Pins (2X)
- c. Washer
- d. Grub Screw



Asymmetric Integration - Ai Offset



This frame requires a 6 mm offset.

To produce this offset, a 12mm 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.

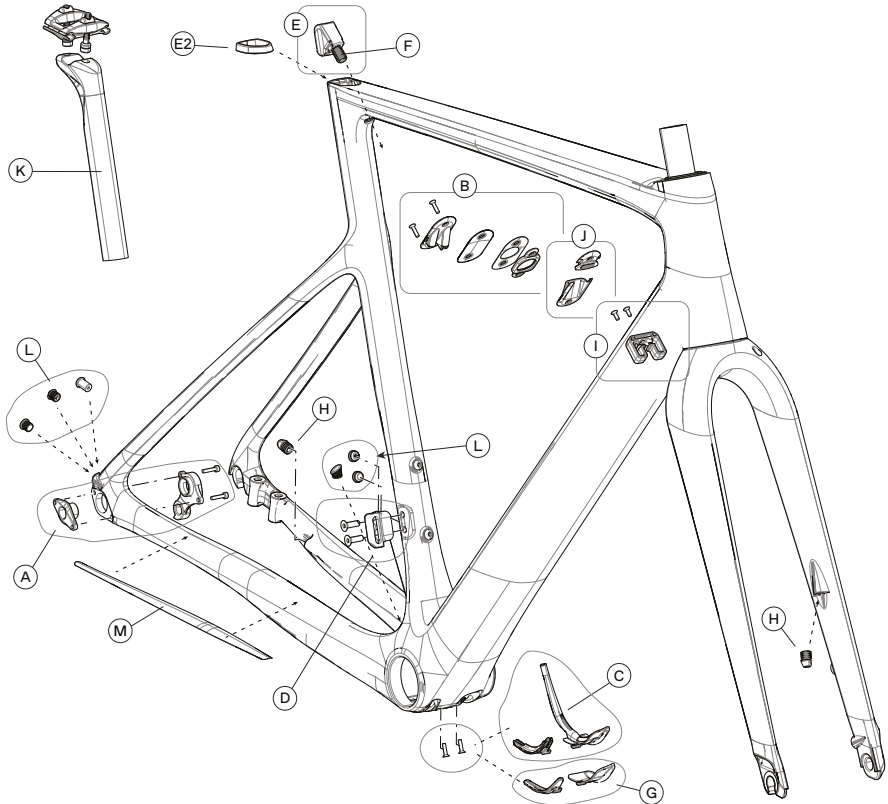
A standard-dish rear wheel assembled on this frame will result in insufficient tire clearance, leading to rubbing and serious frame damage. This kind of damage is not covered by the Cannondale Limited Warranty.

Building/Truing a Wheel:

If you choose to build or to true a rear wheel for use on this bike, make sure the 6 mm offset is present.

Consult with your Cannondale Dealer if you have any questions.

REPLACEMENT PARTS



ID	Part Number	Description
A	K33071	Derailleur Hanger TA ST 2P 086
B	K32160	S6 EVO/CAAD13 Down Tube Cable Guide
C	K32150	E255920+E256046 Cable Guide
D	K33081	S6 CX SE FD Mount
E	K26141	S6 EVO Int Seat Binder v2
E2	K26070	Silicone Seatpost Grommet D Shape
F	K26040	KNOT 27 Seat Binder Screw
G	K32161	BB Guide Covers

ID	Part Number	Description
H	KP449/	Rubber Brake Housing Grommets
I	K32221	DT Cable Keeper
J	K32171	DT Cable Switch Plate
K	K2601000	HG 27 KNOT Crb Seatpost 330mm 0 O/Set
	K2601015	HG 27 KNOT Crb Seatpost 330mm 15 O/Set
	K2602015	C1 27 KNOT Alloy Seatpost 330mm 15 O/Set
L	K32170	S6 EVO Frame Grommets
M	K34651	Evo CX/SE CS Protector

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SuperSix EVO CX/SE OMS

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