

# SuperSix EVO Neo

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.
	Anti-Sieze Lubricant	Apply Permetex® Anti-Sieze Lubricant
	Carbon gel	Apply carbon gel (friction paste) KF115/
	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

### Cannondale USA

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

### Cycling Sports Group Europe B.V

Mail: Postbus 5100  
Visits: Hanzepoort 27  
7570 GC, OLDENZAAL, Netherlands  
[service@cyclingsportsgroup.com](mailto:service@cyclingsportsgroup.com)

### International Distributors

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

## 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.

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## Drive System



### WARNING

MANUFACTURER’S INSTRUCTIONS - In addition to this supplement, you must read and follow the manufacturer’s instructions for all components of the drive-assist system:

<b>Drive Unit</b>	<b>Battery</b>
<b>Display/Control Unit</b>	<b>Charger</b>

Manufacturers’ instructions contain important operations, service and maintenance information.

## IDENTIFICATION

### Parts of Your Ebike



#### Identification

Actual bike appearance will differ.

- |                                   |                           |                                 |
|-----------------------------------|---------------------------|---------------------------------|
| 1. X35 Rear Hub Drive Unit **     | 4. Bottom Bracket Cover   | 9. Rear Cassette                |
| 2. iWoc@ ONE<br>(drive interface) | 5. Charger/Battery Port   | 10. Bike Serial Number Location |
| 3a. Battery (internal)**          | 6. PAS Wheel Sensor **    |                                 |
| 3b. Battery (external)**          | 7. Drive Unit Cable Guard |                                 |
|                                   | 8. Front Chain Rings      |                                 |

### Serial Number

Record YOUR Serial Number here:

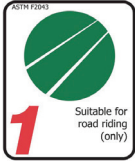
The serial number is located on downtube.  
It is a 7-character code. Use this serial  
number to register your bike.

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

# SAFETY INFORMATION

## Intended Use



The intended use of all models is ASTM CONDITION 1, High-Performance Road.

### What is an Ebike?

Electric bikes, also known as “E-Bikes” are bicycles equipped with an electric pedal assist drive system. An E-Bike IS NOT a moped or motorcycle. Ebike share components common with pedal-only bikes.

### What is a Drive System?

The drive-assist system consists of a drive unit, a battery, a computer control, and various electronic components (harness wires, sensors, and switches). There are many different drive-assist systems for differing uses and bike types. Likewise there are various drive-assist system manufacturers (Shimano, BOSCH, Bafeng, Yamaha, etc.)

### How does the Drive System work?

It is important to know that when the drive-assist system is turned ON, the drive unit engages to provide power only while you are pedaling.

The amount of power provided by the drive unit depends on your pedaling force and the assistance mode/level you set with the handlebar control unit. At anytime, if you stop pedaling, the drive-assist will dis-engage.

In all modes/levels, the drive-assist system power reduces progressively and cuts off as the bike reaches a the maximum allowable speed. The drive-assist re-engages when speed drops below the maximum allowable speed as long as the pedals are turning.

Whenever the drive-assist system is turned OFF, you can pedal the bike normally. The drive system will not engage.

### WARNING

**Understand your bike, its drive-assist system and the intended use of both. Using your bike the wrong way is dangerous.**

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.**

## 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.**

## No Child Seats or Trailers

### WARNING

Child seats and trailers or racks can not be used and are not allowed to be used with your Cannondale E-Bike.

## Compliance/Regulation

### **WARNING**

**YOU MUST OBEY ALL LOCAL LAWS & REGULATORY REQUIREMENTS** - It is your responsibility to identify and follow all local laws and regulations necessary for legal compliance. Compliance with local regulation is critical to the safety of a rider and others where the bike is used.

**Here are some important specifications related to compliance with local laws:**

**VEHICLE CLASS** - A definition (California, USA) of the different types of E-Bikes, E-Bike labeling and legal use areas, including any required additional equipment, registration, and applicable rider age restrictions.

**VEHICLE CATEGORY** - A definition of the European Union of the different types of E-Bikes, who and where they may be used, necessary additional equipment such as lighting and signaling devices as well as any necessary insurance and licensing.

**MINIMUM OPERATOR AGE** - A minimum age requirement for a rider of the E-Bike. This restriction as well as speed and additional equipment requirements (light, helmets, license plates, signal lamps, etc.)

Follow any state or local laws for any minimum age restrictions for E-Bikes.

Ask your local Authorized Cannondale Dealer for more information about operating an electrically assisted pedal bicycle in your area.

## Operation

### **WARNING**

**ALWAYS WEAR AN APPROVED BICYCLE HELMET AND ALL OTHER PROTECTIVE GEAR (e.g. GLOVES, PADS, AND CYCLING SHOES).**

**IMPORTANCE OF PRACTICE & RIDER TRAINING** - Before you ride this bike, practice riding in a safe area free from hazards. Take time to learn to bike's controls and performance. Practice the controls and gain the experience necessary to avoid the many hazards you will encounter while riding.

**DO NOT RIDE "HANDS-OFF"** - Keep your hands on the handlebars when riding the bike. If you remove your hands from the handlebar while riding, you can lose control of the bicycle and crash.

**CHANGING THE ASSISTANCE LEVEL WHILE RIDING** - Changing the drive-assistance level while riding will increase or decrease the acceleration of the bike. You should anticipate this change in speed and react appropriately depending on the riding conditions. (such as on slippery trails, tight turns, or unstable or uneven surfaces). Set assistance level to "ECO" (lowest assist) or "OFF" before descending technical trails, (e.g. tight downhill switchbacks)."

**WHEN NOT RIDING - TURN THE DRIVE SYSTEM OFF TO PREVENT UNAUTHORIZED USE.**

**DO NOT RIDE THE E-BIKE WITHOUT THE BATTERY. MAKE SURE THE BATTERY IS FULLY CHARGED BEFORE EVERY RIDE.** This will help ensure adequate battery power for necessary lighting and the drive system.

**DO NOT REMOVE ANY LIGHTING OR REFLECTORS AND DO NOT RIDE IF THEY DO NOT WORK.**

**DO NOT ALLOW CHILDREN TO OPERATE OR COME INTO CONTACT WITH E-BIKE OR ITS PARTS.**

**ONLY TURN THE DRIVE SYSTEM ON WHEN YOU ARE SEATED READY TO RIDE.**

(continued)

(Operation continued.....)

**ACCIDENTAL ACTIVATION** - Always disconnect battery from the bike before working on the bicycle. If you transport the bike by car or plane follow/obey local regulations regarding transportation a bicycle with drive system battery. Accidental activation of the bicycle drive system can result in serious injury.

**Wired System Control:** If the drive system control device is detached from the mount or the cables are disconnected to damaged, the drive system will automatically shut off. If this happens you will have to stop the bike, turn the system off, re-attach the computer to the base, and then turn the system back on to resume.

**Wireless System Control:** In wireless control systems, the operation of the drive system is controlled using radio frequencies, without physical attachment. Therefore, activation ON/OFF is determined by software programming. Please consult the manufacturer's instructions for information on preventing accidental activation or re-starting the drive system in the event of a recovering from a drive system fault.

**DO NOT RIDE THE E-BIKE WITHOUT THE BATTERY. MAKE SURE THE BATTERY IS FULLY CHARGED BEFORE EVERY RIDE.** This will help ensure adequate battery power for necessary lighting and the drive system.

**DO NOT REMOVE ANY LIGHTING OR REFLECTORS AND DO NOT RIDE IF THEY DO NOT WORK.**

**DO NOT ALLOW CHILDREN TO OPERATE OR COME INTO CONTACT WITH E-BIKE OR ITS PARTS.**

**ONLY TURN THE DRIVE SYSTEM ON WHEN YOU ARE SEATED READY TO RIDE.**

(continued)

(Operation continued.....)

**YOUR INSURANCE POLICIES** - Your insurance policies (e.g. liability, property and injury) may not provide coverage for accidents involving the use of this bicycle. To determine if coverage is provided you should contact your insurance company or agent. Also, make sure your speed e-bike is insured and registered according to the local laws.

**RIDE SENSIBLY, RIDE SAFELY AROUND**

**OTHERS** - The application of power by means of the electric motor assist means that riders can reach high speed. Riding faster increases the risks of serious accidents.

Watch out for other vehicles, cyclists, pedestrians, and animals where you ride. Always operate under control and at a safe speed. Others may not be aware of you. It is your responsibility to anticipate and react to avoid accidents.

**E-BIKES ARE HEAVIER THAN ORDINARY**

**BIKES** - Always park the bike in a suitable safe area away from children, cars or animals that may come into contact with it. Park the bike so that it cannot fall over possibly resulting in injuries.

**DO NOT RIDE INTO OR ATTEMPT TO RIDE THROUGH WATER OR SUB-MERGE ANY PART OF THE BIKE.** If you ride through water you can lose control of the bike or the drive-assist system can become disabled or damaged.

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



# Batteries & Chargers

## DANGER

The battery pack voltage must match the battery pack charging voltage of the charger. Otherwise, there is risk of fire and explosion.

## WARNING

**REPLACEMENT** - Only use the battery pack and charger indicated in the Specifications of this supplement. Do not use other batteries or chargers. Do not use the charger to charge other batteries.

**PREVENT DAMAGE** - Do not drop the battery or charger. Do not open, disassemble, or modify the battery or charger. No user serviceable parts inside.

Keep the battery out of intense sunlight. Keep away from heat. Heat will damage the battery.

Keep battery away from paper clips, coins, keys, nails, screws or other small metal items, to prevent shorting exposed battery contacts. Shorting battery contacts can cause severe burns, fire, or explosion.

**STORAGE & TRANSPORTATION** - When the battery is not in use in the bicycle, its transportation is subject to hazardous materials regulation. Special packaging and labeling requirements may exist. Contact local authorities for specific requirements. Never transport a damaged battery. Insulate battery contacts before packaging. Package battery inside a shipping container to prevent damage.

The battery must be removed before flying and may be subject to special handling by the air carrier.

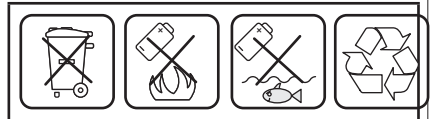
**CHARGING** - Bring indoors and allow to reach room temperature before charging. Make sure charger and A/C outlet are the same voltage.

Locate both charger and battery indoors, in a clean, dry area with good ventilation to charge. Make sure the area is free from combustibles to avoid fire from sparks or overheating. Keep charger ventilation openings unobstructed. Do not cover the charger or the battery.

Disconnect the battery from the charger unit when fully charged. Do not leave a fully charged battery connected to the charger. Unplug the charger from the wall outlet when not in use.

Maintain the battery and the charger as directed by the manufacturer's instructions.

**DISPOSAL**- Battery pack/charger contain regulated materials and must be disposed/discarded in accordance with national and/or local laws. Do not discard the battery/charger into fire, water or ordinary household waste/garbage. Take to a waste facility/recycler.



**FAILURE TO OBSERVE THESE WARNINGS CAN RESULT IN ELECTRICAL FIRES, EXPLOSION, OR SEVERE BURNS OR ELECTROCUTION.**

## Mounting an External Battery

### **WARNING**

**Do not attach any external battery to the down tube water bottle location.**

**The water bolt bosses are not intended to carry the weight of a battery.**

**If you ignore this warning, attaching an external battery to this location could damage the frame and/or detach from the frame while riding, resulting in an accident serious injury, paralysis or death.**

## Commuting

### **WARNING**

**EQUIPMENT** - Any bicycle Including an drive-assisted bike (ebike) must be properly equipped for commuting including any legally required lights, signals, and registrations. Ask your Authorized Cannondale Retailer if commuting is within the scope of your bike's intended use and if your bike is properly equipped for commuting.

**DANGERS** - Operating an E-bike as a commuting vehicle is no less dangerous than an ordinary pedal bike or automobile. E-Bikes are certainly not designed to protect you in a crash. Do not assume the bike or its drive capability will protect you or keep you from being involved in a serious accident.

**NIGHT RIDING**- Riding at night on a E-Bike or pedal-only bikes is very hazardous.

Read the topic "Riding at Night" in your ***Cannondale Bicycle Owner's Manual*** now for more information on the many hazards of riding at night.

**You must operate with a very high degree of awareness and precaution to only reduce the risk of death or serious injury.**

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## 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.**

## Water Bottle & External Batteries

Side impacts to a water bottle or external battery 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 bottle and cage when you are packing your bike for travel.

Periodically check the attachment of the bottle cage and any external battery; tighten the cage bolts if necessary. Don't ride with a loose bottle cage. Riding with loose cage bolts can produce a rocking motion or vibration of the attached cage. A loose cage will damage the insert and possibly lead to the inserts to pull out.

It may be possible to repair a loose insert, or 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.

## TECHNICAL INFORMATION

### Frame Specifications

Item	Specification
Drive System	Ebikemotion® X35 M1-C
Battery (internal)	Ebikemotion® X35 B1-C
Battery (external), Range Extender	(optional), Mount Seat Tube Only
Drive-Assist Owner's Manual	<a href="https://www.ebikemotion.com/web/">https://www.ebikemotion.com/web/</a>
Head Tube	SM, MD: 1-1/8 in - 1-1/4 in, LG: 1-1/8 in - 1-3/8 in
Headset	SM, MD: Integrated, 1-1/8 in - 1-1/4 in LG: Integrated, 1-1/8 in - 1-3/8 in
Bottom Bracket: Type/Width	T47/73 mm
Front Derailleur	Braze-On
Seat Post: Dia./Binder	27 KNØT/Internal Wedge
▲ Min. Seat Post Insert	65 mm
Max. Seat Post Insert	Measure, See page 18.
▲ Tire Size x Max. Tire Width	700c x 26mm
Brakes: Mount Type / Min./Max. Rotor Dia.	RR: Flat Mount/160 mm/160 mm FR: Flat Mount/140 mm/160 mm
Brake Rotor Compatibility	Flat 6-Bolt rotors only (i.e., non-recessed mounting) (e.g., Shimano SMRT-86 is not compatible)
Axles: Type/Length	RR: EBM X35 Axle FR: Speed Release TA Double Lead/100×12mm/119 mm Length
DT Port	Di2 junction box: HBar-end 3-port or stem mount 3-50-5 port only, not in DT.
Water Bottle Mounting Bolts	Maximum Length: 10 mm
▲ Intended Use <sup>1</sup>	ASTM CONDITION 1: High Performance Road
▲ Max. Weight Limit: Total (Rider+All Equipment)	285 lbs/129kg

### No Modification

#### **WARNING**

**DO NOT MODIFY THIS BICYCLE/DRIVE SYSTEM/ IN ANY WAY FOR ANY REASON.** Doing so can result in severe damage, faulty or dangerous operating conditions, or violation of local laws.

Dealers and Owners **MUST NOT** change, alter, or modify in any way the original components of the bicycle or drive-assist system (e.g. the specified sizing of the attached gear ratios (front/rear chain rings) ).

Attempts to “hot-rod” or “improve” the speed of the bike are dangerous to the rider. Use only specified Cannondale and/or manufacturer drive-assist service and replacement parts.

## Drive System Specifications

Platform / Region Specification	Supersix EVO NEO / EU			US		
Model Code	C66150M	C66250M	C66350M	C66150M	C66250M	C66350M
Model Name	SuperSix EVO Neo 1	SuperSix EVO Neo 2	SuperSix EVO Neo 3	SuperSix EVO Neo 1	SuperSix EVO Neo 2	SuperSix EVO Neo 3
EPAC Type <sup>2</sup> / E-Bike Class <sup>3</sup>	N/A			Class 1		
EPAC according to	EN 15194			N/A		
Range Extender	Ebikemotion® X35 250Wh			Ebikemotion® X35 250Wh		
Display	N/A			N/A		
Max. Power, Continuous	250 W			250 W		
Max. Speed	25 km/h			20 mph		
Max. Weight, Rack	N/A			N/A		
EPAC Max. Weight	11.3 kg	12.4 kg	12.4 kg	25.0 lbs.	27.4 lbs.	27.3 lbs.
<sup>1</sup> ASTM F2043 <sup>2</sup> 2006/42/EC (EU) <sup>3</sup> AB 1096 (USA)						

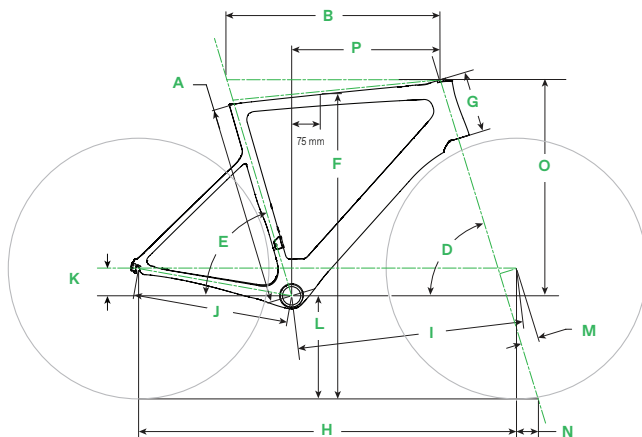
## Ebikemotion® Drive System Manuals

The following internet links will direct you to the drive manufacturer's website and a specific user manual or quick guide you will need to read and consult:

URL	LINK TO
<a href="https://www.ebikemotion.com">https://www.ebikemotion.com</a>	Drive manufacturer, home web page.
<a href="http://iWocONE-Quick-User-Guide">http://iWocONE-Quick-User-Guide</a>	Manual for the drive system interface device located on the top tube.
<a href="http://User-Guide-X35-Connection+Mount">http://User-Guide-X35-Connection+Mount</a>	Manual for the rear hub drive unit, and the rear wheel and electrical connection.
<a href="http://User-Guide-X35-Care+Maintenance">http://User-Guide-X35-Care+Maintenance</a>	Maintainance and Care manual for the X35 Drive System

Periodically, check back with the manufacturers' website for revisions and/or additions to drive system manuals.

### Geometry



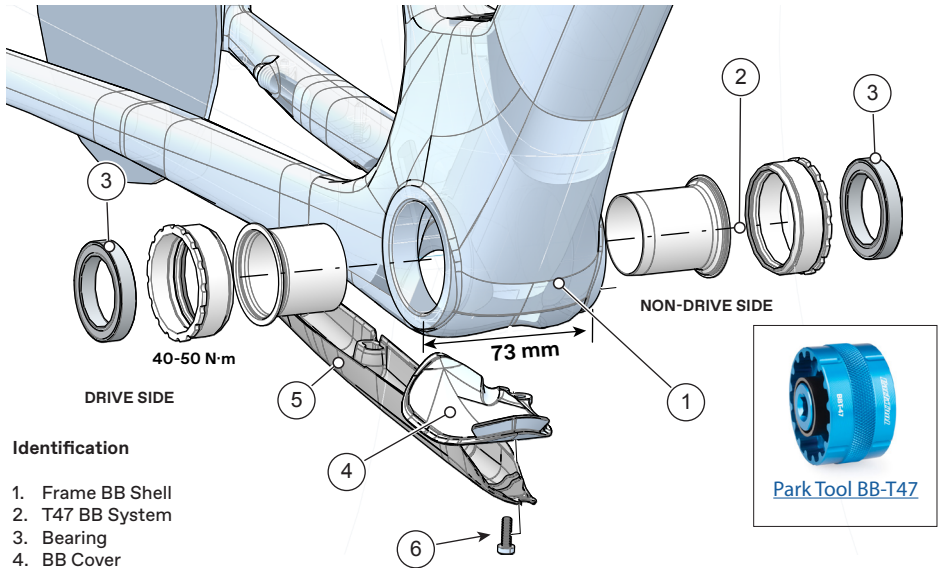
Dimensions = centimeter/inches

Item	Size	S	M	L
A	Seat Tube Length	47.7/18.8	51.5/20.3	53.6/21.1
B	Top Tube Horizontal	53.4/21.0	54.6/21.5	55.7/21.9
D	Head Tube Angle	71.2°	*	73.0°
E	Seat Tube Angle Effective	73.7°	*	*
F	Standover	75.8/29.8	78.8/31.0	80.8/31.8
G	Head Tube Length	13.2/5.2	15.4/6.0	16.4/6.5
H	Wheelbase	100.6/39.6	101.8/40.1	100.2/39.4
I	Front Center	59.8/23.5	61.1/24.0	59.4/23.4
J	Chain Stay Length	41.8/16.5	*	*
K	Bottom Bracket Drop	7.2/2.8	*	*
L	Bottom Bracket Height	27.1/10.6	*	*
M	Fork Rake	5.5/2.2	*	4.5/1.8
N	Trail	5.8/2.3	*	5.8/2.3
O	Stack	53.4/21.0	55.4/21.8	57.4/22.6
P	Reach	37.8/14.9	38.4/15.1	38.9/15.3
	Head Tube Height	37.5/14.8	*	*

\* Indicates same.

All Specifications subject to change without notice.

## Bottom Bracket - T47 / 73 mm



### Identification

1. Frame BB Shell
2. T47 BB System
3. Bearing
4. BB Cover
5. Chainstay Cable Cover
6. Cover Screw

### Servicing

Prior to replacement of any parts in the BB shell system, thoroughly clean the inside surface of the bottom bracket shell with a clean dry shop towel.

### NOTICE

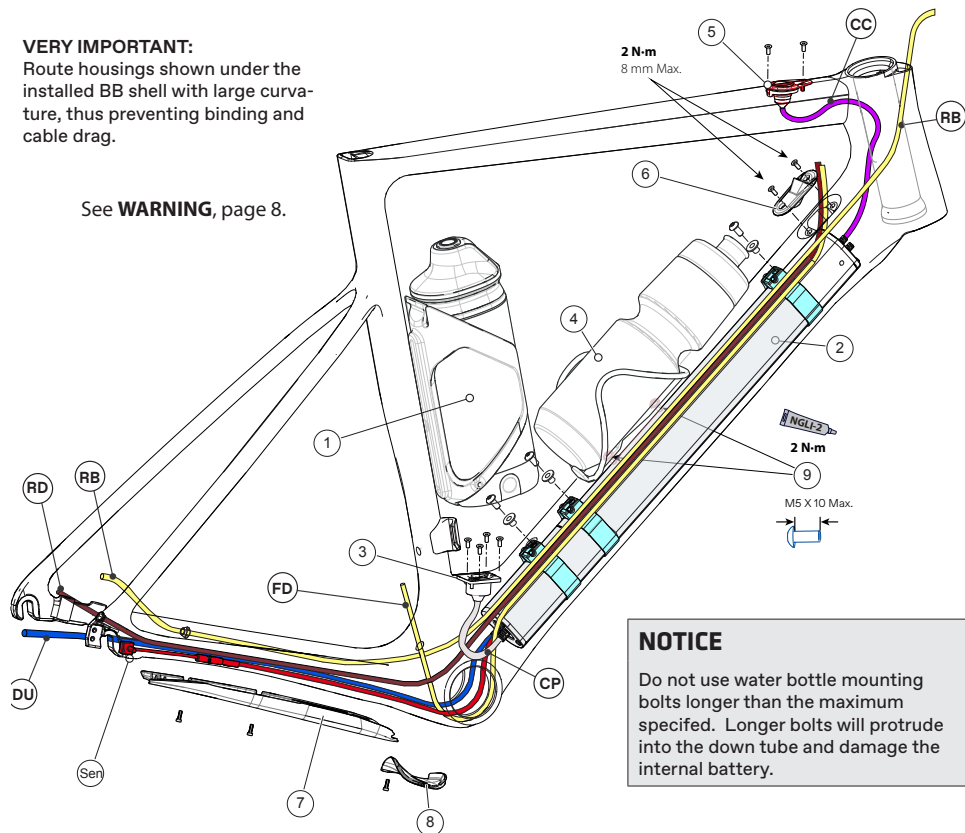
To avoid serious damage to the frame, follow the manufacturer's instruction for assembly and installation of the bearing system. Use the specified bottom bracket tools when servicing. Consult with your Cannondale Dealer on the quality and compatibility of any proposed replacement component. Do not use 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.

### Routing

**VERY IMPORTANT:**

Route housings shown under the installed BB shell with large curvature, thus preventing binding and cable drag.

See **WARNING**, page 8.



**NOTICE**

Do not use water bottle mounting bolts longer than the maximum specified. Longer bolts will protrude into the down tube and damage the internal battery.

**Identification**

- |                                   |                                |                               |
|-----------------------------------|--------------------------------|-------------------------------|
| 1. Battery, External (optional)   | 7. Chainstay Cable Guard       | RB - Rear Brake Line          |
| 2. Battery, Internal              | 8. Bottom Bracket Cover        | RD - Rear Derailleur Housing  |
| 3. Charge Port                    | 9. Water Bottle Mounting Bolts | DU - Drive Unit Cable         |
| 4. Water Bottle                   |                                | FD - Front Derailleur Housing |
| 5. iWoc@ ONE<br>(drive interface) |                                | CP Charge Ports Cable         |
| 6. DT Cable Guide                 |                                | CC - iWoc@ ONE Cable          |

**Please Note:** Do not attempt to work on the cable routing yourself. Due to the complex nature of the parts and the level of disassembly required to gain access, have any repairs or replacements of the battery, cables or hoses parts identified performed by an authorized Cannondale e-bike service center.

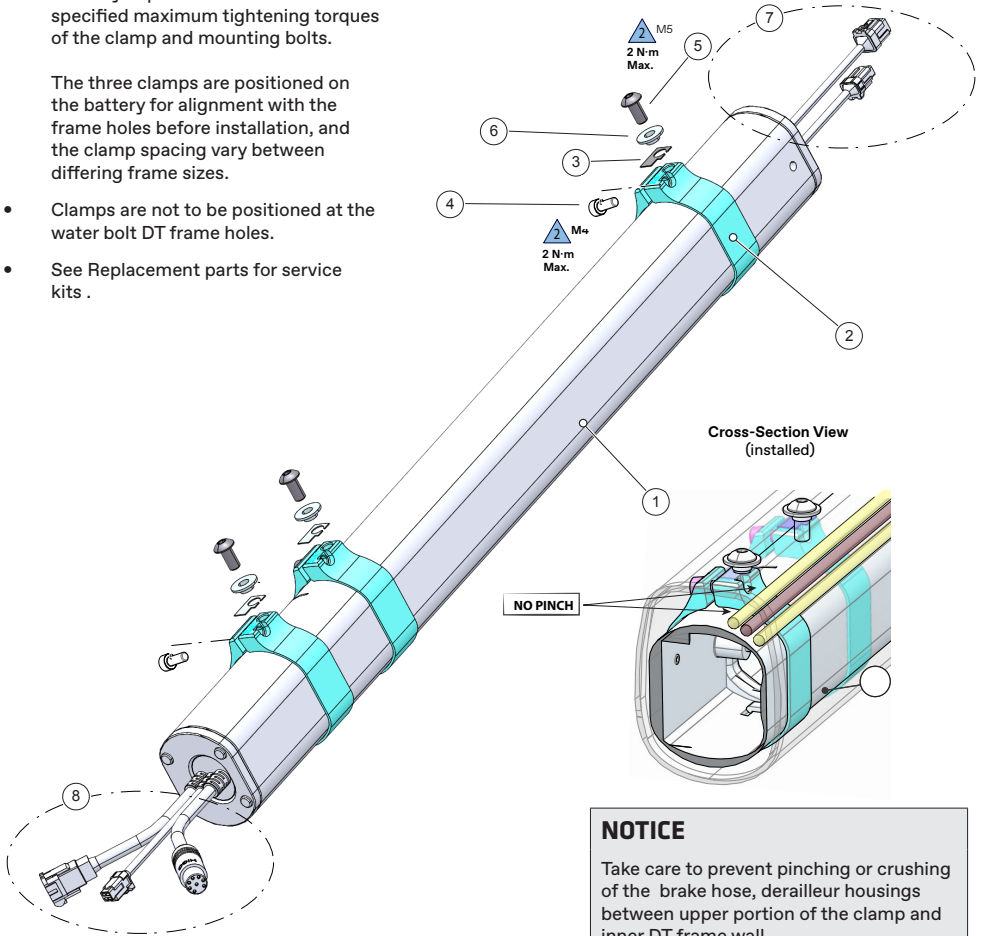


# Internal Battery

- To prevent damage to the battery it is very important to observe the specified maximum tightening torques of the clamp and mounting bolts.

The three clamps are positioned on the battery for alignment with the frame holes before installation, and the clamp spacing vary between differing frame sizes.

- Clamps are not to be positioned at the water bolt DT frame holes.
- See Replacement parts for service kits .



**NOTICE**

Take care to prevent pinching or crushing of the brake hose, derailleur housings between upper portion of the clamp and inner DT frame wall.

## Identification

- |                      |                  |                         |
|----------------------|------------------|-------------------------|
| 1. Battery, Internal | 4. Clamp Bolt    | 7. Upper Battery Cables |
| 2. Clamp             | 5. Mounting Bolt | 8. Lower Battery Cables |
| 3. 3M™ Tape          | 6. T-Washer      |                         |

## Rear Wheel

The drive unit manufacture's instructions contain important details about handling parts of the drive system. Read those instructions now.

### **WARNING**

To prevent serious injury in the event of accidental activation, turn the drive system OFF before performing any work.

### **NOTICE**

Take measures to protect the cables and connectors from damage while the wheel is removed.

#### **To remove:**

If the rear wheel must be removed in case of a tire or tube replacement, the following must be observed in the order presented:

1. Turn OFF the drive system. See manufacturers' instructions.
2. Secure the bicycle in a bicycle work stand with the rear wheel off the ground.
3. Loosen the guard screws and shift the chainstay cable guard back and removed over the screws and remove it.
4. Disconnect the battery cable and drive unit cable connectors.
5. Loosen the drive unit axle nuts. An open end wrench or an 8mm allen wrench can also be used.

Dropouts are designed so that the nuts and washers do not need to be completely removed to assemble/disassemble rear wheel.

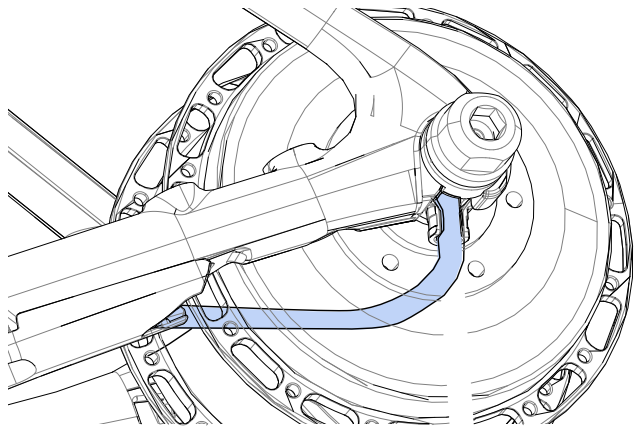
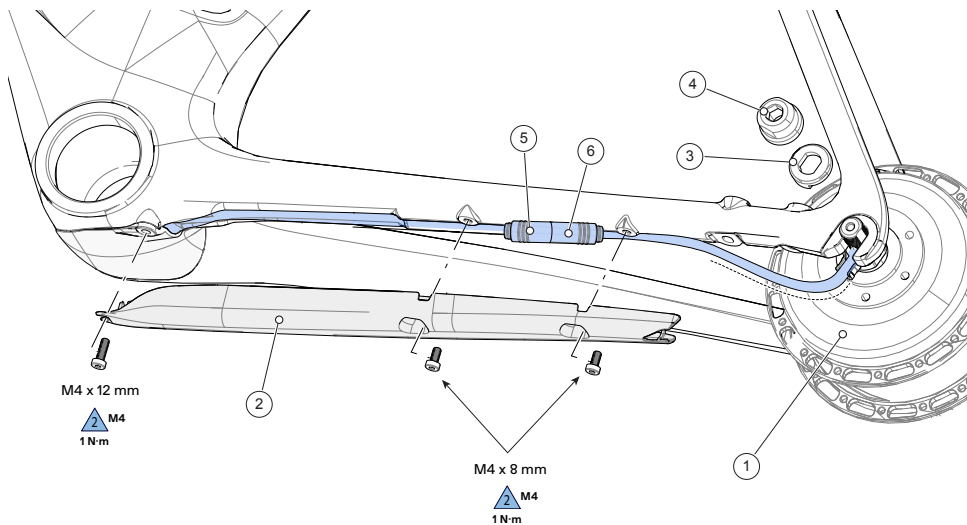
6. Carefully remove the wheel from the dropouts.

#### **To install:**

1. Turn OFF the drive system. See manufacturers' instructions.
2. Secure the bicycle in a bicycle work stand with the rear wheel off the ground.
3. Position the rear wheel into the dropouts.
4. Align the axle washers protrusions with the dropout slots, as shown in the figure and install it onto each side of the axle.
5. Finger tighten both axle nuts.

On the power cable side of the rear hub, make sure the cable is aligned in the slot as shown. Make sure the cable will not be pinched or crushed when tightening the axle nut.

6. Tighten both axle nuts to the specified torque. See hub instructions.
7. Re-connect the battery and hub cable ends.
8. Install the chainstay power cable cover with cables and tighten the screws to the specified torque.



**NOTICE**

Ensure that the chainstay cable cover (1) is capturing the power cable at the dropout end and is not oriented towards brake rotor.

Do not ride the bike without the chainstay cable guard.

Replace it if missing or damaged.

**Identification**

- 1. x35 Drive Unit (rear hub)
- 2. Chainstay Cable Cover
- 3. Axle Washer
- 4. Axle Nut
- 5. Battery Connector
- 6. Drive Unit Connector

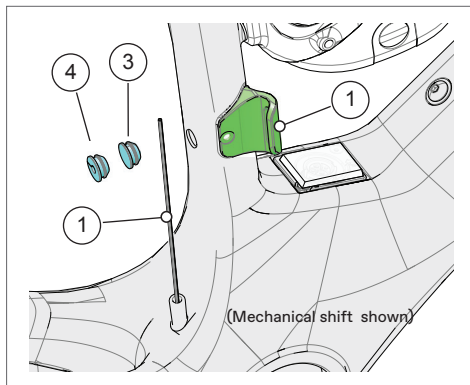
### Removing the internal battery

#### **WARNING**

The internal battery must only be service by a professional bike mechanic.

1. Disassemble the headset cap so that the fork may be lowered slightly within the headtube. This is required to enable adequate cable slack.
2. Remove the two screws and open the down tube cable housing guide on the downtube, to enable cable slack.
3. Remove the screws that retain the top tube mounted iWoc® ONE.
4. Remove the bottom bracket cover and chainstay cable guard.
5. Remove the four screws and open the charge port from the frame opening.
6. Pull the upper cables wire thru the cable guide hole in the DT and unplug the connections.
7. Remove the crankset and remove the BB shell.
8. Remove the rear wheel
9. Unplug the drive unit.
10. Open the charger plug
11. Pull the derailleur housing up thru the charger plug hole to free the space for the battery
12. Pull the battery down and out of the downtube.

### Front Derailleur Mount



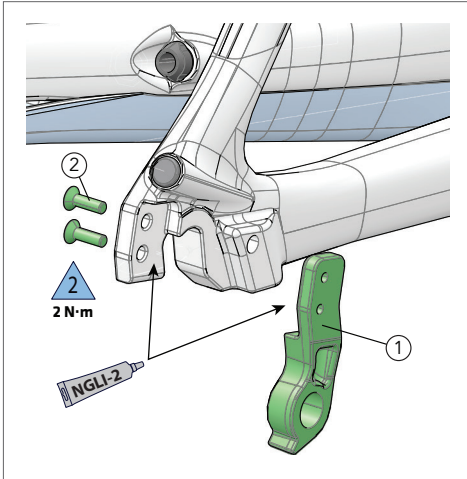
The front derailleur mount is bonded to the frame. It is a “braze-on type.”

Do not attempt to remove the mount.

When using a mechanical FD system or SRAM Etap, make sure the frame plug is installed to prevent the intrusion of water or debris into the frame.

When using Di2 Systems, use the Di2 Cable Plug.

## Rear Derailleur Mount



1. RD Mount                      2. M3 X 10 Screws

### To replace:

Remove the rear wheel.

Remove the mounting screw(s) and remove the old hanger from the dropout.

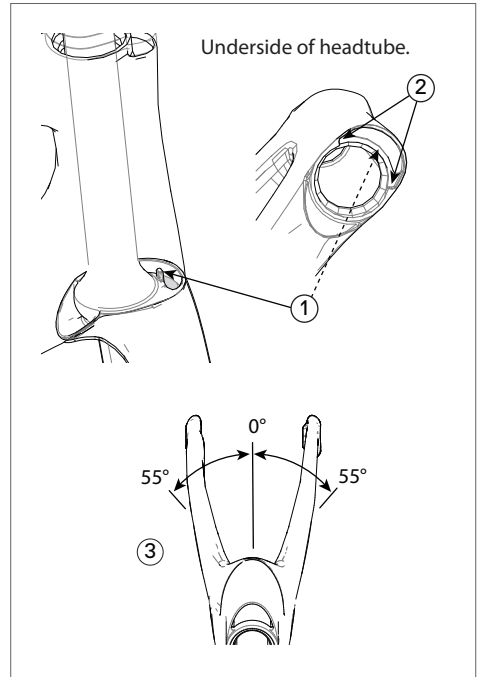
Clean the area around the dropout and inspect the frame carefully for any cracks or damage. If you find damage have the frame inspected by your Cannondale Dealer .

If the dropout is un-damaged, apply a light film of grease between the frame and mount. This will help minimize any noise or “creaking” that might result from very slight movement between the dropout and mount during movement of the derailleur.

Slide the new hanger onto the dropout.

Clean and apply Loctite® 242 (or medium strength thread lock) to the screw threads and tighten to the specified torque.

## Headtube Steering Angle



1. Fork Stop Pin 2. Head Tube Stop                      Limits  
3. Steering Angle

### NOTICE

Do not force the steering past the stop points.

If the front end steering of the bikes is over-loaded (due to e.g. a handlebar strike, a crash, etc.) damage to the frame, fork or pin may result.

This type of damage is not covered by the limited warranty.

## Seat Post

### Installation & Adjustment

#### Before installing:

- Use a clean shop towel to wipe out any residual carbon gel paste from the inside the seat tube.
- Apply fresh carbon friction gel to the seat post and place a little bit inside the seat tube.
- Make sure the seal is in good condition and in place on the seat post.

#### To adjust:

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

#### NOTICE

- Do not use any spray cleaners or solvents to clean. 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 the frame.

### Maintenance

Periodically, remove the seat post and the clamp assembly to clean, inspect for damage and renew the application of grease and carbon gel.

See also, "Seat Binder Inspection."

### 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. Have your Cannondale Dealer size the seat post appropriately.



#### WARNING

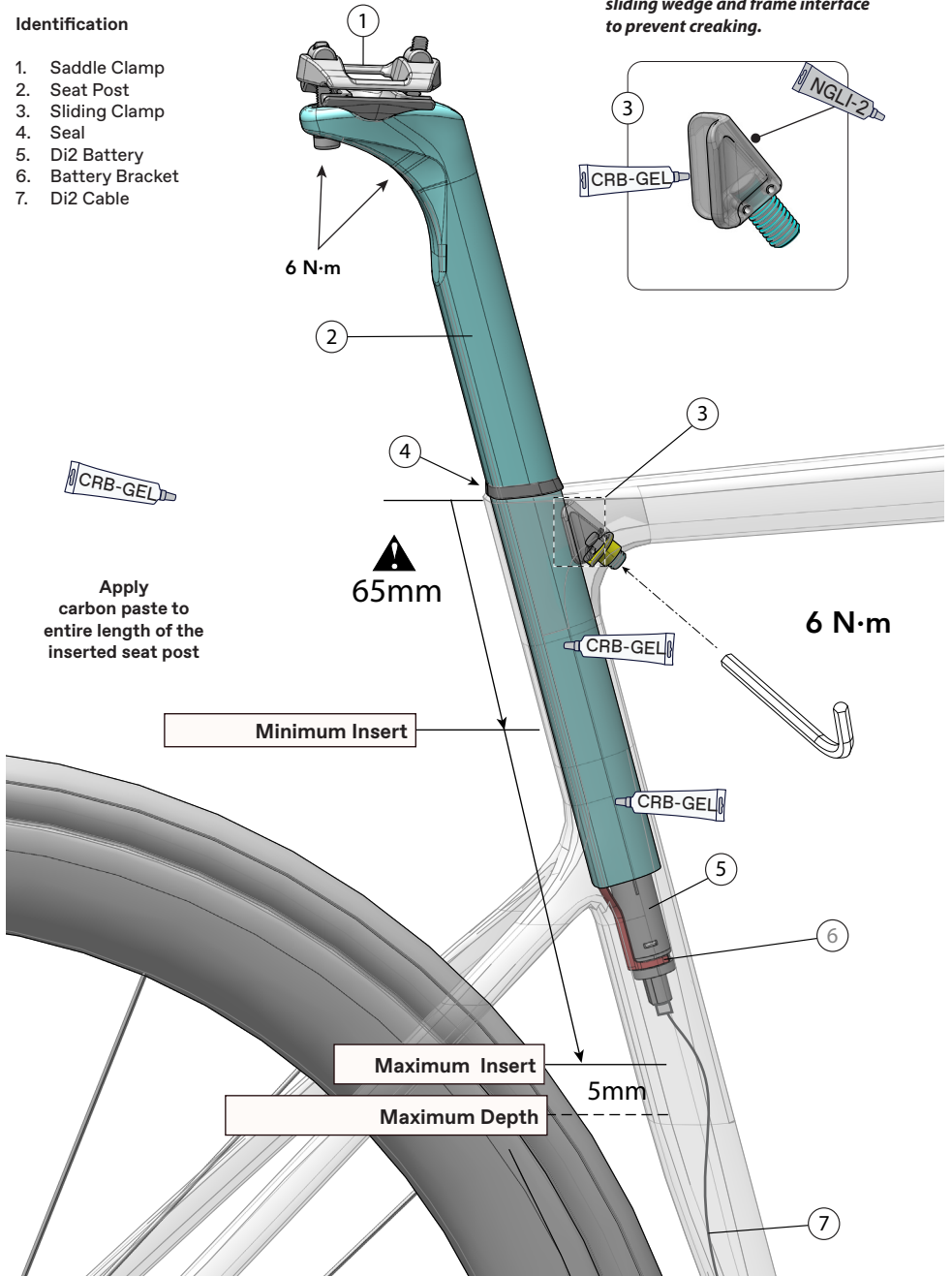
**THE SEAT POST MUST ONLY BE CUT BY A PROFESSIONAL BIKE MECHANIC.** Incorrectly cutting the seat post can result in damage leading to an accident.

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. Seal
- 5. Di2 Battery
- 6. Battery Bracket
- 7. Di2 Cable

*Apply heavy grease between sliding wedge and frame interface to prevent creaking.*



## Seat Binder Inspection

The internal seat binder system consists of a sliding clamp assembly and a nut base with a double-side adhesive holding it to a special mating surface inside the seat tube. The sliding clamp parts can be removed when the seat post is out.

Always clean the surfaces of the sliding clamp by wiping them with a clean dry lint-free shop towel only. Do not soak the parts, as the internal washer is lubricated with grease. Solvents will wash out the lubricant and the assembly will have to be regreased by disassembling it completely.

### NOTICE

If the nut base has become rotated, it should be removed and re-affixed to the frame. The process is described in the Service Instruction for the parts kit. These instructions are not provided in this manual. We recommend that you have a Cannondale Dealer perform the replacement.

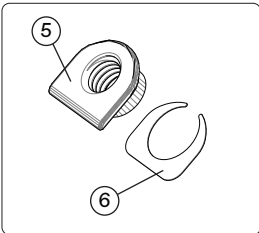
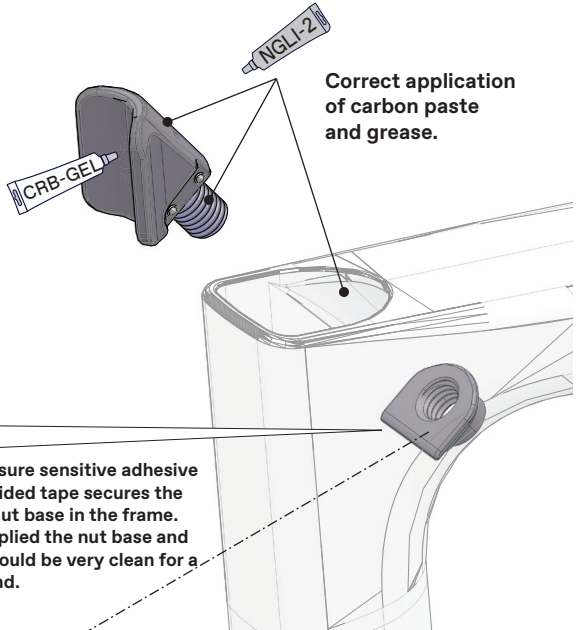
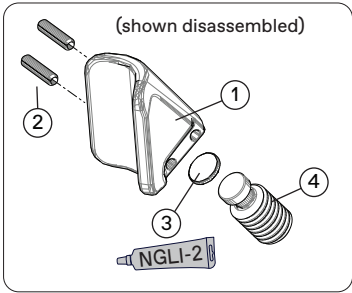
**Please Note:** During first assembly of the nut base, it is important to not push on the 4mm allen when tightening onto the seatpost. This can disengage the adhesive tape before proper bonding. A poor bond can lead to misalignment. The 3M™ VHB™ Tape 5980 is pressure sensitive.

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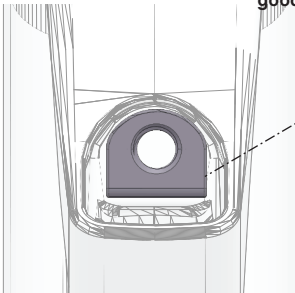
### To inspect

1. To remove the seat post. See previous page.
2. To remove the sliding clamp, use a 4 mm hex key and turn grub screw slowly clockwise until the clamp is disengaged from the nut base.
3. Use the 4 mm hex to push the clamp out through the seat tube opening.
4. Look into the frame opening. Use a pen flashlight. Check the position of the nut base. See CORRECT next page.
5. If the nut base is missing, or rotated or damaged, a replacement is required. This service should be performed by a Cannondale Dealer.
6. Check the condition of the clamp. The seat post face and frame contact surfaces should be smooth. If they are not, the clamp assembly should be replaced with a new one.
7. Clean the parts and inside the seat tube with a dry shop towel and re-apply grease and carbon paste as indicated.
8. Returning the sliding clamp to the frame, using the 4 mm hex to guide it to the nut base.
9. Turn the grub screw counter-clockwise to engage the nut base. Make sure it is engaged sufficiently to easily insert the seat post into the seat tube.

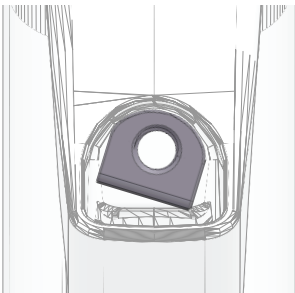
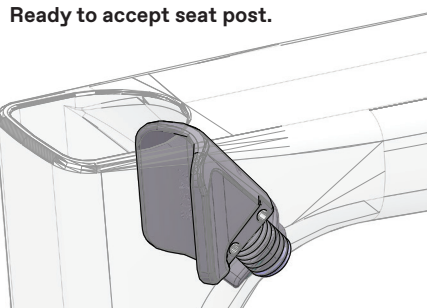




The pressure sensitive adhesive double-sided tape secures the aligned nut base in the frame. When applied the nut base and frame should be very clean for a good bond.



**This is CORRECT.**



**This is INCORRECT.  
The nut plate is rotated.**

**Identification**

1. Sliding Clamp
2. Roll Pins (2X)
3. Washer
4. Grub Screw
5. Nut Base
6. Pressure Sensitive Adhesive Tape (Double-sided)

## KNØT Stem Spacers

Spacers can be flexed open to allow spacer assembly / disassembly without disconnecting cables.



Bend spacer inwards to route cables through first slot, then route cables through the second slot.



Assemble spacer on steerer tube.



Spacers and stem have interlocking feature to ensure alignment.



Hinge covers together and slide them over the stem body. Stem body and covers have interlocking features.



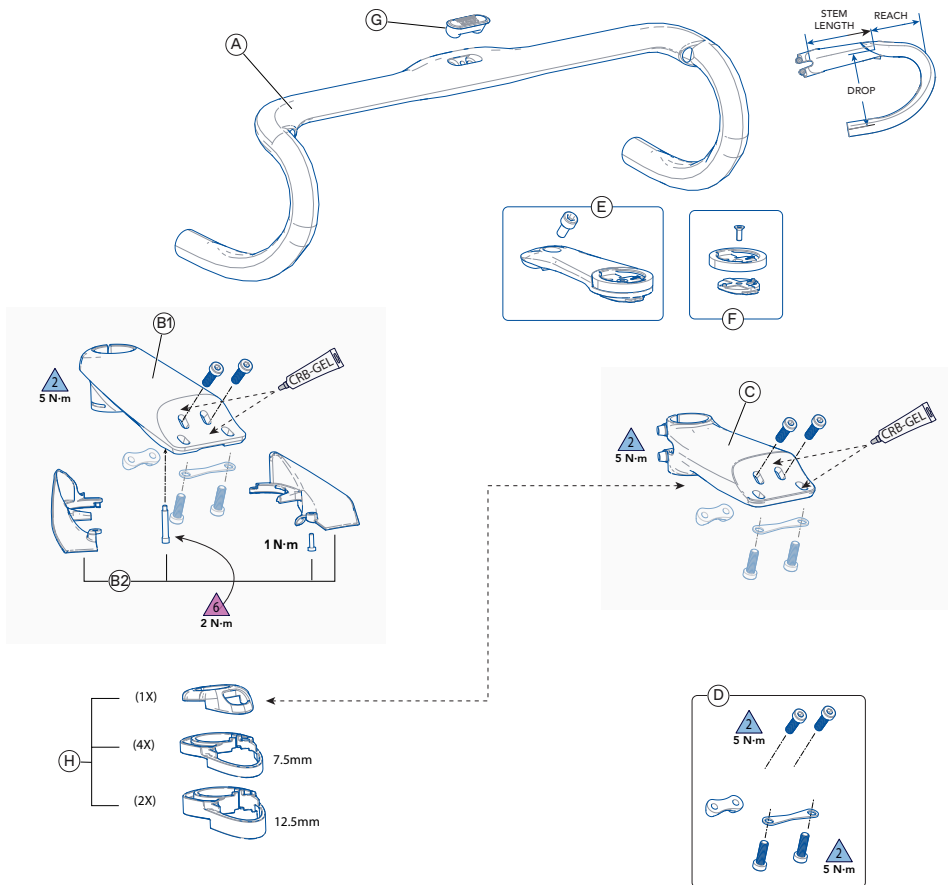
Close right stem cover first, then rotate left stem cover in place and close around the stem body



Assemble the stem covers with the M3 bolt (1Nm)



### KNØT / SAVE SystemBar



### KNØT & SAVE Shared Parts

ID	Description	Part Number
D	K28018	SystemBar Mounting Hardware
E	K12018	SystemBar Computer and Light Mount
F	K12008	SystemBar Computer and Light Insert
G	K28039	HGRM KNØT/SAVE Handlebar Plug
H	K28000	SuperSix Stem Spacers

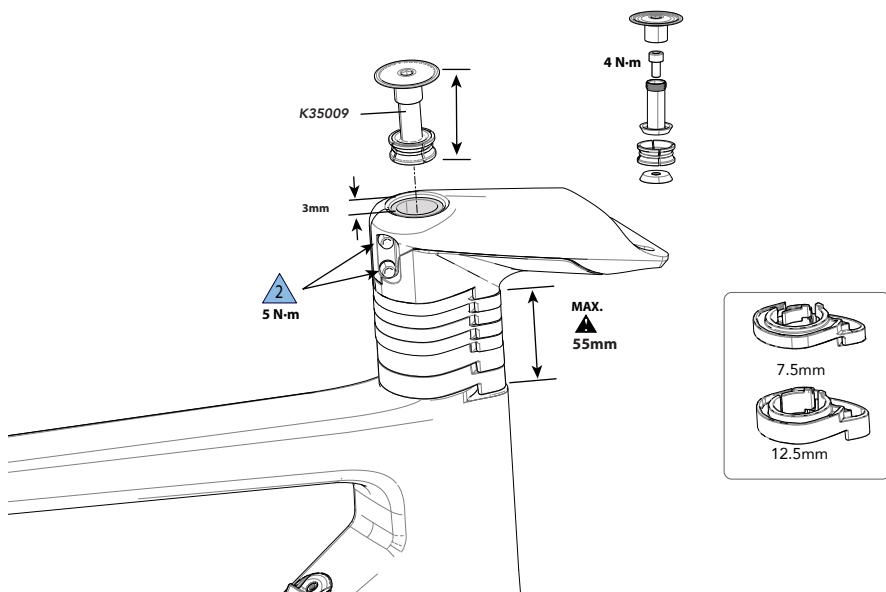
## Handlebar

ID	Description	Part Number	Width (cm)
A	KNØT	CP2650U1038	38
		CP2650U1040	40
		CP2650U1042	42
		CP2650U1044	44
	SAVE	CP2600U1036	36
		CP2600U1038	38
		CP2600U1040	40
		CP2600U1042	42
		CP2600U1044	44

## Stems

ID	Description	Part Number	Stem Length (mm)	Stem Rise (degrees)
B1	KNØT Stems	CP2300U1080	80	- 17
		CP2300U1090	90	
		CP2300U1010	100	
		CP2300U1011	110	
		CP2300U1012	120	- 6
		CP2250U1080	80	
		CP2250U1090	90	
		CP2250U1010	100	
B2	SuperSix EVO KNØT Stem Covers	CP2250U1011	110	- 17
		CP2250U1012	120	
		K2804080	80	
		K2804090	90	
		K2804000	100	- 6
		K2804010	110	
		K2804020	120	
		K2803080	80	
		K2803090	90	
		K2803000	100	
K2803010	110	- 6		
K2803020	120			
C	SAVE Stems	CP2000U1080	80	- 6
		CP2000U1090	90	
		CP2000U1010	100	
		CP2000U1011	110	
		CP2000U1012	120	
		CP2000U1030	130	
		CP2100U1080	80	+ 6
		CP2100U1090	90	
		CP2100U1010	100	
		CP2100U1011	110	

### KNØT SystemStem

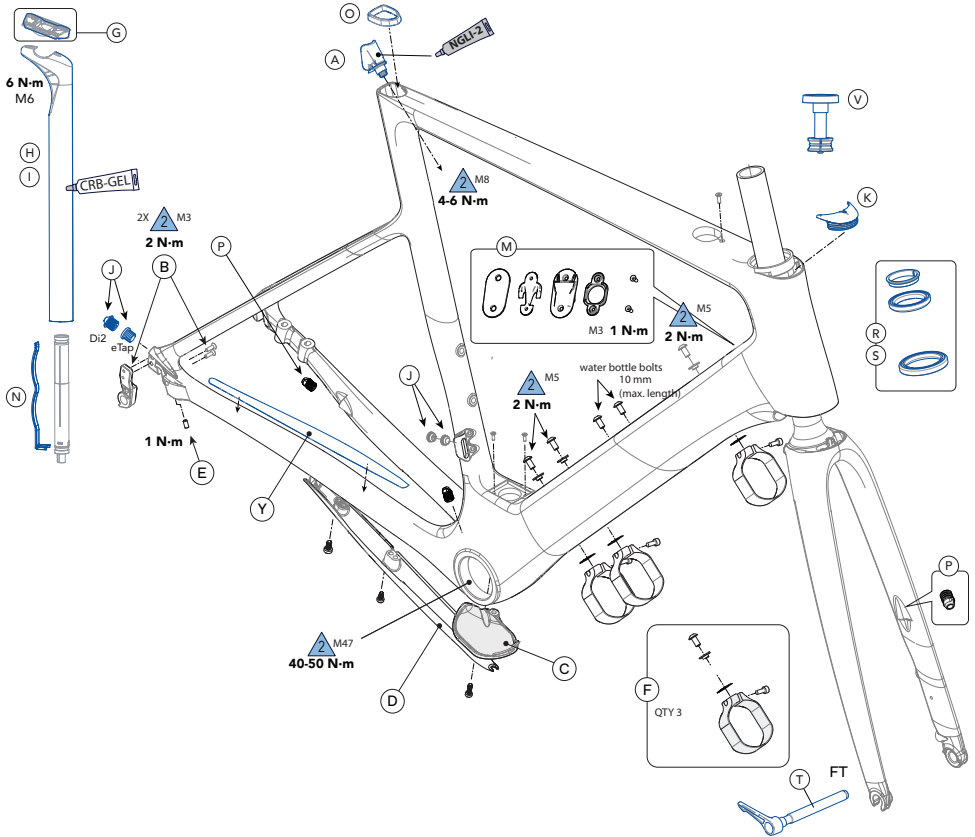


- The KNØT stem supports internal brake hose and Di2 wire routing.
- Assembly of spacers is explained on the previous pages.
- Stem height may be set using combination of the 12.5mm and/or 7.5mm spacers.
- The maximum spacer stack height is 55mm. The example above depict 2x 12.5mm spacers and 4x 7.5mm spacers, resulting in 55mm.
- The KNØT stem is to be used only with a Cannondale SystemBar handlebar such as SAVE or KNØT SystemBar.
- Use only the Cannondale SI Compression plug **K35009**.

Additional instruction at:

<https://p.widencdn.net/w5njzq/134947-REV-1-CD-OMS-SAVE-KNOT-SystemBar>

# REPLACEMENT PARTS



ID	Part Number	Description
A	K26030	S6 EVO Internal Seat Binder
B	K33009	Derailleur Hanger TA ST SS 070
C	K34100	S6 EVO Neo Battery Door
D	K34120	NDS CS Power Cable Protector
--	KF115/	Carbon Seatpost Gel
E	K33080	Dropout Bolts M4×10mm Qty 2
F	K76050	X35 Battery Straps/Mounting Hrdw
G	K26050	KNØT 27 Rail Clamps and Hardware
H	K2601000	HG 27 KNØT Crb Seatpost 330mm 0 O/Set
	K2601015	HG 27 KNØT Crb Seatpost 330mm 15 O/Set
I	K2602015	C1 27 KNØT Alloy Seatpost 330mm 15 O/Set
J	K32170	S6 EVO Frame Grommets
K	K32030	S6 EVO Rim Di2 Headtube Wire Guide

ID	Part Number	Description
M	K32160	S6 EVO/CAAD13 DT Cable Guide
N	K32180	KNØT 27 Di2 Battery Mount
O	K26070	Seatpost Silicone Grommet
P	KP449/	Rubber Brake Housing Grommets
R	K35028	1 1/4 Crb Headset No Crown Race
S	K35038	1 3/8 Crb Headset No Crown Race
T	K83019	Speed Release TA 100×12 2Lead P1.0 119mm
--	K83029	Speed Release TA 142×12 2Lead P1.0 165mm
V	K35058	SL Compression Plug with Top Cap
--	KP197/SRM	PF30 BB Cups & Bearings
--	KB6180/	BB30 Bearing Blue (QTY 2)
--	K22037	BB30 Bearing Blue (QTY 24)
Y	K34130	Chainstay Protection Film

## EBIKE PRE-RIDE CHECKLIST

### Before and After Each Ride:

- Clean and visually inspect the entire bike for cracks or damage. See “Inspect for Safety” in your Cannondale Bicycle Owner’s Manual.”
- Make sure the battery is fully charged and mounted securely. Follow the drive system charging instructions. Battery charge discharge capacity will decline with usage. Have older battery replaced when it fails to charge within the time indicated, and/or to provide power reliably.
- Test the drive-assist system, make sure the drive system functions normally.
- If your E-Bike model was equipped a lighting system, brake lights, headlights, taillights and number plate illumination, make sure these lights are each functioning normally. Make sure the number plate is clean and readable.
- Check the front and rear brake conditions, make sure they function normally.
- Check tire pressure and wheel conditions. Check tire pressure and the condition of the wheels. Ensure the tires are not damaged and do not have excessive wear. Ensure there are no broken or missing wheel parts and that the wheels are firmly attached via secured skewers/axles.
- Confirm the drive chain condition is in good condition, is clean and well-lubricated. Chain wear is greater compared with pedal only bikes. This requires frequent inspection and replacement. Ensure the gears operate normally through the entire range.
- Check the bicycle brakes. Make sure they are working well. Brake system pad and disc wear is greater compared with pedal only bikes. This requires frequent inspection and replacement.
- Inspect condition of electrical cables (i.e. Kinks free, no signs of abrasive wear). Check cable at dropout end when assembled properly will prevent cable from contacting brake rotor.

### WARNING

**Perform a pre-ride-check before and after each ride.** Frequent checks are necessary to identify and correct problems that can lead to an accident. Do not ride your bike if it does not operate normally or has broken, damaged, or missing parts. Have any damage inspected and repaired by your Cannondale Dealer before riding again.

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



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# EBIKE MAINTAINANCE

## Maintaining Your Bike

1. Read your **Cannondale Bicycle Owner's Manual** for information on an owner's responsibility for the routine/ basic inspection and maintenance of your bike.

Consult with your Authorized Cannondale Dealer to create a complete maintenance program for your riding style, components, and conditions of use.

Follow the maintenance recommendations given by the component manufacturer's for the various parts of your bike.

2. Recommended after the first 150 km, bring your bike to your Authorized Cannondale Dealer for an initial check-up. It should include checks of the drive-assist system, drive chain condition, proper shifting, accessories, wheels and tire condition, brakes, etc. This visit will help you establish a schedule for repeated visits appropriate for how and where you ride.
3. Every 1000 km, bring your bike in to your Authorized Cannondale Dealer for a regular detailed inspection, adjustment, and replacement of wear items across the entire bike. Electrically powered-assist cycle (electric bikes) can wear out wheels, tires, drive chain, brakes, more quickly.

## Maintaining Your Bike's Drive System

### NOTICE

Drive-assist system components must only be serviced at an authorized service center. This will ensure the quality and safety of the drive-assist system.

Never attempt to open, remove drive system parts from the frame, or work on them yourself. Other components of the electric bicycle drive (e.g. drive chain, front chain ring, rear cassette, rear derailleur, crank arm) must be serviced by an Authorized Cannondale Dealer.

Replacement parts must be identical to the original Cannondale specification for the bike. Failure to replace components with original specification can result in serious overload or other damage to the drive unit.

Unauthorized opening or service of the drive unit will void the warranty.

### Cleaning

When cleaning your bike, use a damp sponge or a soft brush with only a mild soap and water solution. Rinse the sponge often. Do not spray water directly on controls or drive system components.

#### NOTICE

Do not use a pressure washer or dry with compressed air. This will force contaminants into sealed areas, electrical connections/components promoting corrosion, immediately damaging, or result in accelerated wear.



#### WARNING

**Keep water away from the electrical components.**

**Make sure the bike is secured upright and can not fall over accidentally while you are cleaning it.**

Don't rely on the kickstand. Use a sturdy portable bicycle wheel stand to hold the bike upright.



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SuperSix EVO Neo Owner's Manual Supplement

137377 Rev. 1

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