

CY22 Mavaro Neo/ Tesoro Neo X/ Trail 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.

SYMBOLS

	NGLI-2 synthetic grease	Apply NGLI-2 synthetic grease.
	Anti-Sieze Lubricant	Apply Permetex® Anti-Sieze Lubricant
	Medium-strength removable thread lock	Apply Loctite® 242 (blue) or equivalent.
N·m	Tightening torque in Newton meters.	

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.

Download available manuals or supplements from our website: <http://www.cannondale.com>.

Contacting Cannondale

Cannondale USA

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

CSG Europe (Woudenberg)

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

International Distributors

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

Contents

Safety Information	2-9
Technical Information	10-33
Replacement Parts.....	34-35
Maintenance	36-37

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.

This manual includes information for the following Collection 2022 models:

Mavaro Neo
Tesoro Neo X
Trail Neo

Safety Information

Intended Use



The intended use of all models is ASTM CONDITION 2, General Purpose Riding.

WARNING

Understand your bike and its intended use. 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.

What is an E-Bike?

Electric bikes, also known as “E-Bikes,” are bicycles equipped with an electric pedal-assist drive system. E-Bikes 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, Bafang, 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 on 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 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.

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:

Drive Unit	Battery
Display/Control Unit	Charger

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

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.

No Modification

WARNING

DO NOT MODIFY THIS BICYCLE/DRIVE SYSTEM IN ANY WAY FOR ANY REASON. Doing so can result in severe damage, in faulty or in dangerous operating conditions, or in 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 gear ratios, i.e., the front chainrings and rear cogs).

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

Trailers or Child Carrier or Child Seats

WARNING

Do not attach a trailer, CHILD CARRIER or child seat to this bicycle.

Attachment of a trailer or child seat to this bicycle can result in a serious accident leading to serious injury or death.

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 the bike's controls and performance. Practice the controls and to 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 to "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 to help ensure adequate battery power for necessary lighting and for 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 to come into contact with the e-bike or its parts.

Only turn the drive system on when you are seated ready to ride.

Accidental activation: Always disconnect the battery from the bike before working on the bicycle. If you transport the bike by car or by airplane, obey local regulations regarding transporting a bicycle with a drive system battery. Accidental activation of the bicycle drive system can result in serious injury.

continued next page

continued from previous page...

Wired system control: If the drive system control device is detached from the mount or if the cables are disconnected or 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 operation.

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

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 and 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 to 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 and possibly result in injuries.

Do not ride into or attempt to ride through water or to submerge 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 damage.

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

Batteries & Chargers

WARNING

REPLACEMENT - Only use the battery pack and charger indicated in the “Specifications” section 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. There are no user-serviceable parts inside.

Keep the battery out of intense sunlight and away from heat. Excessive 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 an 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 the 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 the battery and charger 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 from over-heating. 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 and charger contain regulated materials and must be disposed/discarded in accordance with national and/or with local laws. Do not discard the battery/charger into fire, into water, or into ordinary household waste/garbage. Instead, take to a waste facility/recycler.

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

Minimum Seat Post Insert

WARNING

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

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

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

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

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

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

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.

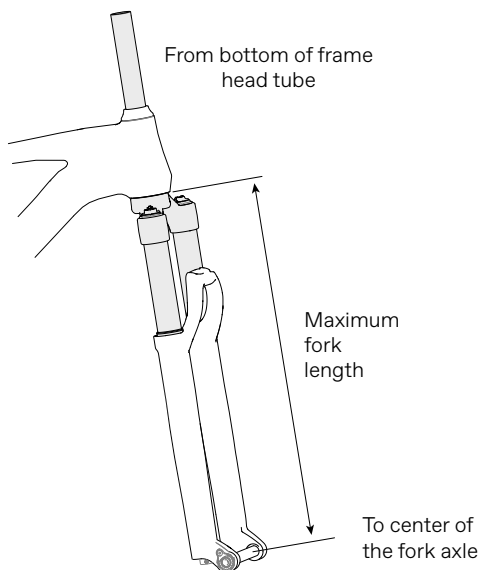
Never attempt to open or remove drive system parts from the frame, or to work on them yourself. Other components of the drive system (e.g. drive chain, front chain ring, rear cassette, rear derailleur, crank arm) must be serviced by an Authorized Cannondale Dealer.

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 in other damage to the drive unit.

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

Maximum Fork Length

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



WARNING

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

Do not exceed maximum fork length. Exceeding the MAXIMUM FORK LENGTH limit can overload the frame causing it to break while riding.

Your retailer MUST follow and observe this specification for your bike. For Maximum Fork Length specifications for Cannondale bicycles, see www.cannondale.com.

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

Rear Rack

 **WARNING**

LOADING LIMIT (TOTAL): 10 kg, 22 lbs. Do not overload the rack. Do not carry a passenger.

UNDERSTAND THAT ADDING ON A RACK WILL AFFECT HOW YOUR BIKE HANDLES; YOU MUST COMPENSATE. A loaded rack bag will affect the handling (e.g., steering, stability, braking, acceleration, etc.) of your bike. You must learn to compensate for the handling effects of the loaded items. If you use multiple racks and or cycling bags, distribute all weight across racks evenly.

DO NOT MODIFY: The rack or bike frame must not be cut, drilled, or modified in any way.

PERIODIC INSPECTION REQUIRED: The rack and frame mounting points must be periodically inspected for damage as part of your routine bicycle maintenance.

SECURE RACK CONTENTS: You must make sure that all items placed in the rack are secure and cannot be thrown out or shifted in the rack while riding. You must prevent any parts of the contents, the straps, or the tie-downs used to secure the rack contents from interfering with your ability to steer the bicycle or to use any of its controls. REMOVE ALL items in the rack when the bicycle is placed on an automobile rack. Make sure the strap ends/hooks are secured at the frame or rack tie-down points.

YOU CAN BE SEVERELY INJURED, PARALYZED, OR KILLED IN AN ACCIDENT IF YOU IGNORE THESE WARNINGS.

Technical Information

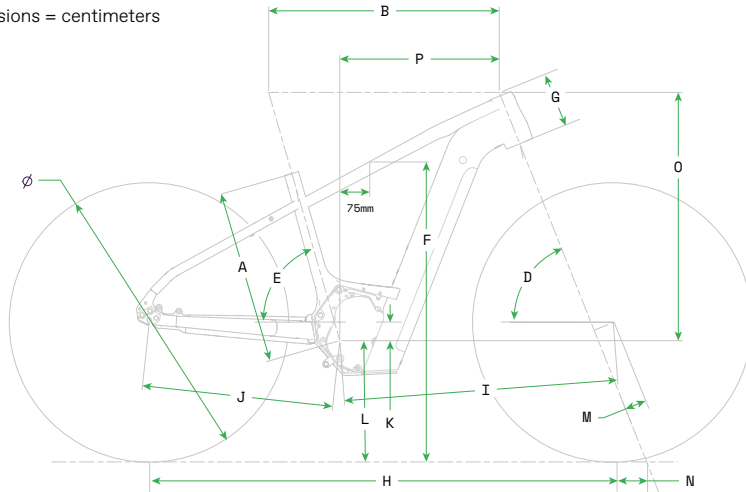
Specifications

Item	Specification
CY22 Model Names	Mavaro Neo, Tesoro Neo X, Trail Neo
Drive System	Bosch Performance Line CX Bosch Performance Line Speed
Battery	Bosch PowerTube 750Wh
Drive-Assist Owner's Manual	https://www.bosch-ebike.com/
Head Tube	UPR:1-1/2 LWR:1.8
Headset	ACROS 1.5-1.8 Integrated w/Internal Cable Routing K35012 1.5-1.8 Int Hdset 28.6/52-60/45.83
Bottom Bracket: Type/Width	Bosch Drive Unit
Front Derailleur	N/A
Seat Post: Dia./Binder	31.6mm/36.4mm
▲ Min. Seat Post Insert	100mm
Tire Size x Max. Tire Width	SM:27.5×2.5 MD LG XL: 29×2.5
▲ Max. Fork Length	SM: 495mm MD LG XL: 505mm
Rear Brake: Mount Type / Min./Max. Rotor Dia.	IS, 180mm/203mm
Rear Axle: Type/Length	135×9mm QR or Internal Gear Hub
Chain Line	Chain: 52mm Belt: 47.5mm
▲ Intended Use	ASTM CONDITION 2: General Purpose Riding
▲ Max. Weight Limit: Total (Rider+All Equipment)	330lbs/150kg
Additional Technical Features	Day Time Running Light Dutch Lock Compatibility

All specifications are subject to change without notice.

Geometry

Dimensions = centimeters



Mavaro Neo Standard

	Size	S	M	L	XL
ø	Wheel Size (in)	27.5	29	29	29
A	Seat Tube Length	40.0	43.5	47.0	50.0
B	Top Tube Horizontal	57.9	59.9	61.8	63.9
D	Head Tube Angle	68.8	69.2	69.2	69.2
E	Seat Tube Angle Effective	74.8	75.2	75.2	75.2
F	Standover	74.4	77.4	79.7	81.9
G	Head Tube Length	14.0	13.0	14.0	15.5
H	Wheelbase	116.3	117.6	119.6	121.9
I	Front Center	68.9	70.6	72.6	74.8
J	Chain Stay Length	48.0	48.0	48.0	48.0
K	Bottom Bracket Drop	5.8	7.5	7.5	7.5
L	Bottom Bracket Height	29.2	29.5	29.5	29.5
M	Fork Rake	5.5	5.5	5.5	5.5
N	Trail	7.7	8.2	8.2	8.2
O	Stack	61.6	62.6	63.5	64.9
P	Reach	41.2	43.4	45.0	46.8
	Head Tube Height	48.0	48.0	48.0	48.0

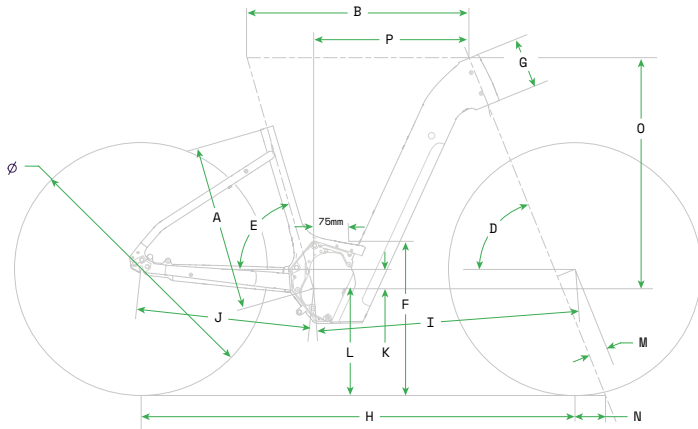
CY22 Mavaro Neo, Tesoro Neo X, Trail Neo

Tesoro Neo X Standard					
	Size	S	M	L	XL
∅	Wheel Size (in)	27.5	29	29	29
A	Seat Tube Length	40.0	43.5	47.0	50.0
B	Top Tube Horizontal	57.9	59.9	61.8	63.9
D	Head Tube Angle	68.0	68.0	68.0	68.0
E	Seat Tube Angle Effective	74.0	74.0	74.0	74.0
F	Standover	75.0	78.4	80.7	82.9
G	Head Tube Length	14.0	13.0	14.0	15.5
H	Wheelbase	115.6	117.8	119.8	122.0
I	Front Center	68.1	70.5	72.5	74.8
J	Chain Stay Length	48.0	48.0	48.0	48.0
K	Bottom Bracket Drop	5.2	6.5	6.5	6.5
L	Bottom Bracket Height	29.9	30.5	30.5	30.5
M	Fork Rake	4.4	5.1	5.1	5.1
N	Trail	9.4	9.4	9.4	9.4
O	Stack	62.4	63.5	64.4	65.8
P	Reach	40.0	41.7	43.3	45.0
	Head Tube Height	49.5	50.5	50.5	50.5

Trail Neo					
	Size	S	M	L	XL
∅	Wheel Size (in)	27.5	29	29	29
A	Seat Tube Length	40.0	43.5	47.0	50.0
B	Top Tube Horizontal	57.9	59.9	61.8	63.9
D	Head Tube Angle	68.0	68.0	68.0	68.0
E	Seat Tube Angle Effective	74.0	74.0	74.0	74.0
F	Standover	75.4	78.7	81.0	83.2
G	Head Tube Length	14.0	13.0	14.0	15.5
H	Wheelbase	115.6	117.1	119.1	121.3
I	Front Center	68.1	69.8	71.8	74.1
J	Chain Stay Length	48.0	48.0	48.0	48.0
K	Bottom Bracket Drop	5.2	6.5	6.5	6.5
L	Bottom Bracket Height	30.3	30.8	30.8	30.8
M	Fork Rake	4.4	4.4	4.4	4.4
N	Trail	9.6	10.3	10.3	10.3
O	Stack	62.4	63.7	64.7	66.0
P	Reach	40.0	41.6	43.3	45.0
	Head Tube Height	49.5	50.5	50.5	50.5

Geometry

Dimensions = centimeters



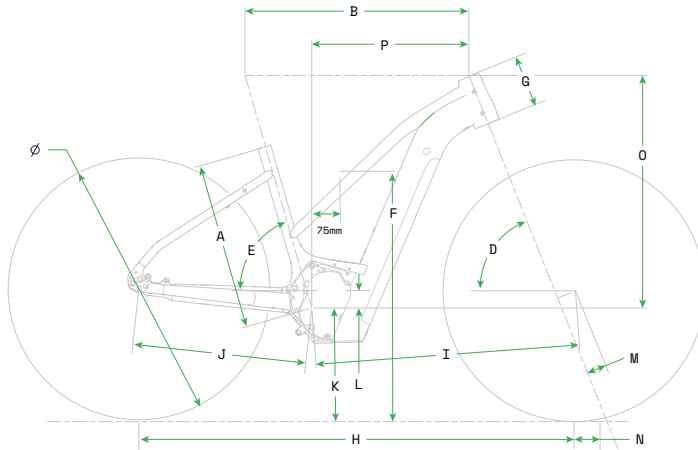
Mavaro Neo Low Step-Thru

	Size	S	L
ø	Wheel Size (in)	27.5	29
A	Seat Tube Length	40.0	47.0
B	Top Tube Horizontal	57.9	61.8
D	Head Tube Angle	68.8	69.2
E	Seat Tube Angle Effective	74.8	75.2
F	Standover	43.4	43.5
G	Head Tube Length	14.0	14.0
H	Wheelbase	116.3	119.6
I	Front Center	68.9	72.6
J	Chain Stay Length	48.0	48.0
K	Bottom Bracket Drop	5.8	7.5
L	Bottom Bracket Height	29.2	29.5
M	Fork Rake	5.5	5.5
N	Trail	7.7	8.2
O	Stack	61.6	63.5
P	Reach	41.2	45.0
	Head Tube Height	48.0	48.0

Tesoro Neo X Low Step-Thru			
	Size	S	L
∅	Wheel Size	27.5	29
A	Seat Tube Length	40.0	47.0
B	Top Tube Horizontal	57.9	61.8
D	Head Tube Angle	68.0	68.0
E	Seat Tube Angle Effective	74.0	74.0
F	Standover	44.0	44.5
G	Head Tube Length	14.0	14.0
H	Wheelbase	115.6	119.8
I	Front Center	68.1	72.5
J	Chain Stay Length	48.0	48.0
K	Bottom Bracket Drop	5.2	6.5
L	Bottom Bracket Height	29.9	30.5
M	Fork Rake	4.4	5.1
N	Trail	9.4	9.4
O	Stack	62.4	64.4
P	Reach	40.0	43.3
	Head Tube Height	49.5	50.5

Geometry

Dimensions = centimeters



Tesoro Neo X Step-Thru, 750Wh

	Size	S	M	L
∅	Wheel Size	27.5	29	29
A	Seat Tube Length	40.0	43.5	47.0
B	Top Tube Horizontal	57.9	59.9	61.8
D	Head Tube Angle	68.0	68.0	68.0
E	Seat Tube Angle Effective	74.0	74.0	74.0
F	Standover	66.6	66.9	66.2
G	Head Tube Length	14.0	13.0	14.0
H	Wheelbase	115.6	117.8	119.8
I	Front Center	68.1	70.5	72.5
J	Chain Stay Length	48.0	48.0	48.0
K	Bottom Bracket Drop	5.2	6.5	6.5
L	Bottom Bracket Height	29.9	30.5	30.5
M	Fork Rake	4.4	5.1	5.1
N	Trail	9.4	9.4	9.4
O	Stack	62.4	63.5	64.4
P	Reach	40.0	41.7	43.3
	Head Tube Height	49.5	50.5	50.5

Drive System Parts of Your E-Bike



Identification

- 1. Drive unit
- 2. Drive Controls/Display
- 3. Internal Battery
- 4. Charge port
- 5. Wheel Sensor
- 6. Serial number

(Actual bike appearance will differ)

Serial Number

The serial number (6) is located on the bottom bracket. It is a 7-character barcode. See inset.

Bike Registration

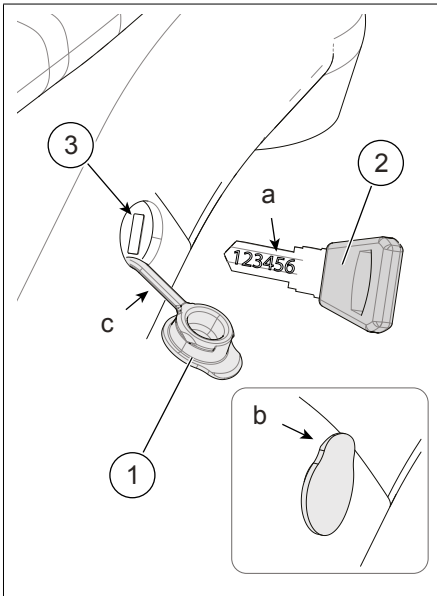
To register your bike:

Go to the Product Registration section of our website at www.cannondale.com

Frame Serial Number



Key



The key (2) unlocks the internal battery mount mechanism. See “Downtube Battery.”

To access the key slot (3), lift out the key cap (1) tab (b) from the frame hole. The tether (c) retains the cap; do not pull it completely from the frame.

When completed, remove the key and return the key cap, making sure it is pressed in completely as shown above (inset).

NOTICE

Don’t ride with the key in the battery lock.

Always remove the key from the lock after using it. Keys may be stolen or break off accidentally in the lock. Keep your spare key in a safe place.

Keep the Key Clean

After multiple rides and bike washes, the battery lock can become dry and difficult to use. To maintain, whenever you lubricate your bike chain, place a few drops of chain oil on the key, insert the key and operate the lock, then remove and wipe the key clean.

Record Key Number

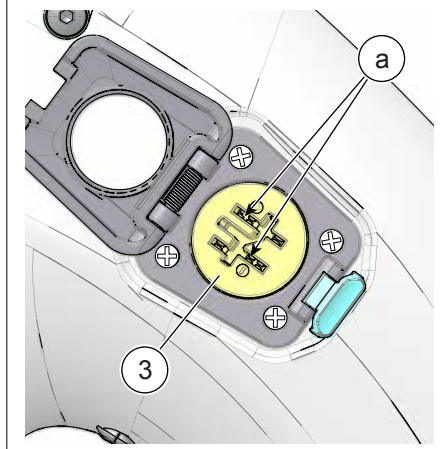
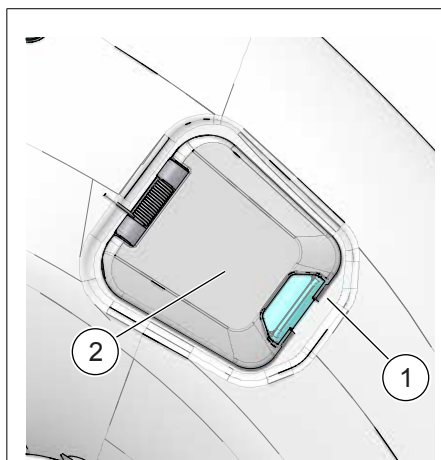
Be sure to write down the key serial number (a) on the line below.

The serial number is required to order spares and replacements .

Replacement keys are obtained from the key manufacturer.

Key Serial Number

Battery Charging Port



The battery charging port is located on the left side of the headtube.

The charging port enables the battery to be charged with the battery installed in the bicycle.

To connect to the charger cable to the port connector:

1. Place the bike and charger in a secure area where both will remain undisturbed while the battery is charging.
2. Press the cover latch (1) allowing cover (2) to spring open.
3. Insert the charging cable into the socket connector (3). Follow the manufacturer's charging instructions for the duration of charging.
4. Disconnect the charger cable from the port connector and close the cover and close the cover latch
5. Disconnect the charger from its source of power.

WARNING

Follow the drive system manufacturer's instructions for charging and handling the battery.

Be sure to inspect the condition of the battery in accordance with manufacturer's specifications before charging.

Do not insert objects other than the charge plug into charging socket (a).

Incorrect charging or handling can result in a fire or explosion, resulting in serious injury or death.

NOTICE

Always make sure the port cover is closed and latched when the charging cable is not inserted.

Downtube Battery

The drive system battery (3) is housed within the bicycle downtube. The battery can be removed for charging or charged via the battery charge port. See page 21.

To remove the battery:

1. Secure the bike upright to prevent it from falling over.
2. Make sure the bike drive system is OFF.
3. Turn the battery cover knob (2) counter-clockwise to release the battery cover (1) from the frame.
4. Remove the key cover (8) and insert the key (7) into the key slot.

Turn the key clockwise to permit the release of the battery.

5. Allow the top of the battery to move forward and lift the battery out of the frame.

To install the battery:

1. Secure the bike upright to prevent it from falling over.
2. Turn the key clockwise to release the battery frame latch.
3. Insert the lower part of the battery so that the battery socket engages with the frame connector (4).

4. Press in on the top of the battery causing the ramp and lock to engage fully.
5. Remove the key.
6. Install the battery cover (1) and secure it with the cover knob (2).

NOTICE

Do not ride the bike without the battery cover installed. Dirt, water, and other contaminants can enter the frame and/or damage the battery.

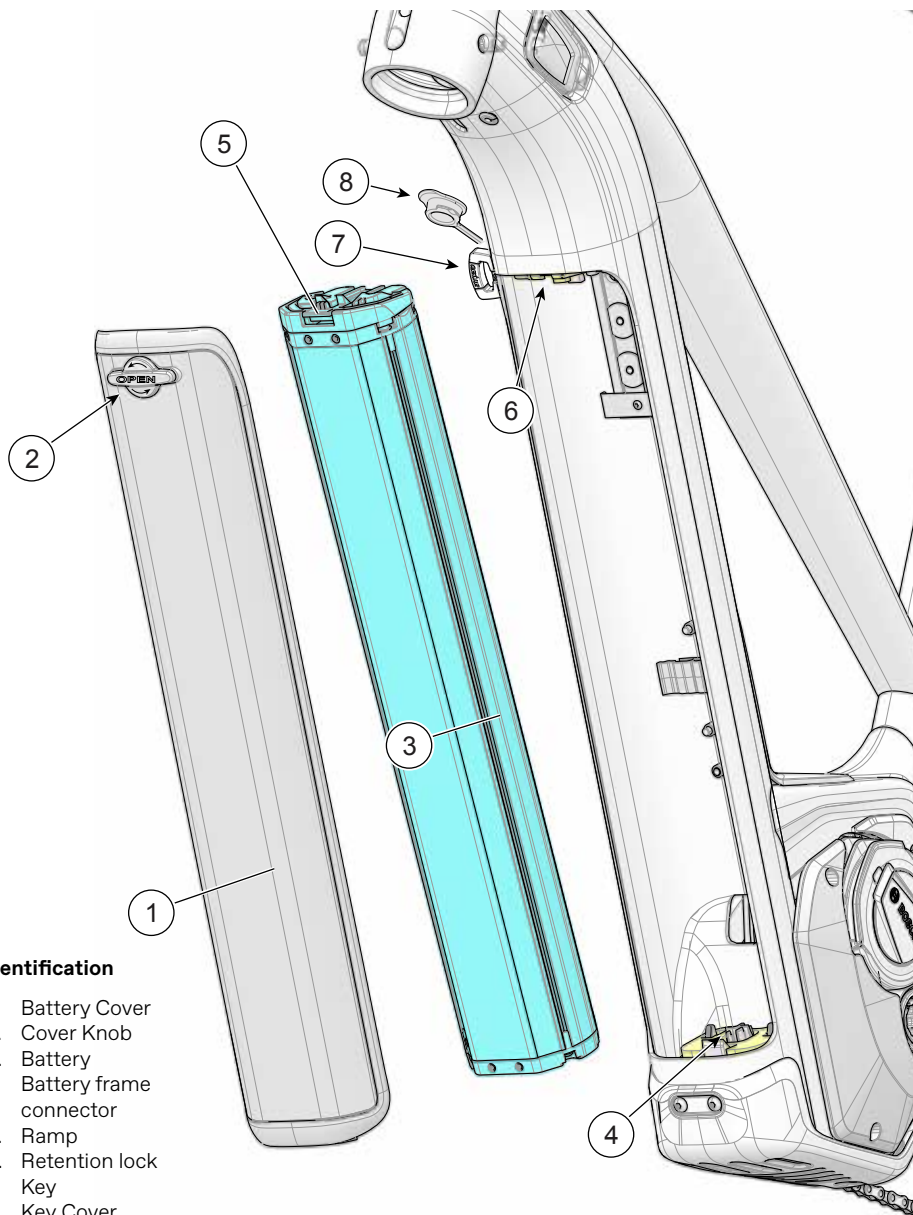
WARNING

Periodically, check to make sure the battery is securely mounted inside the frame and the cover is closed securely.

Check the battery after any fall or impact. Check for loose or damaged parts.

If you take the battery out, replace and secure the battery cover on the frame.

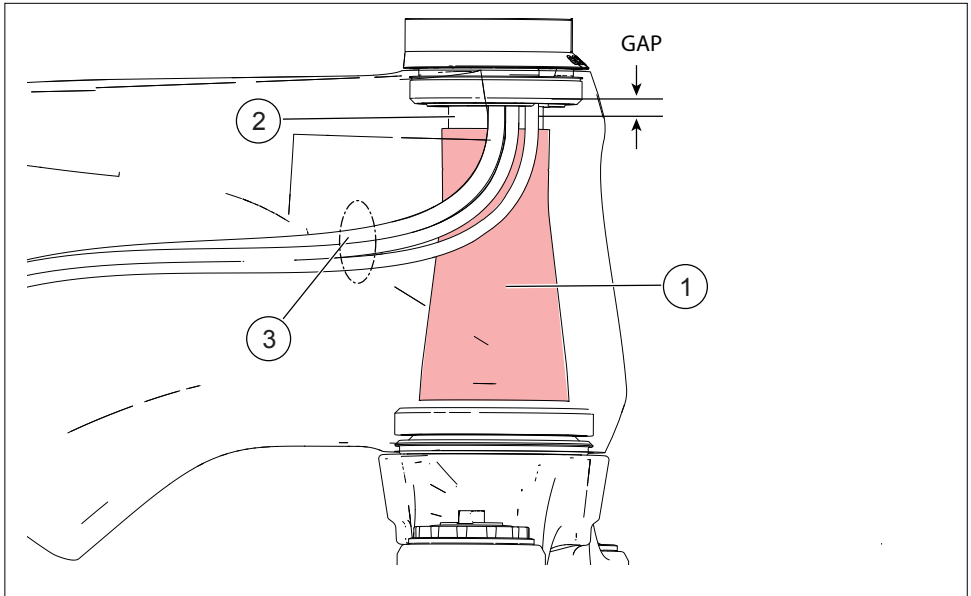
If damage is found, do not ride the bike. Have any damaged part replaced with a new one.



Identification

1. Battery Cover
2. Cover Knob
3. Battery
4. Battery frame connector
5. Ramp
6. Retention lock
7. Key
8. Key Cover

Routing - Headtube Sleeve



Identification

1. Sleeve 2. Fork steerer 3. Internal cables

The sleeve is required. It must be placed over the fork steerer preventing direct cable contact with it. An uncut sleeve must be sized to the correct height depending on the headtube length. The sleeve height should be within 10-25mm of the bottom of the upper headtube bearing as shown by the gap above.

NOTICE

The sleeve is required. Do not remove the sleeve.

WARNING

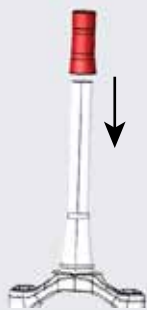
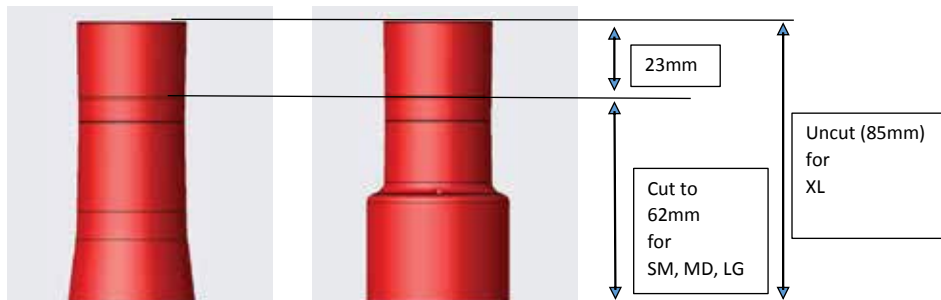
Periodic inspection required. See Maintenance in this manual

Correct installation:

- Use degreaser and a clean cloth to make the complete steerer tube of the fork free of oil and grease.
- Push the sleeve onto the steerer tube by hand.
- It should be hard to push it down by hand. (If tools should be required to push the sleeve down, make sure not to scratch the steerer tube)
- Sleeve should sit at the very bottom of the steerer tube of the fork.

1-1/8

Headshok

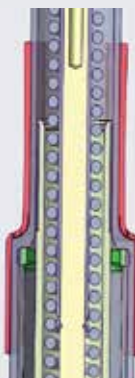


- The sleeve should sit firmly on the steerer tube. It should not be possible to turn the sleeve on the steerer tube.

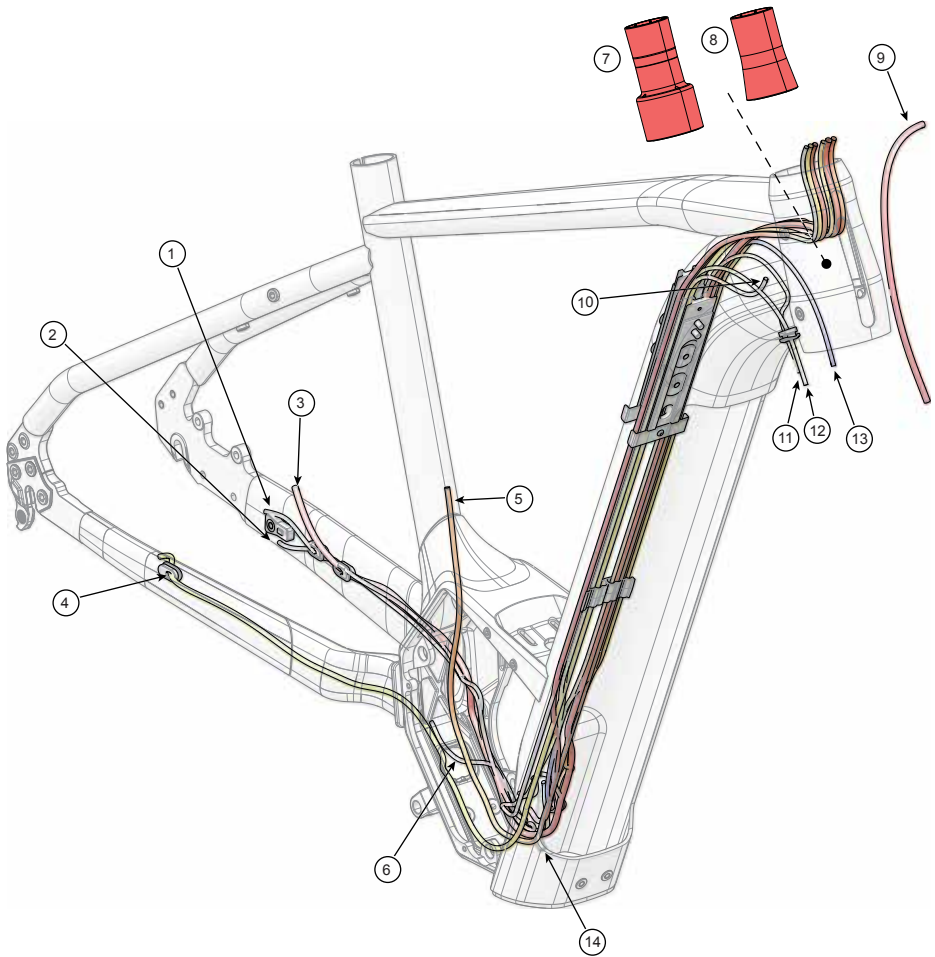
1 1/8" fork: The sleeve needs to be pushed down to the tapered section of the fork to create a close contact.

Headshok: Position sleeve down to the step of the Headshok steerer to create close contact. Close contact can be checked through the 4 little holes of the sleeve.

The sleeve should sit firmly on the steerer tube. It should not be possible to turn the sleeve on the steerer tube.



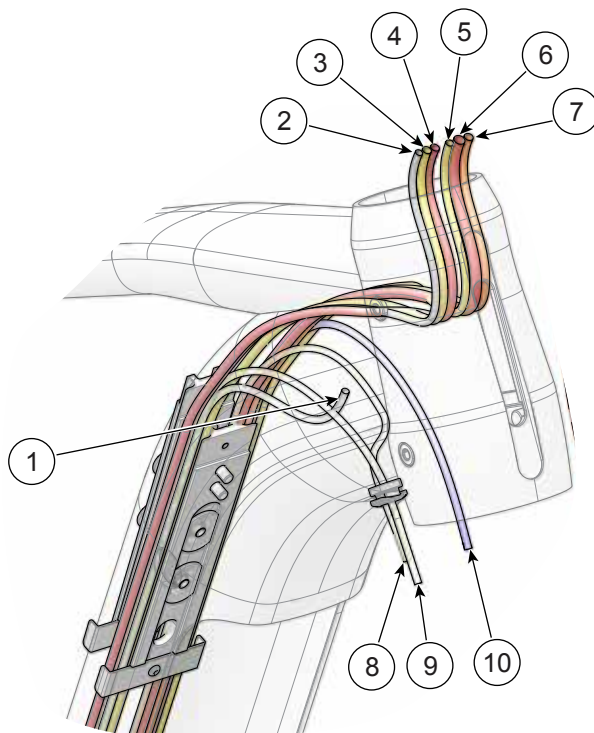
Routing 1 - Frame



Identification

- | | | |
|--------------------|--------------------|-----------------|
| 1. Speed sensor | 6. Rear light | 11. ABS power |
| 2. ABS sensor rear | 7. Sleeve Headshok | 12. ABS sensor |
| 3. Rear brake | 8. Sleeve 1.8 | 13. Front light |
| 4. Rear derailleur | 9. Front brake | 14. Power |
| 5. Dropper post | 10. Charge port | |

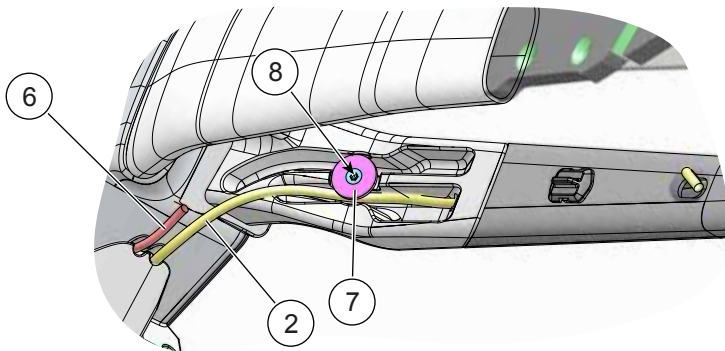
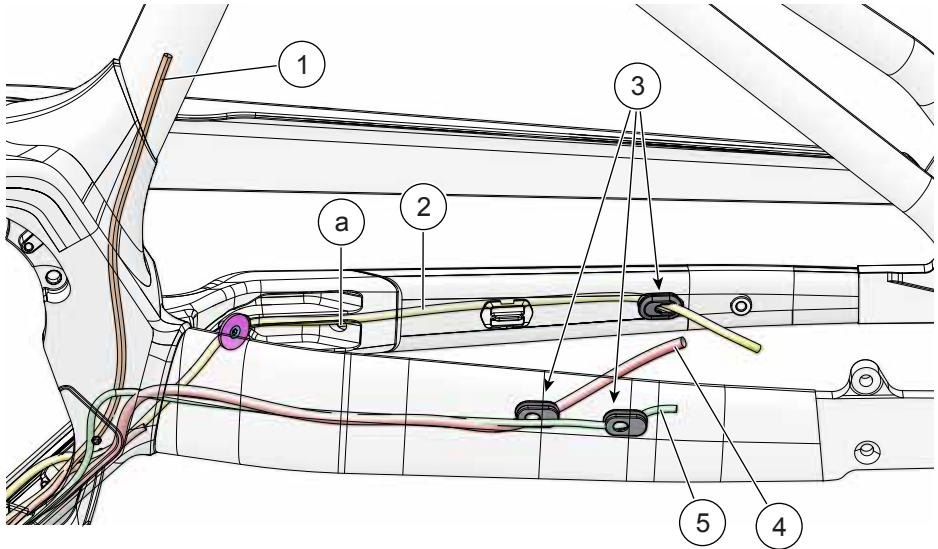
Routing - Headtube



Identification

- | | |
|----------------------------------|---------------------|
| 1. Charge port | 6. Rear brake |
| 2. Human Machine Interface (HMI) | 7. Dropper post |
| 3. Rear derailleur | 8. ABS power |
| 4. Brake light | 9. ABS sensor front |
| 5. Electrical cable | 10. Front light |

Routing - Chainstays



Identification

- | | |
|--------------------|--------------------|
| 1. Dropper post | 6. Rear light |
| 2. Rear derailleur | 7. Washer |
| 3. Grommet | 8. Retaining screw |
| 4. Rear brake | |
| 5. Speed sensor | a. Entry hole |

Drive Belt Tensioner

General Information

The drive belt requires periodic inspection and adjustment so that it remains within the tension specification range as you use the bike. An inspection should include confirmation of the correct belt tension and that the belt is absent of any cuts, tears, fraying, abrasions or missing teeth. The roller assembly should turn freely without binding or looseness. If any damage is found, the conditions must be corrected before the bicycle is ridden again.

The method for inspecting and setting the tension of the belt is defined by the belt manufacturer.

Adjustment

1. See gatescarbondrive.com for correct belt tension measurement setting.

2. Loosen mounting bolts (6).

3. Turn adjust screw (9) to set belt tension.

Turn clockwise to increase tension.

Turn counter-clockwise to decrease tension.

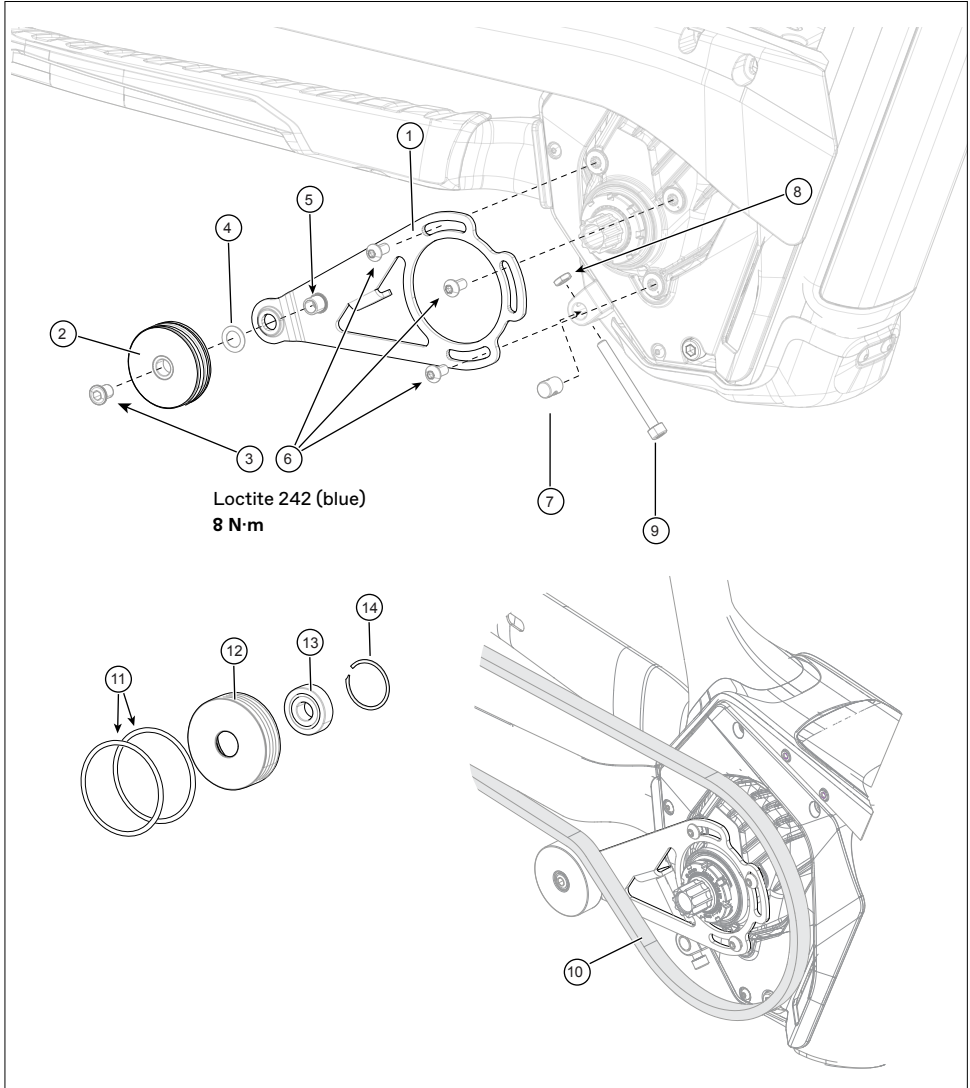
4. Tighten the counter nut (8)

5. Tighten bolts (6) to specified torque.

Replacement

Due to the level of mechanical proficiency, skills, and tools required, belt replacement or renewal should be performed only by a professional bicycle mechanic.

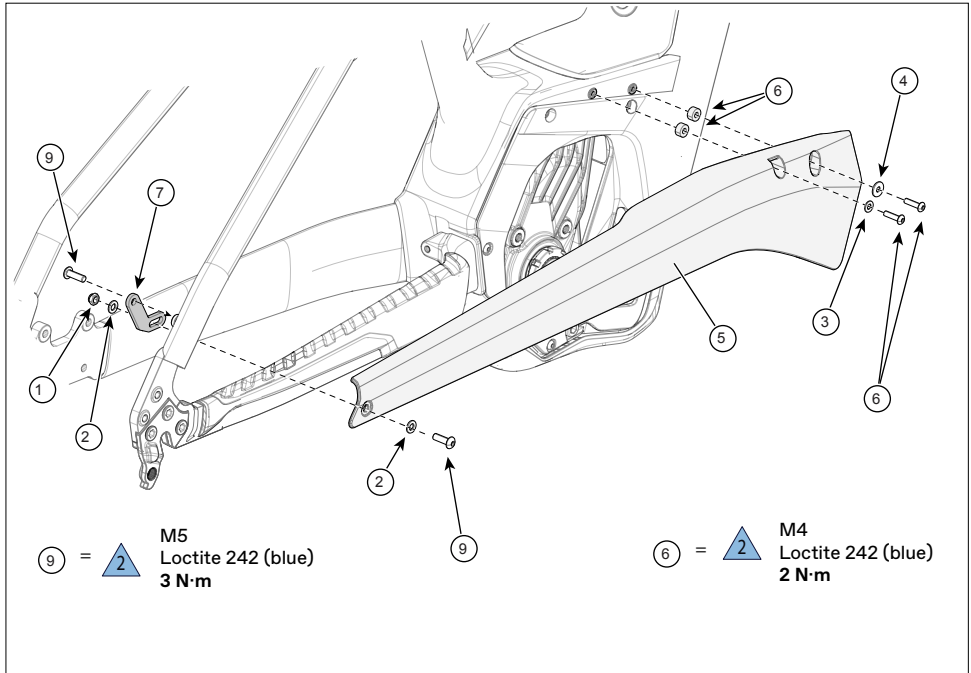
In order to place the belt onto the wheel, the rear dropout must be removed and the belt passed through the small gap between the right seatstay and chainstay. This gap is shown in the illustration at "Right Dropout" on page 29.



Identification

- | | | |
|-----------------|------------------------|------------------|
| 1. Bracket | 6. Mounting bolts (3X) | 11. O-Ring (2X) |
| 2. Roller assy. | 7. Barrel | 12. Roller wheel |
| 3. Bolt | 8. Counter, nut | 13. Bearing |
| 4. Shim | 9. Tensioning screw | 14. Clip |
| 5. Nut | 10. Belt | |

Chain/Belt Guard



Identification

- | | | |
|-------------------|----------------------|---------------------|
| 1. Locknut M5 | 5. Guard | 9. Screw M5×16 (2X) |
| 2. Washer M5 (2X) | 6. Guard spacer (2X) | |
| 3. Washer M4 | 7. Guard bracket | |
| 4. Washer M4 3xD | 8. Screw M4×16 (2X) | |

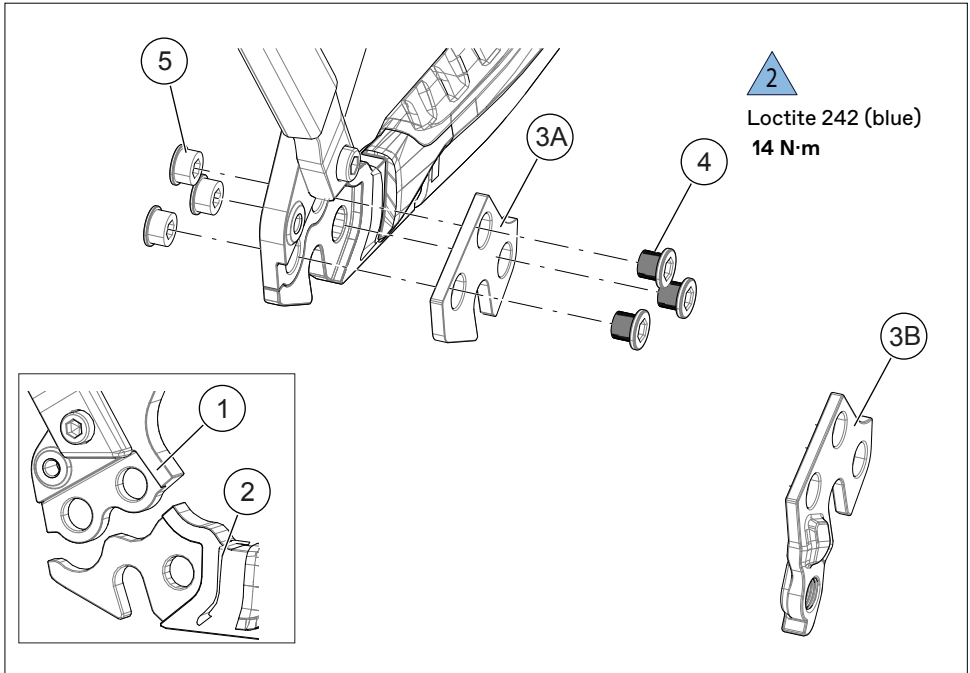
The guard must be securely in place at all times to prevent contact with drive belt or drive chain.

Inspect the guard condition frequently. It should not be loose or damaged (e.g., cracked, broken dented, or missing any part).

Replace the guard with a new one if damaged.

Tighten all hardware securing the rack to the specified torque with a torque wrench.

Right Dropout



Identification

- | | | |
|------------------------|----------------------------|-------------|
| 1. Seatstay | 3B. Rear derailleur Hanger | 5. Nut (3X) |
| 2. Chainstay | (chain drive) | |
| 3A. Plate (belt drive) | 4. Bolt (3X) | |

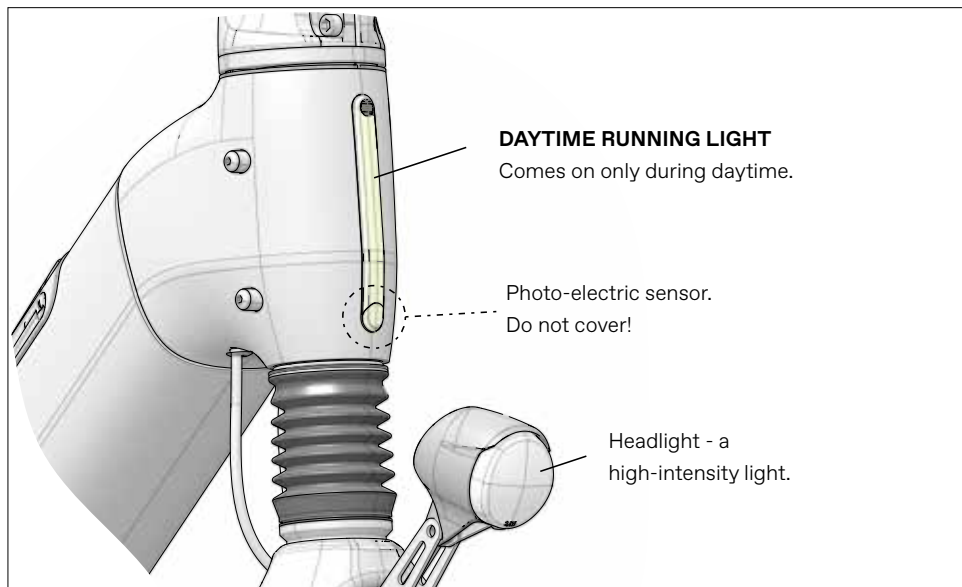
The connection of the seatstay and chainstay should be carefully cleaned and checked for any damage anytime the parts are disassembled.

Do not allow dirt or contamination. A film of bearing grease can be applied to mating surfaces to inhibit corrosion and minimize creaking.

Clean the area with isopropyl alcohol and allow to dry before applying fresh Loctite to the bolt threads.

Tighten all the hardware evenly to the specified torque with a torque wrench.

Daytime Running Light



How it works:

- It turns ON automatically in daylight conditions when the drive system is turned on. It is supplied power via the drive system.
- It turns OFF automatically at low-lighting, dusk, and at night conditions or when the drive system is powered off.
- It is independent of the ON/OFF state of any other lights on the bicycle.

WARNING

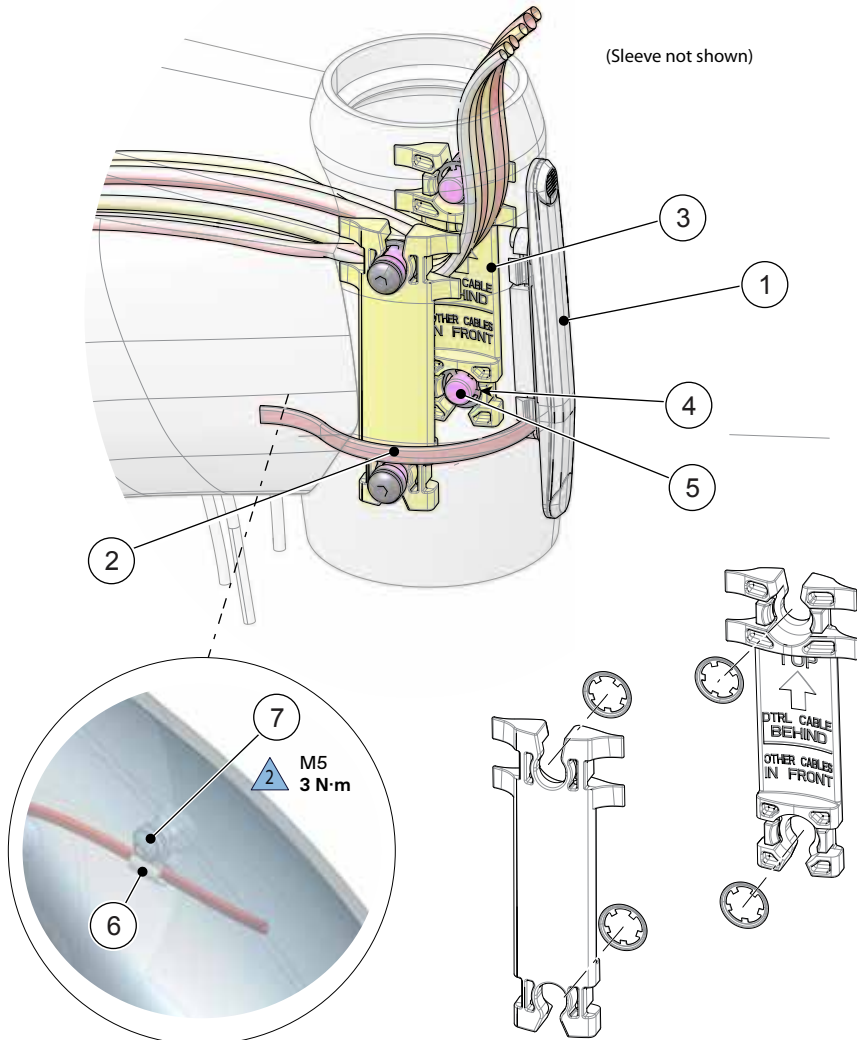
Intended - to be used at daytime to increase rider visibility to other cyclists, to pedestrians, and to motorists.

Not intended - to illuminate the road, road hazards, or use at night. It is not a bright/high-intensity cycling light intended to illuminate the road or hazards in the road.

Please read your Cannondale Bicycle Owner's Manual for information about different types of bicycle lighting.

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

Routing - Daytime Running Light

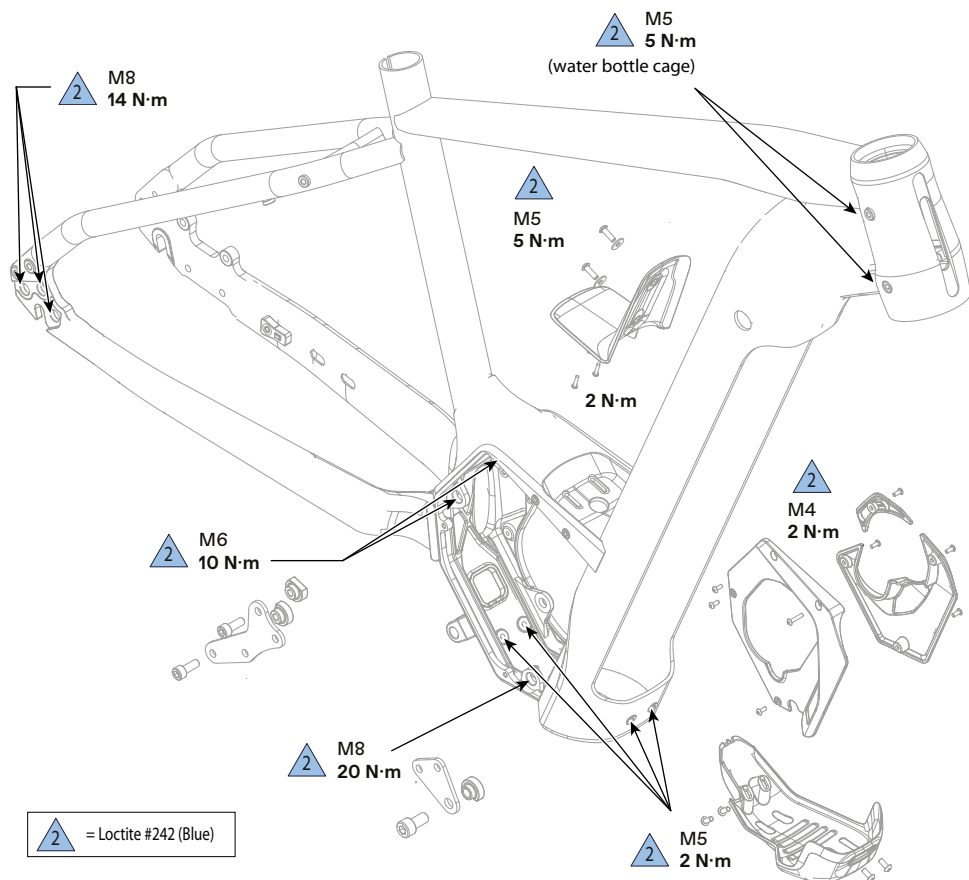


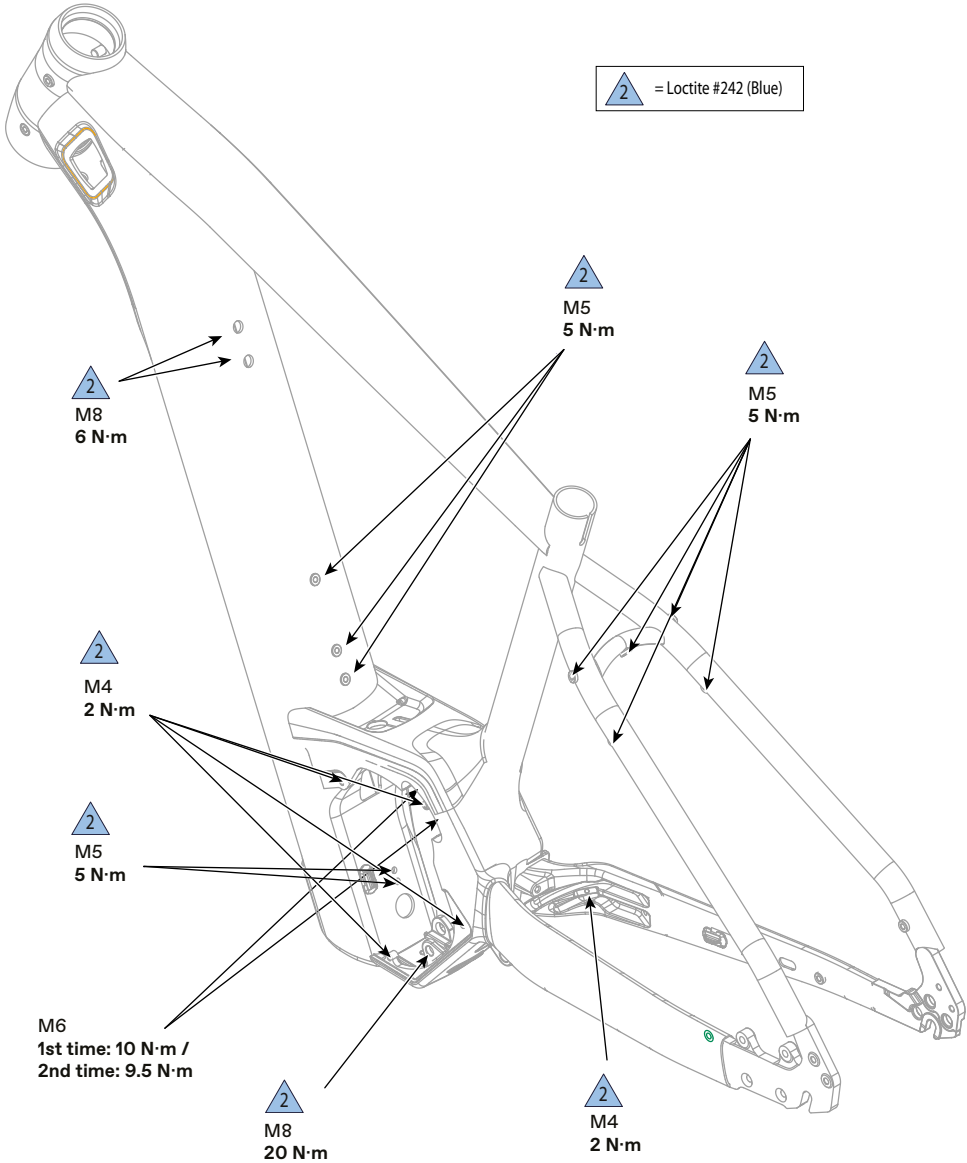
Identification

- | | |
|---------------------------------|---------------------|
| 1. Daytime Running Light (DTRL) | 4. Clip (4X) |
| 2. DTRL wire | 5. Thread boss (4X) |
| 3. Guide (2X) | 6. Cable guide |
| | 7. Screw |

Tightening Torques

The following diagrams list tightening torque and locations for the frame fasteners (bolts, screws, nuts) on your bicycle. Setting the correct torque is very important to your safety and to the durability and performance of your bicycle. Always use a calibrated torque wrench! Follow the manufacturer torque instructions for all the components of your bike. Some fasteners have a pre-applied thread-locking patch. Its effectiveness is reduced after repeated removal and installation of the bolt. Renew the application of specified thread lock as required.

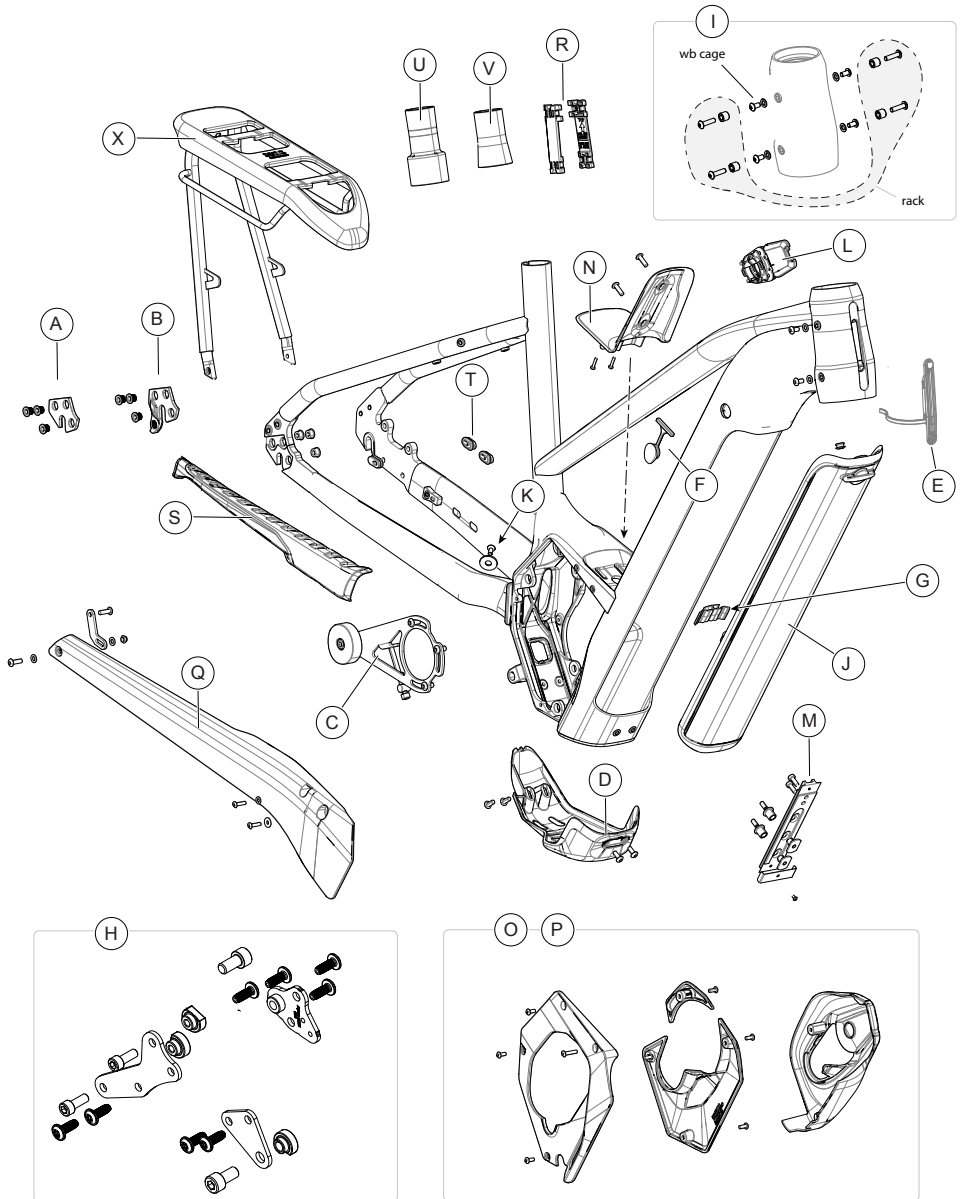




Replacement Parts

Service Kits

Item	Kit #	Kit Description
A	K33002	Derailleur Hanger QR SS SS 088
B	K33012	Derailleur Hanger QR ST SS 087
C	K22002	Hardtail Neo Belt Tensioner
D	K34002	Hardtail Neo Skid Plate
E	K14021	Mavaro Headtube Light
F	K34211	Neo Key Cover
G	K32040	DT Adhesive Cable Guide Qty 3
H	K76002	Hardtail Neo Motor Mount Brackets
I	K76032	Hardtail Neo HT Accessory Mounting Kit
J	K34012	Battery Cover DT Bottom Exit 750wh
K	K32002	Hardtail Neo Frame Cable Guides
L	K76012	Neo Latching Charge Port Holder
M	K76022	Neo 750 DT Bottom Exit Batt Rail
N	K34022	DT Bolt On Scuffguard
O	K34032	Hardtail Neo STD/RMX Motor Cover
P	K34052	Hardtail Neo Step-Thru Motor Cover
Q	K11002	Hardtail Neo Chainguard
R	K32012	HT Internal Cable Clips Qty2
S	K34042	Hardtail Neo CS Protector
T	KP312/	Open Oval Grommet x10
U	K35062	HT Internal Routing Sleeve HeadShok
V	K35052	HT Internal Routing Sleeve 1.8
X	K13002	Hardtail Neo SM Rear Rack
	K13012	Hardtail Neo MD/LG/XL Rear Rack



Maintenance

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 the 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 with a lighting system (e.g., brake lights, headlights, taillights, and/or number plate illumination), ensure each light functions properly.
- Check for proper function of the front and rear brakes. Brake pad and rotor wear is typically greater on e-bikes than on pedal-only bikes, requiring more-frequent inspection and replacement.
- Check tire pressures and the condition of the wheels. Ensure the tires are not damaged and do not have excessive wear. Ensure no wheel parts are broken or missing and that the wheels are firmly attached to the bike via secured skewers/axles.
- Confirm the drive chain is in good condition, is clean, and is well lubricated. Chain wear is typically greater on e-bikes than on pedal-only bikes, requiring more-frequent inspection and replacement. Ensure the gears operate normally throughout the entire range.
- Inspect the condition of the electrical cables, ensuring no kinks or abrasive wear. Check that cables near the dropouts are assembled properly to avoid contact with the brake rotors.

PROFESSIONAL BICYCLE MECHANIC	HOW OFTEN
Inspect and service the drive system and related components as defined by the drive manufacturer.	Minimum, annual.
Inspect routing and sleeve condition . See “Routing - Heatube Sleeve.”	Every 6 months

WARNING

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

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

Cleaning Your Bike

When cleaning your bike:

USE ONLY A MILD SOAP AND WATER SOLUTION. Clean water and a common dish washing liquid will work best.

COVER SENSITIVE AREAS WITH A CLEAN PLASTIC BAG. Secured temporarily with a rubber band or masking tape, a bag can prevent water damage to various bike components (bearings, electrical controls, connections and sensors, seals, fork / shock adjustment features).

SPRAY OFF BEFORE WIPING. To preserve the appearance of paint, finish, and decals, use a low pressure water hose to first spray off heavy soils and dirt.

CLOSE ALL COVERS.

NOTICE

DO NOT power wash or spray water under high pressure to clean. Power washing will force contaminants into parts where they will promote corrosion, immediately damage, or result in accelerated wear.

DO NOT use compressed air to dry.

DO NOT use abrasive or harsh chemical cleaner/solvents which can damage the finish or attack and destroy both the outside and internal parts.

When rinsing, avoid directing the spray directly at shock/fork adjusters or bearings.



WARNING

Do not clean the bicycle while connected to the charger. Move the bicycle to an area away from sources of electrical energy or electric appliances.

Keep water away from the electrical components.

Make sure the bike is secured upright and cannot fall over accidentally while you are cleaning it. Don't rely on the kickstand. Use a bicycle wheel-stand or work-stand to hold the bike upright while you are cleaning it.

www.cannondale.com

© 2022 Cycling Sports Group
CY22 HT NEO G4-750 ECO
138689 Rev. 1

CANNONDALE USA

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

CSG EUROPE

Cycling Sports Group Europe B.V.
Geeresteinselaan 57
3931JB Woudenberg
The Netherlands
service@cyclingsportsgroup.com

CANNONDALE UK

Cycling Sports Group
Vantage Way, The Fulcrum,
Poole, Dorset, BH12 4NU
+44 (0)1202732288
sales@cyclingsportsgroup.co.uk