

CANNONDALE E-SERIES.
OWNER'S MANUAL SUPPLEMENT.

cannondale®

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<p>This bike complies with EN 15194 - Electrically Power Assisted Cycles (EPAC).</p>

About This Supplement

Cannondale Owner's Manual Supplements provide important model specific safety, maintenance, and technical information. They are not replacements for your Cannondale Bicycle Owner's Manual.

This supplement may be one of several for your bike. Be sure to obtain and read all of them.

If you need a manual or supplement, or have a question about your bike, please contact your Cannondale Dealer immediately, or call us at one of the telephone numbers listed on the back cover of this manual.

You can download Adobe Acrobat PDF versions of any Cannondale Owner's Manuals or Supplements from our website: <http://www.cannondale.com/>.

Online E-Series Product Support

You may download a copy of this supplement and other manuals and instructions available for your bike at :
<http://www.cannondale.com/support-ebike>

Your Cannondale Dealer

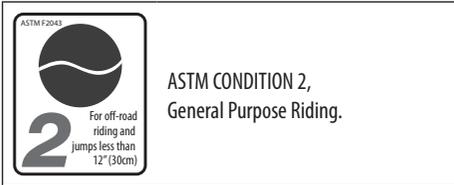
To make sure your bike is serviced and maintained correctly, and that you protect applicable warranties, please coordinate all service and maintenance through your authorized Cannondale Dealer.

NOTICE

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

SAFETY INFORMATION

Intended Use



Your E-Series bike has an electric pedal assist drive system. It is not a moped or motorcycle. In EU countries, it is known legally as an "EPAC" cycle or Electrically Powered Assisted Cycle.

The drive assist system consists of a drive unit, a battery, a computer control, and various electronic components (harness wires, sensors, and switches). Your E-Series bike does share components common with pedal-only bikes. **See Figure 1.**

It is important to know that when the 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 speed of 25 km/h, (15.5 mph), or sooner if you stop pedaling. The drive assist re-engages when speed drops below 25 km/h, (15.5 mph) 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

INTENDED USE: This bicycle is intended to be used as a commuter bicycle. This bike complies with the requirements of European Standard EN 15194, Electrically Power Assisted Cycles. The drive assist system is limited to a maximum continuous power rating of 0,25 kW (250 W) and a maximum speed of 25Km/h, (15.5 mph).

NOT INTENDED: You must not ride this bike in automobile traffic lanes. This vehicle must only be operated on paved surfaces that are legally open to commuter pedal bicycles. This bike is not for mountain biking use, jumping, or racing.

YOU MUST FOLLOW ALL LOCAL LAWS: It is your responsibility to identify and follow all local laws and regulations (including fitting your bike with additional equipment) necessary to comply with local laws. Ask your Cannondale Dealer for more information about operating an electrically assisted pedal bicycle in your area.

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

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.

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.

YOU CAN BE YOU SERIOUSLY INJURED, PARALYZED OR KILLED IF YOU IGNORE THESE WARNINGS.

Battery & Charger

WARNING

BOSCH INSTRUCTIONS - In addition to this supplement, you must read and follow the BOSCH battery and charger instructions. Go to : <http://www.cannondale.com/support-ebike>

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 or modify the battery or charger. No user servicable 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.

ACCIDENTAL ACTIVATION - Always remove battery from bike rack before working on the bicycle or if you transport the bike by car or plane. Accidental activation of the bicycle drive system can result in serious injury.

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 shipping container to prevent damage.

CHARGING - Remove battery from bike before 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.

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.

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.

YOU CAN BE YOU SERIOUSLY INJURED, PARALYZED OR KILLED IF YOU IGNORE THESE WARNINGS.

Rear Rack & Kickstand

WARNING

Do not sit on the bicycle with the kickstand down. Kickstand is not designed to support the weight of a person. Make sure kickstand is up before riding.

Do not overload the rear rack. Make sure the cargo is secured properly.

YOU CAN BE YOU SERIOUSLY INJURED, PARALYZED OR KILLED IF YOU IGNORE THESE WARNINGS.

PARTS OF THE E-SERIES BIKE

Frame



Figure 1.

- | | | |
|---------------------|------------------------|---------------------------|
| 1. BOSCH Drive Unit | 9. Headshok Stem | 17. Pedal |
| 2. BOSCH Battery | 10. Lockout Lever | 18. BOSCH Speed Sensor |
| 3. BOSCH HMI Unit | 11. Bell | 19. Rear Cassette |
| 4. Headshok Fork | 12. Kickstand | 20. Front Chainring |
| 5. Headlight | 13. Rear Wheel Lock | 21. Drive chain |
| 6. Taillight | 14. Front Brake Lever | 22. Crankarm (drive side) |
| 7. Rack | 15. Rear Brake Lever | 23. Seat Binder |
| 8. Chainguard | 16. Rear Shift Control | |

BOSCH Drive Unit

See Figure 2. The BOSCH drive unit (1) is mounted to the frame bottom bracket node (5). Control cables from the HMI unit, battery, and speed sensor are routed to the unit inside the frame.

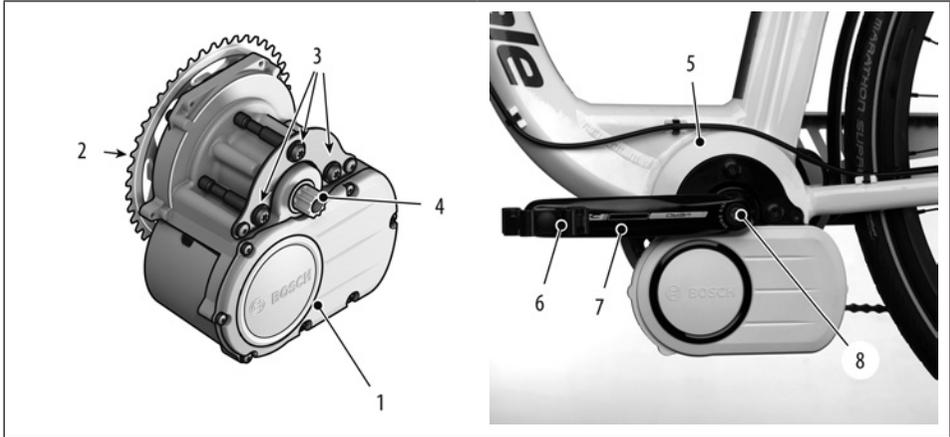


Figure 2.

- | | | |
|-------------------------------|-----------------------------------|-------------------------------|
| 1. BOSCH Drive Unit (removed) | 4. ISIS Axle end (non-drive side) | 7. ISIS Crankarm (drive side) |
| 2. Front Chainring | 5. Frame BB Node | 8. ISIS Crankarm Bolt |
| 3. Frame Mounting Bolts | 6. Pedal | |

NOTICE

Drive unit is maintenance-free and must only be serviced at an authorized service center. This will ensure the quality and safety of the driving unit. Never attempt to open, remove it from the frame, or work on it yourself.

Other components of the eBike drive (e.g. drive chain, front chain ring, rear cassette, rear derailleur, crankarm) must be serviced by your Cannondale Dealer. Replacement parts must be identical to the original Cannondale specification for the bike. **See Specifications.** 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.

Please note: The drive unit utilizes an ISIS standard drive axle. While the ISIS crankarms can be removed a reinstalled following crankarm manufacturer's instructions, the ISIS axle itself can not be removed from the BOSCH drive unit. It must be serviced at an authorized service center.

See also **BOSCH Instructions 0 275 007 X00** <http://www.cannondale.com/support-ebike>

BOSCH Handlebar Mounted Interface (HMI)

See Figure 4. The handlebar mounted interface (HMI) is a cycling computer (1) that enables you to both control the bicycle's drive assistance functions as well as turn lighting on and off, and display speed, distance, and display trip several functions. The buttons and display functions/features of the (HMI) are described on the next several pages.

The HMI unit attaches to the handlebar mounting base (2). The base unit should be positioned on the handlebar for convenient use without interference with other bicycle controls. The handlebar position can be changed, however, to avoid damage, this is something your Cannondale Dealer should do for you.

To remove the computer:

When the bicycle is not in use, remove the computer unit (1) from the base (2) to prevent theft. To remove the unit, carefully twist the computer unit counter-clockwise and detach.

To re-install the computer:

Align and mate the tabs on the back of the computer with the corresponding slots in the base unit. Rotate the computer unit clockwise until it clicks into place on the base unit.

NOTICE

The drive system will not function without the computer unit attached to the base properly. If the computer disconnects from the base during operation, the drive system will 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.

Remove the computer when not operating the bike to prevent theft or unauthorized use.

The HMI displays the battery charge level (13) continuously as long as the computer is turned ON.

Displayed/ Battery Level (for reference only)			
	100 - 80%		39-20%
	79 - 60%		20 - 5%
	59 - 40%		5 - 0%

Figure 3.

BOSCH Speed Sensor

See Figure 4. The BOSCH speed sensor (14) is mounted on the rear chainstay (15). This device must be attached and functioning properly in order for system to work. If it is damaged, set-up incorrectly, or the magnet (16) is not present on the wheel spoke (17) the drive system and speedometer will not function.

To adjust it's position, loosen the screw (18) on the magnet. Slide the magnet along the spoke to adjust the distance between the magnet and speed sensor. Spin the wheel to check the speed registers on the HMI to ensure the distance is set correctly. Ensure the magnet is facing the speed sensor or it will not function. The maximum working distance (a) is 17mm.

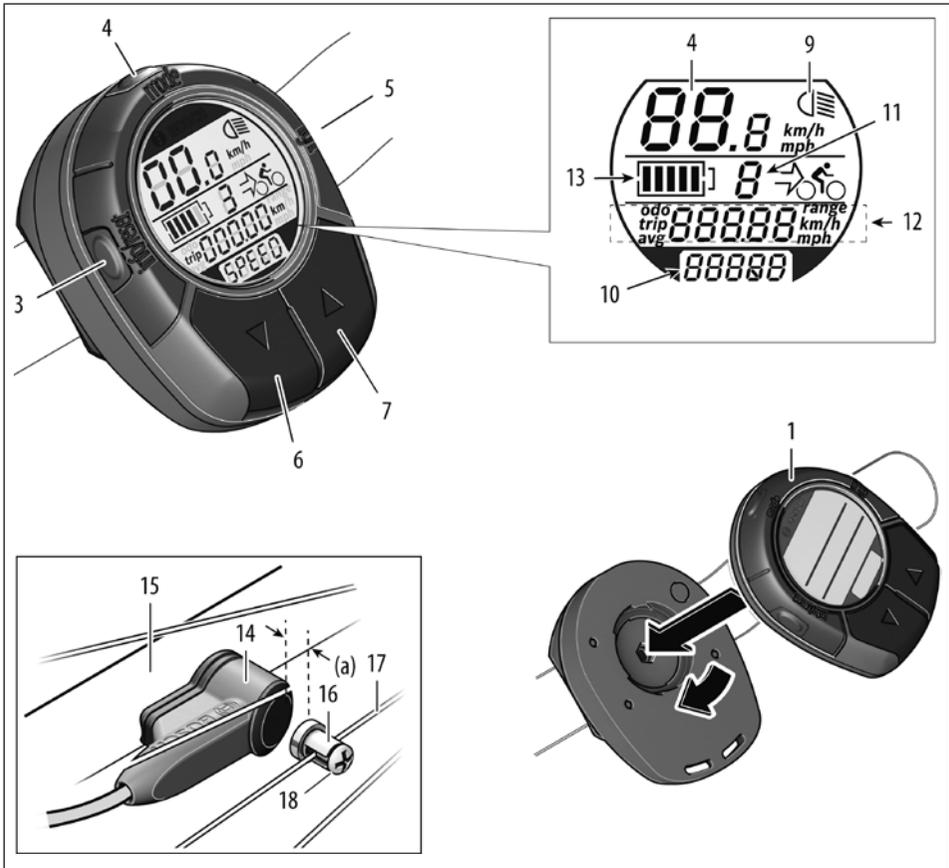


Figure 4.

- | | | |
|------------------------------------------------------|-------------------------------------|---------------|
| 1. Computer | 8. Speedometer Readout | 16. Magnet |
| 2. Handlebar Base Mount | 9. Light Indicator | 17. Spoke |
| 3. Information Reset Select Button | 10. Current Support Level | 18. Set Screw |
| 4. Assistance Modes Button (Eco, Tour, Sport, Speed) | 11. Current Assist Mode, Error Code | |
| 5. Lighting On/OFF Button | 12. Multi-Function Display | a. Sensor Gap |
| 6. Support Level Decrease Button | 13. Battery Charge Level | |
| 7. Support Level Increase Button | 14. Bosch Speed Sensor | |
| | 15. Chainstay | |

See also BOSCH Instructions **O 275 007 X00** <http://www.cannondale.com/support-ebike>

BOSCH Battery Pack

See Figure 5. The battery pack is located in the rear bike rack. It is locked in the rack with the same key that operates the rear wheel lock.

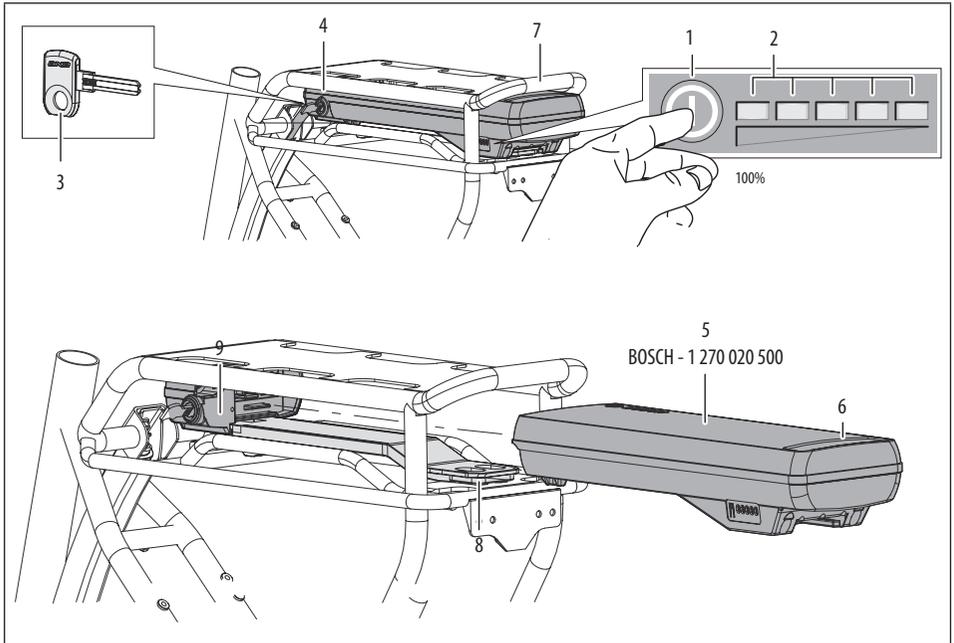


Figure 5.

- | | | |
|------------------------------|-------------------|-------------------|
| 1. System ON/OFF button | 4. Lock | 7. Rack |
| 2. Battery Charge Level LEDs | 5. BOSCH Battery | 8. Rail |
| 3. Key | 6. Battery Handle | 9. Base Connector |

To remove the battery from the bike rack:

Insert the key (3) into lock (4) and turn key completely clockwise (toward rear of bike) to unlock the battery. Remove key from lock. Hold the back of the battery (5) by the handle (6) and pull battery out of the rack (7).

To reinstall the battery in the bike rack:

Insert the key into the lock and turn the key completely clockwise, making sure it is unlocked. Align the battery with the rail (8) and base connector (9) in the rack. Slide the battery into the rack until it clicks into the base connector. Turn the key counter-clockwise (toward the front) until the battery is locked. Remove the key from the lock.

See also BOSCH Instructions 0 275 007 40X <http://www.cannondale.com/support-ebike>

BOSCH Charger

To ensure maximum operating range, make sure battery charge level is 100% before each ride.

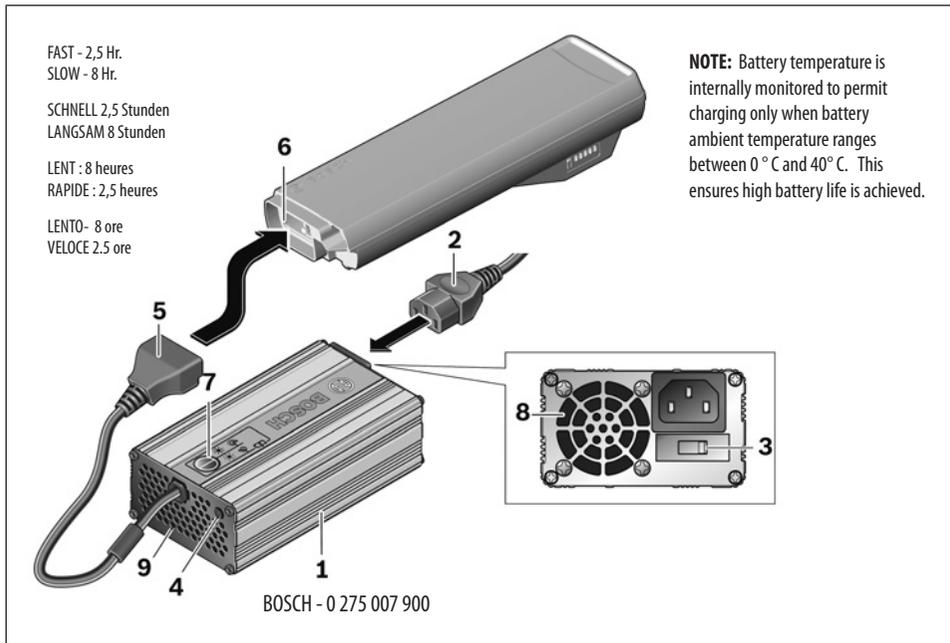


Figure 6.

- | | | |
|----------------------|----------------------|-----------------------------|
| 1. BOSCH Charger | 4. Power LED | 7. Charge FAST, SLOW Button |
| 2. Wall cord | 5. Charger Connector | 8. Charger ventilation. |
| 3. AC Voltage Switch | 6. Battery Jack | |

To charge the battery:

See Figure 6. Remove the battery from the bicycle rack. Bring battery indoors and allow time for it to charge at room temperature. Make sure the charger (1) is set-up for the correct voltage (2) and connected to the wall outlet (3). Confirm that the charger is ready; the LED (4) will be on. Attach the charging connector (5) to the battery jack. (6) Set the rate of charge "SLOW or FAST" with the button (7) on top of the charger. Allow sufficient time for battery to remain connected to the charger to reach a full charge. During charging, make sure the charger ventilation openings (8) are clear. Do not cover the battery or charger.

When the battery is fully charged, remove the charging connector and unplug the charger from the wall outlet. Reinstall and lock the battery into the bicycle rack.

See also BOSCH Instructions 0 275 007 900 <http://www.cannondale.com/support-ebike>

OPERATING INSTRUCTIONS

To turn the drive assist system ON / OFF:

See Figure 7. Press the battery ON/OFF button (1). When you do this, the battery charge level LEDs (2) will illuminate indicating current battery charge level and the HMI computer display will turn on. When all LEDs are lit, the battery level is 100%. Each LED corresponds to about 20% capacity.

The system will turn OFF automatically after 10 minutes of inactivity or if the battery is empty.

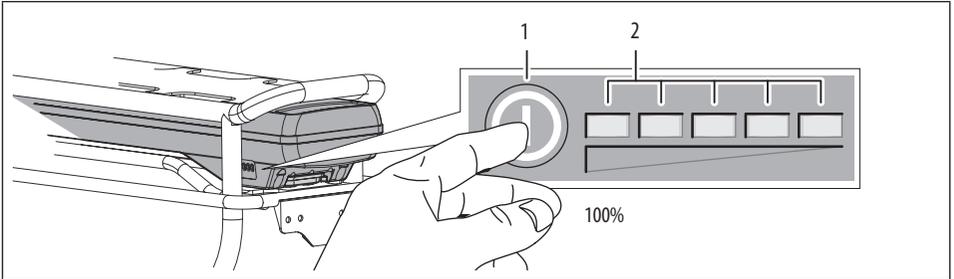


Figure 7.

Lighting

Drive System Battery Supplied (EU, all countries except Germany)

The lighting is powered by the drive system battery.

To turn the lights on/off:

See Figure 4. Press the light button (5) on the HMI. When the lighting is turned on the computer unit back light illumination is on, the indicator (9) appears on the computer display. Lighting will remain on until it is turned off with the button or power from the battery or wheel hub generator is no longer available. If the drive assistance is disabled due to a low battery charge level, lighting will remain on until the battery is completely discharged.

Hub Dynamo Supplied (Germany)

If the lighting system is supplied solely by a wheel hub generator (isolated from the drive system battery by legal requirement) it can not be turned on with the HMI. Lighting must be turned on/off by the separate lighting unit switches.

Trip Information

See Figure 4. Use the information reset select button (3) to interact with the features of the cyclometer: Speed, Average Speed, Total Trip, and Trip Distance.

Selecting Assistance Mode and Support Level

See Figure 9. The bicycle has four assistance modes and four levels of support within each mode. The table below describes the performance characteristic of each mode/level.

To select an assistance mode:

Press the ON/OFF button at the battery to turn the system ON at the battery pack. See previous page.

Press the HMI mode button (1) repeatedly to select the assistance mode. Current mode is displayed at (2).

To select support level:

The current level of support 0-3 is displayed at (3).

Press ▼ button (4) repeatedly to decrease support level.

Press ▲ button (5) repeatedly to increase support level.



Figure 9.

Mode	Performance	Support Level			
		% Assistance/ km Range*			
		0	1	2	3
<i>ECO</i>	effective pedaling support, maximum efficiency/range	0%	30%	60%	90%
		--	145 km	105 km	85 km
<i>TOUR</i>	even pedaling support, for touring or long routes	0%	50%	100%	160%
		--	105 km	85 km	70 km
<i>SPORT</i>	strong pedaling support, for sport riding on hilly distances as well as for city traveling	0%	55%	110%	200%
		--	100 km	80 km	65 km
<i>SPEED</i>	maximum support into high footstep frequencies, for sport riding	0%	60%	130%	250%
		--	90 km	70 km	60 km

Figure 10.

* Ideal conditions at 20 km/h

A higher support level requires more battery power, operating range is shorter. A lower support level requires less battery energy; operating range is longer. When support level is "0" assistance is switched off or 0%

Factors Affecting Assistance Range

1. **Battery Charge Level** - A fully charged battery will provide the greatest range. Before every ride, make sure the battery is fully charged.
2. **Assistance Mode & Support Level** - The assistance mode and support level you select during the ride will affect the operating range. See previous page.
3. **Temperature & Wind Conditions** - Extreme cold or hot conditions will result in more rapid depletion of the battery's energy, reducing available range. Overcoming strong winds on the cycling route will shorten assistance range since more battery energy is required. Conversely, a tailwind (wind behind you) acts to propel the cycle reducing the energy requirement.
4. **Rider Weight & Cargo** - Adding weight to the bicycle (rider or cargo) cycle will require the drive unit to work harder, requiring more battery energy - shorter range. If you carry a backpack or extra luggage on the rack, more energy will be needed, and overall range will be reduced.
5. **Tire Pressure/Condition** - Make sure your tires are in good shape (e.g., good tread, undamaged) and pressurized properly according to the tire sidewall markings. Poor tire condition or inadequate air pressure will shorten range.
6. **Shifting Gears & Braking** - You should shift gears similarly to a normal pedaling bicycle. Efficient gear changes will result in greatest available range. Maintaining a uniform speed and effective braking will help you maximize the energy stored in the battery.
7. **Accelerating From Stopped** - The drive system utilizes more battery energy during its initial acceleration. Therefore, a commute with frequent starting and stopping will consume more energy, shortening range. You can extend your range by carefully managing your speed throughout the trip to avoid unnecessary starts and stops.
8. **Drive Chain Condition** - Be sure to keep the chain clean and well lubricated. Have the chain replaced with a new one.
9. **Pedaling** - Pedaling steadily with moderate effort with the drive unit will result in the greatest range. While all that is required to engage the assistance is a turning pedal, you'll want to contribute especially on uphill or rough terrain. If you rely solely on the drive unit, the range will be much shorter.

Error Codes

The drive assist components of the drive system are constantly reviewed automatically for error conditions. If an error is detected, the corresponding error appears in the display. **See Figure 4, item 11.** Depending on the type of error, the drive system may be switched off automatically. This happens to prevent further damage. If it happens, the bike can be pedaled normally. Contact your Cannondale Dealer with the error code information encountered.

See also BOSCH Instructions 0 275 007 X00 <http://www.cannondale.com/support-ebike>

Keys

See Figure 11. Your E-Series bike comes with a main key (1) and spare key (2). The keys are identified by the serial number (3). The keys work in both the rear wheel frame lock and the BOSCH battery lock. Please record the key serial number for future use and key replacement. If your keys are ever lost or stolen, or you would like additional spares, please contact AXA BASTA for ordering information. AXA BASTA website: <http://www.axa-basta.nl/keyservice-eng.html>

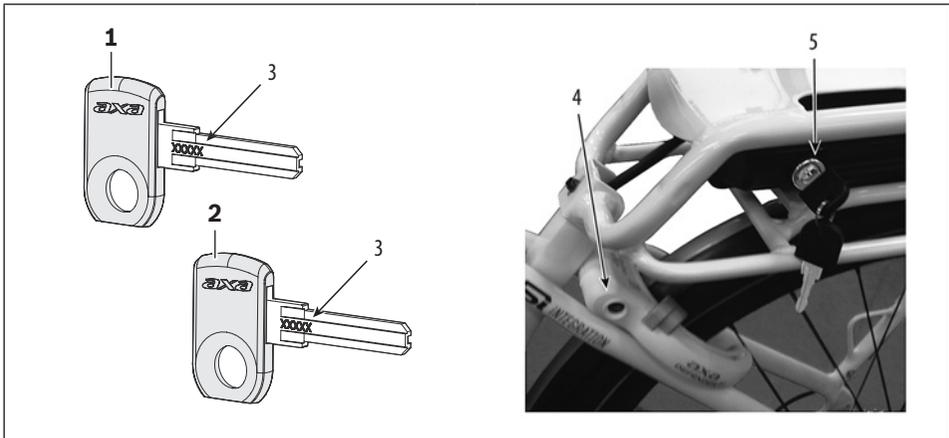


Figure 11.

- | | | |
|--------------|----------------------|-----------------|
| 1. Main Key | 3. Key Serial Number | 5. Battery Lock |
| 2. Spare Key | 4. Rear Wheel Lock | |

NOTICE

Don't ride with key in 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.

Key is not removable from the wheel lock when riding (unlocked).

HEADSHOK SUSPENSION FORK

Fatty w/DL50

Your E-Series bicycle is equipped with a Cannondale Headshok Fatty suspension fork. The fork features the DL50 damping cartridge. The internal spring size can be changed to accommodate various rider weights to tune performance. This fork is designed for a 700c wheel. The brake mounts are international standard. The fork features several accessory mounting points as shown in the figure, next page.

To operate fork lockout:

See Figure 12. The lockout lever turns fork travel “on” and “off.” Be sure to rotate the lever completely to either position until it stops.

To change the lever position:

Remove the retaining screw with a 3 mm Allen key and carefully lift off the lockout lever with your fingers. Reposition the lever while aligning it with the large nut. Press it onto the large nut. Reinstall the retaining screw and tighten to 0.5 Nm, 4 in Lbs.



Figure 12.

NOTICE

Do not force lever past the stop. Do not try to un-thread the large nut under the lever. It is pressed on!

To change the adjustable stem:

See Figure 13. The angle of the handlebar can be raised or lowered depending on your preference. To change handlebar height, loosen the stem angle fixing bolt (23), then raise or lower the handlebar. When the handlebar is in the desired position, use a torque wrench to tighten the fixing bolt to 17-18Nm.

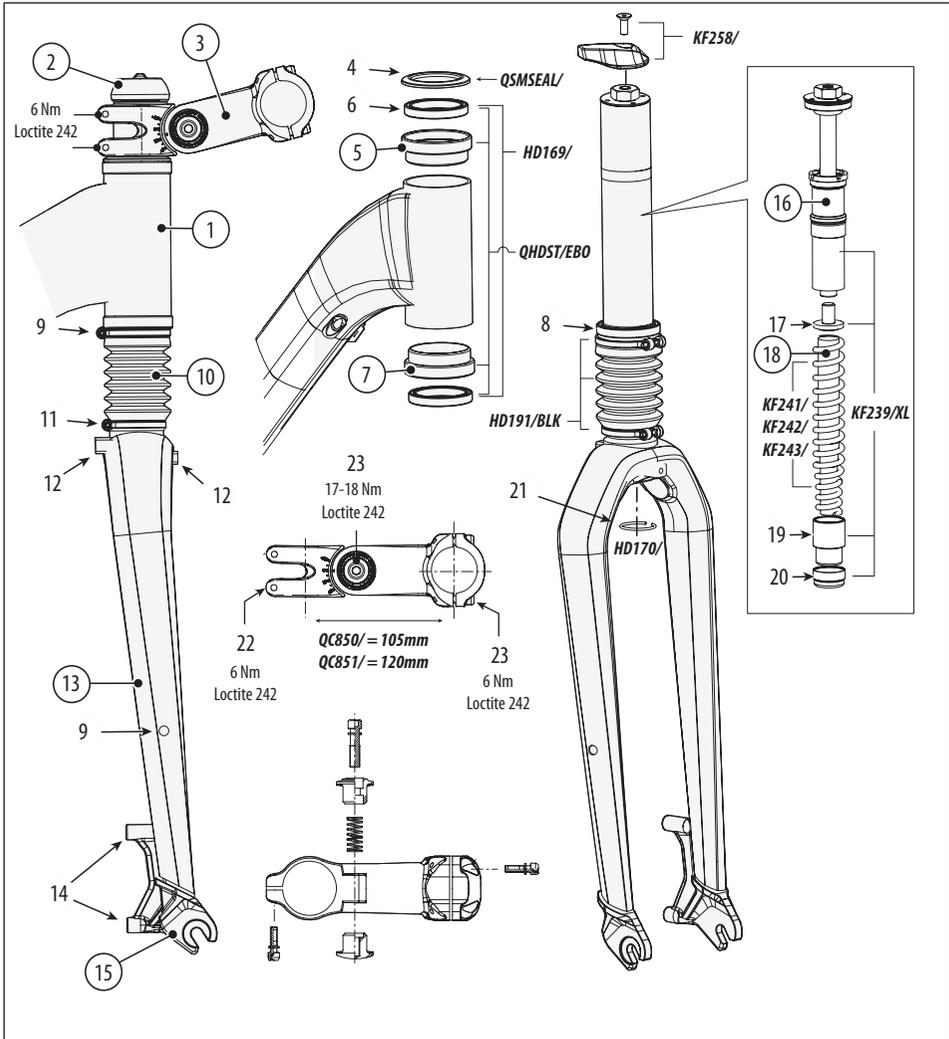


Figure 13.

- | | | |
|----------------------|-----------------------------|--------------------------------|
| 1. Headtube | 9. Upper Boot Clamp (49mm) | 17. Spring Perch |
| 2. Lockout Lever | 10. Fork Boot | 18. Spring w/ Elastomer |
| 3. Handlebar Stem | 11. Lower Boot Clamp (33mm) | 19. Spacer |
| 4. Bearing Seal | 12. Accessories Mounting | 20. Plug |
| 5. Upper Bearing Cup | 13. Fork Leg | 21. Ring Clip |
| 6. Upper Bearing | 14. Brake Mount | 22. Stem Clamp Bolts (2X) |
| 7. Lower Bearing Cup | 15. Dropout | 23. Stem Angle Fixing Bolt |
| 8. Lower Bearing | 16. DL50 Damping Cartridge | 24. Handlebar Clamp Bolts (4X) |

MAINTENANCE

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

CHECK THE FOLLOWING BEFORE EACH RIDE:

Make sure the battery is fully charged and locked in the rear bike rack.

Check tire pressure and wheel condition. Make sure wheel quick release are firmly closed.

Check the drive chain condition. Make sure it is clean and well-lubricated.

Check the bicycle front and rear lighting to make sure it works properly.

Check the bicycle brakes, make sure they are working well.

Inspect condition of electrical cables (i.e. Kinks free, no signs of abrasive wear)

Test the drive assist system, make sure the HMI functions normally.

Check the fork for damage (fork legs, fork boot, crown, dropouts, accessories/brake mounts, fender attachment) Look for damage (e.g., loose parts, cracks, deep scratches, dents) Make sure the fork works properly. Things that can indicate a serious problem are (1) any unusual "klunking" or knocking noises, (2) changes in travel, (3) an over-extended or compressed boot, (4) any changes in the way the fork has been working, or (5) any leaking fluids.

If you find any damage, do not ride the bike, contact your Cannondale Dealer.

TO BE PERFORMED BY CANNONDALE DEALER :

Recommended after the first 150 km, bring your bike to your 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.

Every 1000 km, bring your bike in to your 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.



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. Please ask your Cannondale Dealer to help you develop a complete maintenance program, a program which includes a list of the parts on your bike for YOU to check regularly. Frequent checks are necessary to identify the problems that can lead to an accident.

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.

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.

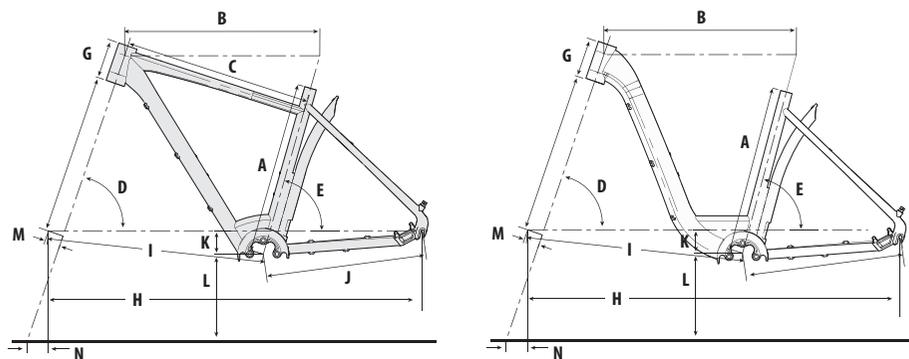
Tightening Torques

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

DESCRIPTION	Nm	In Lbs	Loctite™
Kickstand	7.0	62.0	242 (blue)
Rear Rack Mounting Bolts	3 - 4	26.5 - 35.4	
Lockout Lever Screw	0.5	4.0	
Stem/Handlebar Clamp Bolts	6.0	53.0	
Handlebar Fixing Bolt	17 - 18	150 - 160	
Rear Derailleur Hangar Screws	2.5	22.0	

If you decide to tighten fasteners yourself always use a good torque wrench!

GEOMETRY



	(mm)	Men (above left)			Women (above right)		
		SMALL	MEDIUM	LARGE	SMALL	MEDIUM	LARGE
A	Seat Tube Length	500	550	600	450	500	550
B	Top Tube Horizontal	570	584	608	562	568	582
C	Top Tube Actual	547	559	588	--	--	--
D	Head Tube Angle	71°	71.5°	72°	71°	*	*
E	Seat Tube Angle	74°	73.5°	73°	75°	*	*
F	Standover	782	829	854	411	411	411
G	Head Tube Length	114.3	*	*	*	*	*
H	Wheelbase	1092.81	1096.36	1110.39	1099.23	1107.39	1121.39
I	Front Center	631.2	634.7	648.7	635.5	643.6	657.5
J	Chain Stay Length	470	*	*	*	*	*
K	Bottom Bracket Drop	67	*	*	58	*	*
L	Bottom Bracket Height	283	*	*	292	*	*
M	Fork Rake	45	*	*	*	*	*
N	Trail	72.92	69.66	66.41	72.92	*	*

Figure 14.

Please note that the specifications and information in this manual are subject to change for product improvement.
For the latest product information, go to <http://www.cannondale.com/>

SPECIFICATIONS

Frame	Aluminium 6061-T6
Headtube	OnePointFive, Cannondale Headshok
Fork	Headshok Fatty DL50
Drive Chain	9-speed, 114 Links
Front Chain Ring	42T 4-Bolt 104 BCD
Rear Cassette	11-32, 9 speed
Seat Post	Use a seat post with a 31.6 mm diameter. only. Only use a metal adapter of accurate fit when using a smaller diameter seatpost. Apply bicycle bearing grease to seat post before inserting in seat tube.
Dropout Spacing	135 mm
Rear Brake	International Standard
Front Brake	Post Mount

BOSCH eBike System

Drive Unit	BOSCH Part Number	0 275 007 000
Battery Pack	BOSCH Part Number	1 270 020 503 (Rack Battery)
	Rated voltage	36 V
	Energy	288 Wh
	Operating Temperature (°C)	-10....+40
	Storage Temperature (°C)	-10....+60
	Allowable Load-temperature (°C)	0....+40
	Charging time (approximate)	SLOW- 8 hours, FAST 2,5 hours
Charger	BOSCH Part Number	0 275 007 900
HMI	BOSCH Part Number	1 270 020 900
HMI base	BOSCH Part Number	1 270 020 902
Speed Sensor	BOSCH Part Number	0 275 008 200
Spider	BOSCH Part Number	0 275 007 350

REPLACEMENT PARTS

The following replacement part kits are available through a Cannondale Dealer:

KIT	DESCRIPTION	See Figure
<i>QC850/</i>	KIT,HEADSHOK STEM ADJ 105mmBBQ	13
<i>QC851/</i>	KIT,HEADSHOK STEM ADJ 120mmBBQ	13
<i>KA026/</i>	KICKSTAND STYLO SI C'DALE BLK	15
<i>QC842/BBQ</i>	KIT,SEATBINDER,MTN,34.9,BLK	1
<i>QC843/BBQ</i>	KIT,SEATBINDER,MTN QR,34.9,BLK	1
<i>KF096/</i>	KIT,DER HANGER,SINGLE SIDED RD	16
<i>KP183/</i>	KIT,ZIP TIES, CABLEGUIDE /25	--
<i>KF258/</i>	KIT,LEVER,LO,DL80/50	13
<i>HD191/BLK</i>	KIT,BOOT, HEADSHOK	13
<i>QHDST/EBO</i>	KIT,HEADSET,2 CUPS + 1 BEAR	13
<i>QSMSEAL/</i>	KIT,HEADSET,2 CUPS + 1 BEAR	13
<i>HD169/</i>	KIT,BEARINGS, HEADSET - 2	13
<i>KF239/</i>	KIT,DAMPER,DL50	13
<i>KF241/</i>	KIT,SPRING,DL/MC50-SOFT	13
<i>KF242/</i>	KIT,SPRING,DL/MC50-STD	13
<i>KF243/</i>	KIT,SPRING,DL/MC50-FIRM	13
<i>HD170/</i>	KIT,CIRCLIPS,HEADSHOK /12	13
<i>KP192/</i>	KIT, CHAINRING, FSA E-BIKE WB156 42T	

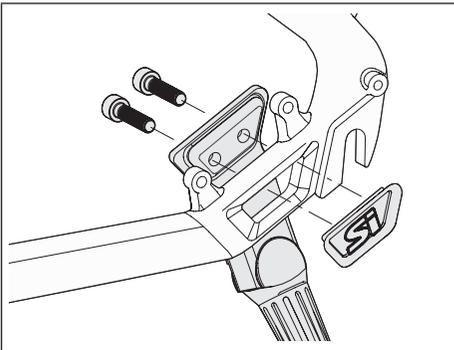


Figure 15.

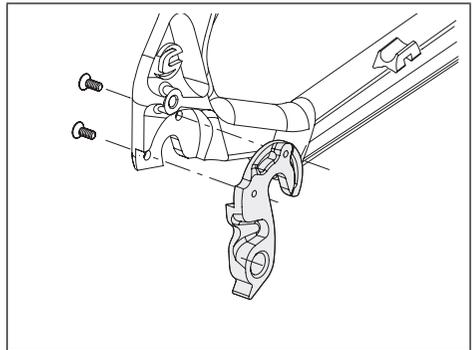


Figure 16.



READ THIS SUPPLEMENT AND YOUR CANNONDALE BICYCLE OWNER'S MANUAL.
Both contain important safety information. Keep both for future reference.

cannondale[®]

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