

133082



# CONTRO-E

OWNER'S MANUAL SUPPLEMENT

**cannondale**

## 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 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. See Contacting Cannondale in this supplement.

You can download Adobe Acrobat PDF versions of any manual/supplement from our website: [www.cannondale.com](http://www.cannondale.com)

This supplement contains information for the following models:

MODEL CODE	MODEL DESCRIPTION	COMPLIANCE
CM2491SM01	CONTR0-e HS 26"	BOSCH
CM2491MD01	CONTR0-e HS 26"	
CM2491LG01	CONTR0-e HS 26"	
CM2490MD01	CONTR0-e Rigid 24"	
CM2490LG01	CONTR0-e Rigid 24"	
C62216M1002	CONTR0-e Rigid US 24"	
C62216M1003	CONTR0-e Rigid US 24"	

## BOSCH eBike Manuals

The manufacturer’s owner’s manuals and instructions for the operation and maintenance of the drive-assist system are available as electronic downloads (in Adobe Acrobat PDF format) from our website. Obtain and read these materials BEFORE you operate the bike.

Go to : <http://www.bosch-ebike.de>

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EN

## Explicit Definitions

In this supplement, particularly important information is presented in the following ways:



### WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### NOTICE

Indicates special precautions that must be taken to avoid damage.

## Contacting Cannondale

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This bike complies with EN 15194.  
 EN14764 - Electrically Power Assisted Cycles (EPAC).

## 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.

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 disengage. 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.

**CONTRO-E**  
ASTM CONDITION 2,  
General Purpose  
Riding

**INTENDED:** For paved roads, gravel or dirt roads that are in good condition, and bike paths.

**NOT INTENDED:** For off-road or mountain bike use, or for any kind of jumping.

### Maximum Weight Limit (Lbs/Kg)

RIDER	LUGAGE	TOTAL
300/136	55/25	330/150



### 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.

**DO NOT RIDE "HANDS-OFF"** - Keep you hands on and 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.

**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.**

## Read the Drive System Manufacturer's Instructions

### 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. These instructions contain correct operation, service and maintenance information. More information please visit: [http://www.cannondale.com/manual\\_ebikes/](http://www.cannondale.com/manual_ebikes/).

## LEFTY Rigid Front Wheel

### WARNING

- **DO NOT CONTAMINATE BRAKE CALIPER, PADS, OR ROTOR WITH GREASE.**
- **DO NOT RIDE WITHOUT A PROPERLY MOUNTED, ADJUSTED, AND FUNCTIONING FRONT BRAKE SYSTEM.** The Lefty (disc/caliper) acts as an integral secondary wheel retention system. If the system is missing or improperly installed, or if the wheel hub axle bolt should loosen, the front wheel could slide off the spindle end.

When mounting IS compatible brake systems:  
Follow brake manufacturer's instructions when mounting the brake caliper to the spindle brake bosses. Do not modify the fork in any way. **PLEASE ASK YOUR CANNONDALE DEALER FOR HELP WHEN INSTALLING COMPATIBLE FRONT BRAKE SYSTEMS.**

### NOTICE

- **LOCATE BRAKE ROTOR BETWEEN THE PADS.** Replace shims that are in use, be sure the shims are positioned between the caliper (adapter if any) and inner face of the fork mounts, not under the head of the caliper bolts.
- **USE ONLY THE LEFTY 16mm CALIPER BOLTS TO MOUNT THE BRAKE.** Longer bolts can result in contact with the brake rotor causing severe damage. Check clearance between the bolt tips and rotor after remounting the caliper. Order replacement bolts - Cannondale p/n LEFTYBOLTS.

## 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.

**RACK MAXIMUM WEIGHT LIMIT: 25Kg, 55lbs**

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## No Modification

### WARNING

**DO NOT ALTER, CHANGE, OR MODIFY THE BICYCLE OR THE DRIVE ASSIST SYSTEM.** Dealers and owners MUST NOT change, alter, or modify in any way the original components of the bicycle or drive assist system. Specifically attempts to "hot-rod" or "improve" the speed of the bike are dangerous to the rider. Use only specified CANNONDALE and manufacturer drive assist service and replacement parts.

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

## PARTS OF THE E-SERIES

### CONTRO-E w/LEFTY rigid



- |                        |                   |                 |              |
|------------------------|-------------------|-----------------|--------------|
| 1 Drive Assist Display | 5 Battery         | 9 Headlamp      | 13 Kickstand |
| 2 Drive motor          | 6 HEADSHOK fork   | 10 LEFTY Rigid  |              |
| 3 Drive Control        | 7 LEFTY Wheel Hub | 11 Rack         |              |
| 4 Sensor/Spoke magnet  | 8 Bell            | 12 Folding Lock |              |

### CONTRO-E w/Headshok



## LEFTY RIGID

### Wheel Removal

1. See Figure 1. Use a 5 mm Allen key to loosen the brake caliper mounting bolts enough to remove the brake caliper from the mounting tabs.  
Note brake alignment shims between brake bosses and the caliper. Replace correctly during reinstallation.
2. See Figure 2. Insert a 5 mm Allen key into the axle hub bolt and turn the the hub extraction bolt counter-clockwise.

Continue turning the extraction bolt until the wheel can be removed easily from the spindle end. See Figure 3.



### NOTICE

- Make sure the axle bolt is completely disengaged before attempting to remove the wheel. Never try to pull the wheel off forcefully.
- When the wheel is off, to keep dirt out, cover the hub opening.
- Protect spindle from damage when wheel is removed.

### Wheel Installation

1. Inspect inside the wheel hub for contamination and the condition of the hub seal. Take corrective action if necessary. Wipe the spindle clean with a dry shop towel. Apply a high-quality bike grease to I.D. of the bearings inside the hub.
2. Slide the wheel straight onto the spindle.
3. Turn the axle bolt clockwise to engage the spindle threads. Make sure the wheel and spindle are supported while tightening the hub bolt.
4. Once the hub has been drawn onto the hub completely, use torque wrench to tighten to final 15.0 N·m (133.0 In·Lbs).
5. Reinstall the brake caliper. Tighten bolts to 78.0 In·Lbf (9.0 N·m).
6. Spin the wheel to make sure it moves freely. Be sure to test the brakes for proper operation before riding.



## MAINTENANCE

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

### CHECK THE FOLLOWING BEFORE EACH RIDE:

- Make sure the battery is fully charged and locked securely in position on the bicycle.
- 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.
- Check the function of the brakelight by pulling brake lever one after another.
- Check the function of the number plate light and make sure it works properly.
- Inspect condition of electrical cables (i.e. Kinks free, no signs of abrasive wear)
- Test the drive assist system, make sure the drive system functions normally.
- **LEFTY RIGID** - Check the fork for signs of damage (bending, cracking, dents, or deep scratches).
- **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 MOUNTING	7.0	62.0	
REAR RACK MOUNTING BOLTS	3 - 4	26.5 - 35.4	
STEM/HANDLEBAR CLAMP BOLTS	6.0	53.0	242 (blue)
DROPOUT MOUNTING BOLTS	15	133	
LEFTY CLAMP BOLTS	7-9	62-80	
LEFTY WHEEL AXLE BOLT	15	133	

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

## Drive Unit

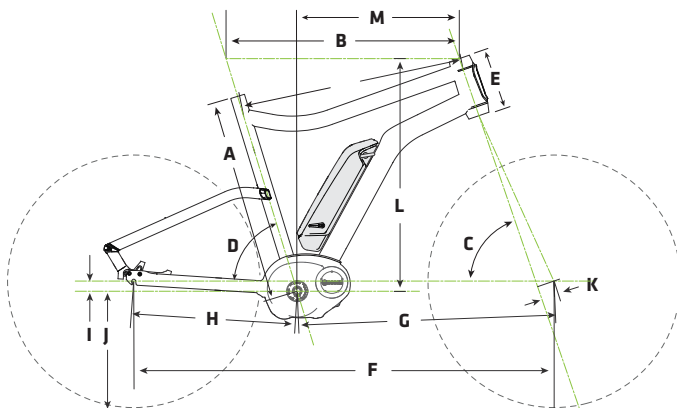
### NOTICE

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. 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.



## GEOMETRY

- A - Seat Tube Length
- B - Top Tube Horizontal
- C - Head Tube Angle
- D - Seat Tube Angle
- E - Head Tube Length
- F - Wheelbase
- G - Front Center
- H - Chain Stay Length
- I - Bottom Bracket Drop
- J - Bottom Bracket Height
- K - Fork Rake
- L - Stack
- M - Reach

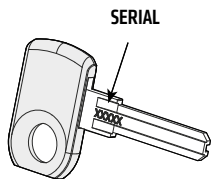


MODEL	Size (mm)	Size												
		A	B	C	D	E	F	G	H	I	J	K	L	M
CONTR0-E HEADSHOK 26"	S	460	578	71°	73°	160	1085	634	456	53	287.5	4,5	79,1	641,6
	M	510	598	71°	73°	160	1105	654	456	53	287.5	4,5	59,1	642
	L	560	628	71°	73°	160	1135	684	456	53	287.5	4,5	59,1	642
CONTR0-E LEFTY RIGID 24"	M	480	588	71°	73°	160	1085.22	650.62	436	27	291	4,5	59,1	616
	L	540	618	71°	73°	160	1115	681	436	27	291	4,5	59,1	616

## KEYS

Your E-Series bike comes with a main key and spare key. The keys are identified by the serial number **SERIAL**. 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:

Replacement information by key manufacturer:



Record SERIAL here. \_\_\_\_\_

**AXA**

<http://www.axa-stenman.com>



[www.abus.com](http://www.abus.com)

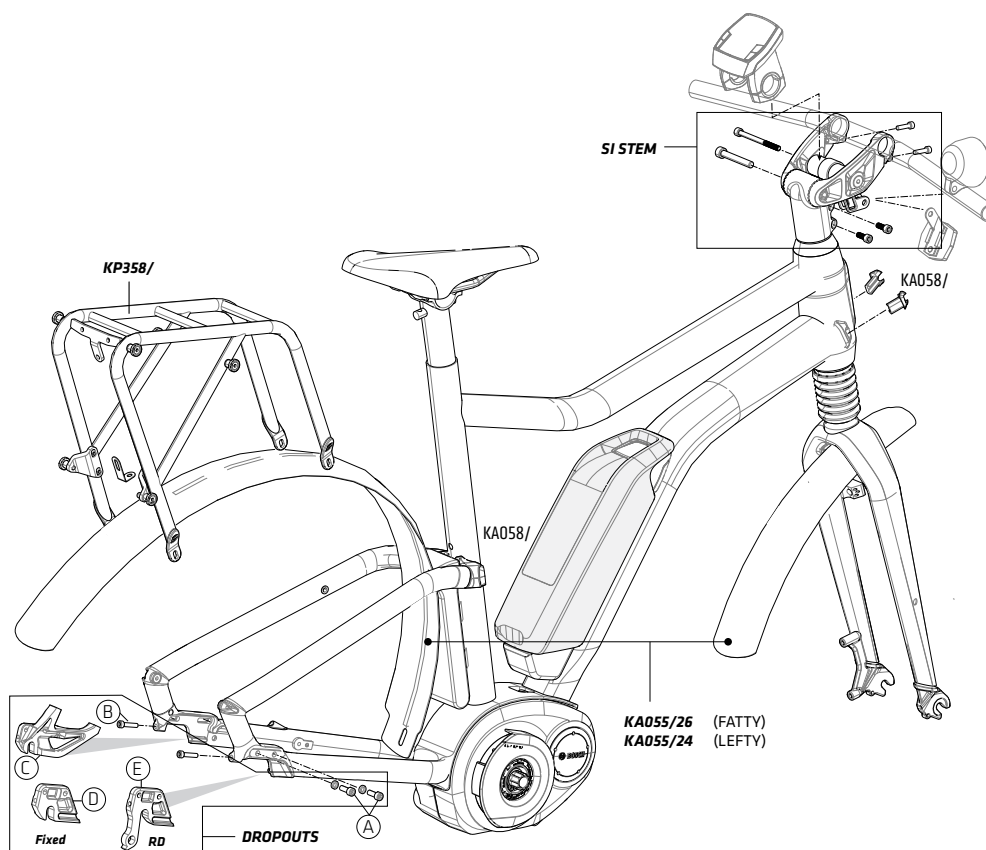


<http://www.trelock.de/web/en/services/schluesselservice/schluesselservice.php>

### 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. (

## REPLACEMENT PARTS



### FRAME/RACK/KICKSTAND

KA056/	KICKSTAND CDALE SI BLK 40mm Mount Plate
KP358/	KIT RACK CONTROL BLK
KA058/	PLUGS, RACK ORTLIEB QL3 --For 26" and 24"

### FORKS

HF15LARIG/24/BBQ	FORK 15 LEFTY AL RIGID E-CONTROL 24 BBQ
HF15LARIG/26/BLK	FORK 15 FATTY DL50-DISC 26 E-CONTROL BLK
HF15LARIG/24/BBQ	FORK 15 LEFTY AL RIGID E-CONTROL 24 BBQ

### SI STEM

BIKE SIZE	S	M	L
HEADSHOK - 26" stem length:	KA057/S 100mm	KA057/ 135mm	KA057/ 135mm
LEFTY RIGID - 24" stem length:		KA063/S 100mm	KA063/S 135mm

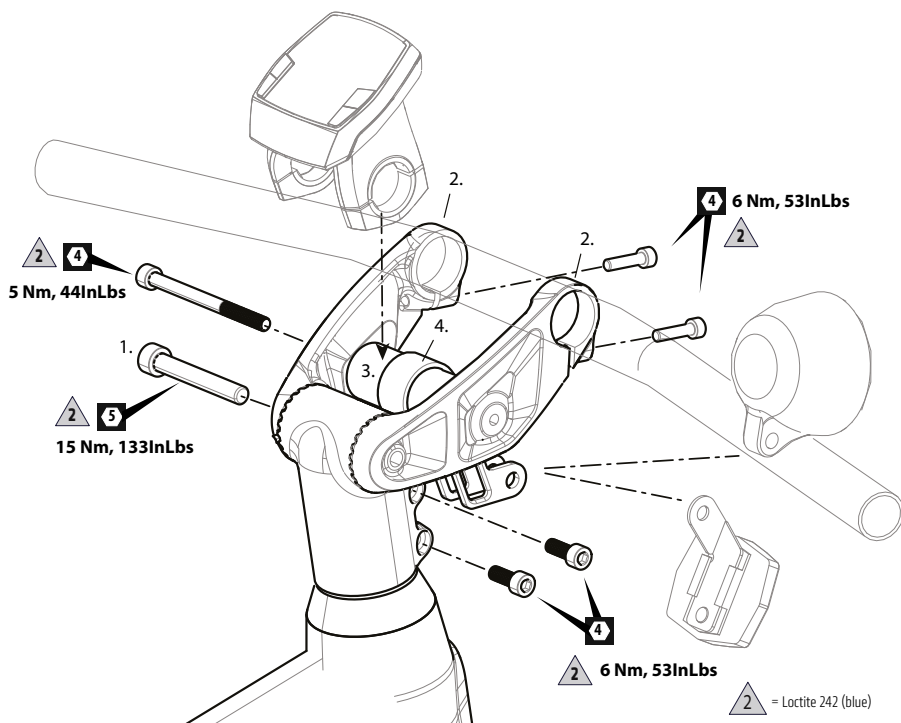
### DROPOUT KITS

KP356/	DROPOUT KIT (Fixed)
KP357/	DROPOUT KIT (Rear Derailleur)
DROUPOUT KIT (fixed) contains A, B, C, D	
DROUPOUT KIT (rear derailleur) contains A, B, C, E	

### FENDER

KP358/26	FENDER SET E-CONTROL 26" - HEADSHOK
KP358/24	FENDER SET E-CONTROL 24" - LEFTY RIGID

## SI CONSOLE



### Handlebar Adjustment

The handlebar height is adjusted by loosening the pivot bolt (1) and moving the arms (2) handlebar up or down to the desired position. Re-tighten the pivot bolt to the specified torque with a torque wrench following adjustment. The adjustment bolt is treated with a thread locking agent, but it will require periodic re-application of Loctite #242 (blue), especially if frequent adjustments are made.

### Head Lamp & Display Mounting

The drive assist system display and head lamp and reflector brackets are to be mounted onto the center support (3). This support will rotate so that the mounted parts can be positioned correctly. The head lamp mounting bracket (4) can also be rotated if necessary.

#### **WARNING**

**ADJUSTMENTS SHOULD ONLY BE PERFORMED BY A QUALIFIED BICYCLE MECHANIC.**



Warning! Read this supplement and your Cannondale bicycle owner's manual.  
Both contain important safety information. Keep both for future reference.

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