



SUPERSIX EVO.
OWNER'S MANUAL SUPPLEMENT.

cannondale

SAFETY INFORMATION

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/>.

- This manual is not a comprehensive safety or service manual for your bike.
- This manual does not include assembly instructions for your bike.
- All Cannondale bikes must be completely assembled and inspected for proper operation by a Cannondale Dealer before delivery to the owner.

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 retailer.

Important Composites Message

WARNING

Your bike (frame and components) is made from composite materials also known as "carbon fiber."

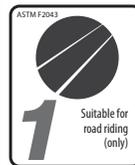
All riders must understand a fundamental reality of composites. Composite materials constructed of carbon fibers are strong and light, but when crashed or overloaded, carbon fibers do not bend, they break.

For your safety, as you own and use the bike, you must follow proper service, maintenance, and inspection of all the composites (frame, stem, fork, handlebar, seat post, etc.) Ask your Cannondale Dealer for help.

We urge you to read PART II, Section D. "Inspect For Safety" in your Cannondale Bicycle Owner's Manual BEFORE you ride.

YOU CAN BE SEVERELY INJURED, PARALYZED OR KILLED IN AN ACCIDENT IF YOU IGNORE THIS MESSAGE.

Intended Use



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

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.

Inspection & Crash Damage Of Carbon Frames/Forks

WARNING

AFTER A CRASH OR IMPACT:

Inspect frame carefully for damage (See PART II, Section D. Inspect For Safety in your Cannondale Bicycle Owner's Manual.)

Do not ride your bike if you see any sign of damage, such as broken, splintered, or delaminated carbon fiber.

ANY OF THE FOLLOWING MAY INDICATE A DELAMINATION OR DAMAGE:

- An unusual or strange feel to the frame
- Carbon which has a soft feel or altered shape
- Creaking or other unexplained noises,
- Visible cracks, a white or milky color present in carbon fiber section

Continuing to ride a damaged frame increases the chances of frame failure, with the possibility of injury or death of the rider.

Repainting Or Refinishing

WARNING

Repainting, painting over, retouching, or refinishing your frame or fork can result in severe damage leading to an accident. You can be severely injured, paralyzed or killed.

Refinishing chemicals : Solvents, and strippers can attack, weaken, or destroy the important composite chemical bonds holding your frame together.

Using abrasives or sanding the frame/fork structure, original paint, decals, or coatings through the use of mechanical actions such as plastic or glass bead blasting or other abrasive methods such as sanding or scraping can remove frame material or weaken it.

Bicycle Repair / Work Stands

The clamping jaws of a bike stand can generate a crushing force strong enough to seriously damage your frame.

NOTICE

Never place your bike in a bike stand by clamping the frame.

Place your bike in a stand by extending the seat post and positioning the stand clamp on the extended seat post. Don't extend beyond the MINIMUM INSERT line marked on the seat post.

Since your carbon seat post can also be damaged by clamping force, adjust the stand clamp for the minimum clamping force needed to secure the bike.

Also, before clamping, clean the post and protect the seat post finish with a rag.

If you have an old un-used seat post, use it instead of your regular post to mount your bike in a stand.

Tightening Torques

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

Find Tightening Torque Information

The wide range of bicycle models and components used means that a listing of tightening torque would be out of date by the time it was published. Many fasteners should be installed with a thread locking adhesive such as Loctite®.

To determine correct tightening torque and any adhesive application for a fastener we ask you to check:

- Markings on the component. Many components are marked. On-product marking is becoming common.
- Torque specs in the component manufacturers instructions shipped with your bicycle.
- Torque specs listed on the websites of component manufacturers.
- With your Dealer. Dealers have access to current data and have experience with correct torque for most fasteners.

Trainers

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

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

Be particularly cautious with a carbon frame or fork. Carbon is relatively soft, not abrasion resistant. If there is any relative movement, carbon will wear quickly.

If you ride a trainer a lot, consider using an old bike: Corrosion from sweat will take it's toll. Weight is irrelevant. Save wear on your expensive components.

Ask your dealer for help with trainers, the right one and the correct way to use it.

NOTICE

TRAINERS - Improperly mounting a bike in a trainer, or using one that is not compatible with your particular bike frame can cause serious damage.

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

This kind of damage is not covered by the Cannondale Limited Warranty.

Water Bottles

Side impacts to a water bottle or cage can result in damage threaded inserts due to the leverage on a very small area. In a crash, certainly the last thing you should be worried about is saving the threaded inserts in your frame. However, when you are storing or transporting your bike, take steps to prevent situations where a water bottle may be hit or bumped by a strong force that would cause damage. Remove bottle and cage when you are packing your bike for travel.

Periodically check the attachment of the bottle cage; tighten the cage bolts if necessary. Don't ride with a loose bottle cage. Riding with loose cage bolts can produce a rocking motion or vibration of the attached cage. A loose cage will damage the insert and possibly lead to the inserts to pull out. It may be possible to repair a loose insert, or install another insert only if the frame is undamaged. Replacement requires the use of a special tool. If you notice damage to the threaded insert, please ask your Cannondale Dealer for help.

Building Up A Frameset

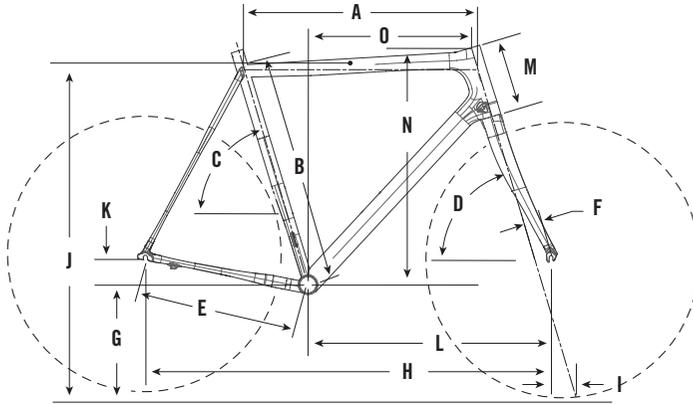
Before building up a frameset, consult with your Cannondale Dealer and the component manufacturers, and discuss your riding style, ability, weight, and interest in and patience for maintenance.

Make sure the components chosen are compatible with your bike and intended for your weight and riding style.

Generally speaking, lighter weight components have shorter lives. In selecting lightweight components, you are making a trade-off, favoring the higher performance that comes with less weight over longevity. If you choose more lightweight components, you must inspect them more frequently. If you are a heavier rider or have a rough, abusive or "go for it" riding style, buy heavy duty components.

Read and follow the component manufacturers warnings and instructions.

GEOMETRY & SPECIFICATIONS



	Sizes (cm)	48	50	52	54	56	58	60	63
A	Horizontal Top Tube Length (cm)	51.5	52.5	53.5	54.5	56	57.5	59	60
B	Measured Size (cm)*	46	48	50	52	54	56	58	61
C	Seat Tube Angle (degrees)	74.5 °	74.5 °	74 °	73.5 °	73.5 °	73 °	72.5 °	72 °
D	Head Tube Angle (degrees)	71.5 °	72.0 °	72.5 °	73 °	73 °	73.5 °	73.5 °	73.5 °
E	Chain Stay Length (cm)	40.5	★	★	★	★	★	40.8	40.8
F	Fork Rake (cm)	4.5	★	★	★	★	★	★	★
G	Bottom Bracket Height (cm)	26.5	26.5	26.5	26.8	26.8	27	27	27
H	Wheelbase (cm)	96.1	96.7	97.3	97.5	99.1	99.6	100.8	101.2
I	Trail (cm)	6.6	6.3	6.0	5.7	5.7	5.4	5.4	5.4
J	Standover at Top Tube Midpoint (cm)	74.2	75.5	76.7	78.8	80.4	82.5	84.3	86.9
K	Bottom Bracket Drop (cm)	7.2	7.2	7.2	6.9	6.9	6.7	6.7	6.7
L	Front Center Distance (cm)	56.3	56.9	57.5	57.6	59.1	59.7	60.6	60.9
M	Head Tube Length (cm)	11	11.5	12	14	15.5	17.5	19.5	22
N	Stack (cm)**	51.3	51.9	52.6	54.4	55.8	57.7	59.6	62.0
O	Reach (cm)	36.8	37.6	38.4	38.4	39.5	39.9	40.2	39.9

Intended Use

Condition 1, High-Performance Road

Bottom Bracket

PRESSFIT 30, 68mm

Headset

Upper 1 1/8" Campagnolo Hiddenset, Lower 1 1/4"

Cannondale - **KP044/**

Headset Compression Assembly

Cannondale SI - **KP017/**

Seatpost Diameter

27.2mm

Seat Binder

30.0 mm, Maximum torque: 6.8 Nm, 60.0 In Lbs

Dropout Spacing

Front 100 mm, Rear 130 mm

Front Derailleur Clamp Diameter

Maximum Weight Limit

Rider (275lbs/125kg), Luggage¹ (10lbs/4.5kg), Total(285/129kg)

* The measured size is from the center of the bottom bracket to the top of the top tube, measured along the seat tube axis. All sizes have a slightly sloping top tube.

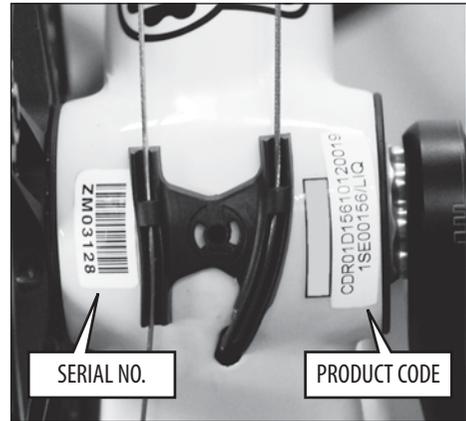
** Stack is measured vertically from the center of the BB to the top of the head tube, reach is measured horizontally from the center of the BB to the top of the head tube.

1. Seat Bag /Handlebar Bag Only

SERIAL NUMBER

The serial number located on the bottom bracket. It is a 7-character barcode. Use this serial number to registration your bike. See your Cannondale Bicycle Owner's Manual for more information on warranty registration.

Other codes on the BB shell are related to production including model year, frame type, frame size, and color coding. The same product code may appear on many bikes and does not uniquely identify your frame.



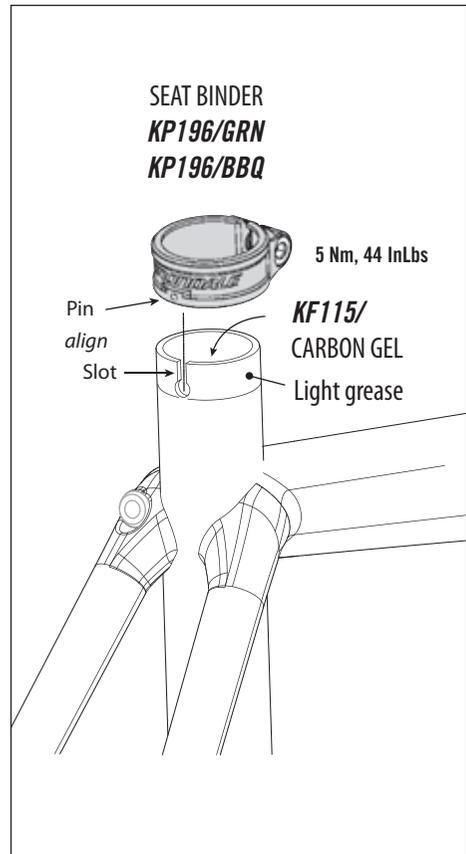
SEAT POST

Use a high-quality carbon gel to install and maintain the seat post. Cannondale kit **KF115/** is a small quantity, enough for two or three applications.

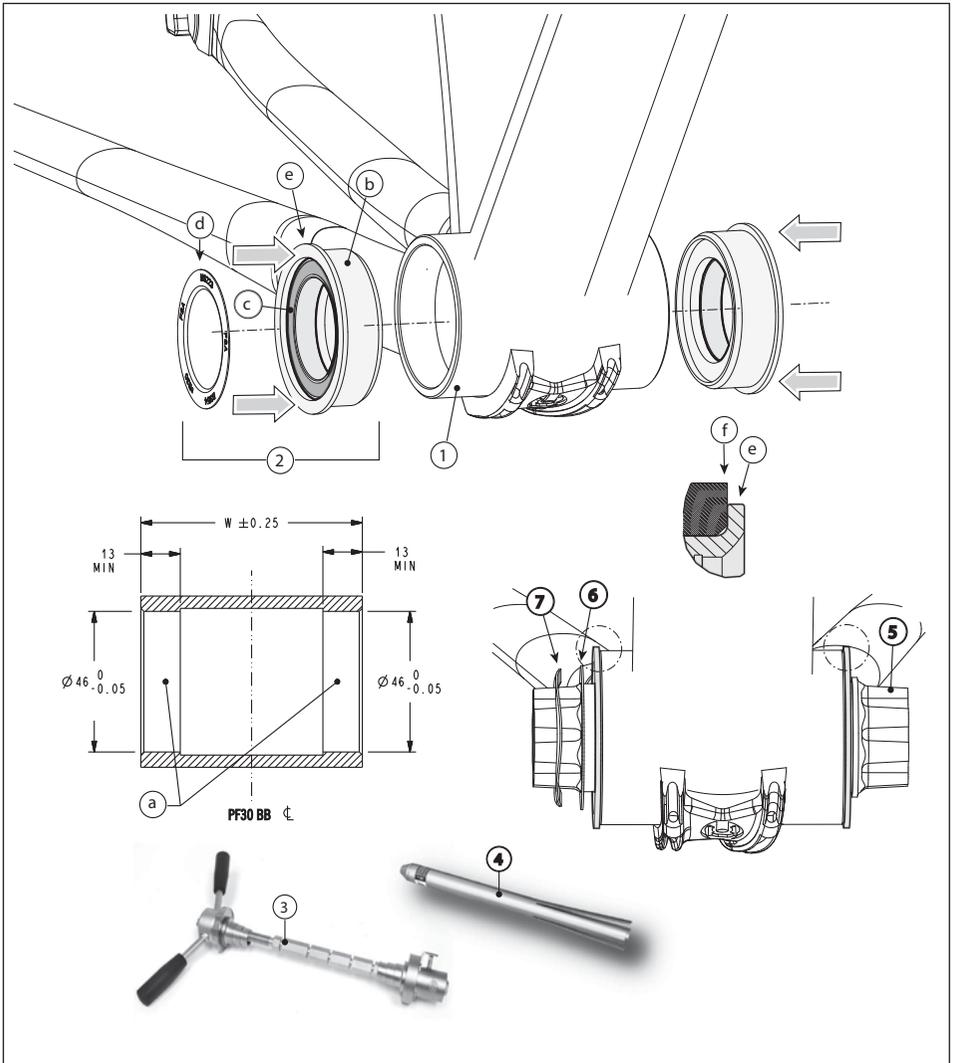
1. Clean the inside of the seat tube. Wipe it out with a dry clean towel.
2. Apply a generous amount carbon gel to the inside of the clean seat tube and to the seat post. A small nylon brush works well for spreading inside the seat tube.
3. Apply small amount of bicycle bearing grease to the area under the binder on the seat tube and reinstall the seat binder.
4. Insert the seat post, set saddle height, and tighten the binder bolt to the specified torque.

TIP: When tightening the seat binder, also check the specified tightening torques of the saddle to seat post clamp bolts.

TIP: Its a good idea to periodically remove the binder bolt, from the binder, clean it threads and lightly grease the threads.



BOTTOM BRACKET - PRESSFIT 30



- | | | |
|--------------------------------|---------------------|----------------------------|
| 1. Bottom bracket shell | 6. 0.5mm shim(s) | d. Pressfit bearing shield |
| 2. Pressfit 30 bearing unit(2) | 7. Wave washer | e. Cup flange |
| 3. Park tool HHP-2 | a. Pressfit surface | f. BB shell edge |
| 4. Park tool RT-1 | b. Pressfit cup | |
| 5. Hollowgram BB30 spindle | c. Pressfit bearing | |

Compatibility

PressFit 30 compatible frames have a 46 mm I.D. bottom bracket bearing system press interface. PressFit 30 compatible frames may have a shell width of 68 mm or 73mm depending on the frame type. PressFit 30 bottom bracket bearing systems from various manufacturers enable the installation of BB30 cranksets. The PressFit 30 bearing system on your bike may differ from the one shown.

Maintenance

In general, you should inspect the condition of the bearings annually (at a minimum) or anytime the crankset assembly is disassembled, serviced, or if a problem is indicated.

To inspect, when the crankset is removed, rotate the inner bearing race of both bearings; rotation should be smooth, and quiet. Excessive play, roughness or corrosion indicates a damaged bearing.

Removal

To avoid serious damage to the frame, it is important to remove bearing systems very carefully using proper tools indicated by the manufacturer's service instructions. For the PressFit 30 system shown, push out bearing units from opposite sides using a head cup remover such as Park Tool RT-1. See <http://www.parktool.com/product/head-cup-remover-RT-1>. Make sure the bearings (cup or adapter parts) are driven out squarely and evenly from inside the shell!!! Do not pry components from shell.

Replacement

PressFit 30 bearings are not removable from the adapters or cup systems that are pressed into the frame bottom bracket shell. Therefore, damaged bearings must be removed and replaced as new entire sets. Before installing any new bearing units into the shell, thoroughly clean the inside surface of the bottom bracket shell with a clean dry shop towel. Also, make sure both bearing units and the BB shell surfaces are clean and dry. Do not apply grease to either.

Follow the manufacturer's instruction for assembly and installation of the bearing system. Bearing units should both be pressed at the same time with slow even pressure. This will help ensure bearing unit enter squarely and they do not become tilted. Use a headset press such as Park Tool HHP-2. See <http://www.parktool.com/product/bearing-cup-press-HHP-2>. Select appropriate press adapters to ensure that force is only applied to the cup (arrows in illustration) and not the bearing inside. Press until the both cup flanges are mated to the BB shell edge.

NOTICE

Consult with your Cannondale Dealer on the quality and compatibility of any proposed replacement component. Make sure the PressFit 30 system is intended for use with a 46 mm I.D. BB shell. Confirm actual part dimensions with a micrometer.

Do not use chemical solvents to clean. Do not remove frame material or use surfacing tools on bottom bracket shell.

Frame damage, caused by improper components, component installation or removal is not covered by your warranty.

REAR DERAILLEUR HANGER

To replace:

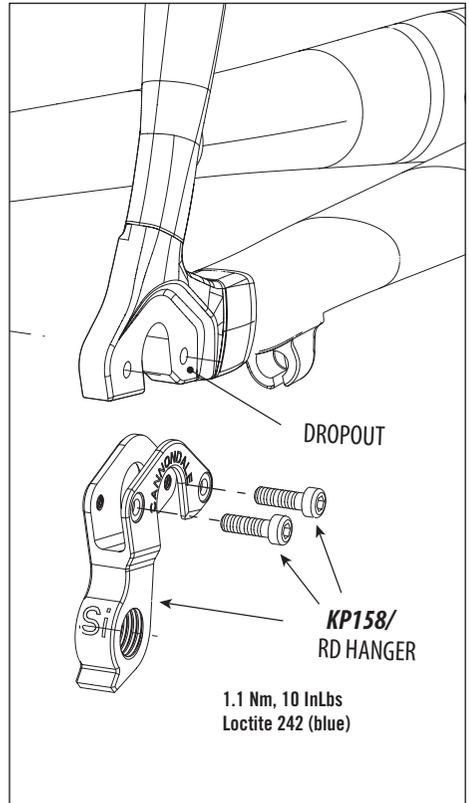
Remove the mounting screws and remove the old hanger from the dropout. Clean the area around the dropout and inspect the frame carefully for any cracks or damage. If you find damage have the frame inspected by your Cannondale Dealer .

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

Slide the new hanger **KP158/** onto the dropout. Apply Loctite to the screw threads and tighten to the specified torque.

NOTICE

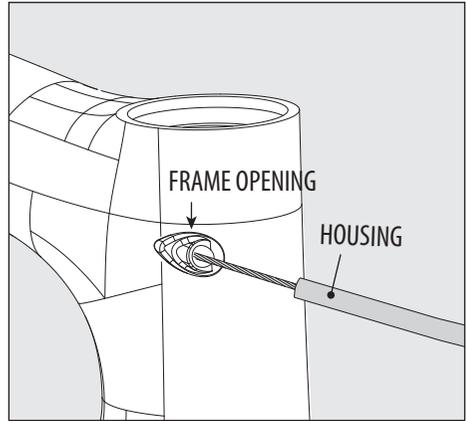
Do not use a derailleur hanger alignment tool. If bending adjustment is necessary, remove the hanger from the frame first!



REAR BRAKE ROUTING

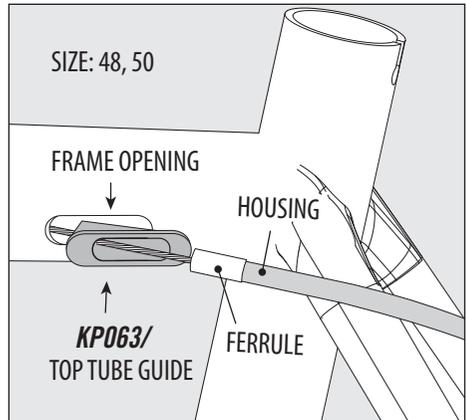
Rear brake cable routing is internal.

The rear brake cable enters the top tube via the integrated cable guide. Rear brake housing fits directly into the fitting without a ferrule.

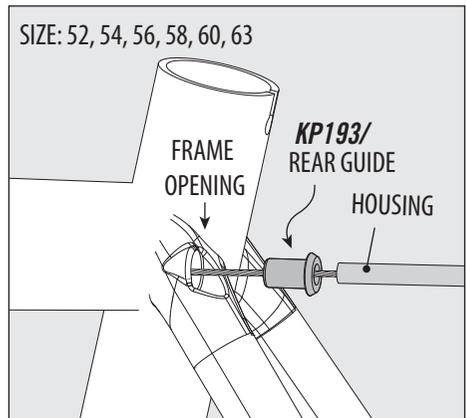


Smaller size frames utilize a top tube opening for the rear brake cable exit. This is necessary due to ensure the right curvature in the cable as it approaches the brake caliper.

The rear top tube brake guide **KP063/** is removable. The guide is secured in the tube opening by the brake cable tension. Make sure the guide is seated properly in the top tube opening when installing and connecting the rear brake. Be sure to use a ferrule on the housing end.

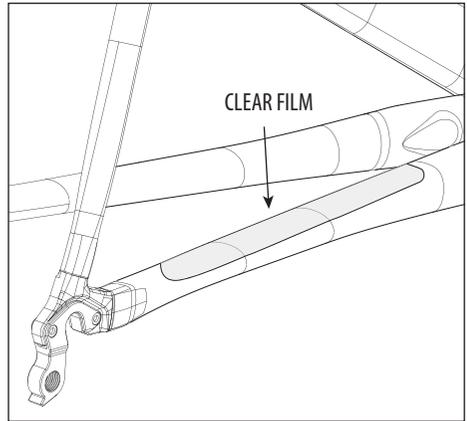


On larger size frames, cable exits at the rear of the seat tube/top tube junction. The rear guide **KP093/** is designed to be used without a housing ferrule as shown. The guide is secured in the tube opening by the brake cable tension.



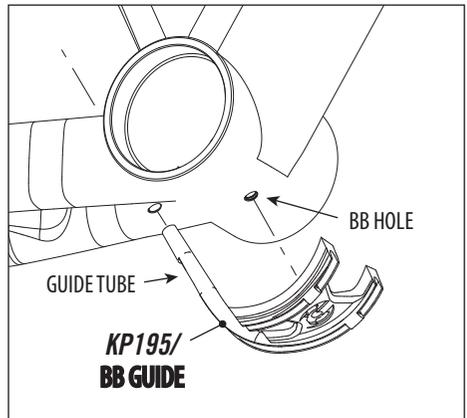
CHAINSTAY PROTECTION

The clear adhesive film protector applied to the top surface of the right chainstay provides limited protection against frame or finish damage caused by the chain. Replacements are available through a Cannondale Dealer.



BB CABLE GUIDE

The BB cable guide snaps into the shell hole with a guide tube that passes through the shell.

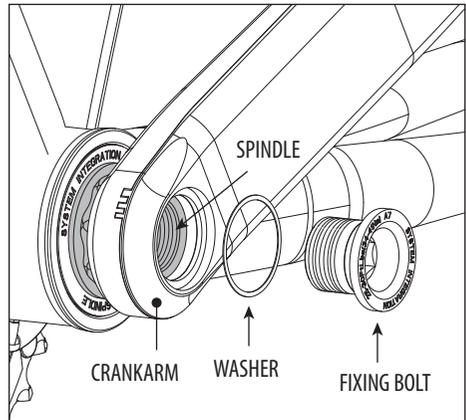
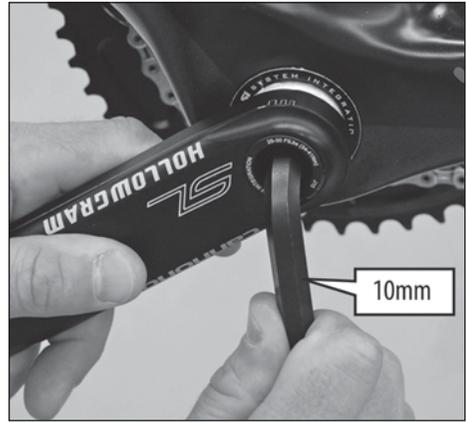


HOLLOWGRAM SL

Crankarm Removal

The following procedure applies to left or right crankarms:

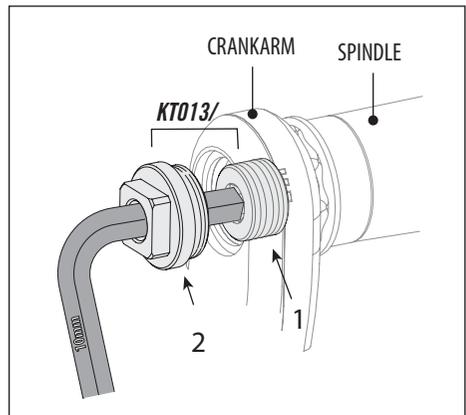
1. Insert a 10mm hex into the fixing bolt.
2. Hold crankarm with your hand and turn fixing bolt counter-clockwise to remove it from the crankarm.
3. Remove the thin steel washer under the bolt head. Or, it may be still in the crankarm.



4. Apply bearing grease to both parts of the crankarm Cannondale tool **KT013/**.

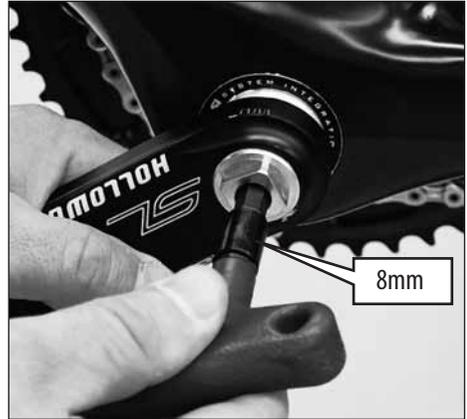
Thread tool part 1 into spindle until it is flush with the top of the spindle.

Thread tool part 2 into the crankarm completely and tighten it snug with a 15mm open end wrench.



7. Insert a 8mm Allen key through part 2 and into part 1.

Hold the crankarm with your hand and turn the the 8 mm hex counter-clockwise until the crankarm can be removed from the spindle end.



8. Hold the crankarm with your hand and turn the the 8 mm hex counter-clockwise until the crankarm can be removed from the spindle end.



Crankarm Installation

Make sure the crankarm sockets, the spindle splines and fixing bolt threads are clean and apply a high-quality bicycle bearing grease to these surfaces before assembly.

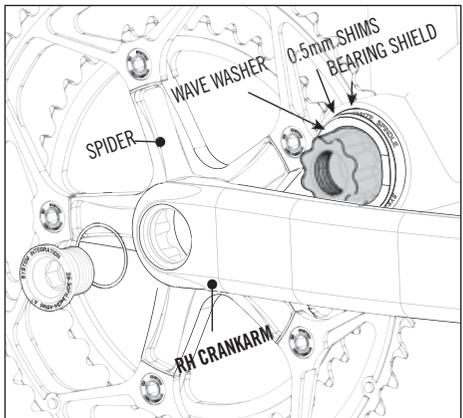
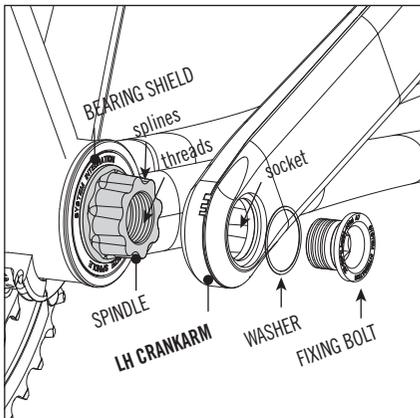
NON-DRIVE (Left) - See bottom page, left

DRIVE (Right) -Before attaching the right crankarm/spider to the spindle, make sure the part order (shield, shims, wave washer) is correct. Also, use only enough 0.5mm spacers on the spindle to result in slight compression of the wave washer. when the fixing bolt is tightened

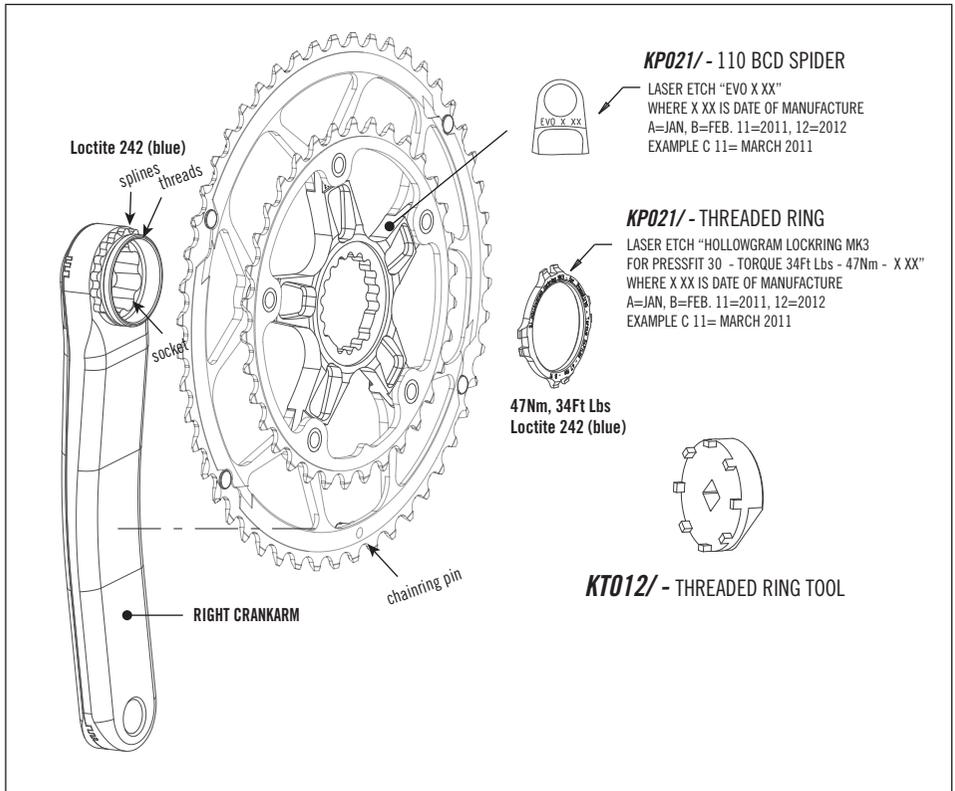


Use a torque wrench to tighten fixing bolts to:

25-30 FtLbs, 34-41 Nm



EVO 110 BCD HOLLOWGRAM SPIDER & LOCKRING



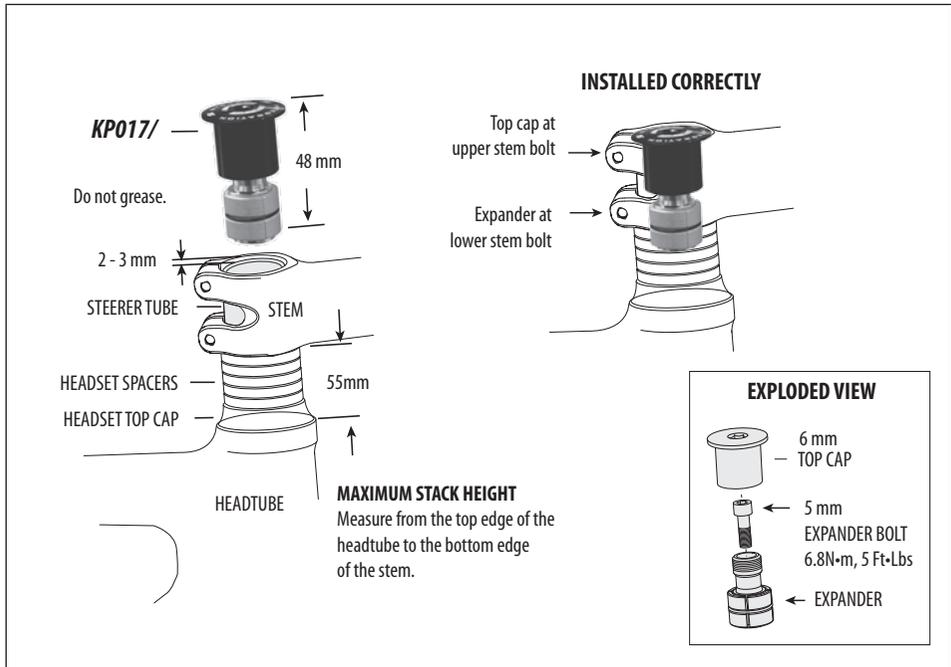
NOTICE

To maintain BB shell clearance with spider the 110 BCD Hollowgram spider used with this frame must be marked "EVO X XX" as shown above.

When assembling the spider and right Hollowgram crankarm, use the threaded ring tool KT012/ and tighten with a torque wrench to the specified torque. Over-tightening can crack the threaded ring.

Apply Loctite 242 to the threaded ring splines AND the spider splines.

SI COMPRESSION ASSEMBLY *KP017*/INSTRUCTIONS

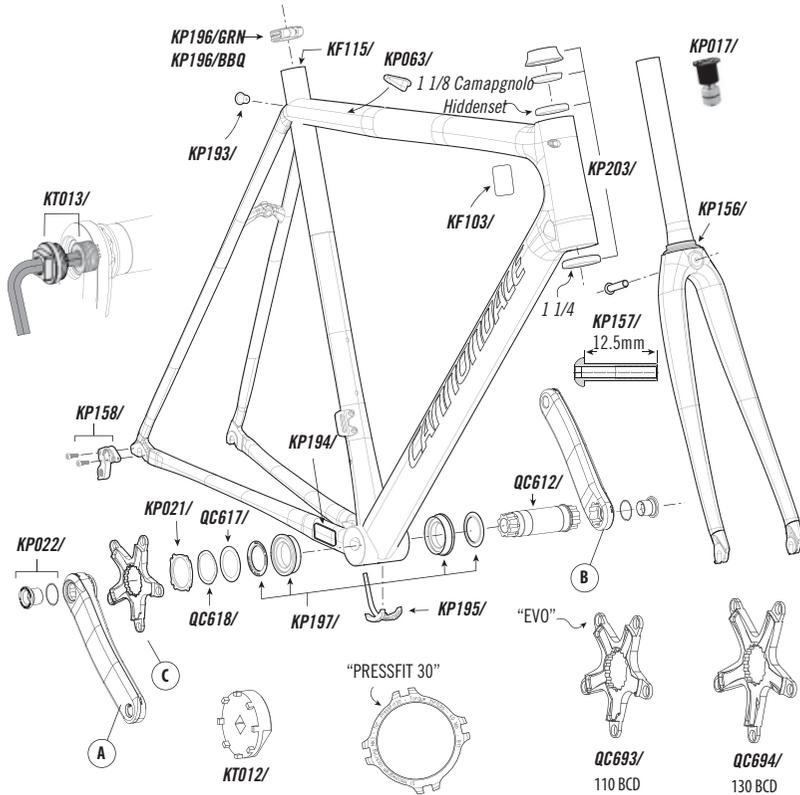


The following procedure should only be completed by a professional bike mechanic.

1. Assemble the fork, headset, spacers, and stem without tightening the stem bolts onto the head tube. When the system is assembled, the carbon steerer tube should be 2-3 mm below the top stem. All spacers must be located below the stem and within the maximum stack height as shown. No spacers may be used above the stem.
2. Set-up the compression assembly before inserting it. Adjust the length so that the expander is located at lower stem bolt. The top cap and the expander end provides critical support to the carbon steerer when tightening the stem bolts. Adjust the length by threading the top cap on the expander parts.
3. When the assembly is the correct length, insert it into the steerer tube. It is designed to fit snugly inside the steerer. Insert a 5 mm Allen key through the access hole in the TOP CAP and into the EXPANDER BOLT. Tighten the expanding parts by turning clockwise to 6.8Nm, 5 ftLbs.
4. Now, to set bearing preload, insert a 6mm allen key into the hex shape in the TOP CAP itself. Turn the entire top cap clockwise to increase preload. Turning it counter-clockwise will decrease the preload. When the headset preload feels correct, turn the stem to align the handlebar and tighten the stem fork clamp bolts to the torque specified for the stem. Consult the stem manufacturer's instructions. The torque values for components are often marked on the part.

REPLACEMENT PARTS

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



NO. (QTY)	KIT	DESCRIPTION
	KP203/	KIT,HEADSET,SUPERSIX EVO.CRB
	KP017/	KIT,COMP ASSY,23.6ID,EXPANDER
	KP156/	KIT,CROWN RACE, CAAD10/EVO
	KP063/	KIT,GUIDE,BRAKE SUPERSIX EVO 48-50
	KP193/	KIT,GUIDE,BRAKE SUPERSIX EVO 52-63
	KP157/	KIT,BRAKE BOLT,12.5MM
	KP194/	KIT,CH.STAY PROTECT-SUPERSIX EVO
	KP195/	KIT,BB CABLEGUIDE, SUPERSIX EVO
	KP158/	KIT,DER HANGER,RD CAAD10/EVO
	KF055/	KIT,ADJUSTER-INLINE SHIFTER-2
	KP196/GRN	KIT,SEATBINDER, ROAD 30.0
	KP196/BBQ	KIT,SEATBINDER, ROAD 30.0
	KP197/	KIT,BB,PRESSFIT 30, 68/73MM
	KF115/	KIT,GEL,DYNAMIC,CARBN SEATPOST

NO. (QTY)	KIT	DESCRIPTION
A	KP020/170L	KIT,CRANKARM-SL,BLK,170 LFT
	KP020/172L	KIT,CRANKARM-SL,BLK,172 LFT
	KP020/175L	KIT,CRANKARM-SL,BLK,175 LFT
B	KP020/170R	KIT,CRANKARM-SL,BLK,170 RHT
	KP020/172R	KIT,CRANKARM-SL,BLK,172 RHT
	KP020/175R	KIT,CRANKARM-SL,BLK,175 RHT
C	QC693/	KIT,SPIDER,H-GRAM SI,110MM BCD
	QC694/	KIT,SPIDER,H-GRAM SI,130MM BCD
	KP021/	KIT,LOCKRING-SL --REQUIRES KT012/
	KT012/	KIT,TOOL-LOCK RING-SI
	KT013/	KIT,TOOL-CRANK EXTRACT - SI
	QC617/	KIT,SHIMS-PLASTIC, BB-SI; 5 SHIMS
	QC618/	KIT,WASHER-WAVE, BB-SI
	KP022/	KIT,CRANK BOLTS,H-GRAM SL,(2)
	QC612/	KIT,SPINDLE-SI ROAD



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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