



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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CYCLING SPORTS GROUP

OWNER'S MANUAL SUPPLEMENT

130919



F-SI

OWNER'S MANUAL SUPPLEMENT

cannondale

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 inside cover of this supplement.

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

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/>

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.

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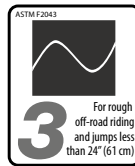
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YOUR CANNONDALE DEALER

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.



The intended use of all models is ASTM CONDITION 3, Cross-Country.

SAFETY INFORMATION

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.

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.)

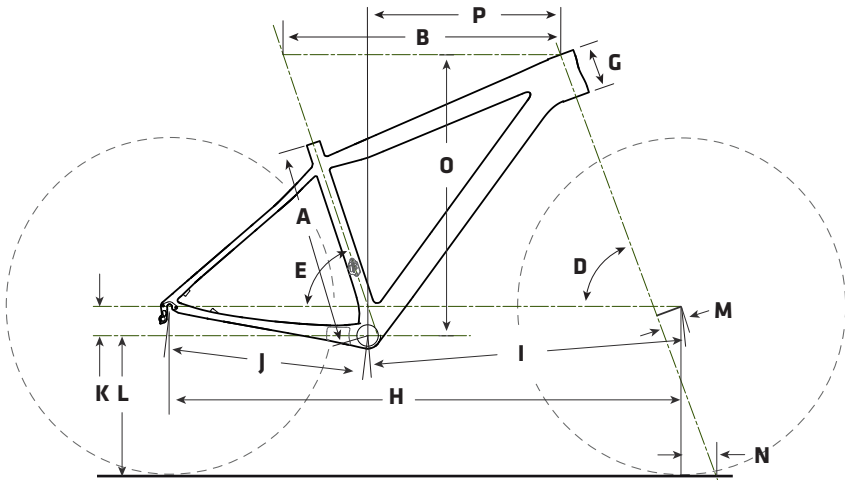
Do not ride your bike if you see any sign of damage, such as broken, splintered, or delaminated carbon fiber.

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.

TECHNICAL INFORMATION



GEOMETRY

SIZE		SM	MD	L	XL
A	SEAT TUBE LENGTH (CM/IN)	38.5 /15	43.5 /17	48.5 /19	53.5 /21
B	TOP TUBE HORIZONTAL (CM/IN)	57.3 /22.6	59.6 /23.5	62.3 /24.5	64.8 /25.5
C	TOP TUBE ACTUAL (CM/IN)	55.2 /21.7	56.5 /22.2	58.7 /23.1	61.2 /24.1
D	HEAD TUBE ANGLE	69.5°	★	★	★
E	SEAT TUBE ANGLE EFFECTIVE	73.3°	73.2°	73.1°	73°
F	STANDOVER (CM/IN)	76.8 /30.2	78.1 /30.7	81.9 /32.2	85 /33.5
G	HEAD TUBE LENGTH (CM/IN)	9.7 /3.8	9.7 /3.8	11 /4.3	12.2 /4.8
H	WHEELBASE (CM/IN)	107.6 /42.4	109.7 /43.2	112.3 /44.2	114.7 /45.2
I	FRONT CENTER (CM/IN)	65.2 /25.7	67.3 /26.5	69.8 /27.5	72.2 /28.4
J	CHAIN STAY LENGTH (CM/IN)	42.9 /16.9	★	★	★
K	BOTTOM BRACKET DROP (CM/IN)	6.2 /2.4	★	★	★
L	BOTTOM BRACKET HEIGHT (CM/IN)	30.8 /12.1	★	★	★
M	FORK RAKE (CM/IN)	5.5 /2.2	★	★	★
N	TRAIL (CM/IN)	7.9 /3.1	7.8 /3.1	7.8 /3.1	7.7 /3
O	STACK (CM/IN)	60.2 /23.7	60.3 /23.7	61.5 /24.2	62.8 /24.7
P	REACH (CM/IN)	39.2 /15.4	41.4 /16.3	43.6 /17.2	45.7 /18

SPECIFICATIONS

Headtube	Cannondale Si (see also Replacement Parts for conversion kits)
Chainline	55 mm
BB Shell/ Width	PF30/83mm
Seat Post Diameter	27.2mm
Front Derailleur	Direct Mount
Dropout Spacing	135mm
Rear Brake	Post Mount



WARNING

Please read your **Cannondale Bicycle Owner's Manual** for more information on the following specifications:

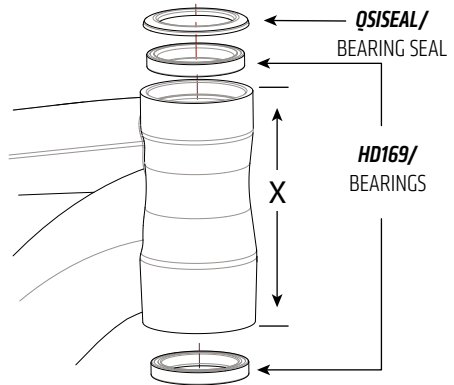
Intended Use	ASTM CONDITION 3, Cross-Country, Marathon, Hardtails.		
Maximum Tire Width	2.25"		
Maximum Fork Length	500 mm		
Minimum Seat Post Insert	100 mm		
Maximum Weight Limit (Lbs/Kg)	RIDER	LUGGAGE*	TOTAL
*(Seat Bag Only)	300 / 136	5 / 2.3	305 / 138

INTEGRATED HEADTUBE

In carbon models, cups are bonded within the head tube. Cannondale Headshok System Integration bearings are accepted directly into both type. For 1.5" and 1 1/8" adapter headsets, see Replacement Parts.

NOTICE

Do not face, surface, or cut the head tube bearing cups. When removing adapters, bearings, or cup from the frame, extra care must be used so that the tool used to drive out the bearing is not located on any part a bonded cup.



FRAME SIZE	HEADTUBE LENGTH (X)
SM	97mm
MD	109mm
LARGE	122mm
X-LARGE	134mm

ASYMMETRIC INTEGRATION (Ai) - REAR WHEEL

ABOUT

You must use rear wheels that are compatible with the Cannondale Asymmetric Integration (Ai) 6mm offset. OEM wheels built to this specification are identified with "Ai" logo, shown at right.

6mm OFFSET / 55mm CHAINLINE

The Ai rear hub is offset 6mm to the drive side. This both aligns the cassette with the Ai frame's 55mm chainline, and aligns the rim/tire with frame's centerline for correct tire clearance. (See also, Maximum Tire Width in SPECIFICATIONS). Ai wheels have equal spoke angles and tension on both sides (non-dished wheel) which improves wheel stiffness, strength.

NOTICE

USE ONLY "Ai" OFFSET REAR WHEELS.

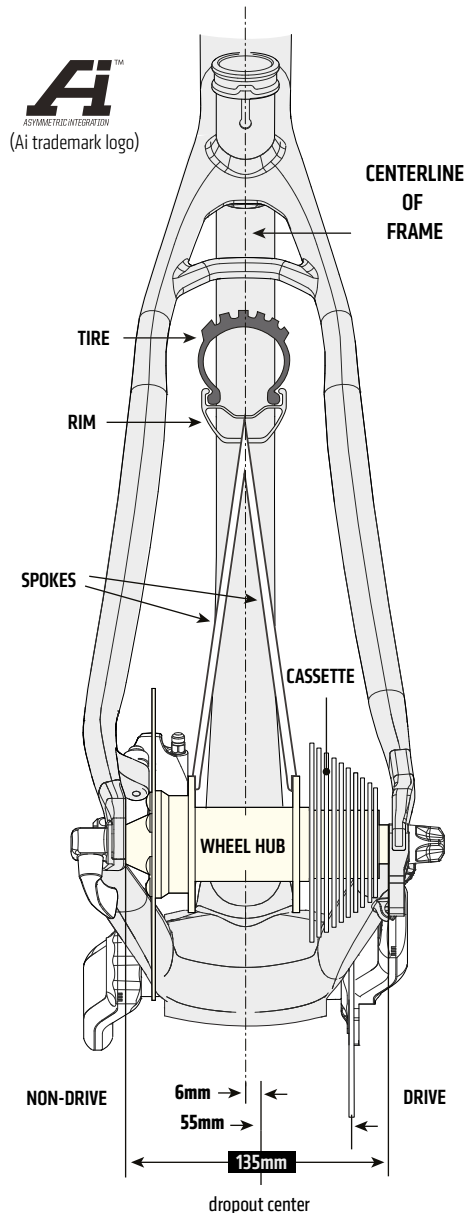
Incorrect wheel offset can damage your frame.

Standard wheel assembled on this frame will result in insufficient tire clearance leading to rubbing and serious frame damage. This kind of damage is not covered by the Cannondale Limited Warranty.

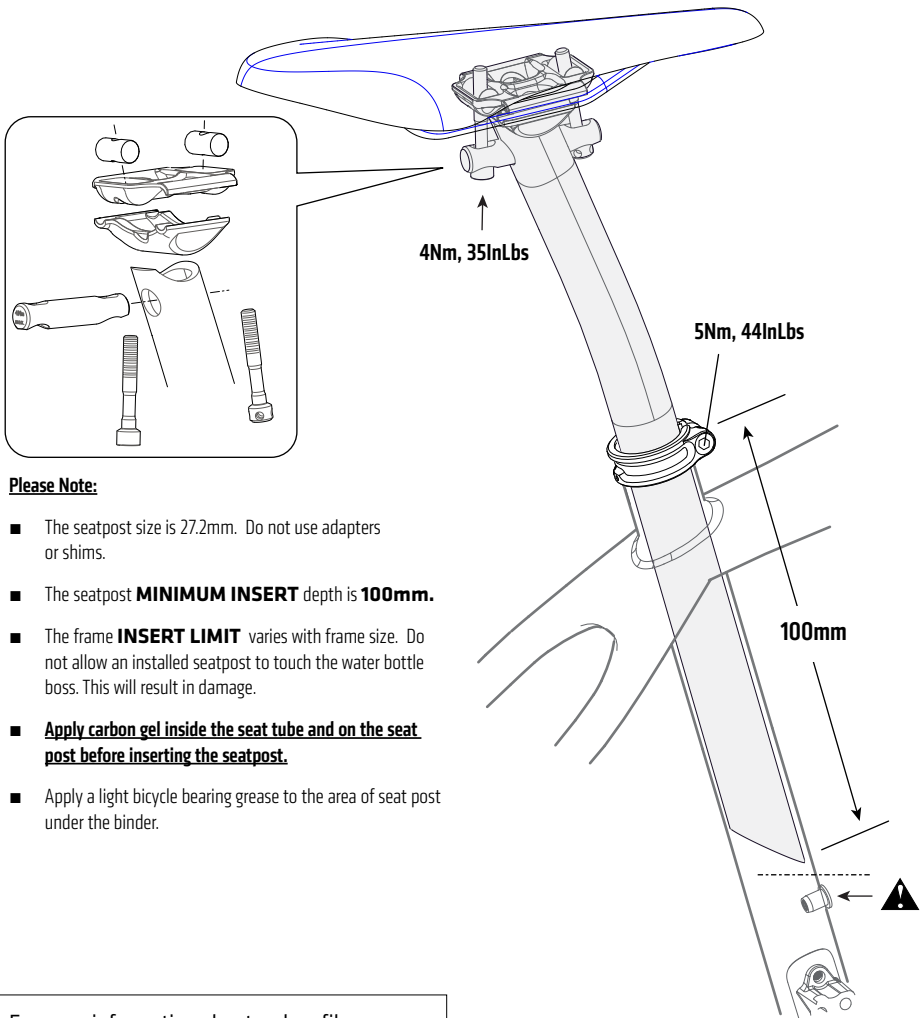
Building/Truing a Wheel

If you chose to build, or true the wheel, make sure the 6mm offset is present.

Consult with your Cannondale Dealer if you have any questions.



SEAT POST



Please Note:

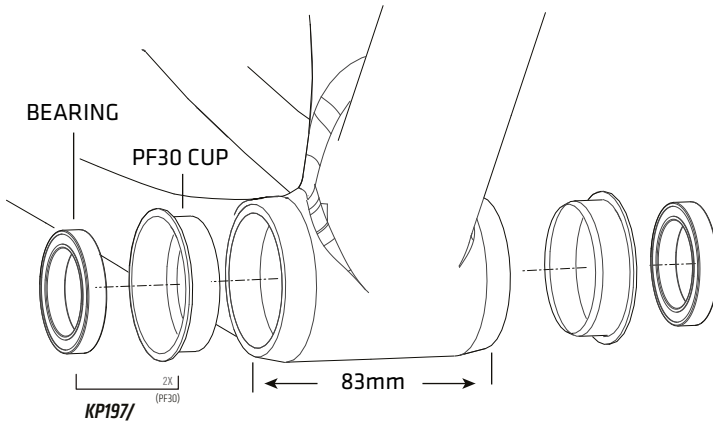
- The seatpost size is 27.2mm. Do not use adapters or shims.
- The seatpost **MINIMUM INSERT** depth is **100mm**.
- The frame **INSERT LIMIT** varies with frame size. Do not allow an installed seatpost to touch the water bottle boss. This will result in damage.
- **Apply carbon gel inside the seat tube and on the seat post before inserting the seatpost.**
- Apply a light bicycle bearing grease to the area of seat post under the binder.

For more information about carbon fiber seat posts, see also "APPENDIX D. Care and Maintenance of Carbon Fiber Seat Posts" in your [Cannondale Bicycle Owner's Manual](#).

⚠ WARNING

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

BOTTOM BRACKET - PF30/83MM



Cup/Bearing Installation

Thoroughly clean the inside surface of the bottom bracket shell with a clean dry shop towel.

Apply bearing grease** to the BB shell and cup.

Press each cup individually with the headset press until the cup flange is mated with the BB shell face.

Apply bearing grease to each bearing and press one at a time into the already installed cups.

Removal

To avoid damage to the frame, drive out bearing out of the installed cup. Then, drive out each bearing cup. Drive both the bearings and cups out squarely and evenly. Do not pry components from shell.

Maintenance

In general, you should inspect the condition of the BB 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.

Do not reinstall removed bearings or cups. Replace both cups/bearings as a new set.

NOTICE

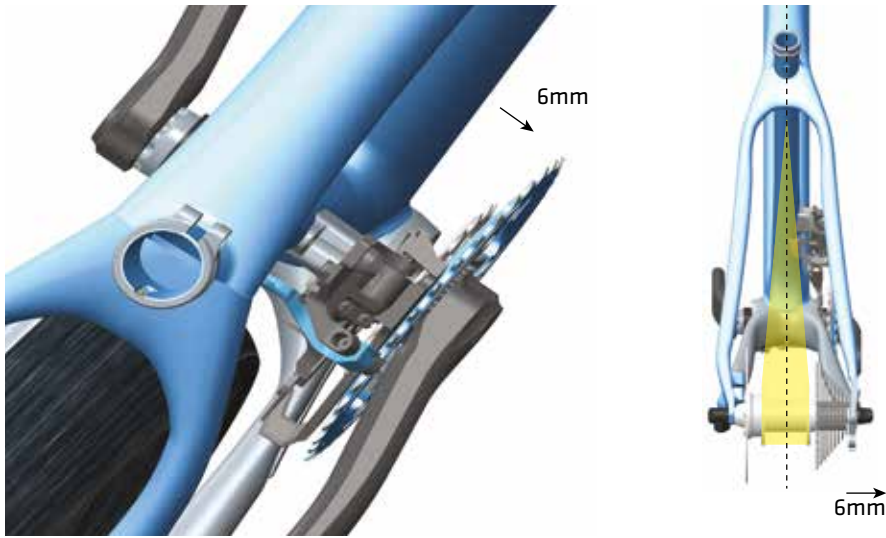
Consult with your Cannondale Dealer on the quality and compatibility of any proposed replacement component.

Make sure the PRESSFIT BB30 30 system is intended for use with a 46 mm I.D. BB shell. Confirm acutel 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.

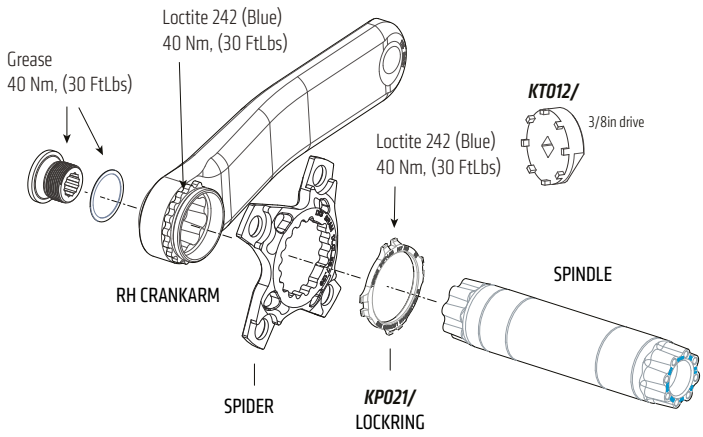
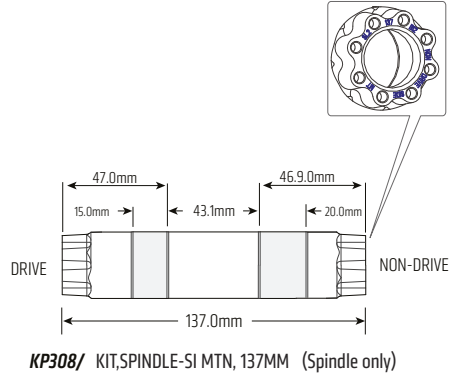
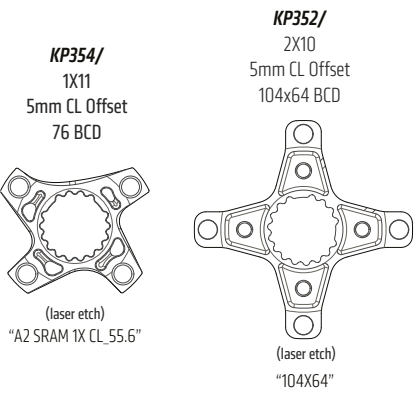
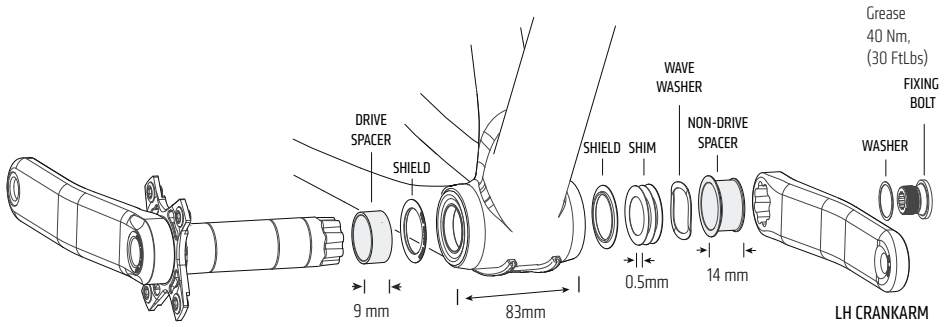
Frame damage, caused by improper components, component installation or removal is not covered by your warranty.

** Loctite 609 Loctite 609 can be used instead of grease to install the BB cups. Bonding improves the BB shell and cups interface and can also eliminate any creaking that develops. Please follow the Loctite instructions if you decide to bond the cups.

ASYMMETRIC INTEGRATION (Ai) - SI HOLLOWGRAM

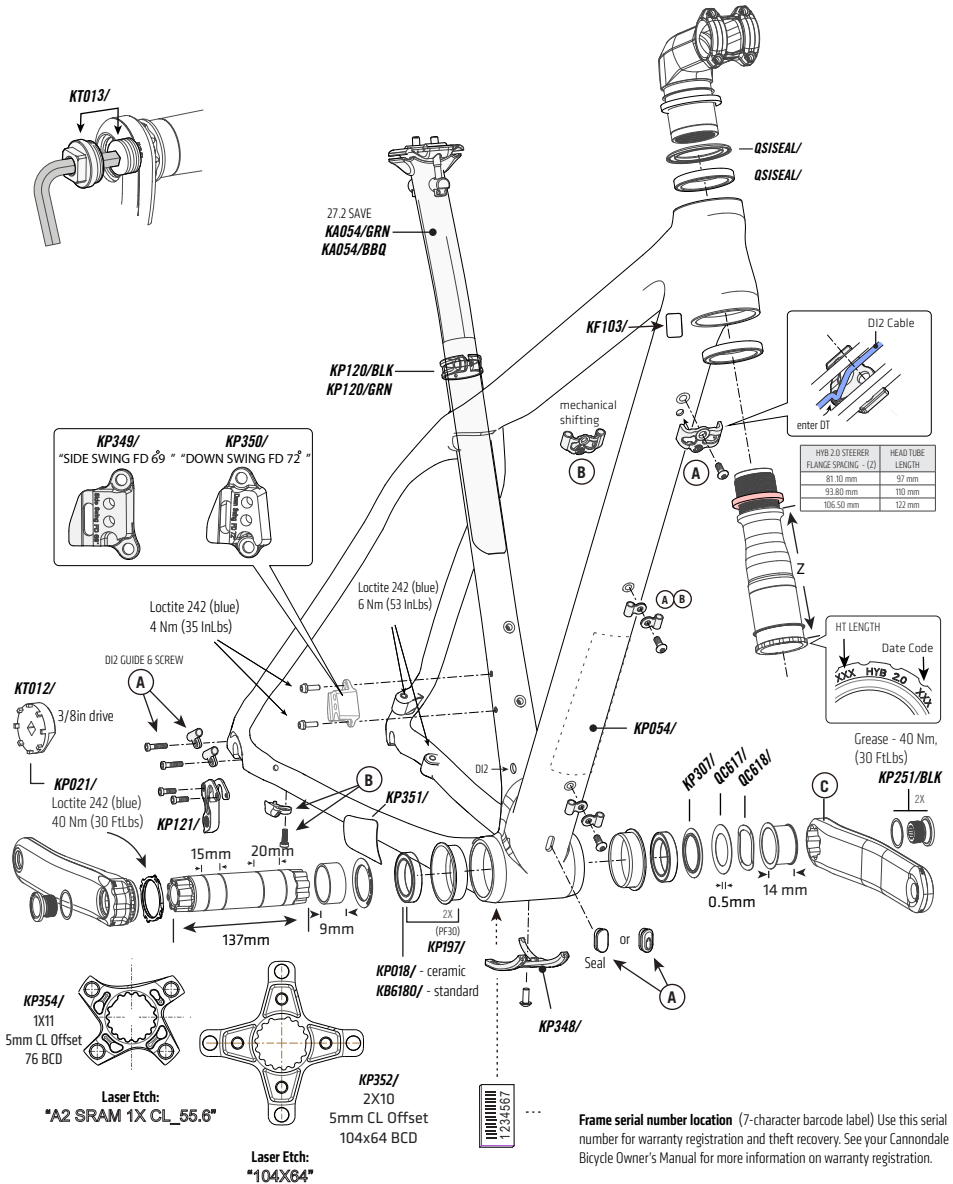


- **DRIVE & NON-DRIVE SPACER:** Please note the location and size of the non-drive and drive side spacers (opposite page)
- **Ai SPIDERS:** Specific spiders have been developed for the Ai driveline. They are manufactured to accommodate the 6mm offset present in the frame. Note that the spiders are laser etched on the inside faces with the specific chainring BCD and chainring compatibility.
- **137mm SPINDLE:** The 137mm spindle used must be “Ai compatible.” A compatible Ai spindle will have bearing lands (areas shown shaded)that are 5mm wider than the previous revision 137mm spindle. Older revisions of the 137mm MTN spindle are not Ai compatible, but an Ai compatible spindle will work fine on older 137mm cranksets.
- **RH CRANKARM ASSEMBLY:** As evident in the upper illustration, the RH Crankarm, Spider, and Spindale are inserted into the BB as an assembly with the 9mm drive side spacer and bearing shield added beforehand. It is important to apply a high-quality bearing grease to the areas indicated in the lower illustration and also note the application of Loctite 242 (blue) a removable thread locking agent.
- **FD SPACERS:** The front derailleur spacers are necessary to move the position of a derailleur outboard. You can see that the spacers attach directly to the frame and the derailleurs are then fitted to the spacers. Please note that the spacers are etched with the type of derailleur. These spacers are available as kits. See Replacement Parts in this supplement.



EN

REPLACEMENT PARTS



FRAME

CODE	DESCRIPTION
(A) KP347/	KIT ROUTING FSI 29ER CRB DI2
(B) KP346/	KIT ROUTING FSI 29ER CRB MECH SHIFTING
KP121/	KIT,DER,HANGER,FLASH CRB
KP348/	KIT BB CABLEGUIDE FSI 29ER CRB
KP349/	KIT FD MOUNT FSI 29ER CRB SIDE SWING
KP350/	KIT FD MOUNT FSI 29ER CRB DOWN SWING
KF024/	KIT C STAY PROTCTR NEOPRN SM
KF103/	KIT,GUARD,SCUFFGUARD-8PK
KP351/	KIT C-STAY PLATE PROTECT FSI 29ER CRB
KP054/	KIT,GUARD,SCUFFGUARD,DOWNTUBE

BOTTOM BRACKET

CODE	DESCRIPTION
KP197/	KIT,BEARING,BB-PF30
KP018/	KIT,BEARING,BB-SI,CERAMIC,2PCS
KB6180/	KIT,BEARING,BB-SI,2PCS
KP308/	KIT,SPINDLE-SI MTN, 137MM (Spindle only)
KP306/	KIT,BB,CDALE SI,68/73X137 BB30/PF30

HOLLOWGRAM

CODE	DESCRIPTION
C711200006	CRANKSET,SL2,MTB,24/38 ,170
C711400006	CRANKSET,SL2,MTB,24/38,175
C711200007	CRANKSET,SL2,MTB,32,170
C711400007	CRANKSET,SL2,MTB,32,175
KP246/170L	KIT,CRANKARM-SL2 BLK,170 LFT
KP246/172L	KIT,CRANKARM-SL2 BLK,172 LFT
KP246/175L	KIT,CRANKARM-SL2 BLK,175 LFT
KP246/170R	KIT,CRANKARM-SL2 BLK,170 RHT
KP246/172R	KIT,CRANKARM-SL2 BLK,172 RHT
KP246/175R	KIT,CRANKARM-SL2 BLK,175 RHT
QC617/	KIT,SHIMS-PLASTIC, BB-SI; INCL 5 SHIMS
QC618/	KIT,WASHER-WAVE, BB-SI
KB6180/	KIT,BEARING,BB-BB30 (SKF#6806-2RS /SR12 /90% FILL)
KP021/	KIT,LOCKRING-SL -REQUIRES KT012/

Ai SPECIFIC (HOLLOWGRAM)

CODE	DESCRIPTION
KP352/	KIT SPIDER SI MTN SRAM 64/104 4-BOLT AI FSI 29 2X10, 5mmCL
KP354/	KIT SPIDER SI MTN XX1 AI FSI 29 1X11, 5mmCL
KP306/	KIT,BB,CDALE SI,68/73X137 BB30/PF30

STEERER/HEADSET

CODE	DESCRIPTION
KH148/97	KIT STEERERS LOWER 97 FSI 29
KH148/110	KIT STEERERS LOWER 110 FSI 29
KH148/122	KIT STEERERS LOWER 122 FSI 29
QSCSEAL/	KIT,SEAL,UPPER BEARING,60MM OD
QSISEAL/	KIT,SEAL,UPPER BEARING,58MM OD
HD169/	KIT,BEARINGS, HEADSET - 2
KP058/	KIT,HEADSET,INT HEADSHOK-11/8
KP119/	KIT,HEADSET,INT H-SHOK TO 1.5

OPI STEMS

Vedi il supplemento LEFTY

SEATPOST

CODE	DESCRIPTION
KP120/BLK	KIT,SEATBINDER,FLASH CRB/BLK
KP120/GRN	KIT,SEATBINDER,FLASH CRB/GRN
KA054/GRN	KIT SEATPOST SAVE F-SI 29 MY15 GRN
KA054/BBQ	KIT SEATPOST SAVE F-SI 29 MY15 BBQ

TOOLS

CODE	DESCRIPTION
KT010/	KIT,TOOL-BB BEARING-SI;
KT011/	KIT,TOOL - BEARING REMOVAL SI;
KT012/	KIT,TOOL-LOCK RING-SI
KT013/	KIT,CRANK EXTRACTION TOOL; 2 PIECES

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 manufacturers for the various non-Cannondale parts of your bike.

ITEM	FREQUENCY
<p>HOUSING AND CABLES - Your bike has been supplied with small adhesive frame protectors - <i>KF103/</i>. Place this material on the frame between where cables and housing rub due to movement. Overtime, cable rubbing can wear into the frame itself causing very serious frame damage.</p> <p><i>NOTE: Damage to your bike caused by cable rubbing is not a condition covered under your warranty. Also, adhesive frame guards are not a fix for incorrectly installed or routed cables or lines. If you find that applied guards are wearing out very quickly, consult with your Cannondale Dealer about the routing on your bike.</i></p>	<p>BEFORE FIRST RIDE</p>
<p>DAMAGE INSPECTION - Clean and visually inspect entire bike frame/ swingarm/linkage assembly for cracks or damage. See "Inspect For Safety" in your Cannondale Bicycle Owner's Manual.</p>	<p>BEFORE AND AFTER EACH RIDE</p>
<p>CHECK TIGHTENING TORQUES - In addition to other component specific tightening torques for your bike. Tighten according to the TIGHTENING TORQUES information listed in this supplement.</p>	<p>EVERY FEW RIDES</p>
<p>FORK - Please consult the manufacturer's owner's manual for maintenance information for your fork .</p>	



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.