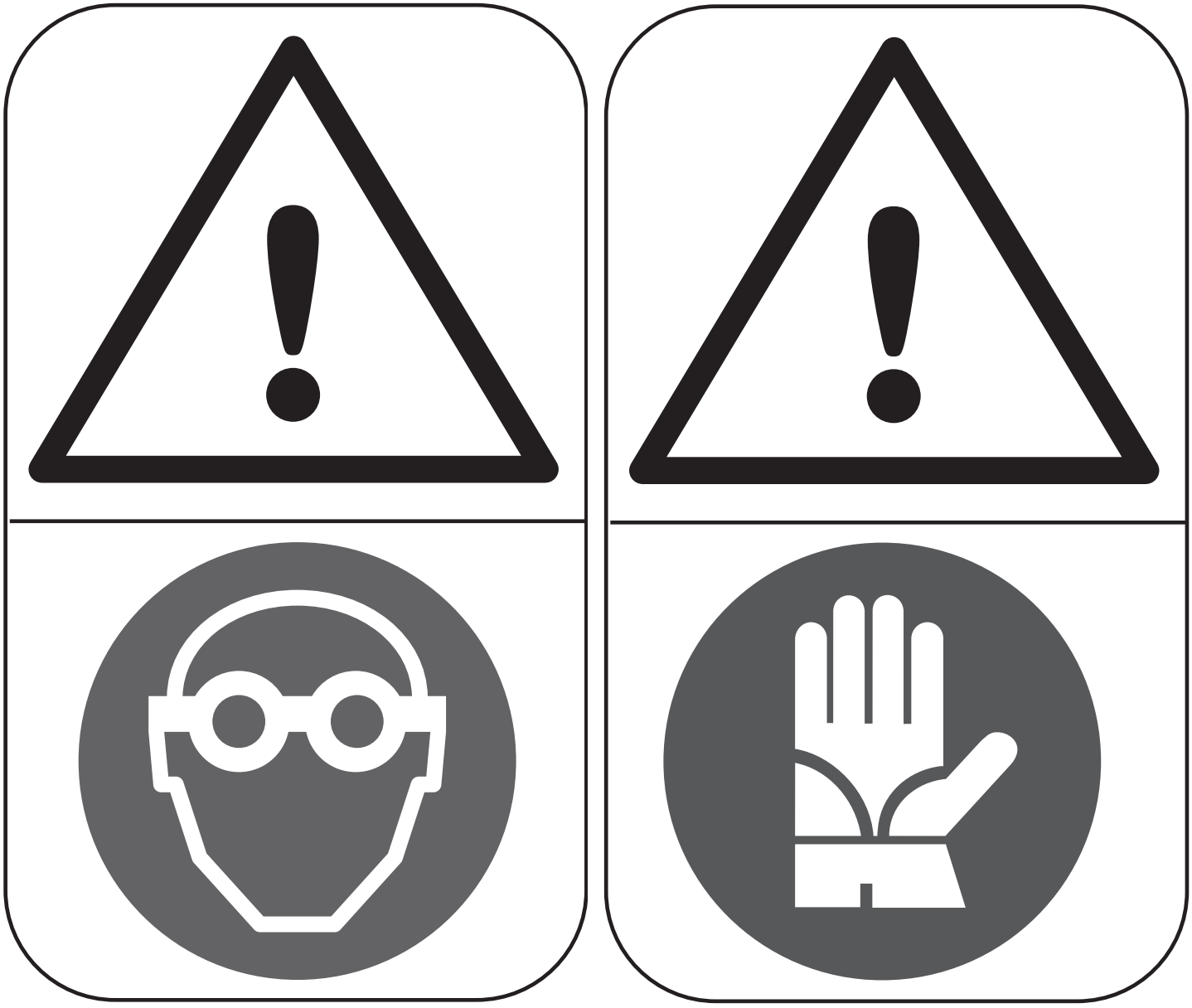
12s REAR DERAILLEUR

WARNING!

ALWAYS wear protective gloves and glasses while working on the bicycle.



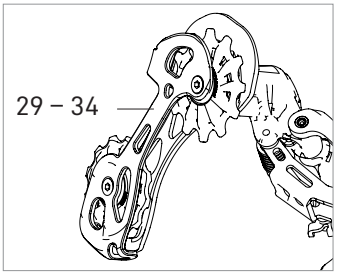
12s REAR DERAILLEUR

THIS TECHNICAL MANUAL IS INTENDED FOR USE BY PROFESSIONAL MECHANICS.
Anyone who is not a qualified professional for bicycle assembly must not attempt to install and operate on the components independently due to the risk of carrying out incorrect operations which could cause the components to malfunction, resulting in accidents, physical injury or even death.
The actual product may differ from what is illustrated, as the specific purpose of these instructions is to explain the procedures for using the component.

1 - TECHNICAL SPECIFICATIONS

12s REAR DERAILLEUR	CAPACITY (TEETH)	MAX SPROCKET (TEETH)	MIN SPROCKET (TEETH)	CHAINRING FRONT DIFFERENCE (TEETH)
SUPER RECORD RECORD CHORUS	39 37*	34 32*	11	16

*Where not indicated on the inside of the jockey cage 29 – 34



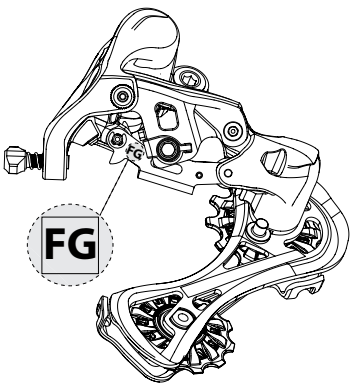
2 - COMPATIBILITY

12s REAR DERAILLEUR	ERGOPOWER 12s CONTROLS	12s CHAIN
SUPER RECORD RECORD CHORUS	SUPER RECORD RECORD CHORUS	SUPER RECORD CHORUS

WARNING!

Combinations other than those provided in the table may cause malfunction of the drivetrain and cause accidents, personal injury or death.

This rear derailleur is compatible with drivetrains with traditional brakes or hydraulic disc brakes.

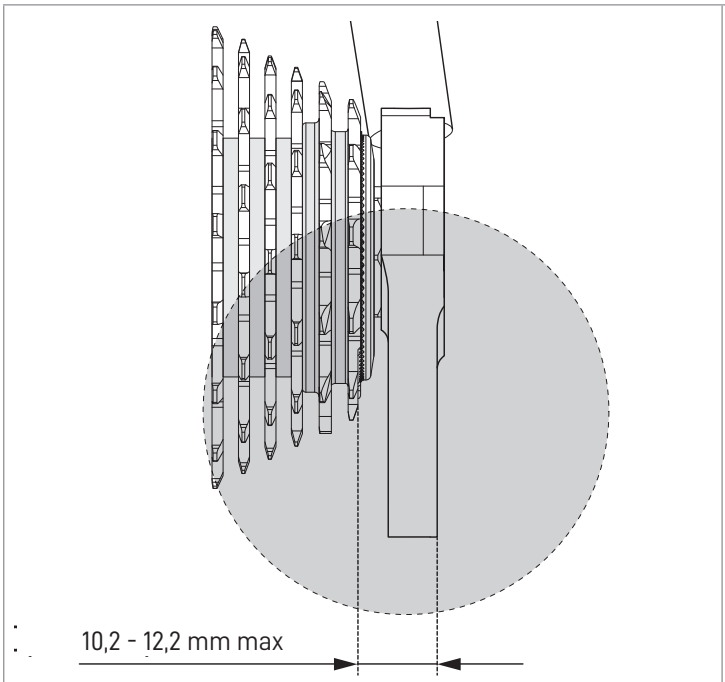


WARNING!

This rear derailleur is marked FG and therefore is designed for and is only compatible with parts marked F, G or FG.
The largest compatible sprocket is 32 teeth. For sprockets with 34 teeth, the jockey cage must be marked 29-34.

3 - INTERFACE WITH THE FRAME

3.1 - STANDARD DROP-OUT SPECIFICATIONS



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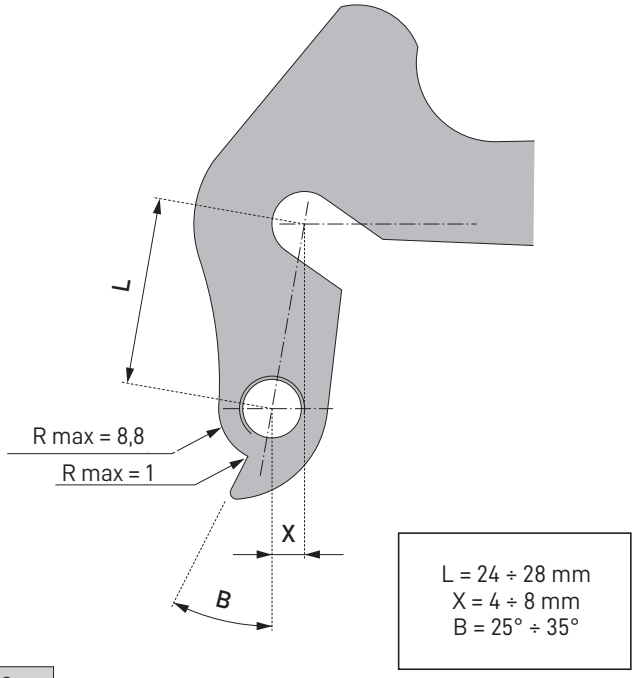
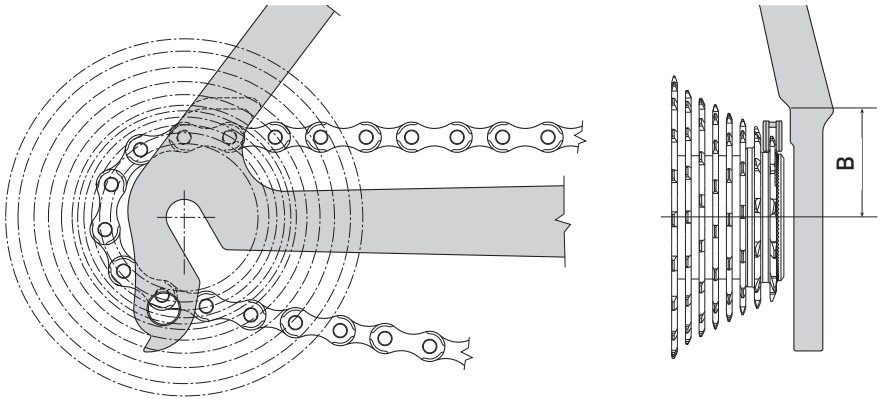


2

The stroke of the cage in relation to the cable throw is checked by Campagnolo Quality Control for each single piece produced. The distance of the rear derailleur hanger from the first sprocket influences this stroke, so it is indispensable to stay within the tolerance prescribed as per the drawing (Fig. 1).

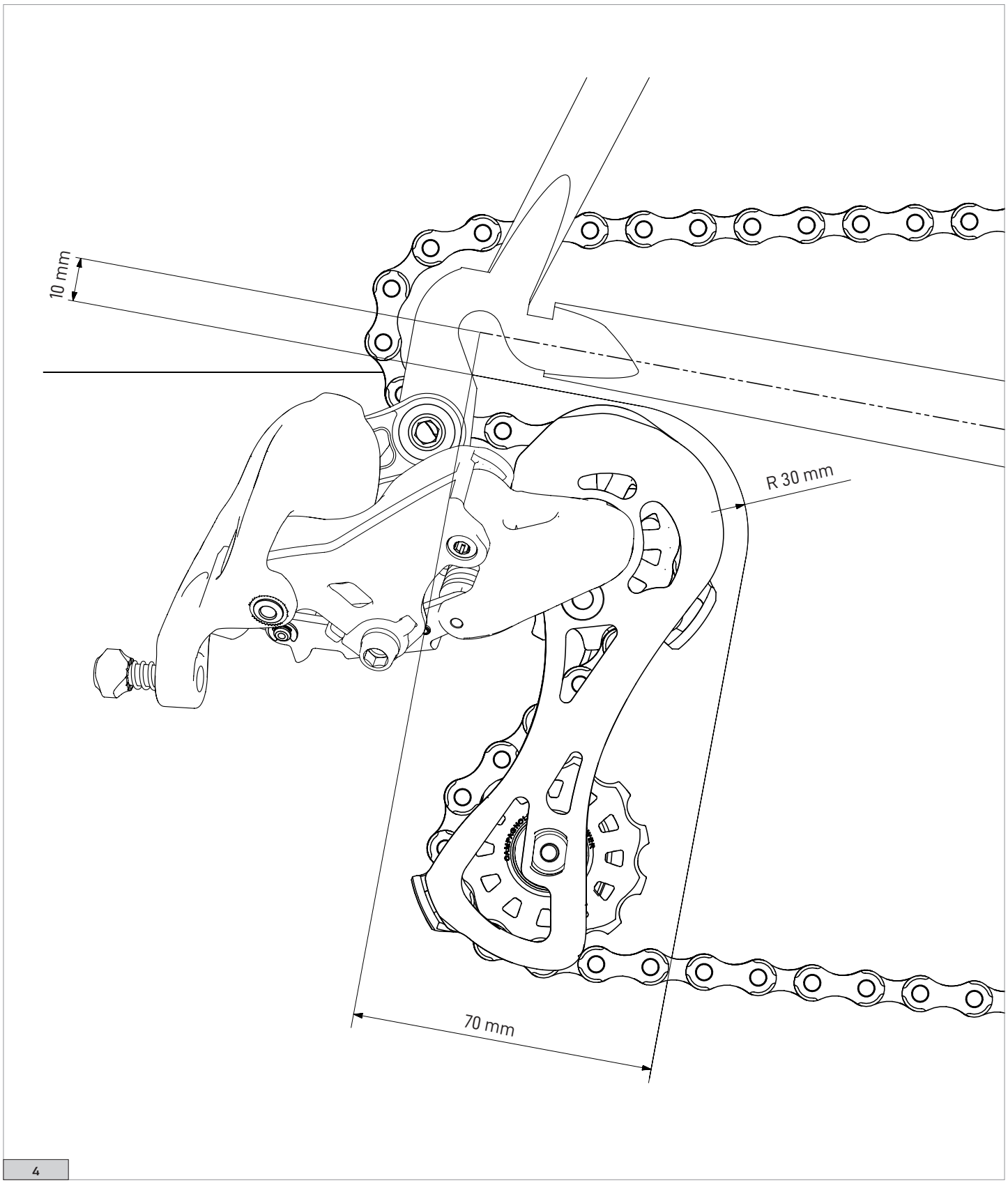
WARNING!

Campagnolo® rear derailleurs are designed to work with dropouts that have the dimensions shown in Fig. 2.
For your safety and for the performance of the drivetrain please make sure that the dropout of your bicycle has those dimensions.
If you have any doubts please have a qualified mechanic inspect your bike before using it.
Drop-outs outside these specifications can lead to a serious loss of performance.



3

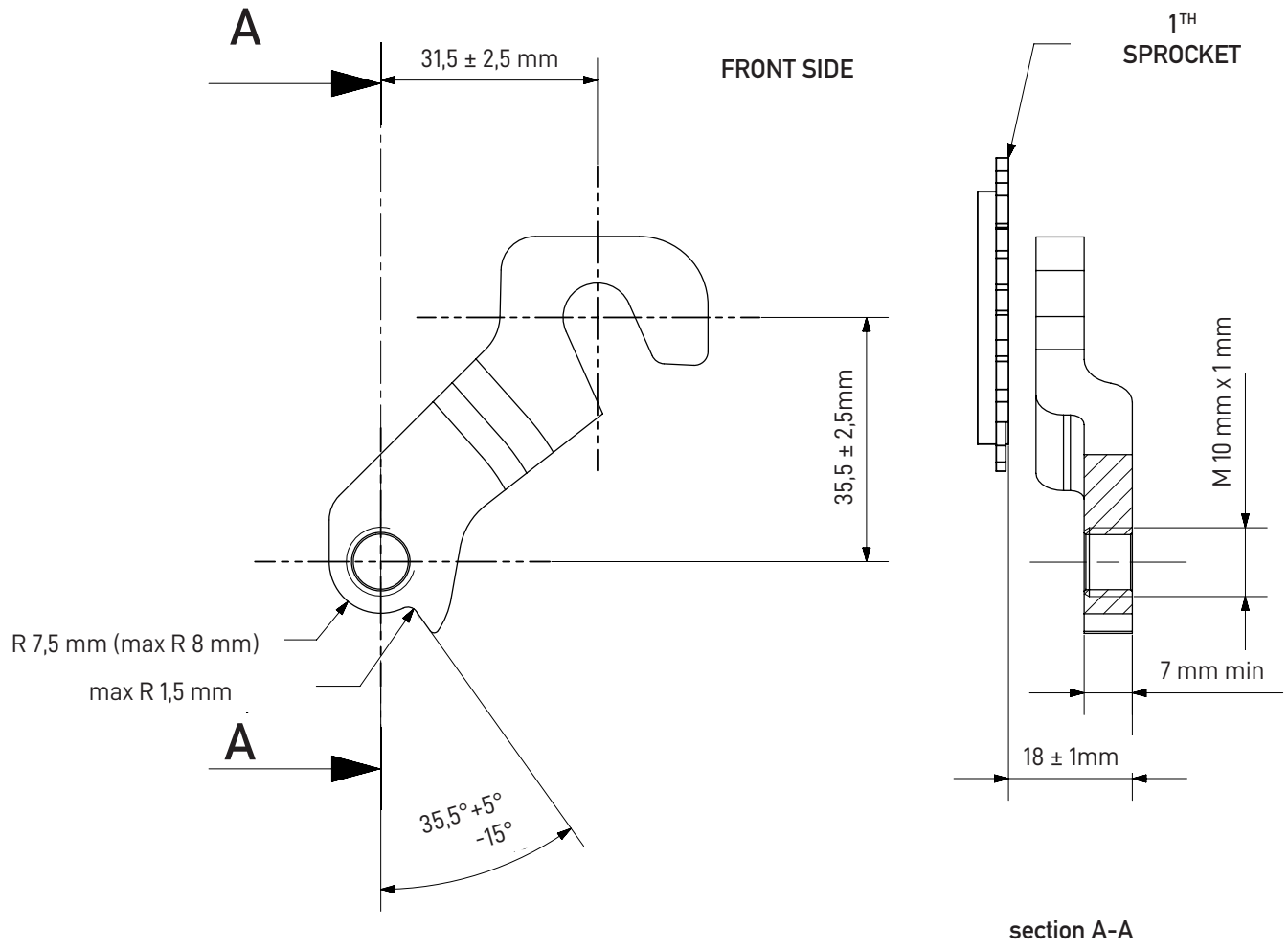
N° TEETH	B (Fig. 3)
Z 11	30 mm
Z 12	30 mm
Z 13	32 mm



4

! For the first 70 mm between the wheel axle and the bottom bracket, the right chainstay must not fall more than 10 mm inside the direct line between the axle and the centre of the bottom bracket.

3.2 - DIRECT MOUNT DROP-OUT SPECIFICATIONS



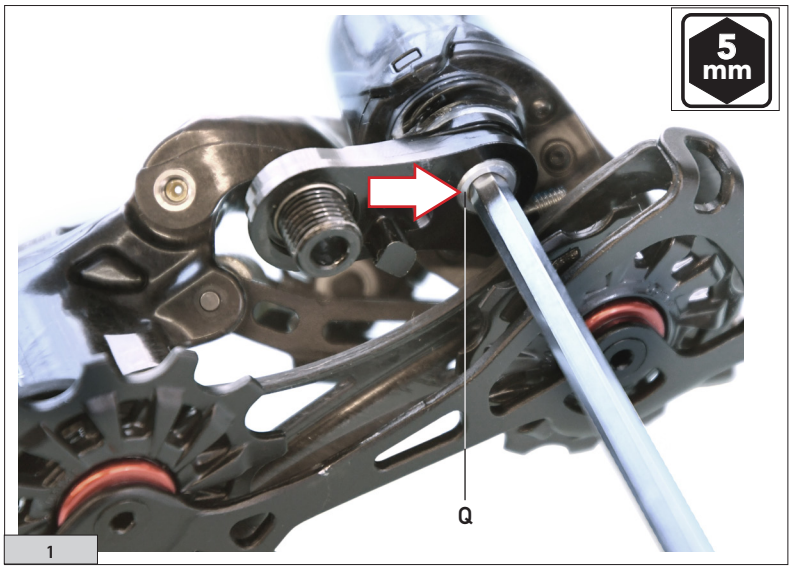
5

! For changing the rear derailleur preset for the standard Direct Mount drop-out (and vice-versa), follow the procedure at page 7 / 8.

4 - REMOVAL / ASSEMBLY OF THE REAR DERAILLEUR JOINT

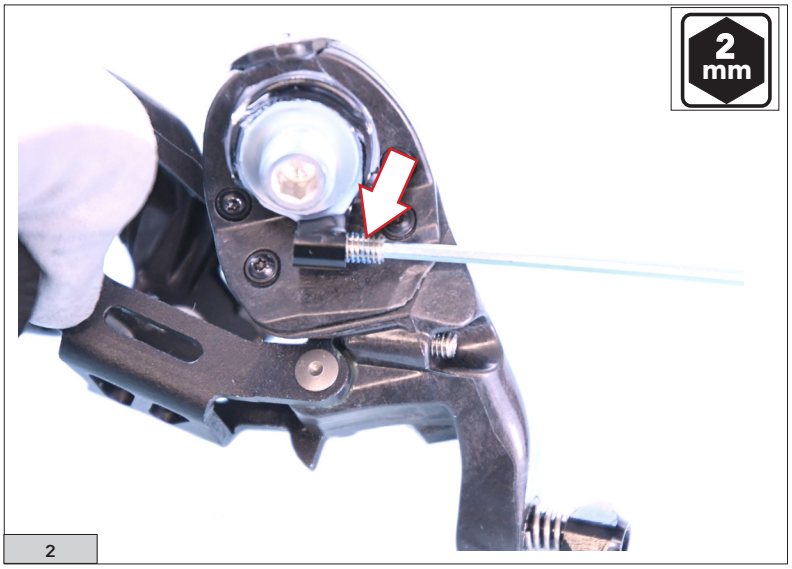
4.1 - CONVERSION FROM STANDARD E DIRECT MOUNT HANGER

• Use a 5 mm Allen key and turn the Q screw (Fig. 1) clockwise to remove the joint.



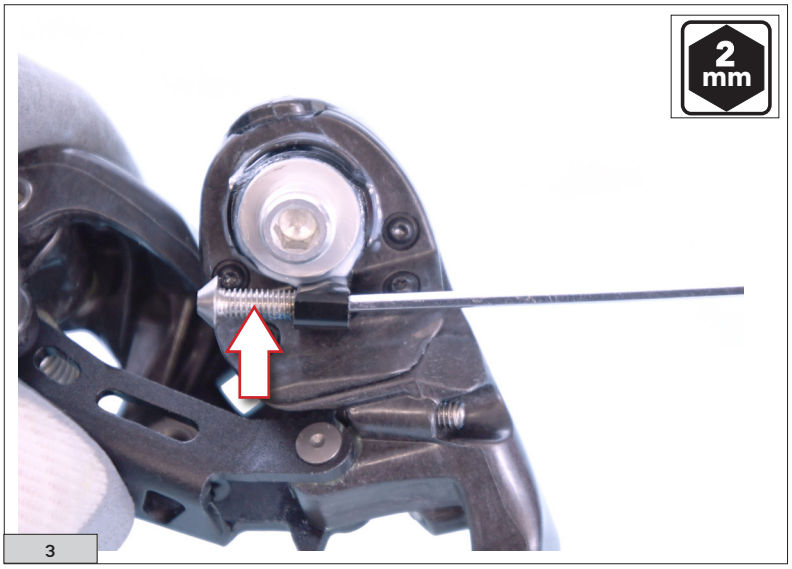
1

• Use a 2 mm Allen key to remove the rear derailleur positioning screw with joint (Fig. 2).



2

• Use a 2 mm Allen key to install the direct mount rear derailleur positioning screw with joint (Fig. 3).



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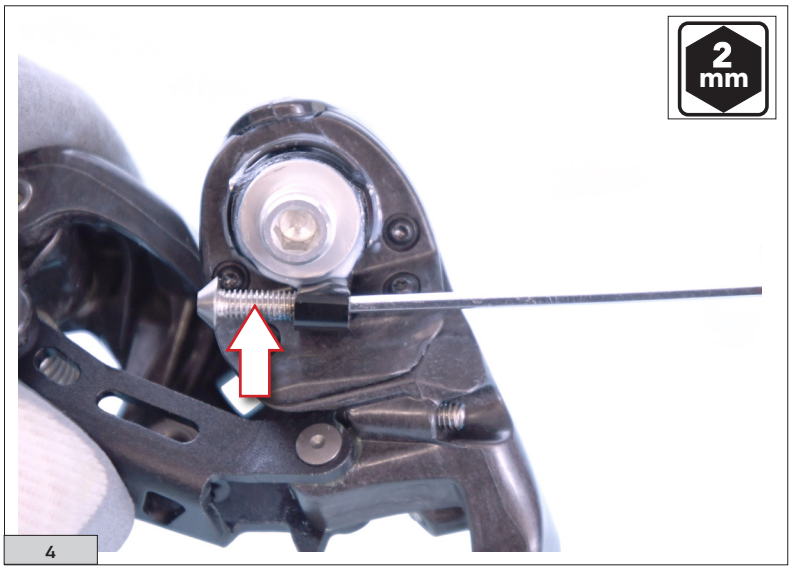
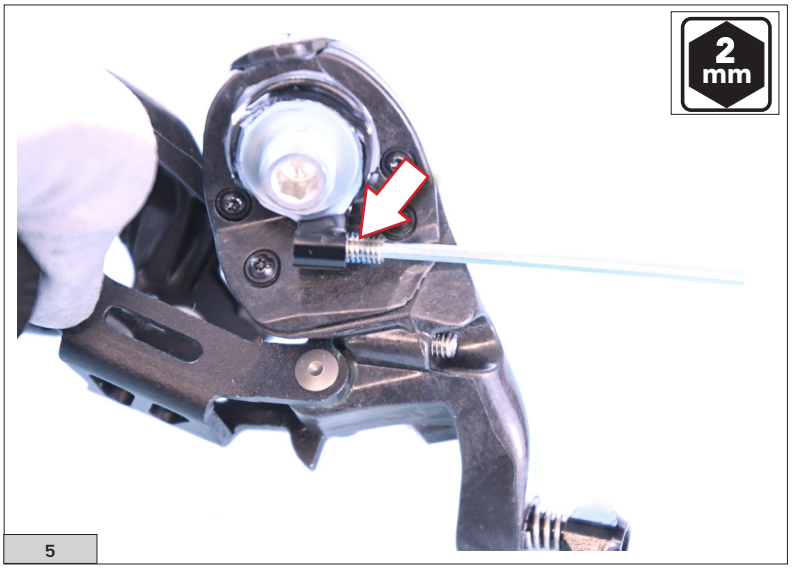
4.2 - CONVERSION FROM DIRECT MOUNT TO STANDARD REAR DERAILLEUR

• Use a 2 mm Allen key to remove the direct mount rear derailleur positioning screw (Fig. 4).



4

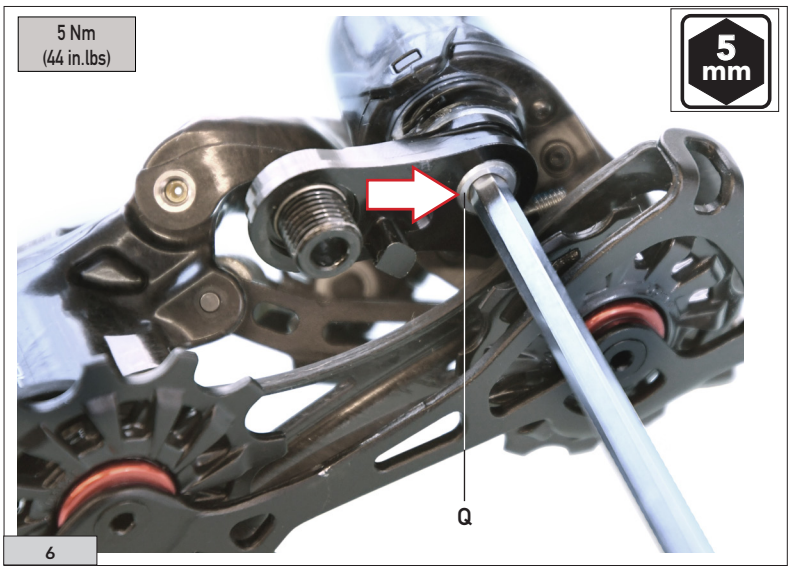
• Use a 2 mm Allen key to install the rear derailleur positioning screw with joint (Fig. 5).



5

• Use a 5 mm Allen key to turn the Q screw (Fig. 6) counter-clockwise, then tighten to a tightening torque of **5 Nm (44 in.lbs)** to install the joint.

NOTE
Make sure that the tooth of the joint goes against the drop-out tooth.



6

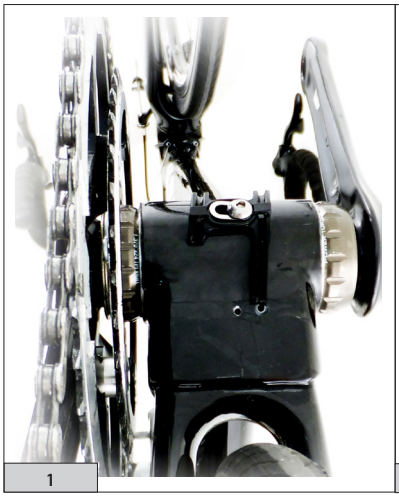
5 - ASSEMBLY

5.1 - PREPARING THE FRAME

• Check that the Campagnolo® plate (Fig. 1) is fitted under the bottom bracket shell.

Different plates can also give rise to a serious loss of performance.

• Chase the threads of the rear derailleur hanger (X - Fig. 2) using a tool tap with threading M10x1.



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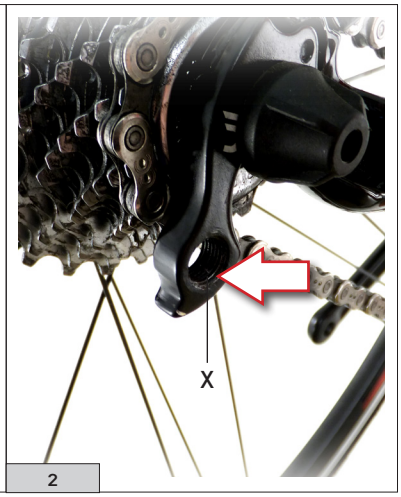
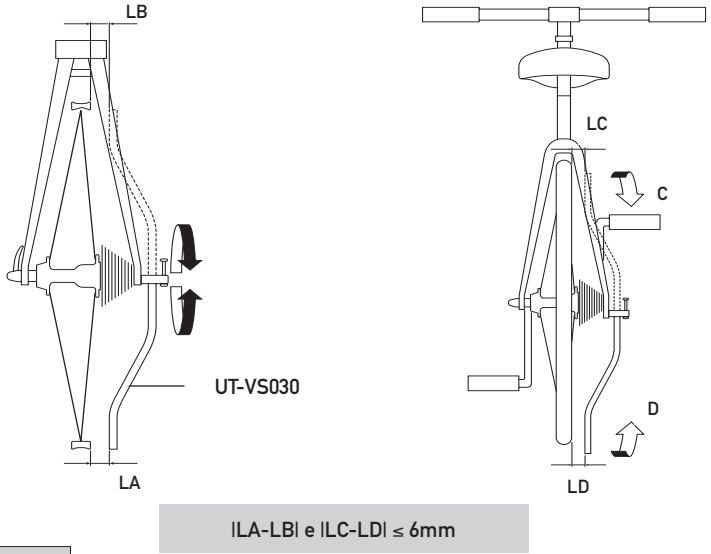


2

CAUTION

Check and, if necessary, realign the rear derailleur dropout only be using Campagnolo® tool UT-VS030 (Fig. 3).
NEVER straighten the dropout with therear derailleur assembled because you could damage the dropout and cause irreparable damage or loss in functionality to your rear derailleur.



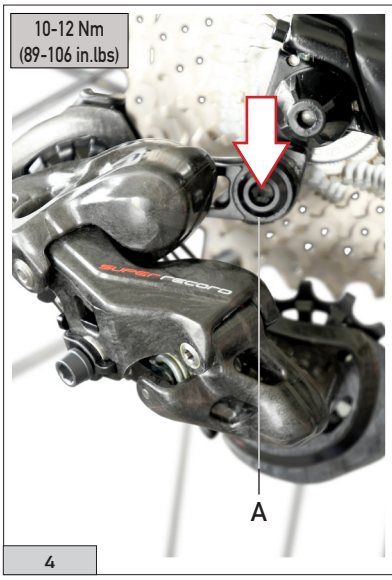
3

5.2 - INSTALLATION AND ADJUSTMENT OF REAR DERAILLEUR

• Attach the rear derailleur to the frame with the screw (A - Fig. 4) using a 5 mm Allen wrench.

Tightening torque (Standard / Direct Mount): 10-12 Nm (89-106 in.lbs).

• Carry out this adjustment with the chain on the smallest cassette sprocket and with the Ergopower control button zero-ed (Fig. 5).



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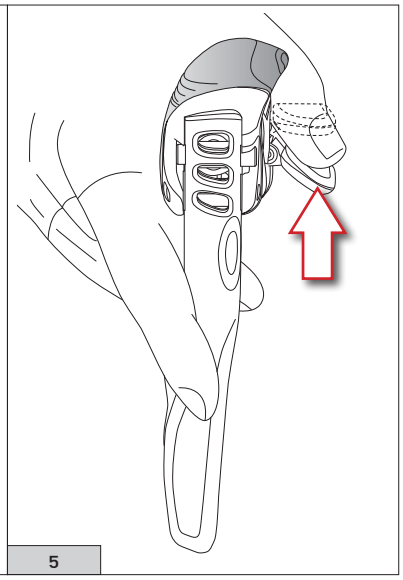
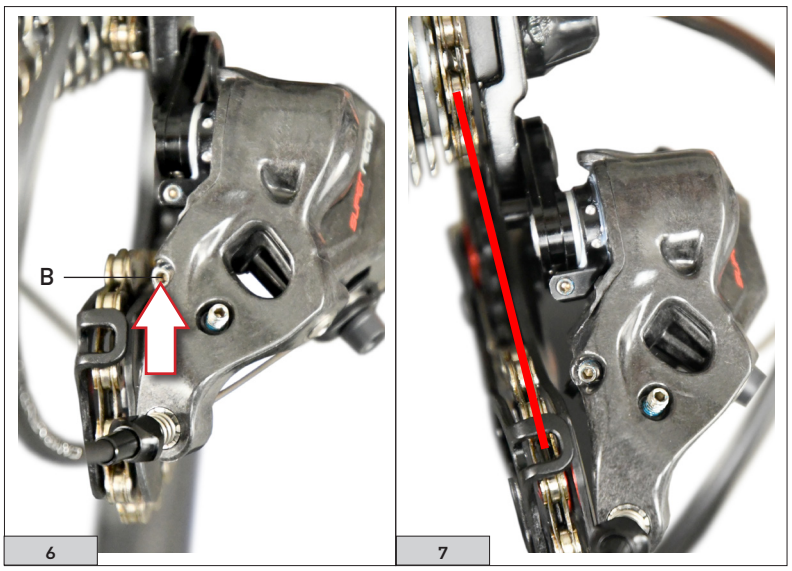


5

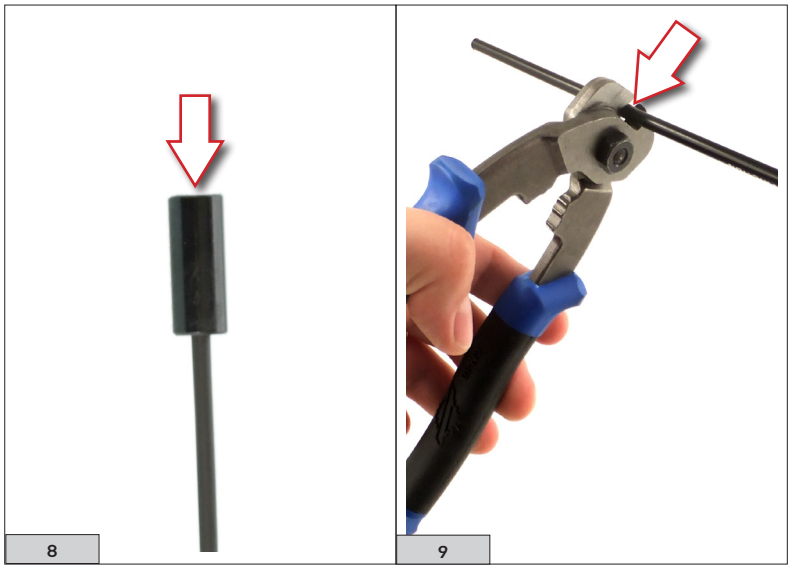
• Turn the screw (B - Fig. 6) until perfect alignment is obtained between the centreline of the top roller and the axis of the first sprocket (Fig. 7).



• Use only "The Maximum Smoothness" cables and housings, and ferrules like the ones shown in Fig.8.

• Pay particular attention not to drag the cables of the rear derailleur and of the front derailleur on the metallic or sharp edges to prevent damage to the Teflon™ surface.

Cables and casings do not require lubrication since they are supplied already lubricated.



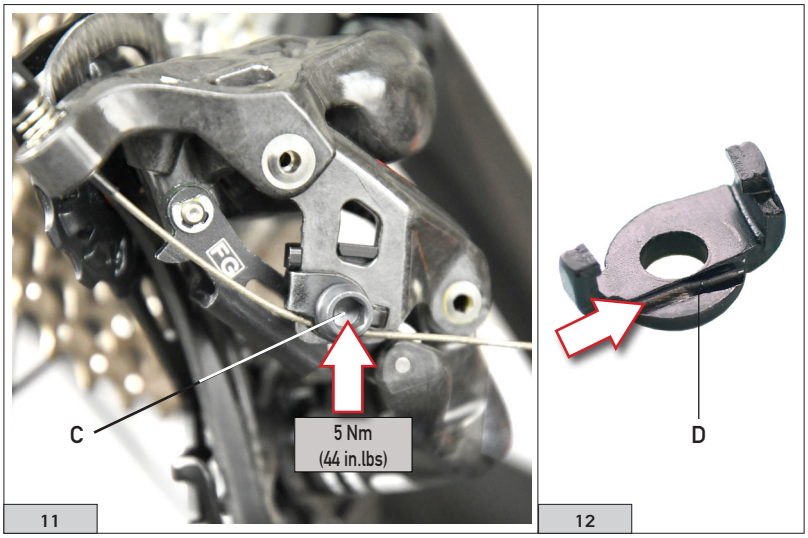
• Check the length and, if necessary, shorten the casing.

• Take care to cut it straight across without altering the configuration of the casing and without damaging the cable in any way (Fig. 9).
If the cable is damaged, please replace it before riding your bicycle. If the casing is too short, rear derailleur operation will be affected (Fig.10).

• Pass the cable through the adjustment screw (C - Fig. 11) and insert the end of the housing; then pass the cable underneath the plate (D - Fig. 12) and clamp it by tightening the Allen screw at a tightening torque of **5 Nm - (44 in.lbs)**.

Important: note that the underside of the cable locking plate has a locking slot (Fig.12).

• Cut the excess cable at about two cm. from the clamping screw and protect the end with a cable cap.



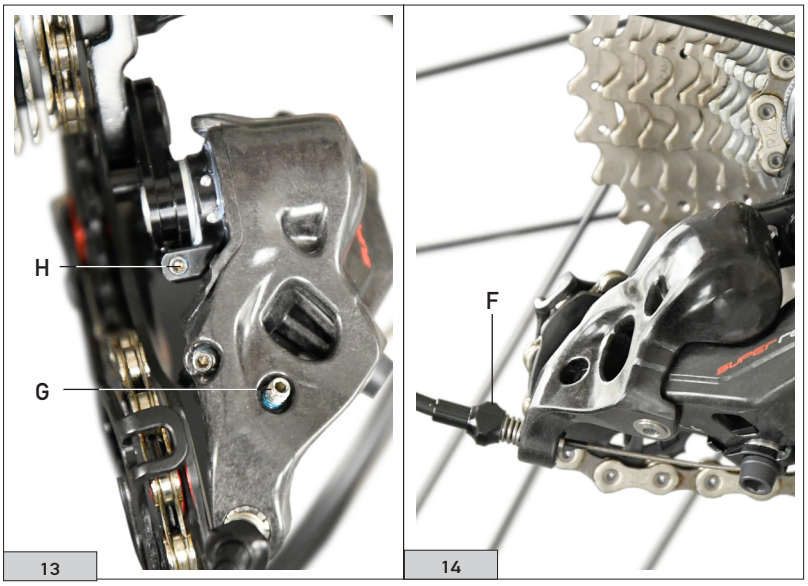
11 12

• Make sure that the screw (G - Fig. 13) is correctly adjusted: by operating the gear lever with the chain on the largest sprocket, the inner plate of the derailleur cage must NOT come into contact with the spokes.

• Position the chain on the 5TH sprocket counting from the smallest.

• Turn the cable tension adjuster (F - Fig. 14) until perfect alignment is obtained between the centreline of the top roller and the centreline of the 5TH sprocket.

• If centering between the centrelines of the roller and the fourth sprocket is not correct, turn the adjuster (F - Fig. 14) counterclockwise to shift the rear derailleur inwards. Turn clockwise to shift the rear derailleur outwards.



13 14

• Check that when the shifter is actuated accordingly, the rear derailleur positions the chain on the largest sprocket; if this does not occur, turn the screw (G - Fig. 13) repeatedly (slackening it until the chain is positioned on the largest sprocket without overshifting).

• Make sure that all gear ratios work perfectly.

The upper wheel should be positioned as follows:

• Put the chain on the smallest sprocket and the largest chainring.

• Adjust the rear derailleur positioning screw H (Fig. 13).

The upper wheel must be as close as possible to the sprocket (Fig. 15), but in such a way that:

• the lower branch of the chain is not oriented upwards.

• does not generate noise during the rotation and the shifting on the nearby sprocket.

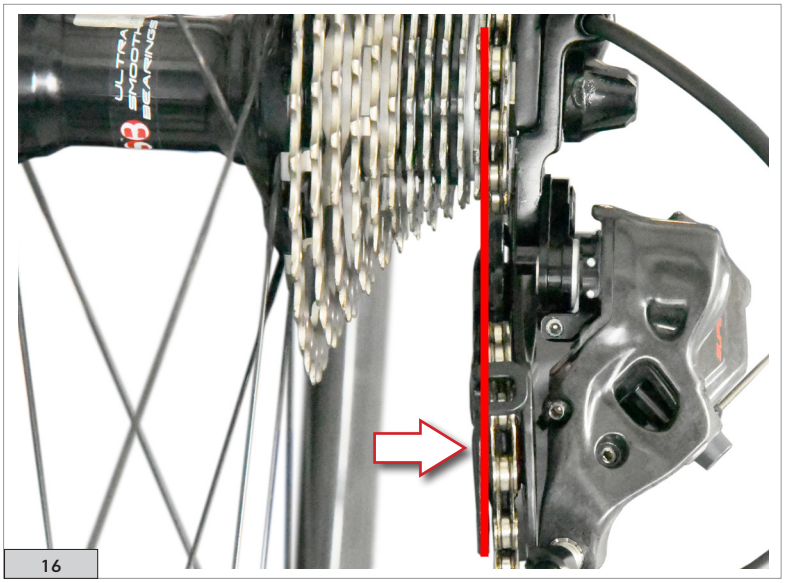

15

• that there is a correct ascent and descent between the smaller sprocket and the nearby sprocket with the chain positioned on both chainrings.

• that there is a correct ascent and descent between the larger sprocket and the nearby sprocket with the chain positioned on both chainrings.

IMPORTANT: Note that it is normal that, due to the outward inclination of the jockey, the lower wheel positions itself more outward compared to the upper wheel (Fig. 16).

! **If you have a frame with internal cable runs, also ensure that there is no contact between the rear and front derailleur cables. If necessary, completely loosen the front derailleur cable, checking rear derailleur operation in these conditions.**



16

⚠ **WARNING!**

Derailleur adjustments must be performed by skilled personnel: a badly adjusted derailleur can result in an accident, personal injury or death.

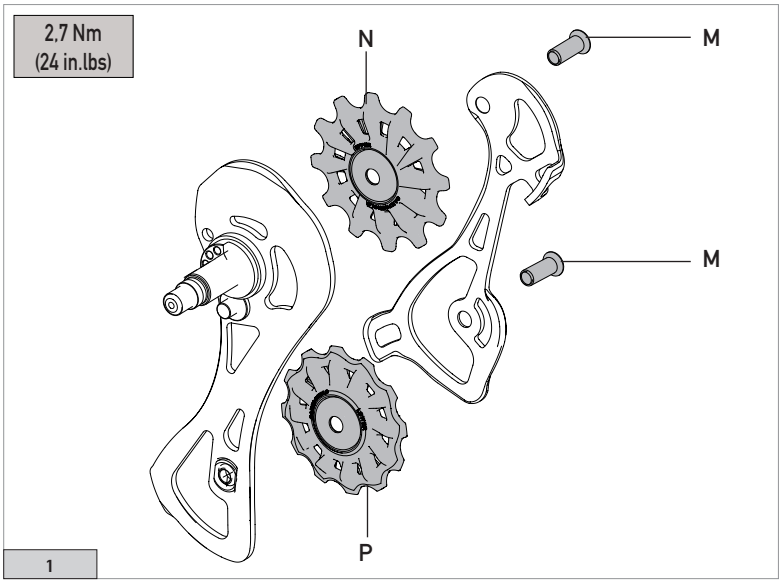
6 - MAINTENANCE

• Lubricate all the joints regularly.

• If the rollers do not rotate smoothly, clean throughly and replace if necessary.

• To remove the rollers, unscrew the screws (M - Fig. 1) with a 3 mm Allen screw.

WARNING!
The two rollers are different: on the upper section, fit the roller (N - Fig. 1) marked "UPPER" (with side play); in the lower section, fit the roller (P - Fig. 1) marked "LOWER".



1

⚠ **WARNING!**

Comply with the following specifications when replacing the pulleys:
TIGHTENING TORQUE: 2,7 Nm (24 in.lbs)

• Before lubricating, carefully clean the drivetrain (system, sprocket pack, chainrings and rear derailleur wheels) with a brush or cloth soaked in a specific degreaser/detergent. In the case of dust or mud, remove any residuals with specific plastic tools.

! **For cleaning the bicycle only use environmentally-friendly and neutral products without caustic substances and safe to use for you and for the environment.**

• Dry the drivetrain with a soft cloth: never use abrasive sponges or metal scouring pads.
• Carefully lubricate the components, using a specific lubricant.
• After application, turn the hand cranks using all the possible gear combinations in order to properly lubricate the entire drivetrain.
• Carefully clean any remaining lubricant remaining on the bicycle or the floor.

⚠ WARNING!

Lubricant residues on the rims, brake shoes, discs and brake pads can decrease or nullify your bicycle's braking capacity, and can lead to accidents, physical injuries, or even death.

• The duration of the components is variable based on the conditions of use, frequency and quality of maintenance. For proper component maintenance, it is necessary to frequently perform the cleaning and lubrication operations, especially under conditions of heavy use (e.g. each time after washing the bicycle, after use in wet conditions, on dusty or muddy roads etc.).

• Dirt seriously damages the bicycle and its components. Wash, clean and dry your bicycle carefully after use.
• Never spray your bicycle with water under pressure. Pressurized water, even form the nozzle of a small garden hose, can pass under seals and enter your Campagnolo components, thereby affecting its operation. Wash your bicycle and Campagnolo components by wiping them down with water and neutral soap.
• Check that any holes on the bottom bracket shell are unobstructed and allow water infiltrating into the frame to drain.

⚠ WARNING!

Salty environments (such as winter roads or roads near the sea) may lead to galvanic corrosion of most of the bicycle's exposed components. To prevent damage, malfunctions and accidents, rinse, dry and carefully re-lubricate all components which are subject to this phenomenon.

• Do not expose the products to high temperature, do not leave them closed in cars parked under the sun, do not keep them near radiators or other heat sources, do not leave carbon or plastic products in direct sunlight.

7 - PERIODIC MAINTENANCE TABLE

Maintenance intervals are strictly approximate and may vary significantly in relation to the intensity and conditions of use (for example: competitions, rain, winter roads with salt, weight of the athlete, etc.). Schedule the appropriate maintenance with your mechanic.

PROCEDURE	MILEAGE IN KM (MAX)	TIME (MAX)	METHOD FOR CHECKING
Check screws are tightened to the correct torque	2000	2 months	torque wrench
Lubricate the axles regularly	6000	6 months	
Check alignment frame drop-out	2000	2 months	rear derailleur hanger alignment tool UT-VS030
Wheel cleaning	500	1 month	
Replacement if necessary wheels	2000	2 months	