



TECHNICAL MANUAL
ERGOPOWER CONTROL LEVERS
12s / 13s

WARNING!

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



ERGOPOWER CONTROL LEVERS - 12s / 13s



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.

Info for professional mechanics: Although the User Manual that comes with the product is intended mainly for the end user, it is vital that professional mechanics also read and understand it so that they are adequately prepared to explain the product to customers, making certain that all care is taken to ensure its safe and proper use.

1 - TECHNICAL SPECIFICATIONS

ERGOPOWER CONTROL LEVERS (POWER-SHIFT)	UP / DOWN	HOUSINGS REAR DERAILLEUR	CABLE REAR DERAILLEUR	BRAKE HOSE (EXTERNAL Ø)
EKAR 13s	4 UP 1 DOWN	Ø 4.1 mm Campagnolo maximum smoothness	Ø 1.2 mm	5 mm
EKAR GT 13s	3 UP 1 DOWN			
ULTRA-SHIFT 12s	3 UP 5 DOWN	Ø 4.1 mm Campagnolo maximum smoothness	Ø 1.2 mm	5 mm
EPS 12s	11 UP 11 DOWN	—	—	5 mm

2 - COMPATIBILITY

2.1 - MECHANICAL GROUPSET

ERGOPOWER CONTROL LEVERS	CRANKSET - CHAINRING MARKING	REAR DERAILLEUR	FRONT DERAILLEUR
ULTRA-SHIFT 12s (FG)	ULTRA-TORQUE 12s (F / G)	SUPER RECORD 12s RECORD 12s (FG)	SUPER RECORD 12s RECORD 12s (FG)



IMPORTANT!

For Ekar and Ekar GT groupset, please refer to the compatibility tables ("Ekar groupset compatibility table" and "Ekar GT groupset compatibility table"), available in the Support /Technical Documentation section on www.campagnolo.com



WARNING!

Combinations other than those specifically indicated by Campagnolo srl could cause the drivetrain to malfunction and potentially be the cause of accidents, physical injury or even death.

2.2 - EPS GROUPSET

* In the case of frames with thru-axles, use a rear derailleur produced in 2017 or later - these are concave shaped, ensuring perfect clearance between the rear derailleur and the frame.



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ERGOPOWER CONTROL LEVERS	12s EPS
CRANKSET	SUPER RECORD / RECORD ULTRA-TORQUE 12s
CHAINRING MARKING	F / G
REAR DERAILLEUR	SUPER RECORD EPS 12s
FRONT DERAILLEUR	SUPER RECORD EPS 12s
INTERFACE UNIT	V4
WIRELESS FORM	V4
POWER UNIT	V4

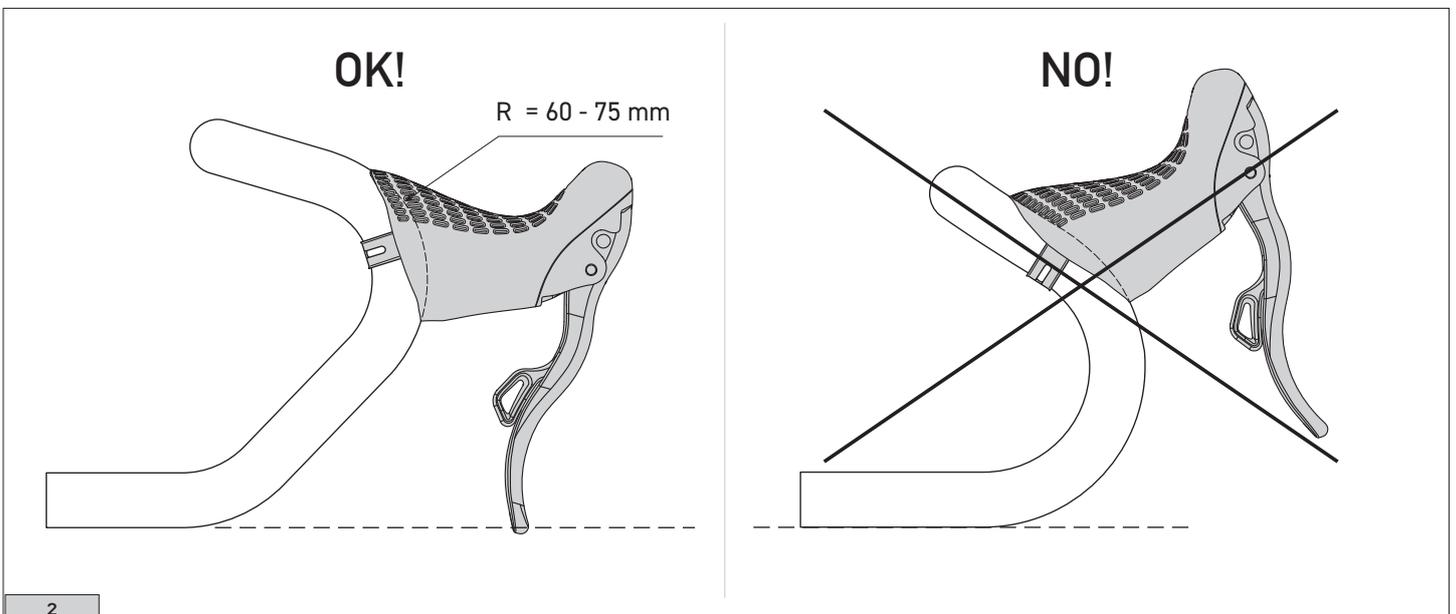
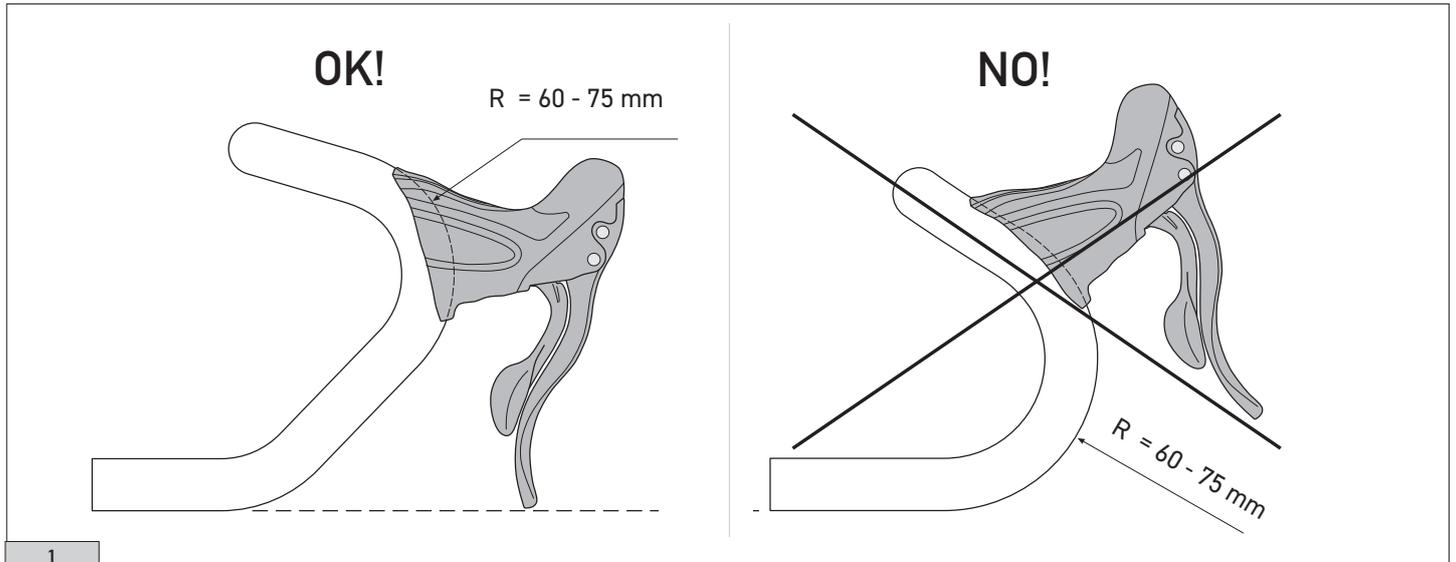
3 - INTERFACE WITH HANDLEBAR

3.1 - INTERFACE WITH HANDLEBAR FOR ERGOPOWER MECHANICAL / EPS CONTROLS



WARNING!

Combinations other than those provided for in the above table could cause the drivetrain to malfunction and potentially be the cause of accidents, physical injury or even death.

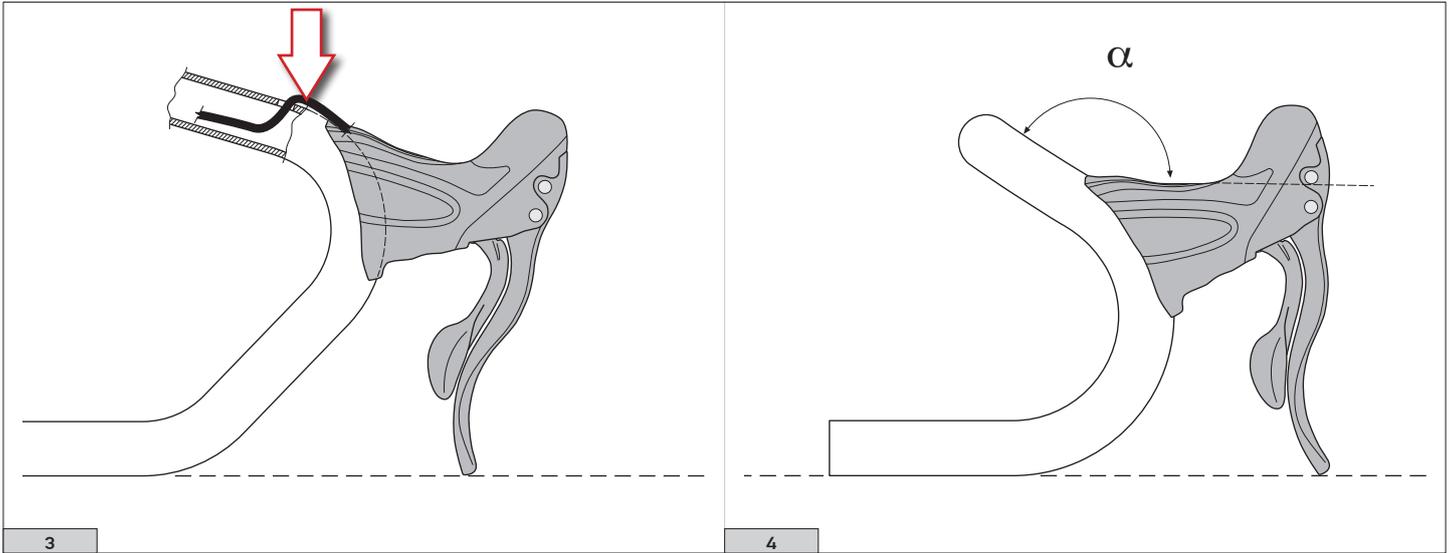


- Do not lodge the upper part of the command in the rectilinear section of the handlebar (Fig. 1 / Fig. 2).
- Lodge the command in the curved section measuring $R = 60 - 75$ mm with a diameter = 23.8 - 24.2 mm (including any ovalization) to guarantee more effective fastening (Fig. 1/ Fig. 2).



CAUTION

Make sure that the curved section of the handlebar where the command is to be fixed, has a sufficiently rough surface to ensure a better grip.



CAUTION

The cable routing illustrated in Figure 3 seriously compromises the drivetrain's gear shift and derailing performance.
DO NOT USE HANDLEBAR BENDS WITH THIS KIND OF ROUTING.

- Make sure that angle α is sufficiently wide to ensure that the housing is mounted correctly and the cable runs through it easily (Fig. 4).

4 - ASSEMBLY

- Fold back the rear of the hood (A - Fig. 1) to expose the securing screw (B - Fig. 1).

- Loosen the bolt (B - Fig. 1) positioned in the top of the body sufficiently to fit the clamp (C - Fig. 2) on the untaped handlebar.

Make sure that the arrow on the band faces towards the upper part of the control unit (C - Fig. 2).

- If the hood has been completely removed, moisten the inside slightly with alcohol to facilitate installation on the control unit.

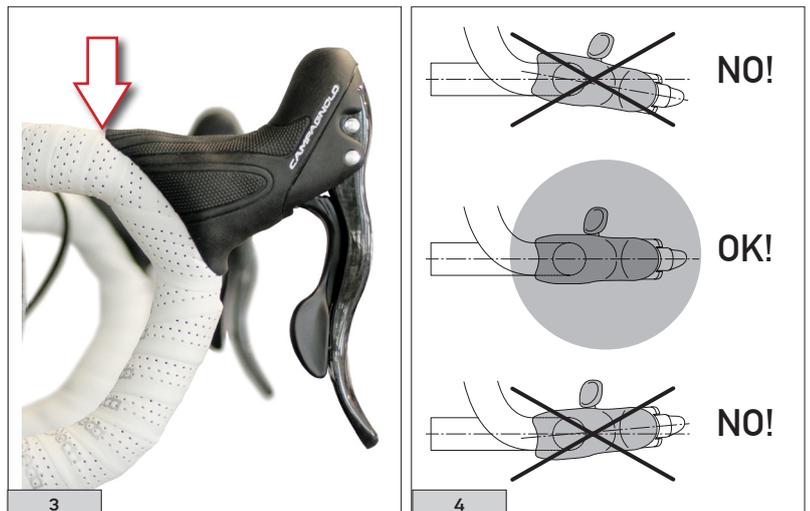


- Position the Ergopower™ control in the curved area of the handlebar and attempt to create a straight line if the handlebar bend lets you (Fig. 3).

- The control unit must be correctly oriented to avoid affecting bicycle aerodynamics (Fig. 4)

- Secure the control on to the handlebar by tightening the screw (B - Fig. 1) to 10 Nm (89 in.lbs) using a torque wrench.

! **ONLY for Ekar GT:** Secure the control on to the handlebar by tightening the screw (B - Fig. 1) to 8Nm (71 in.lbs) using a torque wrench.



4.1 - ASSEMBLY OF TRANSMISSIONS (MECHANICAL UNITS)

- Install the cable guide plate under the bottom bracket shell, as follows:

- position the washer (A - Fig. 5) in the provided seat in the cable guide plate.

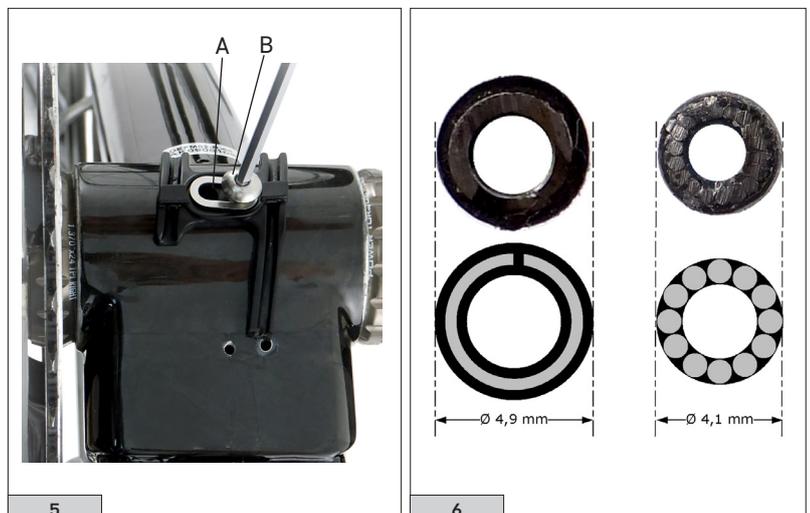
- place the cable guide plate under the bottom bracket shell and fix it by means of the provided screw (B - Fig. 5) with a torque of 3÷4 Nm (27÷35 in.lbs).

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

- The cable housings of the rear derailleur (Fig. 6) have a diameter of 4.1 mm, while the brake cable housings (Fig.6) have a diameter of 4,9 mm.

NOTE

Use only 'maximum smoothness' cables and sheaths with these Ergopower commands.



- Depending on your frame, it may be necessary to cut the rear brake housing and install a housings end (not supplied in your Ergopower™ control levers package), and install a casing lead end (not supplied in your Ergopower™ control levers package).

⚠ WARNING!

Before cutting the housing, carefully check that the length you choose is suitable for the dimensions of your frame. Insufficient slack in the cable and housing could affect your ability to turn or control your bicycle, resulting in an accident, personal injury or death.

NOTES

The housing must be cut so that the end is perpendicular to the length (Fig. 7). In addition, the cross section of the housing must not change. After cutting the housing, check that you have restored its roundness to ensure that there is no friction between the cable and housing.

To cut the casings, we suggest you to use the specific tool Park Tool CN-10.

Insert the end of the housing into the provided slot in the body of the control (Fig. 8). Ensure that the housing rests perfectly on the bushing fixed on the body.

⚠ WARNING!

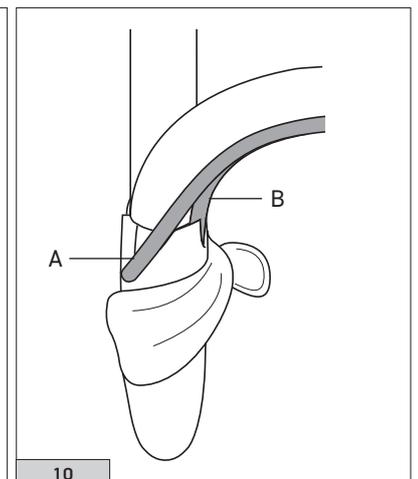
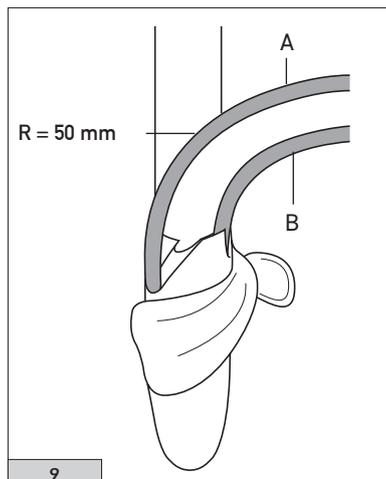
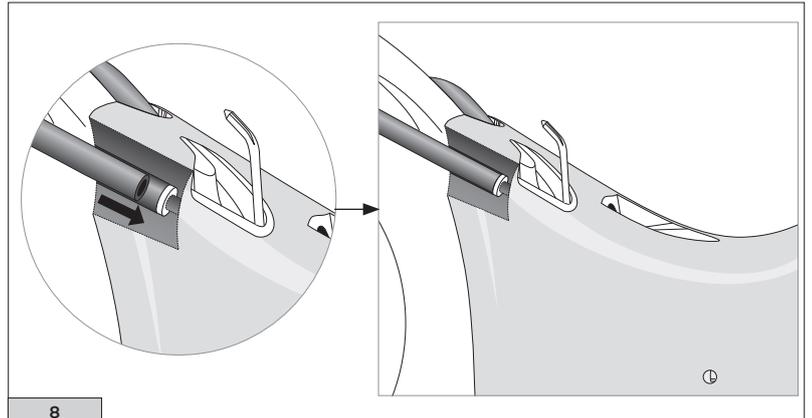
After installation, check that the cables do not interfere with your steering or any other function of your bicycle. Interference could affect your ability to turn or control your bicycle, resulting in an accident, personal injury or death.

- Attach the housing to the Ergopower™ control lever as illustrated. The rear derailleur (or front derailleur) housing (A - Fig. 9) should be positioned in the outer slot of the control unit; the brake housing (B - Fig. 9) should be positioned in the inner slot of the Ergopower™ control lever unit.

- If you prefer, you can pass the derailleur cable housing alongside the brake casing, as shown in figure 10.

CAUTION

Position the cable so that it is as straight as possible. At all costs avoid kinks or sharp bends in the housing (less than $R = 50 \text{ mm}$).

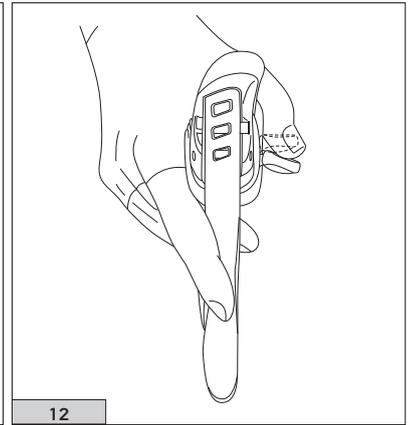
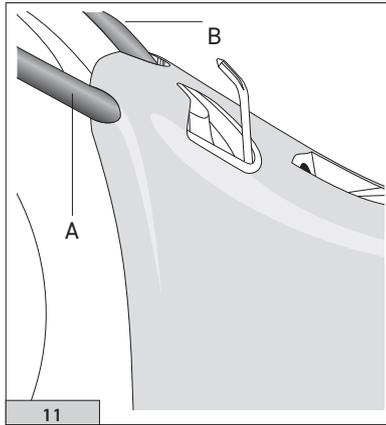


4.1.1 - REAR DERAILLEUR CABLE AND HOUSINGS

- Lift up the hood and push the end of the 680 mm long, 4.1 mm diameter housing into the hole provided (Fig. 11). Slightly bend the cable (for the first 5 - 10 mm) (Fig. 11) to facilitate insertion of the same into the housing.

- Move the control to the smallest sprocket position (Fig. 12).

The Ergopower Ultra-Shift controls allow you to upshift up to five cogs in a single lever throw.



Insert the rear derailleur cable (length 2,000 mm - \varnothing 1.2 mm) into the bottom of the control (B - Fig. 13).

⚠ WARNING!

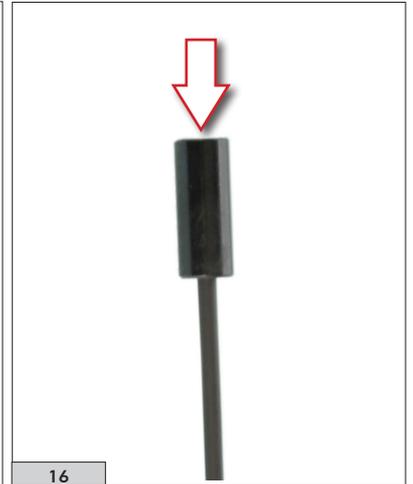
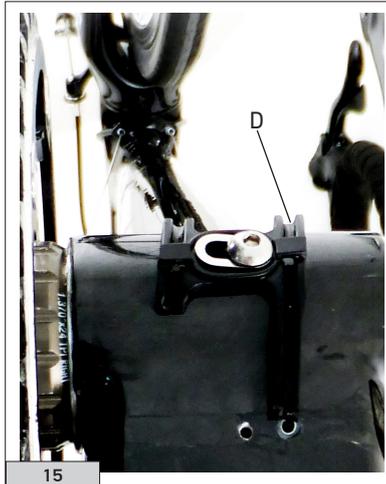
Before cutting out the housing, please be careful to make sure that the chosen length is suitable for the size of your frame. An insufficient length may cause too straight curves and will prevent the transmission from functioning properly.



- Cut the housing (on the frame side) so that it reaches the metal cable stop on the frame (C - Fig. 14).

- After cutting the housing at the suitable length, fit a housing end and insert the housing in the Downtube barrel adjuster (C - Fig. 14) on the frame.

- Run the cable through the right hand opening (D - Fig. 15) of the cable guide plate located under the bottom bracket box; insert the cable into the support on the sheath.



- On the 330 mm - \varnothing 4.1 mm sheath apply a sheath terminal, run the cable and insert it into the specific right hand rear sheath support (A - Fig. 16).

- Apply a sheath terminal to the other end of the sheath and secure the cable onto the rear derailleur (see the technical manual chapter on the rear derailleur).

WARNING

Use only "maximum smoothness" cables and sheaths, and end caps like those shown in Fig.16.

- Please make sure that the cable is flowing freely within the sheath. Verify in particular that the sheath head entries are rectilinear (Fig. 17), to avoid hindrances to the gear-shifting system.
- If the sheath is too short, the shift function will be affected (Fig.17).

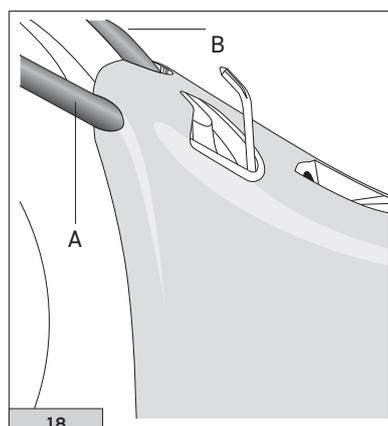


! WARNING!

After installation, check that the cables do not interfere with your steering or any other function of your bicycle. Interference could affect your ability to turn or control your bicycle, resulting in an accident, personal injury or death.

4.1.2 - FRONT DERAILLEUR CABLE AND HOUSING (WHERE APPLICABLE)

- Lift up the hood and push the end of the 680 mm long, 4.1 mm diameter housing into the hole provided (Fig. 1).
- Slightly bend the cable (for the first 5 - 10 mm) (Fig. 18) to facilitate insertion of the same into the sheath.



- Move the control to the smallest chainring position.



Insert the front derailleur cable (length 1,600 mm - \varnothing 1.2 mm) into the bottom of the control (B - Fig. 19)

! WARNING!

Before cutting out the housing, please be careful to make sure that the chosen length is suitable for the size of your frame. An insufficient length may cause too straight curves and will prevent the transmission from functioning properly (Fig. 20).

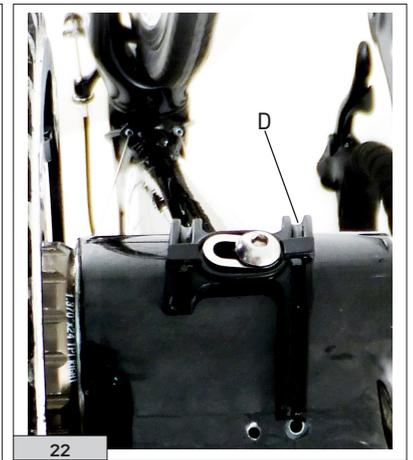


- Cut the housing (on the frame side) so that it reaches the metal housing stop on the frame (C - Fig. 21).
- After cutting the housing at the suitable length, fit a housing end and insert the housing in the Downtube barrel adjuster (C - Fig. 21) on the frame.
- If the frame is the type with internal cable routing, the Campagnolo cable tension adjuster for the front derailleur included in the package of the Ergopower commands must also be installed. Fit the tension adjuster with the knurled part at the bottom. The lower housing must provide the housing end cap while the upper housing is fitted without housing end cap (Fig.22).

The tension adjuster is placed near the handlebar in an area where it does not interfere with the frame.

- Ensure that the cable moves fluidly in the housing.

- Pass the cable through the LH slot on the cable guide plate (D - Fig. 22) located underneath the bottom bracket box and secure the cable to the front derailleur (refer to the derailleur technical manual for proper attachment of the cable to the front derailleur).



WARNING!

After installation, check that the cables do not interfere with your steering or any other function of your bicycle. Interference could affect your ability to turn or control your bicycle, resulting in an accident, personal injury or death.

4.1.3 - ADJUSTING THE CABLE TENSION

- Refer to the Gearbox and Derailleur Technical Manual (where applicable).

4.2 - BRAKE CABLE AND SHEATH (in the case of a hydraulic brake, refer to the Technical Manual: Disc brake hydraulic system)

4.2.1 - REAR BRAKE CABLE AND SHEATH

- Insert the brake cable (length 1,600 mm - \varnothing 1.6 mm) into the bushing on the right hand Ergopower™ control brake lever, ensuring that the cable stop head fits into its seat (Fig. 24).
- Ergopower™ control levers do not require a brake housing end.
- Depending on your frame, it may be necessary to cut the rear brake housing (1,250 mm long - diameter \varnothing 4,9 mm) and install a housing lead end (diameter \varnothing 6 mm).
- Insert the sheath (without the sheath terminal) into the control and into the brake sheath stop and secure the cable to the brake (see the "brakes" section).



4.2.1 - FRONT BRAKE CABLE AND SHEATH

- Insert the brake cable (length 800 mm - \varnothing 1.6 mm) into the bushing on the left hand Ergopower™ control brake lever, ensuring that the cable stop head fits into its seat (Fig. 24).
- Ergopower™ control levers do not require a brake housing end.
- Depending on the frame you have, you may need to cut the front brake sheath (length 580 mm - \varnothing 4.9 mm) and install sheath terminals (\varnothing 6 mm).
- Insert the sheath (without the sheath terminal) into the control and into the brake sheath stop and secure the cable to the brake (see the "brakes" section).

4.3 - TAPING THE HANDLEBAR

- Fold back the hood.
- Tape the handlebar of the Ergopower™ control body.
- Refit the support hood in position.

WARNING!

Before using your Ergopower™ system on public roads, ride in an open, traffic free area to become familiar with the Ergopower's function and operation. Failure to do so could result in an accident, personal injury or death.

5 - MAINTENANCE

- Periods and riding distances are purely indicative and may be significantly different in relation to conditions of use and the intensity of your activity (for example: racing, rain, salted Winter roads, weight of the rider etc.). Check with your mechanic to select a schedule that is best for you based on your size, riding conditions and your riding style.
- Casings are supplied pre-lubricated and do not require any additional lubrication.
- Dirt seriously damage bicycles and their components. Thoroughly rinse, clean and dry your bike after using it in these conditions.
- Never spray your bicycle with water under pressure. Pressurized water, even from the nozzle of a small garden hose, can pass seals and enter into your Campagnolo® components, damaging them beyond repair. Wash your bicycle and Campagnolo® components by wiping them down with water and neutral soap. Dry them using a soft cloth. Never use abrasive or metal pads.



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

5.1 - PERIODIC MAINTENANCE TABLE

PROCEDURE	KM INDICATION (MAX)	TIME INDICATION (MAX)	CALCULATION METHOD
Check screws are tightened to the correct torque	2000	2 MONTHS	Torque wrench
Check by specialised mechanic	30000	3 YEARS	
Check by specialised mechanic (in case of competition use)	15000	1 YEAR	
Replace cables and sheaths	10000	1 YEAR	
Replace cables and sheaths (in case of competition use)	5000	6 MONTHS	