



**POWER UNIT EPS V3 / V4
ASSEMBLY
INSTALLATION INSIDE VERTICAL FRAME
TUBE
(SOLUTION 1)**

WARNING!

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



POWER UNIT EPS V3 / V4 ASSEMBLY

THIS TECHNICAL MANUAL IS INTENDED FOR USE BY PROFESSIONAL MECHANICS.

Anyone who is not professionally qualified to assemble bicycles should not attempt to install and operate on the components because of the risk of carrying out incorrect operations that could cause the components to malfunction with the consequent risk of 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 - ASSEMBLY - SOLUTION 1

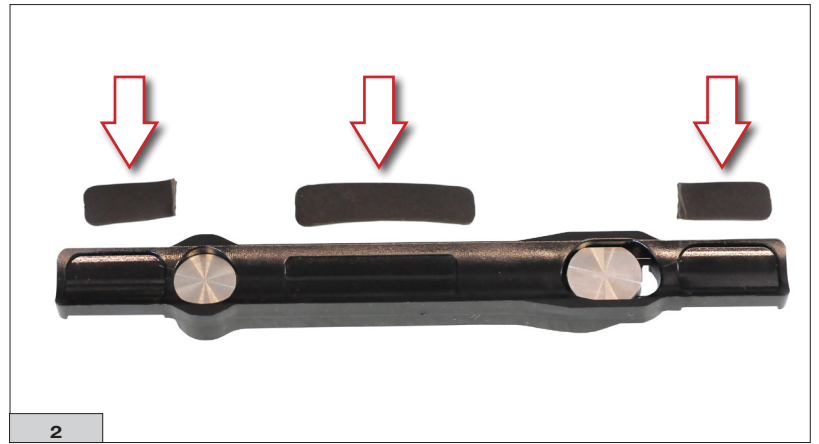
1.1 - INSTALLATION INSIDE VERTICAL FRAME TUBE



TOOLS AND ACCESSORIES:

- EPS grommet magnets kit
- internal installation tool for the EPS V3 / V4 Power Unit

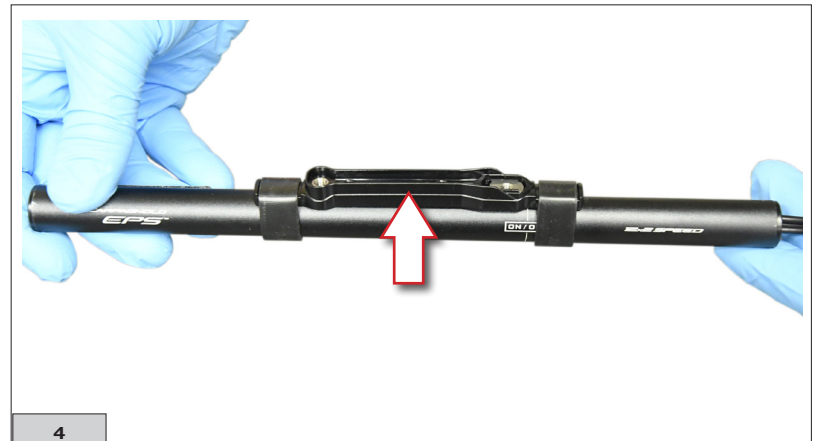
1) Apply the 3 anti-slip rubber plugs onto the support (Fig. 2).



2) Insert the two elastic rings onto the Power Unit (Fig. 3).



3) Position the support in the central area of the Power Unit (Fig. 4).



4) Slide the two snap rings into the two areas (Fig. 5) in order to secure it onto the Power Unit.



Important

Positioning the support outside the central area of the Power Unit may damage the Power Unit's internal components or the shell due to excess vibration or impact with the seat post or frame. Excessively high (Fig. 6) or excessively low (Fig. 7) positions should therefore be avoided.

Using Power Unit support systems not produced by Campagnolo is also prohibited.



5) Check whether there's the risk of contact with the frame by moving the Power Unit from side to side. If there is a risk of contact, recheck the position of the support to reduce the risk as far as possible and apply the adhesive neoprene spacer, contained in the support pack, in the area of the Power Unit where contact may occur (Fig. 8).



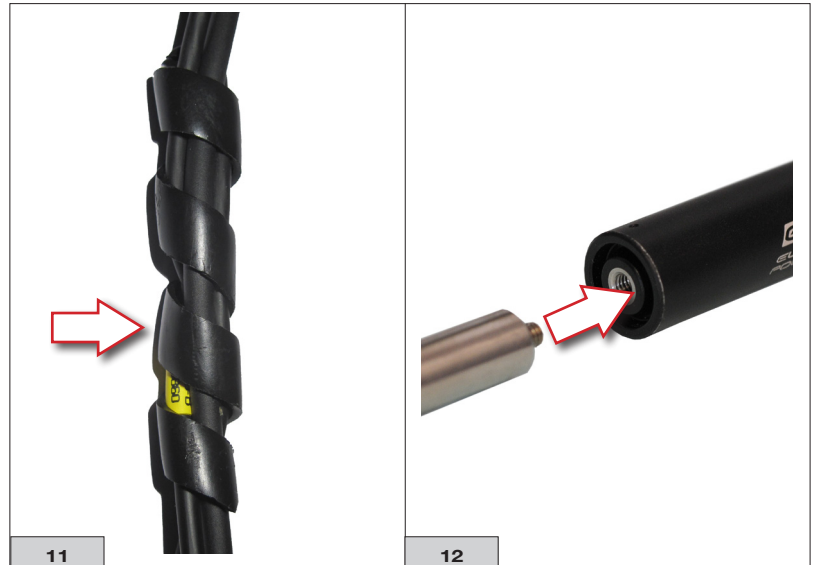
6) Align the screw B hole (Fig. 9) with the upper rivet: move the screw A hole (Fig. 9) so that it coincides with the lower rivet.



7) Consider applying elastic spacers at the end of the Power Unit in order to eliminate any vibrations of the Power Unit itself and any noise caused by contact between the Power Unit and the frame or the saddle support pipe (Fig. 10).

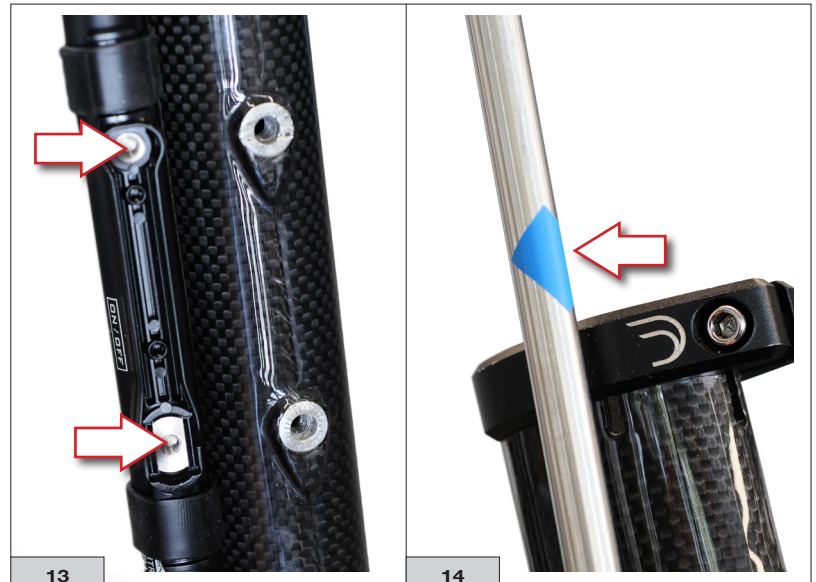


8) To hold the 3 cables of the power unit together and facilitate routing of the cables through frame, fit one of the two spiral wraps: near the front derailleur connector and the battery charger connector, and fit the other near the rear derailleur connector (Fig. 11).



9) Screw the assembly rod on the end of the power unit until it goes no farther (Fig. 12). If necessary use the rod extension as well: attention - the extension thread is left-handed.

10) Position the rod with the power unit external to the seat tube with the two threads at exactly the same height as the rivets (Fig. 13). Use some adhesive tape to mark this position on the rod (Fig. 14).



The more accurate the position the easier it will be to fix the power unit with the screws.

11) Bring the cables out from the bottom bracket shell.

If it is not easy to get the cables out from the bottom bracket shell, use the grommet magnet kit, putting the long cable in from the bottom bracket and making it come out of the seat tube. Fit the short wire on the grey connector, connect the two magnets and pull the long cable, pulling the ends of the cables out from the bottom bracket.

NOTE

If the bottom bracket shell is closed but has channels that go outside it, several cable routing kits will have to be used simultaneously and then each cable must be brought out directly through the 3 holes in the frame.

12) Screw the assembly rod on to the end of the power unit until it goes no farther - this gives perfect control of its position. If necessary use the rod extension as well.

Important: the extension thread is left-handed.

13) Guide the Power Unit into the seat tube until it rests on the upper part of the support and the screw B hole on the upper rivet.

Screw in the medium screw (L=21.2 mm) which is included using a 9 mm spanner until it goes no further, tightening it to **2 Nm (18in.lbs)** (Fig.15).

If the screw is too long or too short, use the most suitable screw (included) or insert one or more spacers.

CAUTION

The screw hole is 3.5 mm: therefore the screw must be screwed at least 2 mm (about 2.5 turns) and no more than 3.5 mm which corresponds to about 4 turns.

IMPORTANT: follow the procedure illustrated and comply with the tightening torque given so as not to risk going beyond the seat of the screw and damaging the Power Unit.

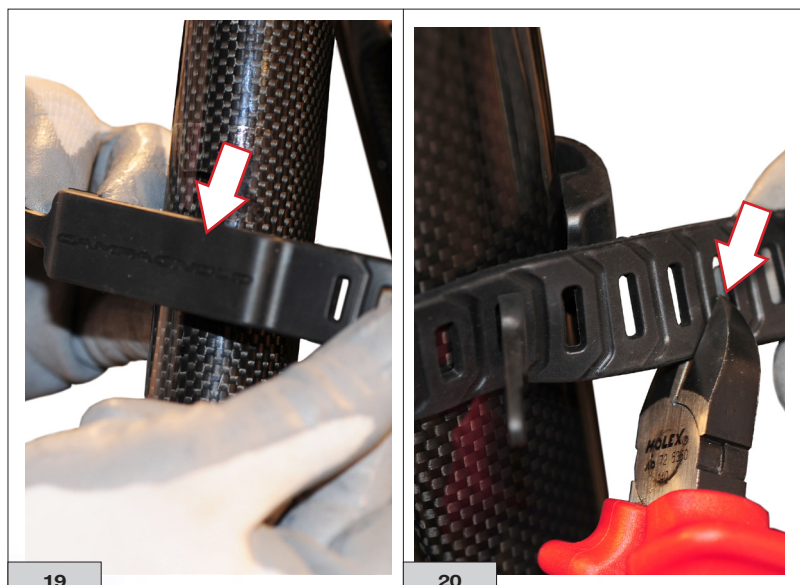
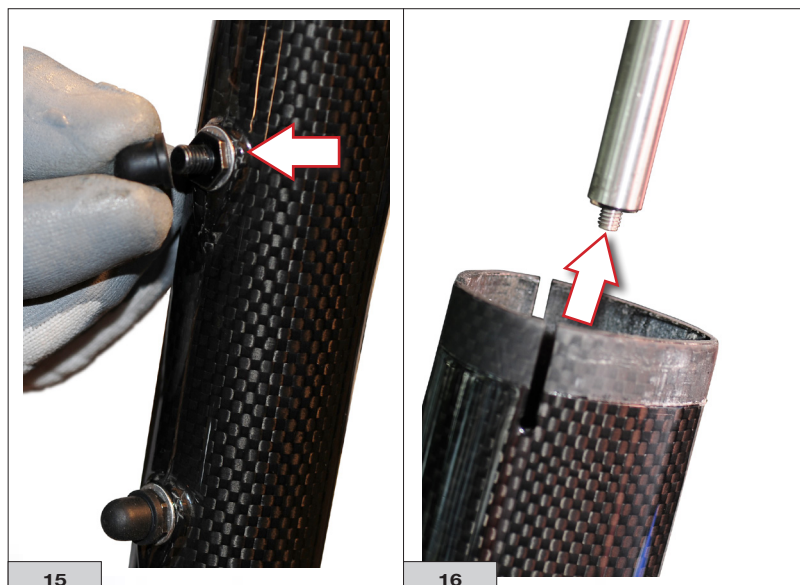
14) In correspondence with the lower rivet screw in the screw with the same characteristics or with the same spacers already used in correspondence to the upper rivet until it can go no further (tightening torque **2 Nm/18in.lbs**).

15) Remove the assembly rod (Fig. 16).

16) Bearing in mind where the power off area (ON/OFF) was positioned with respect to the bottle holder rivets (Fig.17), use the power off strip to check the exact corresponding position on the frame. Apply the adhesive "EPS" label in correspondence to the sensitive area (Fig. 18).

17) Switch the system off by placing the magnetic power-off clamp on the seat tube, with the Campagnolo logo above the rectangle of the label (Fig. 19).

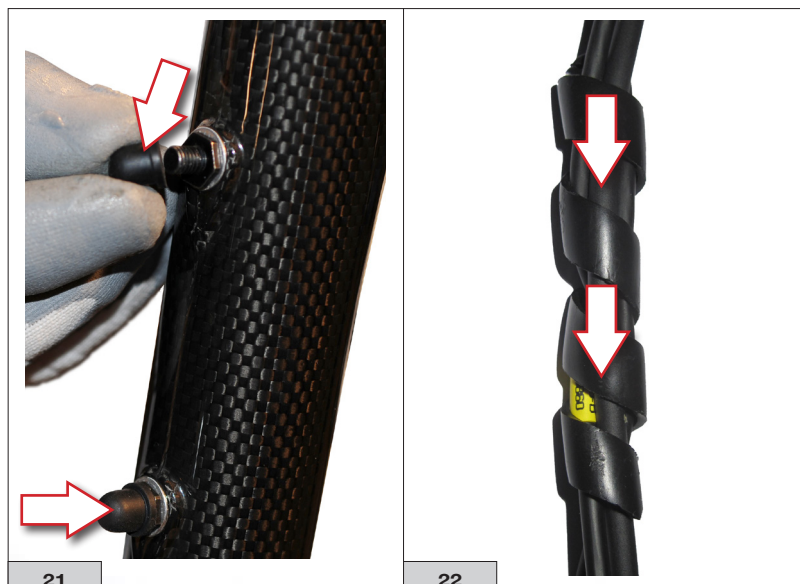
The excess length of clamp may be cut off across the indentations in the perforated section (Fig. 20).



18) If a bottle holder is to be fitted, install now. If necessary use the spacers supplied, putting them under the bottle holder to prevent the power unit locking screws from damaging the bottle or from making it impossible to pull the bottle holder out correctly. Fit the bottle holder with one shim and one nut per screw. Tighten the nuts included to a torque of **1.2 Nm (11 in.lbs)**.

19) If a bottle holder is not to be fitted, fit the protective rubber caps on the two screws (Fig. 21).

20) Remove the spiral wraps holding the cables together (Fig. 22).



Continue installation by routing the cables for the rear derailleur, the front derailleur and the interface, following the instructions given in the chapter “Assembly: cable routing” chapter, available from our website: www.campagnolo.com.