

USER MANUAL
2023



ILYNX +

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01 INTRODUCTION

This user manual contains important information for proper use and maintenance of the bicycle. In particular, this document contains specific information about the **iLYNX ENDURO/TRAIL + (ES993 / ES983 / ES973 / ES893 / ES883 / ES873)**. Please read the entire manual carefully. The user manuals of all BH models can be consulted on the website at the following address:

<https://www.bhbikes.com/manuals>

Keep in mind that the manuals on the BH BIKES website are updated on a regular basis. Make sure you have downloaded the latest version from the website. You can check the version on the front page.

This document contains additional information to the general user manual, available at:

https://www.bhbikes.com/es_INT/quienes-somos/manuales-descargas

You can check the characteristics, recommendations and warranties of third-party parts on their corresponding official websites.

SYMBOLS

This document contains different icons that refer to use, maintenance and assembly warnings. Carefully read the meaning of each one to prevent improper handling or hazardous situations that may result in serious personal injuries or fatal accidents.

SAFETY



DANGER: refers to a hazardous situation that, if not avoided, will lead to serious injuries or even a fatal accident.



WARNING: refers to a hazardous situation that, if not avoided, could lead to serious injuries or even a fatal accident.



ATTENTION: refers to a hazardous situation that, if not avoided, could cause minor or moderate injuries.



RISK OF ELECTRIC SHOCK: refers to a hazardous situation that, if not avoided, could cause serious injuries due to electric shock or even death.



RISK OF SHORT CIRCUIT: refers to a hazardous situation that, if not avoided, could cause short circuits in the electrical components. Short circuits may cause damage to the electrical components and fire.

TOOLS



FLAT WRENCH



ALLEN KEY



TORX KEY



PHILLIPS SCREWDRIVER



10Nm

TIGHTENING TORQUES: on one side of each tool symbol, the tightening torque will be indicated in newton metre.

TYPE OF ASSEMBLY COMPOUND



OIL: light lubrication for elements such as chains and cables.



GREASE: assembly grease.



CARBON PASTE: assembly paste used to increase the friction of the carbon elements.



ADHESIVE: use medium strength thread lock.



Adhesive is used to fasten bolts and make sure that they do not come loose due to vibrations when using the bicycle. Add a drop of thread lock to the tip of the screw thread in all cases. Never apply more than one drop around the thread, since this will make it very hard to remove the bolt.



02 BH WARRANTY

BH BIKES undertakes to offer long-lasting bicycles, in compliance with the highest standards of quality. Therefore, in addition to the statutory warranty, BH BIKES offers an additional coverage and warranty. This section defines the different types of warranty and the process that must be followed to register for the additional "LifeTime Frame" warranty.

STATUTORY WARRANTY

The statutory warranty covers the original purchaser in the event of manufacturing defects and/or non-conformities. This warranty applies to frames and components manufactured by BH BIKES. The warranty period will be established according to the current laws of the country where the bicycle was purchased, and will start on the date of purchase. During this period, the holder of the warranty will be entitled to have all manufacturing defects repaired or replaced free of charge, including the reimbursement of transport expenses and any losses caused as a result of this. Different conditions must be met in order to be covered by the warranty:

- This warranty does not affect the consumer's applicable rights, according to the current laws in each country.
- Faulty bicycles or parts will be covered by warranty upon the decision of our Technical Service.
- The warranty does not include the replacement of parts prone to wear and arising from normal use of the bicycle.
- The warranty does not cover defects or broken parts due to improper use of the bicycle, use for competitions, mounting of non-original accessories or improper handling and incorrect maintenance work.
- The warranty does not apply if the inspection before delivery and the corresponding inspection intervals included in this document have not been carried out, observed, documented as required and stamped by an authorised BH dealer.
- Should the repair not be satisfactory and not ensure that the optimum conditions are met according to the intended use, the holder of the warranty will be entitled to request the replacement of the purchased item or faulty part with one of identical characteristics, or to receive a refund of the amount paid for the damaged item or part.
- The warranty period will be interrupted during the repairs or, in the event of replaced items or components, it will be renewed.
- Any claim against this warranty shall expire six months after the end of the warranty validity period.
- All warranty claims must be processed by an authorised dealer.
- Geographical scope: refer to the User Manual or [www. BHbikes.com](http://www.BHbikes.com)

Visit the following link to read the terms and conditions:

https://www.bhbikes.com/es_ES/registro-garantia/registra-tu-bici-garantia-de-por-vida

LIFETIME FRAME WARRANTY

Through its authorised stores, BH Bikes provides the original buyer with a commercial policy to cover any manufacturing defects in frames for a period beyond that specified in the product's statutory warranty, pursuant to the following clauses:

1. **The LIFETIME warranty solely applies to BH frames and bikes that are sold through stores that are authorised by BHBIKES EUROPE S.L.**
 - The buyer must register the LIFETIME warranty online, with the information duly completed, within 30 calendar days of the purchase date, as it appears on the invoice issued by the authorised store.
 - This warranty cannot be transferred to subsequent buyers and it is cancelled when the bicycle is sold to a third party. Original buyer means the individual who registers the warranty at the time of the purchase; the commercial warranty cannot be transferred to third parties who are not the original buyer.
 - It shall be compulsory to have the bicycle serviced in an establishment that is authorised by BHBIKES EUROPE and according to the instructions in the user manual.
2. **The LIFETIME warranty does not cover:**
 - The rear swingarms of the double suspension models, fork, kids' bikes, defects and/or fading of the original paint, or rust caused by natural deterioration.
 - Defects or breakages resulting from an accident or improper and/or negligent use of the bicycle.
 - When components or accessories that are not intended for or are not compatible with the use for which the bicycle was designed have been installed.
 - Defects resulting from improper handling.
 - Scratches, discolouration, or stains caused by the use of abrasive fluids, sharp items, clamps and/or prolonged exposure to sunlight or other weather conditions.
 - Defects caused by the bicycle's normal wear and tear, including those due to material fatigue. Fatigue damage is a sign that the frame has been damaged by normal use, so it is the user's responsibility to regularly inspect the bicycle.
 - Improper use and/or maintenance of the product (carefully read the recommendations for use and cleaning).
 - Frames that have been used in competitions, demos or as rentals.

Read the full terms and conditions at:

https://www.bhbikes.com/es_ES/registro-garantia/registra-tu-bici-garantia-de-por-vida

EXTENDED WARRANTY FOR BH BATTERIES

In a constant effort to improve our customer services on a daily basis, BH offers the best warranty conditions and the possibility of acquiring an extended warranty for its e-Bike range (an additional one or two years). Through its authorised stores, BH Bikes provides the original buyer with a commercial policy to cover any manufacturing defects in BH batteries for a period beyond that specified in the product's statutory warranty, pursuant to the following clauses:

1. **The BH battery extended warranty solely applies to BH batteries installed in BH bikes and sold through stores that are authorised by BHBIKES EUROPE S.L.:**
- The buyer must register the warranty online, with the information duly completed, within 30 calendar days of the purchase date, as it appears on the invoice issued by the authorised store, on which the bike's serial no. must be specified.
 - This warranty cannot be transferred to subsequent buyers and it is cancelled when the bicycle is sold to a third party. Original buyer means the individual who registers the warranty at the time of the purchase; the commercial warranty cannot be transferred to third parties who are not the original buyer.
 - It shall be compulsory to have the bicycle serviced in an establishment that is authorised by BHBIKES and according to the instructions in the user manual.
2. **The BH battery extended warranty shall not ever cover:**
- Fading paintwork and a loss of original colour, or corrosion caused by normal wear and tear.
 - Defects or breakages resulting from an accident or improper and/or negligent use of the bicycle.
 - Deterioration or natural degradation due to age, even without use. Deterioration after 500 full charging and discharging cycles if it is below 30% of the nominal capacity (read the recommendations in the user manual carefully).
 - When components or accessories have been installed that are not intended for/compatible with the use for which the bicycle was designed.
 - Defects resulting from improper handling.
 - Scratches, discolouration, or stains caused by the use of abrasive fluids, sharp items, clamps and/or prolonged exposure to sunlight or other weather conditions.
 - Improper use and/or maintenance of the product (carefully read the recommendations for use and cleaning).
 - Batteries that have been used in competitions, demos or in rentals.
 - Auxiliary batteries (extenders).

Read the full terms and conditions at:
https://www.bhbikes.com/es_INT/registro-garantia-vida-bh/extension-garantia-bateria

REGISTERING EXTENDED WARRANTIES

You must register the bicycle within 30 days after purchase to enjoy the BH BIKES additional warranties. The process to activate the extended warranties is described below:

LIFETIME FRAME WARRANTY

You must register the bicycle on the BH BIKES website to enjoy the LIFETIME FRAME extended warranty:

https://www.bhbikes.com/es_ES/registro-garantia/registra-tu-bici-garantia-de-por-vida

Watch this video to find out what you need to do:

<https://youtu.be/47aLVgUI248>



EXTENDED WARRANTY FOR BH BATTERIES

You must register the bicycle on the BH BIKES website to enjoy the BH BATTERY extended warranty:

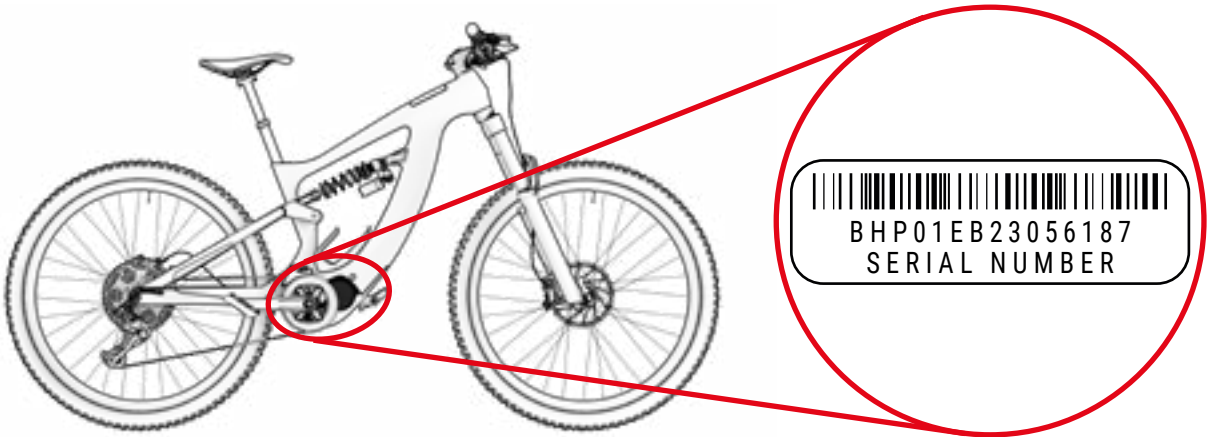
https://www.bhbikes.com/es_ES/registro-garantia/extension-garantia-bateria

Watch this video to find out what you need to do:

<https://youtu.be/sINzdFBygMM>



! The serial number required to register the bicycle is located on the bottom of the bicycle, on the seat tube, above the bottom bracket:



WARRANTY OF PARTS OF THE ELECTRICAL ASSISTANCE SYSTEM

As in the case of BH BIKES frames and parts, all electrical components made exclusively for BH will be covered by the statutory warranty (BH motors feature an extended 5-year warranty after the LIFETIME FRAME warranty is activated). The warranty period will be established according to the current laws of the country where the bicycle was purchased, and will start on the date of purchase.

During this period, the holder of the warranty will be entitled to have all manufacturing defects repaired free of charge, including the reimbursement of transport expenses and any losses caused as a result of this. The terms and conditions are as described in the section "Statutory Warranty" and can be read at:

<https://www.bhbikes.com/manuals>

Under no circumstances shall the warranty cover the wear and natural ageing of batteries due to use, charging and storage. Likewise, the buyer must contact the original manufacturer to use the warranty of third-party parts.

SUBMITTING A WARRANTY CLAIM

All warranty claims must be channelled through an official BH dealer. The dealer will analyse the claim to identify its scope and perform a preliminary assessment of the incident. The dealer will submit and process the claim directly with BH. Once BH has defined the corrective measures required, the dealer will send this information to the customer.

All claims must be processed by the official dealer from which you purchased your bicycle. If this is not possible, please contact us directly. We will help you find an authorised dealer near you:

https://www.bhbikes.com/es_INT/quienes-somos/contacto

CONDITIONS THAT MAY VOID THE WARRANTY OF ELECTRICAL COMPONENTS

The BH battery and electrical components are covered by the statutory warranty, but the following requirements must be met:

- No electrical components must be removed or tampered with.
- The service life will vary according to the use, charging and storage conditions.
- Keep the battery charged at all times. Otherwise, the battery may deteriorate faster than normal.

03 MAINTENANCE

This user manual contains important information for iLYNX ENDURO/TRAIL + (ES993 / ES983 / ES973 / ES893 / ES883 / ES873). The user manuals of all BH models can be consulted on the website at the following address:

<https://www.bhbikes.com/manuals>

This document contains additional information to the general user manual, available at:


<https://www.bhbikes.com/manuals>


You can check the characteristics and recommendations of third-party parts on their corresponding official websites.


INSPECT THE BICYCLE BEFORE USE

Bicycles are inspected several times throughout the manufacturing process and then at the BH workshop during the final check. As the bicycle's operation may be affected during transport or third parties may have modified the bicycle before its sale, the following must be checked before each trip:

- **FRAME:** no cracks, damage or strange noises.
- **CHAIN:** it must be lubricated and the transmission system must not make any strange noises.
- **BRAKES:** the brakes must be working properly. When stopped, press the brake lever with enough strength and check that it does not touch the handlebars.
- **TYRES:** the pressure must be correct and there must be no cuts on the tread or on the sides. Also check that the wear level does not exceed the maximum recommended level.
- **WHEELS:** the wheels must rotate freely in order to check how they rotate. Also check the space between the brake lining and the rim, as well as the space between the frame and tyre.
- **STEERING:** the steering must turn smoothly and with no strange noises.
- **SWINGARM ROTATION POINTS:** when weight is exerted on the bicycle, the suspension must work as expected and with no strange noises. If it is not working properly or there is play between the moving parts, this might mean that the tightening torques are incorrect or that the bearings are worn.
- **BEARINGS:** the bearings must work properly and with no strange noises. The bearings are subject to wear and must be replaced to prevent damage to the components on which they are installed.
- **ELECTRICAL SYSTEM:** if the bicycle features an electrical system, check that it is functioning properly by ensuring that the electrical assistance mode is running and that all parts are functioning properly (motor, display, change of assistance mode and speed sensor). If there is no electrical assistance, check that all connections are correct and show no signs of damage.

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Do not ride your bicycle if it does not meet any of these points! A faulty bicycle may cause serious accidents! If you are unsure or have any queries, please contact your nearest BH workshop!
- 


Check the tightening torques to make sure that they are as described in the recommendations in the user manuals. Failure to observe these recommendations may result in accidents and even death.
- 


The effect of the ground and the forces exerted on the wheel subject the bicycle to a lot of stress. The different parts will be subject to fatigue and wear because of these dynamic loads. Check the bicycle at regular intervals to look for signs of wear, scratches, bent parts, wear on the finish or the formation of cracks. Parts may fail suddenly after their service life has expired. Take your bicycle to an authorised BH workshop regularly to have these parts replaced if needed.

KEEP THE BICYCLE CLEAN

We recommend you follow these basic prevention measures to make sure that the bicycle is in perfect working order. Failure to observe these recommendations may lead to premature wear or even breakages in specific areas, such as gaskets or moving parts.

- Clean the dust and mud with a damp sponge and a gentle and neutral cleaning product.
- Plastic parts must only be washed with soapy water.
- Tyres can be washed with a sponge or brush and soapy water.
- After cleaning the bicycle, dry it by rubbing it firmly with a smooth cloth.
- After each cleaning, lubricate the transmission elements.


- 

Dirt may cause damage that can result in accidents or even death.
- 

Never use pressure washers or steam cleaners.

KEEP THE TRANSMISSION LUBRICATED AT ALL TIMES

After washing the bicycle, the chain transmission's lubrication may have also been washed off. Inspect and lubricate the chain's links, if needed. Excess lubrication may attract more dirt, causing premature wear and incorrect functioning of the system.

- 

Never use pressure washers or steam cleaners.


PART MAINTENANCE


The bicycle requires regular maintenance and a minimum number of regular inspections. The frequency of the maintenance operations depends on the type of vehicle (leisure, road or mountain bike), as well as the frequency and conditions of use.

PART MAINTENANCE CALENDAR

Part	Action required	Before each outing	Monthly	Annually
Lighting	Functional check.			
Tyres	Pressure check.			
	Inspect the height of the profile and sides.			
Brakes (on the rim)	Check the lever travel, lining strength and rim position.			
	Brake test when stopped.			
	Clean the brake pads.			
Brake cables	Visual inspection.			
Brakes (disc brakes)	Change the brake fluid (DOT fluid).			
Suspension fork	Check the bolts and the corresponding tightening torque.			
	Change the oil and lubricate the elastomer.			
Saddle seat post with suspension	Maintenance.			
	Play check.			
Rims on rim brakes	Inspection and replacement, if needed, of the wall linings.	At the latest after the second part of the brake lining.		
Bottom bracket axle	Check the play.			
	Re-lubrication.			
Chain	Check and lubrication.			
	Check and replacement.	After 800 km.		
Chainsets	Check and tightening.			
Wheels / Spokes	Check wheel spin and spoke tension.			
Headset	Inspection of the headset.			
	Re-lubrication.			
Metal surfaces	Maintenance.	At least once every six months.		
Hubs	Bearing inspection.			
	Re-lubrication.			
Pedals	Bearing inspection.			
	Lubrication, cleaning the anchoring mechanism.			

Part	Action required	Before each outing	Monthly	Annually
Saddle seat post / Stem	Inspection of the fastening screws.			
Rear derailleur / Derailleur	Cleaning, lubrication.			
Quick-release mechanism / Thru-axle	Efficacy check.			
Nuts and bolts	Check and tightening.			
Spokes	Tension check.			
Stem / Saddle seat post	Removing and applying new assembly paste.			
Circuit / Brakes	Disassembly and greasing.			
Components of the electrical assistance system	Check the connections.			
	Check there is no dirt.			

 You do not need to take the bicycle to an expert if you are skilled, experienced and have the appropriate tools. Immediately implement the corrective measures if you detect problems. If you are unsure or have queries, please contact BH.

 The tasks described above must only be carried out by a trusted bike repair expert.


SPARE PARTS

Original parts must be used to ensure the optimum performance of your bicycle and the utmost safety. Failure to use original parts may cause damage that is not covered by the warranty.

The most common spare parts are parts prone to wear. The most common ones are tyres, inner tubes, brake pads, disc brakes and brake pads, as well as rims, when these are part of the brake unit, headlights, position lights, batteries and accumulators.

- **TYRES:** Replace them with an equivalent type of tyre. Check the marking on the outside of the tyre (ETRTO standard). Keep in mind that using a tyre with a larger outer diameter than the recommended one may cause the tip of the foot to touch the front wheel or rear wheel guard when the handlebars turn. The cyclist may lose control of the bicycle and suffer an accident with serious consequences. This can also occur when the pedal chainset is replaced with a longer one.
- **INNER TUBES:** Replace them with a suitable type of inner tube, according to the type of tyre. Refer to the information on the outside of the inner tube (ETRTO standard).
- **DISC BRAKES AND BRAKE PADS:** Follow the instructions supplied by the manufacturer.
- **HEADLIGHTS AND POSITION LIGHTS:** Replace the bulb with one of the same type. Check the indication on the metal area.

- **CHAIN, COG AND CHAIN RINGS:** Follow the instructions supplied by the manufacturer.
- **BATTERIES AND ACCUMULATORS:** Change for the same type. Check the indication on the outer area.


 Remember that the failure to use original parts may cause damage that is not covered by the warranty.

AFTER A FALL, BLOW OR IMPACT


If you suffer a fall, blow or impact, first make sure that you are okay to continue cycling. Do not use the bike if you are injured and ask for medical assistance if needed.

If you are okay to continue cycling, check the bicycle to make sure that it is in perfect working order:

- Check that the wheels are firmly secured and that the rims are in the centre of the frame and fork. Turn the wheels. If they cannot be centred in situ because the gap is too small, separate the brakes from the rim so it can move freely.

 In this case, keep in mind that the braking efficacy will be less.

- Check whether the handlebars or the front of the frame are twisted or broken. Check that the front is firmly seated on the fork, holding the front wheel firmly between your legs and trying to twist the handlebars with respect to the front wheel.
- Check that the chain is fitted correctly. If the bicycle fell onto the transmission side, check that it is working properly. Ask for help to place the bicycle on its saddle and change gears. When the chain fits on the largest cog, check the distance between the gear and the spokes. If the gear or bracket are bent, the first one may become stuck on the spokes - Danger of falling! The gear, rear wheel or frame may be damaged. Check the derailleur. If it has shifted, the chain may come off the gear. The bicycle's transmission will become less effective (also refer to the "Traction" section).
- Check the saddle, upper tube or the bottom bracket box to make sure that there are no defects.
- Lift the bicycle slightly and let it drop onto the ground. If there are any noises, inspect the bicycle for any loose bolts.
- Inspect the entire bicycle again to check for bent areas, worn finish or cracks.
- Ride again carefully if no problems have been detected during the inspection. Do not brake or accelerate suddenly or pedal when going uphill. If you are unsure, wait for a car to pick you up instead of risking an accident. Once home, you should inspect the bicycle carefully again. If you are still unsure or have any queries, please contact your nearest BH workshop!

 Bent aluminium parts must not be straightened, i.e., they must not be repaired. Even afterwards, there is a high risk of breakage, especially in regards to the fork, handlebars, front part, chainsets and pedals. Replace them for greater safety.

04 WARNINGS ON USE

MAXIMUM TYRE SIZE

If you install a tyre of a different size on your bicycle, check and make sure that there are at least 6 mm between the tyre and other parts of the frame and fork.

MINIMUM AND MAXIMUM INSERTION LENGTH OF THE SEAT POST

Failure to observe the maximum and minimum seat post insertion dimensions indicated in this manual may cause a lever effect on the frame. The pressure exerted could damage the frame and cause serious accidents. The warranty does not cover the damage generated by failing to observe these indications.

MAXIMUM FORK LENGTH (AXLE-TO-CROWN)

Observe the maximum length between the fork axle and the lower part of the steering tube (axle-to-crown). If this maximum length is not observed, the frame could be damaged due to withstanding a greater load than that for which it was designed and may cause serious accidents.

MAXIMUM NUMBER OF STEERING SPACERS

This manual specifies the maximum number of steering spacers that can be fitted under the stem. If this maximum quantity is not observed, the materials could be damaged due to withstanding a greater load than that for which they were designed and may cause serious accidents.

POSITION OF THE SPINDLE INSIDE THE FORK TUBE

No steering spacers must be fitted above the stem. Otherwise, the materials could be damaged due to withstanding a greater load than that for which they were designed and may cause serious accidents.

INTENDED USE

Each bicycle has been designed according to a specific intended use. The models described in this manual meet the requirements associated with their intended use:

These refer to the conditions that guarantee the proper functioning of the bicycle, such as riding on difficult trails, unpaved paths and difficult terrain and trails that require technical skills. The maximum jumping and/or drop height is 61 cm (24").

05 WARNINGS ON USE OF THE ELECTRICAL ASSISTANCE SYSTEM

CARE AND INSTRUCTIONS FOR USE OF THE ELECTRICAL COMPONENTS AND BATTERIES


All BH products and parts have been designed to withstand splashed liquids and rain. However, some practices may cause damage to the parts and short circuits. Do not do the following:

- Wash the bicycle with pressure devices.
- Use the bicycle under adverse weather conditions.
- Transport the bicycle on the outside of a vehicle when it is raining.
- Expose the batteries to very high temperatures. If the temperature exceeds 70°C, this could cause leaks and there could be a risk of fire.
- Fail to observe the working temperature, storage and charging range of the bicycle.

RECOMMENDATIONS TO MAXIMISE THE BATTERY LIFE

We recommend the following to maximise the battery life:

- Charge it on a flat and stable surface.
- Make sure that it is not exposed to direct sunlight.
- Make sure that there are no children or pets near.
- Make sure that there is no rain or dampness.
- The place must be well ventilated and dry.
- The temperature must be between 15-25°C.
- Do not use the battery with a charge of less than 10%. The useful life of the cells may be affected below this charge level.

 Any unauthorised handling of the electrical system's components may cause serious accidents and will void the warranty.

WARNINGS ON THE USE OF BATTERIES

Improper use of the batteries may cause damage and serious accidents. Follow these recommendations to prevent this:

- Always use the original battery charger.
- Never leave the battery near sources of heat.
- Do not heat the battery or throw it into a fire.

- Prevent the battery connections from coming into contact with metal objects.
- Do not submerge the battery in water and prevent splashes and dampness.
- Do not hit or drill holes into the battery.
- Make sure that the battery liquid does not touch your hands or eyes in the event of a leak.
- Do not use it if there are external signs of damage.
- Only clean the battery with a dry or damp cloth.

UNSUITABLE CHARGING AND DISCHARGING ENVIRONMENTS AND SOLUTIONS

The hot and cold environments described below may lead to charging entering standby or sleep mode without fully charging the battery.

- **Winter discharging sleep mode or DUT (Discharge Under Temperature):** Battery discharging will enter the deep sleep mode if the temperature is below -20°C, stopping the pedal assistance system from working and protecting the battery. In such cases, sleep mode will automatically be disabled when the battery exceeds -20°C.
- **Winter charging sleep mode or CUT (Charge Under Temperature):** Battery charging will enter sleep mode if the temperature is below 0°C. If charging starts and the temperature falls below this level due to night cooling or other factors, charging will stop and sleep mode will be activated to protect the battery. In such cases, sleep mode will automatically be disabled when the battery exceeds 0°C.
- **Noise on televisions/radios/computers:** Charging near televisions, radios or similar devices may cause static electricity, flickering images and other interference. If this happens, recharge somewhere that is away from the television or radio (e.g. in another room).

RECYCLING

Ion-lithium batteries can be recycled but they may harm the environment if they are not managed properly after the end of their service life. Follow these steps after the end of their service life:

- Classify and recycle each electrical component in a place prepared for the sustainable recycling of such parts.
- Check and make sure that the applicable regulations of your country are observed with regards to batteries.

MOTOR

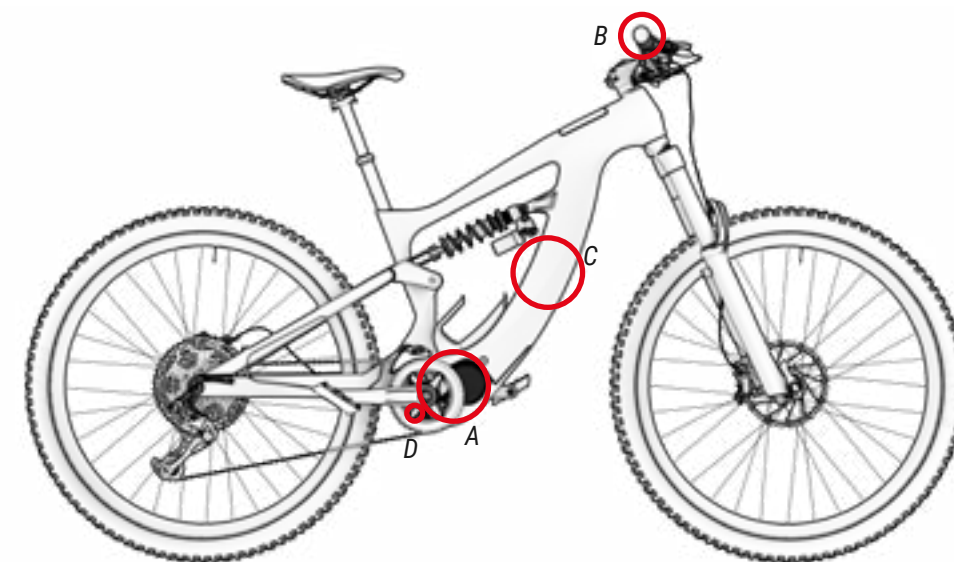
The DC motor is located on the bottom bracket bearing axle. As with any other part of your bicycle, the service life of the motor depends on how it is used. Under normal conditions, the motor can last for 10 to 20 years, or up to 100,000 km.

06 PEDAL ASSISTANCE SYSTEM OPERATION

COMPONENTS OF THE PEDAL ASSISTANCE SYSTEM

The BH Bikes pedal assistance system is made up of the following components:

- **A. A motor**, which drives the bicycle.
- **B. A control unit** (SW-EN600-L), which, among other things, allows you to select the assistance mode.
- **C. A battery**, which powers the motor and can be located in different places.
- **D. A torque sensor**, which reads the force applied to the pedal by the user.



PEDAL ASSISTANCE SYSTEM

The pedal assistance system is designed to provide the optimal amount of assisted power. It provides assistance within a standard range, based on factors such as the pedalling force, the speed of the bicycle and the transmission. The system does not provide assistance in the following situations:

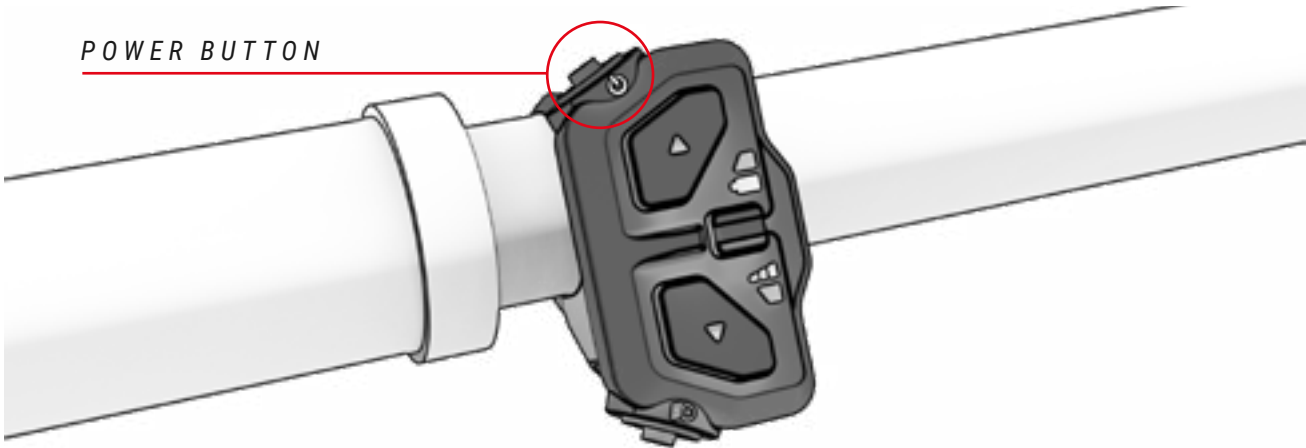
- If the control panel is off.
- When travelling at 25 km/h or faster.
- If you are not pedalling and the throttle function is released at 6 km/h.
- If there is no remaining battery capacity.
- If the assistance mode selected is 0% assistance.

ACTIVATION AND DEACTIVATION OF THE PEDAL-ASSIST SYSTEM

The pedal-assist system is activated using the power button located at the top of the control unit (see lower image). Pressing the power button once will start the system. The LEDs on the control unit will light up to indicate that the system has been turned on.

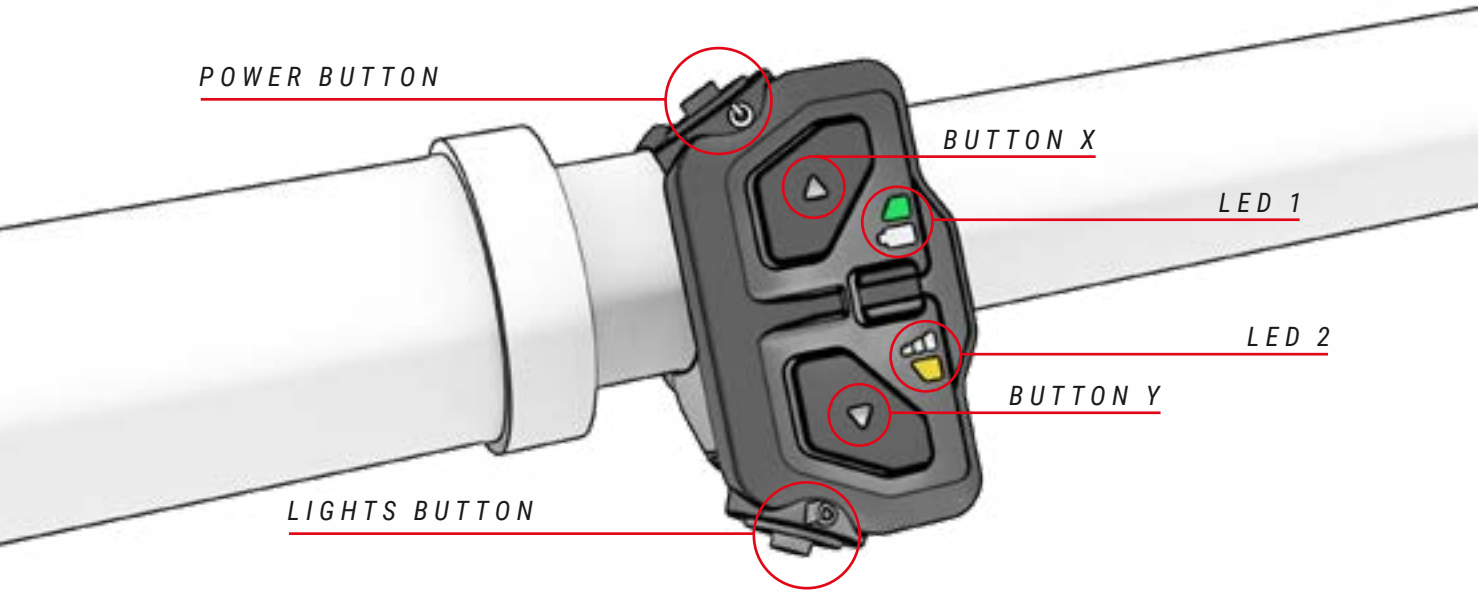
Similarly, to turn off the system, you need to hold down the power button for 3 seconds. The LEDs on the control unit will turn off, indicating that the system is disconnected

- ⚠ After turning on the system, be cautious when starting to ride without checking the assistance mode. By default, the unit starts in the assistance mode that was selected before it was last turned off.
- ⚠ Wait for 3 seconds after turning on the system before starting to pedal. During this 3-second period, the assistance system is initializing and calibrating the torque sensor. If you don't wait and start pedaling before this period ends, it could weaken the assistance, and you may even see error code 14 on the display (See Error Codes Section). To resolve it, you need to turn off and restart the system without pressing the pedals during the 3-second period.



PARTS OF THE CONTROL UNIT

The general control unit SW-EN600-L is located on the left side of the handlebar next to the grip. The control unit consists of 6 parts:



This manual only displays the main details of the SW-EN600-L control unit. Refer to the Shimano-specific manual for all the details:

<https://si.shimano.com/en/pdfs/um/0NM0A/UM-0NM0A-000-ENG.pdf>



ASSISTANCE TYPE

The pedal assistance system offers different modes for assistance, and here's how you can navigate through them:

- Boost Mode: Use this mode when you want to get the maximum power from the system.
- Trail Mode: Use this mode when you want progressive power based on your pedaling effort.
- Eco Mode: Use this mode when you want to travel as far as possible with assistance.
- No Assist: Use this mode when you want to ride without pedal assistance. You can still use other functions of the control unit.

Walk Assist: Use this mode when you need assistance in transporting the bike while not riding it.

To switch between the assistance modes, press the (X) button to increase the assistance level and the (Y) button to decrease it. The lower LED will change color to indicate the selected assistance mode



*BOOST
YELLOW*

*PISTA
GREEN*

*ECO
CLEAR BLUE*

*OFF
NO LIGHT*

*WALK ASSIST
DEEP BLUE*

In order to increase the battery's lifespan and prevent it from a complete discharge that could damage it, the assistance modes are limited based on the battery charge level:

- Battery charged above 20%: 100% of the maximum assistance level is available.
- Battery charged between 10 and 20%: assistance level limited to 50% of the maximum assistance level.
- Battery charged between 5 and 10%: assistance level limited to 25% of the maximum assistance level.
- Battery charged between 1 and 5%: no assistance is allowed. Only the lights can be turned on.

WALK ASSIST MODE

The control unit turns dark blue. Once the mode is active, release and press the Y button again for it to start assisting. You need to hold the button to receive assistance and release it to stop it.



*SELECTED
DEEP BLUE*



*ASSISTING
FLASHING DEEP BLUE*

*KEEP PRESSED
FOR ASSISTANCE*

START OF PEDALING

The user should position themselves on the saddle and firmly grip the handlebars before applying pressure to the pedals. Special attention should be paid if starting to pedal in a mode with higher assistance (TRACK and BOOST mode) because the motor will react with maximum thrust, posing a risk of loss of control. To facilitate acceleration, the motor provides an additional initial push as soon as pedaling begins. This makes the effort required to set the bike in motion minimal, helping to integrate into traffic more quickly and safely.

- ⚠ "Start pedaling with a lower gear (higher gears) and in a lower assistance mode (ECO Mode). In addition to greater control and safety on the bike, this will require less energy consumption and, therefore, provide greater range. It is advised that starting in a higher assistance mode (TRACK and BOOST modes) can pose a safety risk to the user.
- ⚠ When the user pushes the bicycle while walking alongside it, they should make sure that the system is turned off.

BATTERY CHARGE LEVEL DISPLAY

A full charge can provide up to 155km of range. The battery charge level can be displayed in three different ways: through the control unit, the internal battery, or a Garmin device. In all cases, the battery charge level indicator shows an estimate of the remaining battery capacity::

- **Remote control:** The upper LED on the control unit will indicate the charge level depending on the color and whether it's blinking:



*100-51%
GREEN*



*50-26%
FLASHING GREEN*



*25-11%
RED*



*10%+
FLASHING RED*

- ⚠ The system's range will vary depending on, among other factors, the following riding conditions: frequent starts and stops, gear ratio, steep inclines, poor road conditions, heavy cargo loads, strong headwinds, low ambient temperature, battery deterioration, use of integrated lighting, improper tire pressure, chain, or brakes adjustment

- **Battery:** the button located on the top of the battery has a LED ring that indicates the battery's charge level by displaying different colors:



- **Garmin Device:** Garmin devices also allow you to view the battery level on their own interface:



DISPLAY OF XPRO+ BATTERY CHARGE LEVEL

The external XPRO battery increases the range from the standard 130km to 175km. By pressing the XPRO battery button, a ring of light will illuminate around it. This ring will indicate, depending on the color displayed, the battery percentage range in which the XPRO is currently. Green 100-75%, blue 75-50%, yellow 50-25%, red 25-10%, and flashing red 10-0%.



BATTERY CHARGING

Due to its advanced Ion-Lithium technology, it is not necessary to wait for the battery to fully discharge before connecting it to the charger. Likewise, it is not necessary to charge it to 100% before you can use it again. However, please note that, in order to achieve maximum range, it is advisable to proceed with a full charge.

The battery can be charged whether it is inside the bicycle or removed from the frame. Below are the steps to correctly charge the battery in both cases:

BATTERY AND CHARGER

The battery equipped in your BH contains lithium-ion cells, representing the most advanced technology in terms of energy density (energy stored per kilogram of weight and per cubic centimeter of volume).

Lithium-ion batteries have the following characteristics:

Their performance decreases in extremely hot or cold environments.

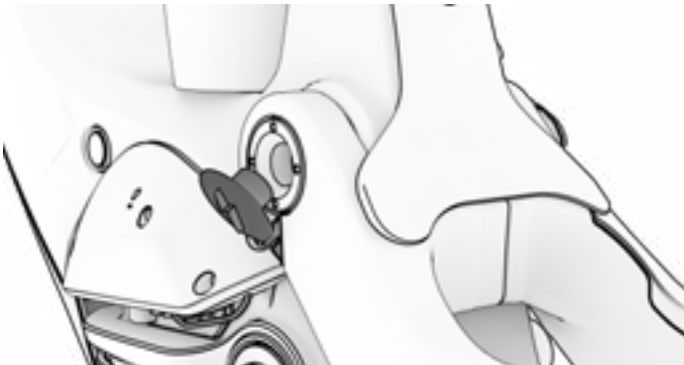
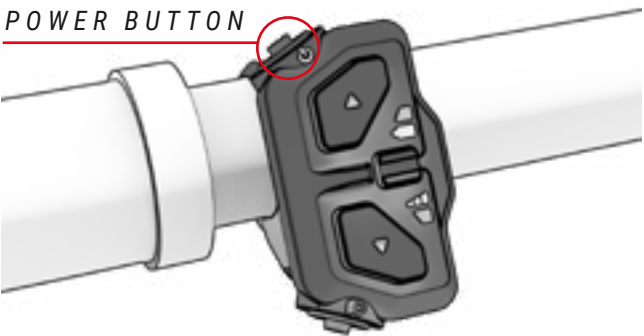
An additional feature of BH's Lithium-Ion batteries is that they lack a "memory effect" and are not affected by incomplete discharges.

They naturally and progressively lose their charge with use. The battery can be fully discharged (100%) approximately 500 times, with a maximum battery deterioration of 20%. In the case of partial discharges, only the discharged portion is considered. For example, if we recharge the battery every time its charge level drops by 25%, we can charge it to 100% of its initial capacity up to 2,000 times. In conclusion, the guaranteed durability of the battery with a maximum degradation of 20% amounts to at least 20,000 km.

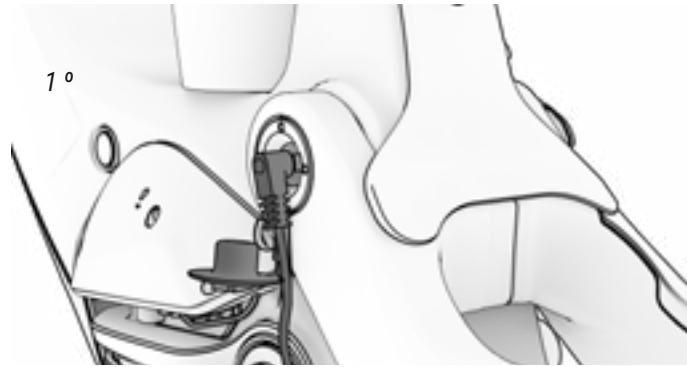
CHARGING FROM THE SWINGARM CHARGING PORT

1. TURN OFF THE PEDAL ASSISTANCE SYSTEM

2. OPEN THE CAP OF THE SWINGARM CHARGING PORT



3. CONNECT THE CHARGER FIRST TO THE CHARGING PORT AND THEN TO THE POWER OUTLET.



4. VIEW THE CHARGE STATUS AND ERRORS

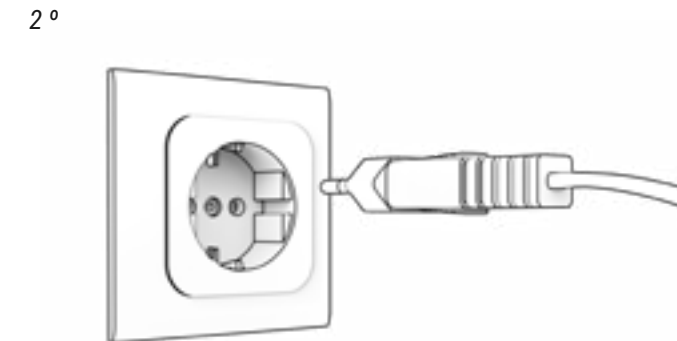
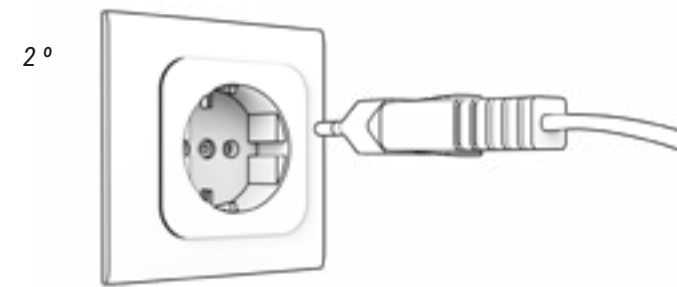


 100% CHARGED	 CHARGING
 STANDBY (FLASH)	 ERROR (FLASH)

5. ALWAYS DISCONNECT THE CHARGER FROM THE CHARGING PORT FIRST AND THEN FROM THE POWER SOURCE

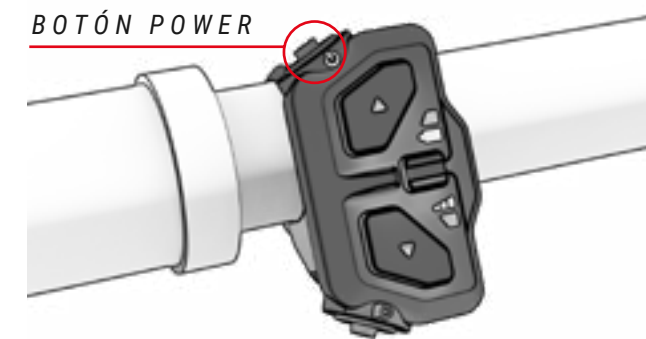


6. CLOSE THE CAP OF THE SWINGARM CHARGING PORT

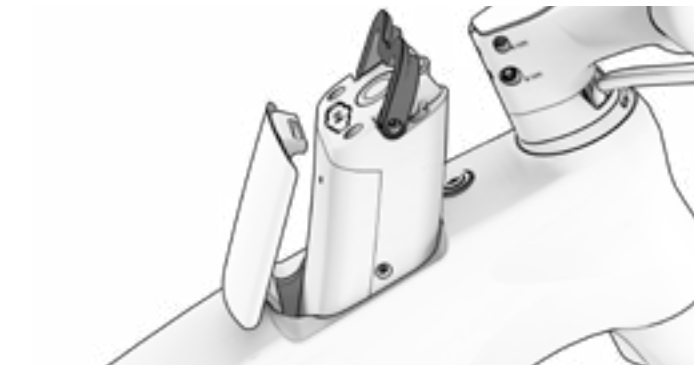


CHARGING FROM THE BATTERY CHARGING PORT.

1. TURN OFF THE PEDAL ASSISTANCE SYSTEM.



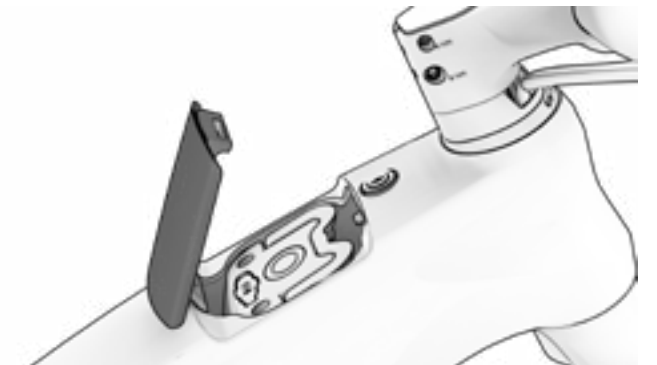
3. LIFT THE HANDLE TO REMOVE IT OR LEAVE IT INSIDE THE FRAME



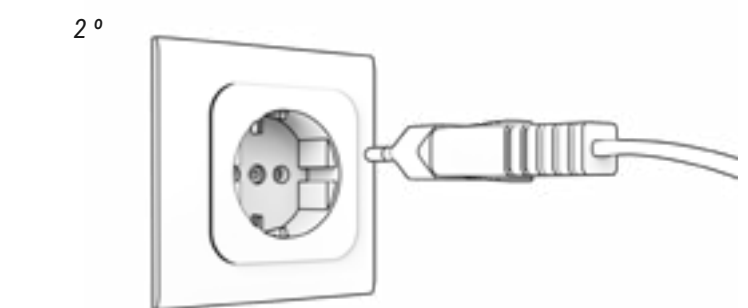
4. CONNECT THE CHARGER TO THE BATTERY FIRST AND THEN TO THE POWER OUTLET.



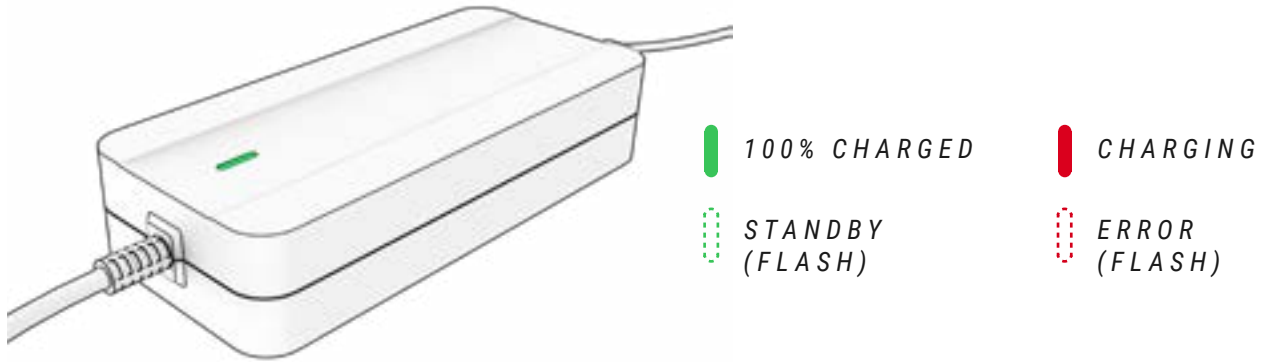
2. OPEN THE FRAME COVER THAT PROVIDES ACCESS TO THE BATTERY



3. LIFT THE CAP OF THE CHARGING PORT.



5. VIEW THE CHARGE STATUS AND ERRORS

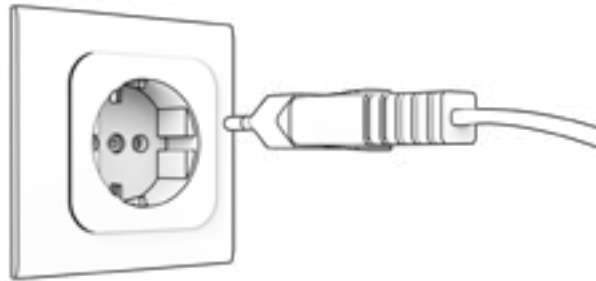


6. ALWAYS DISCONNECT THE CHARGER FROM THE BATTERY FIRST AND THEN FROM THE POWER SOURCE.

1°



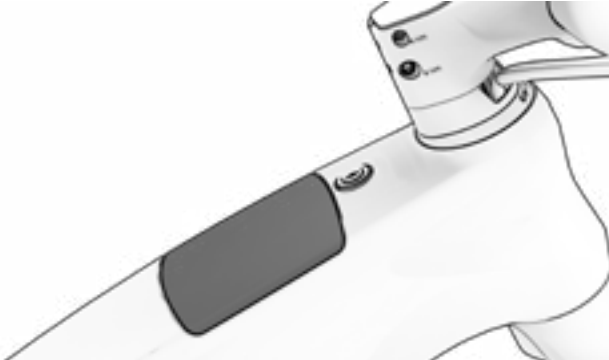
2°



7. CLOSE THE CAP OF THE BATTERY CHARGING PORT



8. INSERT THE BATTERY INTO THE FRAME AND CLOSE THE TOP COVER.

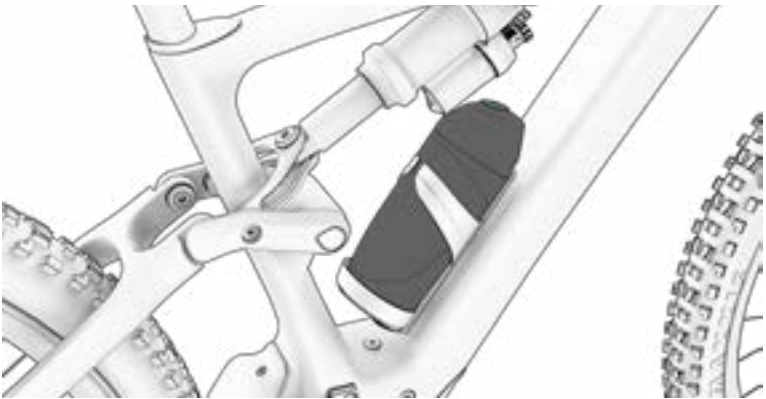


- ⚠ Never charge or use a damaged battery.
 - ⚠ Be cautious and do not touch the charger during the charging process. It can become very hot, especially in high ambient temperatures.
 - ⚠ If a failure occurs during battery charging, unplug the charger power plug from the outlet and wait until the battery cools down.
 - ⚠ Never touch the power plug, charging plug, or contacts with wet hands.
 - ⚠ Ensure there is no foreign matter on the battery contacts before inserting it into the bicycle.
 - ⚠ Do not connect the charger power plug to the battery or bicycle charging port if it is wet or damp. Make sure to connect the power plug only after the battery or bicycle charging port has dried completely.
 - ⚠ Do not apply excessive force on the power plug or pull the cable with the power plug connected to the battery.
-
- ⚠ Turn off the pedal-assist system before removing the battery from its location on the bicycle.
 - ⚠ Use both hands to remove the battery from its location, being careful not to drop it. Dropping the battery on your foot can cause injuries and may damage the battery

XPRO+ BATTERY

The additional or extended XPRO battery allows for an increase in the bicycle's range. It is an external 180Wh battery in the shape of a water bottle, which fits into the specific bottle holder, which must be installed and connected to the system by an authorized store. Once the bottle holder is installed, the external battery connects to the system simply by inserting it into the bottle holder. In other words, it is a Plug&Ride battery that does not require any additional connection or work for its operation.

- ⚠ The XPro+ battery designed to power Shimano motors is not compatible with the XPro batteries designed for BH motors.



XPRO BATTERY CHARGING AND DISCHARGING

The XPro battery will only charge if it is in the XPro bottle holder, the bicycle is charging, and the iRemote is turned on. When starting the charging process, if the internal battery is below 15% charge, the display will not turn on. During charging, if the XPro battery is connected and the internal battery reaches 15% charge, they will charge in parallel. The system will automatically switch between the two batteries (there will be a 2-3 second interruption during the switch between battery usage).

During bicycle usage, the XPro battery and the internal battery will discharge in parallel as long as the internal battery is below 80%, providing assistance of up to 100% until the battery charge level reaches 0%

XPRO BOTTLE HOLDER

The bottle holder contains a connector that is designed to be waterproof, thus ensuring the protection of the system. Therefore, the user can mount a conventional water bottle in the bottle holder or leave it empty.

MENERGY SAVING MODES

The battery has been designed to ensure a long service life, thanks to energy-saving modes that prevent inefficient battery consumption:

- **Transport mode:** In order to minimize internal consumption during the transportation of the bicycle from the factory to the store, the battery is in Transport Mode. The user can permanently exit this Transport Mode by fully charging the battery before the first use.

If the battery is not fully charged, Transport Mode will not be deactivated, and it will enter it quickly for protection. Remember to fully charge the battery to permanently deactivate this Transport Mode.

- **Stand By mode:** In order to minimize internal consumption, the battery automatically enters Standby Mode. This happens automatically when the system does not detect charging, discharging, or communication with the battery for a period of 10 minutes. For example, this mode will automatically turn off the bicycle's control unit after 10 minutes of inactivity, in case the user left it on after parking.

The user can exit Standby Mode by simply turning on the bicycle's control unit.

- **Deep Sleep:** In order to protect the battery during long periods of inactivity or storage (for example, during the winter), the battery automatically enters a Hibernation or Deep Sleep mode. This happens automatically under the following circumstances:
 - If the battery charge is less than 1%, the battery enters Hibernation or Deep Sleep mode when the battery is in Standby mode continuously for 10 minutes.
 - If the battery charge is less than 10%, the battery enters Hibernation or Deep Sleep mode when the battery is in Standby mode continuously for 48 hours.
 - If the battery charge is less than 40%, Hibernation or Deep Sleep mode is activated when the battery is in Standby mode continuously for 3 days.
 - If the battery charge is less than 80%, Hibernation or Deep Sleep mode is activated when the battery is in Standby mode continuously for 5 days.

The user can exit this Hibernation or Deep Sleep mode by pressing the SOC button (charge level check) on the battery for 5 seconds or by starting the battery charging with the charger. Two flashes with all LEDs in Standby mode and one flash in Hibernation or Deep Sleep mode will be displayed

APP SHIMANO ETUBE PROJECT

The specific Shimano Etube Project app allows, among other things, customizing the level of assistance for each pedal-assist mode. This manual describes the main features and functionalities of this app. For more information, refer to Shimano's specific user manual via the following link:

<https://si.shimano.com/en/um/7J4MA>

This app also serves to update the firmware of components and diagnose problems in case of anomalies.

The app is available for download on both Google Play and the Apple Store. Once downloaded, follow these steps to start using it:

Open the app on your smartphone.

Register your e-bike.

Select the unit to pair. Press a button on the control unit to activate the connection if it's not available.

Register the bike with the password of your choice.

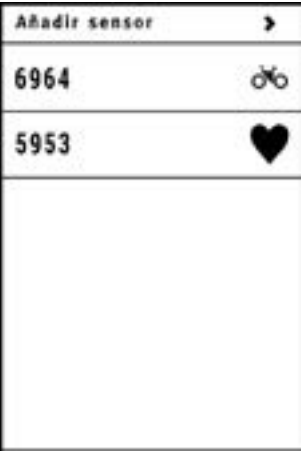
After completing the registration process, you can change the pedal-assist level and configure up to two profiles with specific pedal-assist settings for each. Profile 1 will be the default, but you can switch between profiles from the display itself:

<https://si.shimano.com/en/pdfs/um/7J4MA/UM-7J4MA-008-ENG.pdf>

OPERATION WITH GARMIN DEVICE

The ANT+ connection to a Garmin device grants you access to additional assistance display and control functions. The Heart Rate strap connects via the Garmin device. The steps that must be followed to connect iRemote to the Garmin device are described below. The image in the sixth step shows that the Garmin device can be used to check the bicycle's battery status and to select the desired pedal assistance level.

1. PRESS "ADD SENSOR".



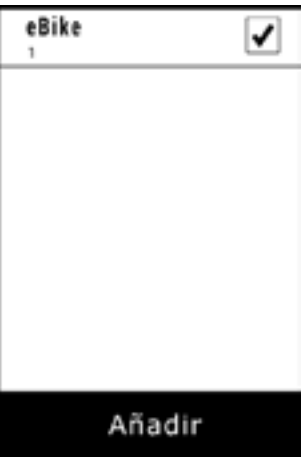
2. PRESS "EBIKE".



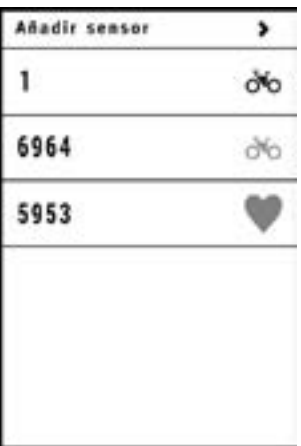
3. PAIRING WITH GARMING.



4. SELECT THE EBIKE.



5. SELECT THE CREATED SENSOR.



6. GARMIN CONECTED.




ELECTRIC SYSTEM UPDATE

System electrical updates are performed through the Shimano Etube app when connected to your bicycle via Bluetooth. If the update process is interrupted for any external reason, such as an incoming call on your mobile phone, it will be necessary to take the bicycle to an authorized dealer to install the update correctly.

The complete manual for the app can be consulted at the following link:

<https://si.shimano.com/en/um/7J4MA>

It is recommended that as part of regular maintenance or repairs with an authorized dealer, the status of updates is checked and necessary actions are carried out.

 Please remember that some actions require advanced knowledge, and incorrect handling can lead to serious accidents. In addition, improper manipulations are not covered by the warranty

PEDAL ASSIST SYSTEM ERRORS

The lower LED on the control unit will flash red if the system detects an error. When an error occurs, Shimano recommends taking the following steps to try to resolve the problem:

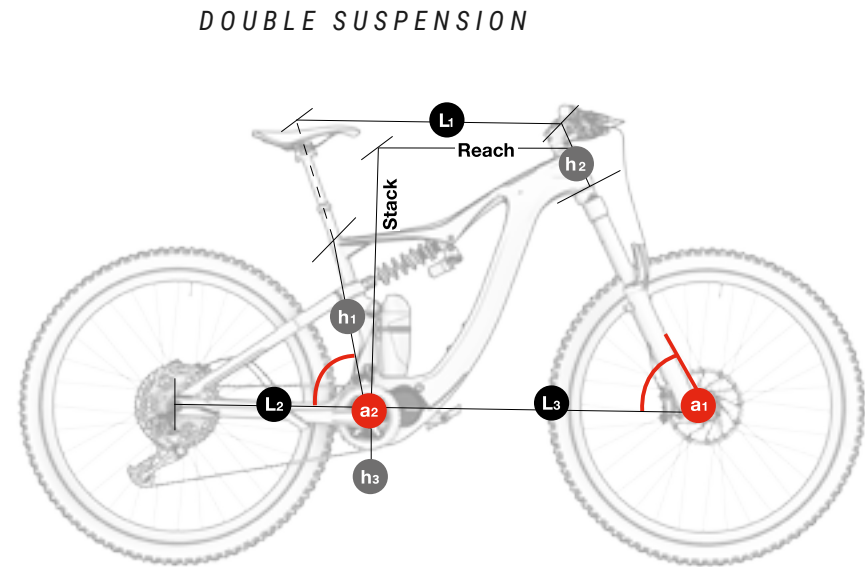
- Turn off the power and then turn it back on.
- Remove the battery and reconnect it.

If the error persists, visit an authorized BH dealer. Additionally, you can check Shimano's website for possible errors and their solutions:

<https://si.shimano.com/en/error>



07 SIZES AND MEASUREMENTS



ES893 / ES883 / ES873
ILYNX+ TRAIL

	h1	h2	h3	L1	L2	L3	a1	a2	Stack	Reach
SM	400	95	338	581	440	749	66	77	595	433
MD	420	100	338	606	440	773	66	77	600	458
LA	440	110	338	628	440	793	66	77	610	478
XL	480	125	338	649	440	810	66	77	623	495

ES993 / ES983 / ES973
ILYNX+ ENDURO

	h1	h2	h3	L1	L2	L3	a1	a2	Stack	Reach
SM	400	95	349	583	440	754	65	76	612	430
MD	420	100	349	608	440	779	65	76	616	455
LA	440	110	349	630	440	799	65	76	626	475
XL	480	125	349	651	440	816	65	76	639	492

08 TECHNICAL SPECIFICATIONS

Feature	Model		Specification
Frame material			
Front triangle	All		Carbon
Swingarm (chainstays and seatstays)	All		Carbon
Linkage	All		Aluminum
Recommended use	All		Trail-Enduro
Sizes	All		S, M, L, XL
Suspension design	All		Double, system Split Pivot
Fork reach	All		140-160
Maximum fork length (axle to crown)	All		580mm
Fork offset	All		Contact the manufacturer
Shock absorber measurements	All		Contact the manufacturer
Compatibility with coil shock absorbers	All		It depends on the measurements of the shock absorber and spring. Please consult with the manufacturer.
Headset	All		1.5" - 1 1/8" Steerer
Chain line	All		57mm
Tyre size	All		29"
Maximum rear tire size	All		2.4" (61mm)
Maximum front tire size	All		It depends on the fork
Speed sensor installation	All		Center Lock rotor. In brake disc
Rear axle standard	All		Boost 12x157
Rear axle thread pitch	All		1mm

GENERAL SPECIFICATIONS

Feature	Model	Specification
Rear axle length	All	200mm
Seatpost diameter	All	31.6mm
Seatpost clamp diameter	All	Integrada
Maximum seatpost insertion		
S	All	200mm
M	All	220mm
L	All	240mm
XL	All	240mm
Compatible with internally routed dropper post	All	Si
Front derailleur	All	No. Only 1X
Maximum chainring size	All	38t
Minimum chainring size	All	34t
Compatible with oval chainring	All	No
Brake type	All	Disc
Rear brake pad standard size	All	Post Mount
Rear brake disc maximum size	All	203mm
Rear brake disc minimum size	All	180mm
Compatible guía cadena	All	Yes
ICGS	All	No
Cable routing	All	Internal throught DT and CS. Full housing
Compatible with left rear brake cable routing	All	Yes
Bottle cage	Yes	All sizes. Standard bottle cage
Power meter compatibility	Yes	No
Compatible with trailer	Yes	No

Feature	Model	Specification
Rack mounting	All	No
Fender mounting	All	No
Seat for kids mounting	All	No
Recommended maximum weight (rider+gear+luggage)	All	165Kg

SPECIFICATIONS OF THE SHIMANO DU-EP801 MOTOR

Feature	Specification
Nominal power	250W
Voltage	36V
Type	Brushless DC
Assistance	Up to 25km/h
Maximum torque	85Nm
Weight	2700g
Pedal assist modes	ECO TRAIL BOOST WALK ASSIST
Walk assist	Yes (press the Y button for 1 second to activate and hold it to assist)
Cadence rang	130/min.
Sensors	Cadence/Speed/Torque
System technology	CAN bus y ACC

SPEED SENSOR SPECIFICATIONS

Feature	Specification
Assembly	Integrated into the left chainstay. Internal cable routing
Magnet	On the brake disc

SPECIFICATIONS OF THE SHIMANO SW-EN600-L CONTROL UNIT

Feature	Specification
Functions	Turning the pedal assist system on and off.
	Changing assist mode.
	Displaying battery charge level.
	Turning the bike lights on and off.
	Activating Walk Assist mode.

BATTERY SPECIFITACIONS

Feature	Specification
Voltage	36V
Capacity	540WH
Weight	2690g
Cell type	10S3P
Charge	With the battery inside or outside the frame
Dimensions	244*508*69mm
Conection	Motor cable and charge port cable
Sealing	IP65

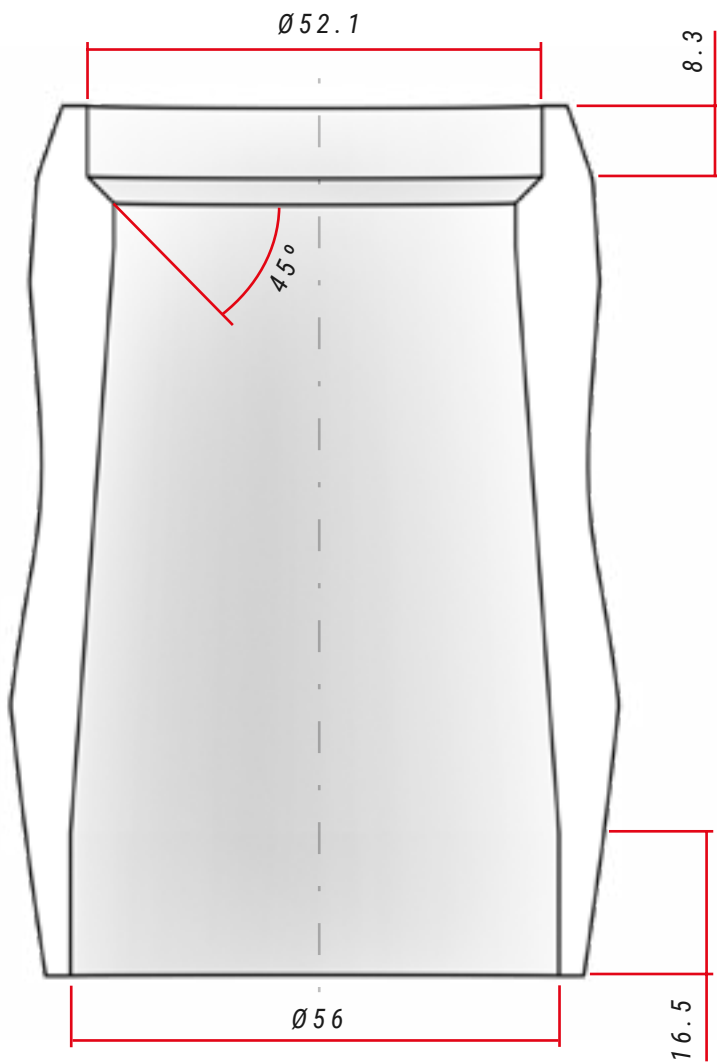
CHARGER SPECIFICATIONS

Feature	Specification
Input	100-240V. 50-60Hz. AC
Output	42V
Charging current	4A
Charging temperature range	0°C - 40°C
Charge display	Through LED integrated in charger

EXTERNAL BATTERY SPECIFICATIONS

Features	Specification
Voltage	36V
Capacity	180WH
Weight	1000g
Cell type	10 (10S1P)
Charge	With the battery in the bottle cage and the bike turned on
Dimensions	L192, Ø73 mm
Conection	With the motor cable
Seal	IP65

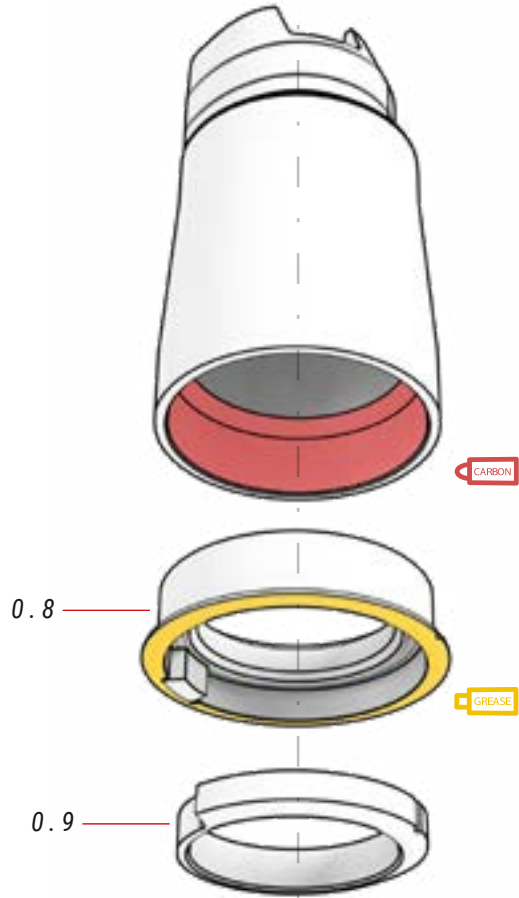
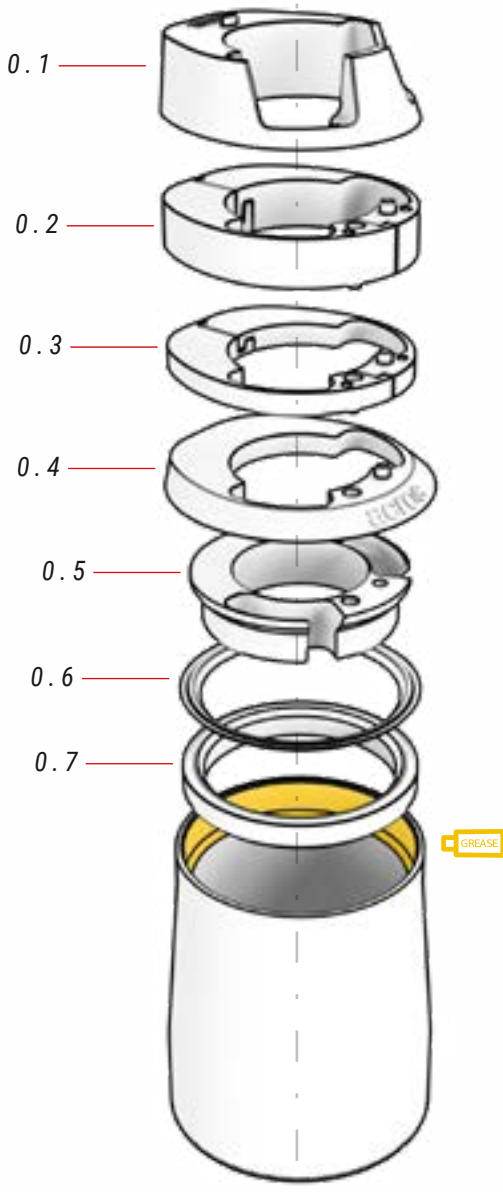
HEAD TUBE DIMENSIONS



SPECIFICATIONS OF THE HEADSET

	Type	Contact angle with compression ring/ fork race	Bearing dimensions
Top	1-1/8" Steerer	45°	42x52x7
Bottom	1,5" Steerer	45°	40x52x7, R2

HEADSET ASSEMBLY



⚠ Piece 0.8 can be installed with the notch facing the frame, but piece 0.9 should always be installed according to the position of the first one, as shown in the images.

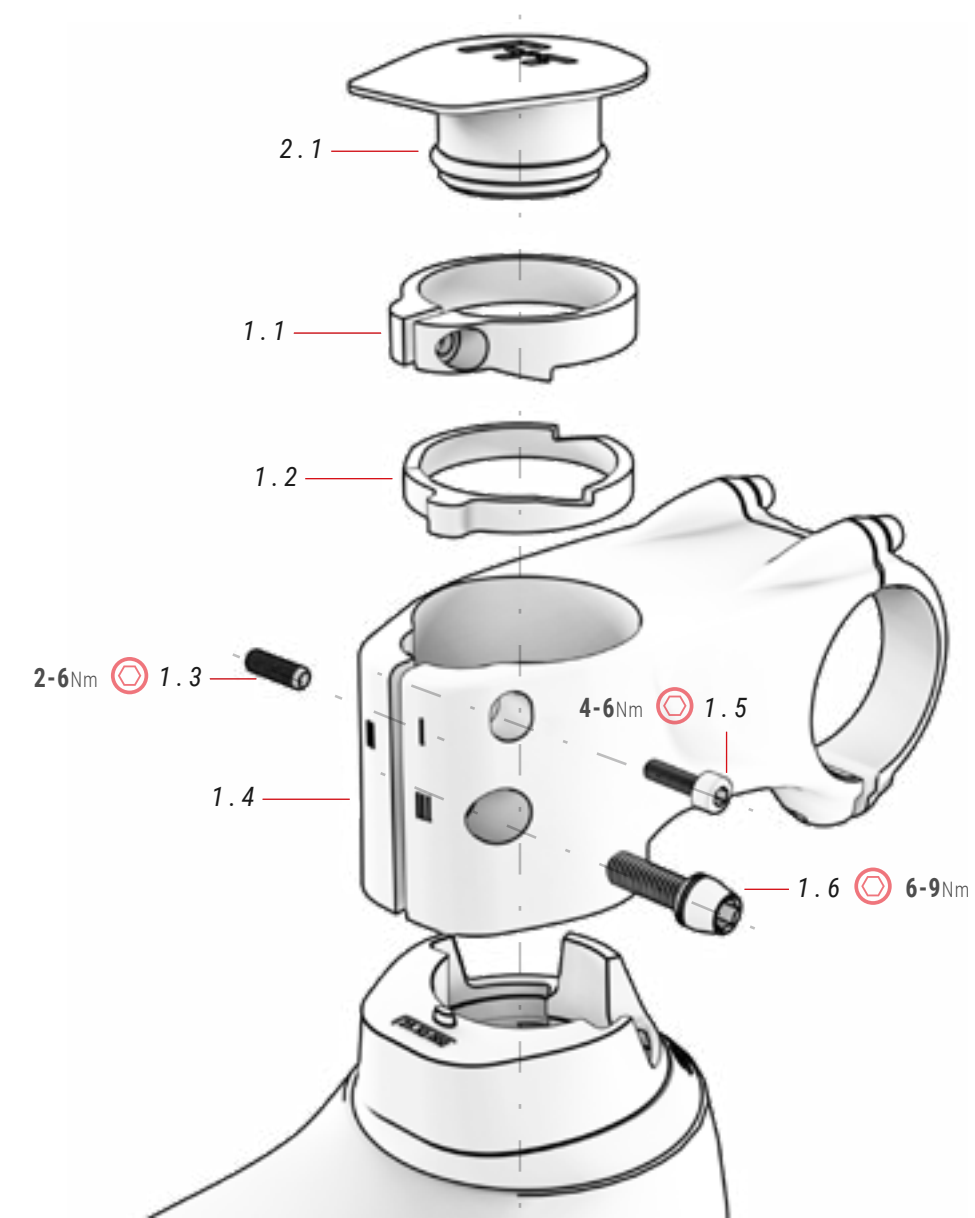
00 HEADSET

ref.: 383260100

N°	Item	Qty
0.1	Top cap, cable routing insert	1
0.2	10mm spacer (2 pieces)	1
0.3	5mm spacer (2 pieces)	1
0.4	Headset cap	1
0.5	Cable routing ring	1

N°	Item	Qty
0.6	Seal ring	1
0.7	Angle bearing 42x52x7	1
0.8	Angular contact bearing 40x52x7 / Block-Lock spacer	1
0.9	Base plate 1.5", Block-Lock	1

STEM INSTALLATION



01 FIT STEM

ref.: 384612600

N°	Item	Qty
1.1	Top washer	1
1.2	Bottom washer	1
1.3	Stem bolt	1
1.4	FIT Stem	1

VIDEO WITH BH FIT ASSEMBLY



0

<https://youtu.be/hJOCCBBYKQk>

⚠ Thanks to the washer system (1.1 and 1.2), the FIT.1 stem eliminates play without using a spider. Follow all the steps described in the video carefully to correctly install the stem and avoid accidents.

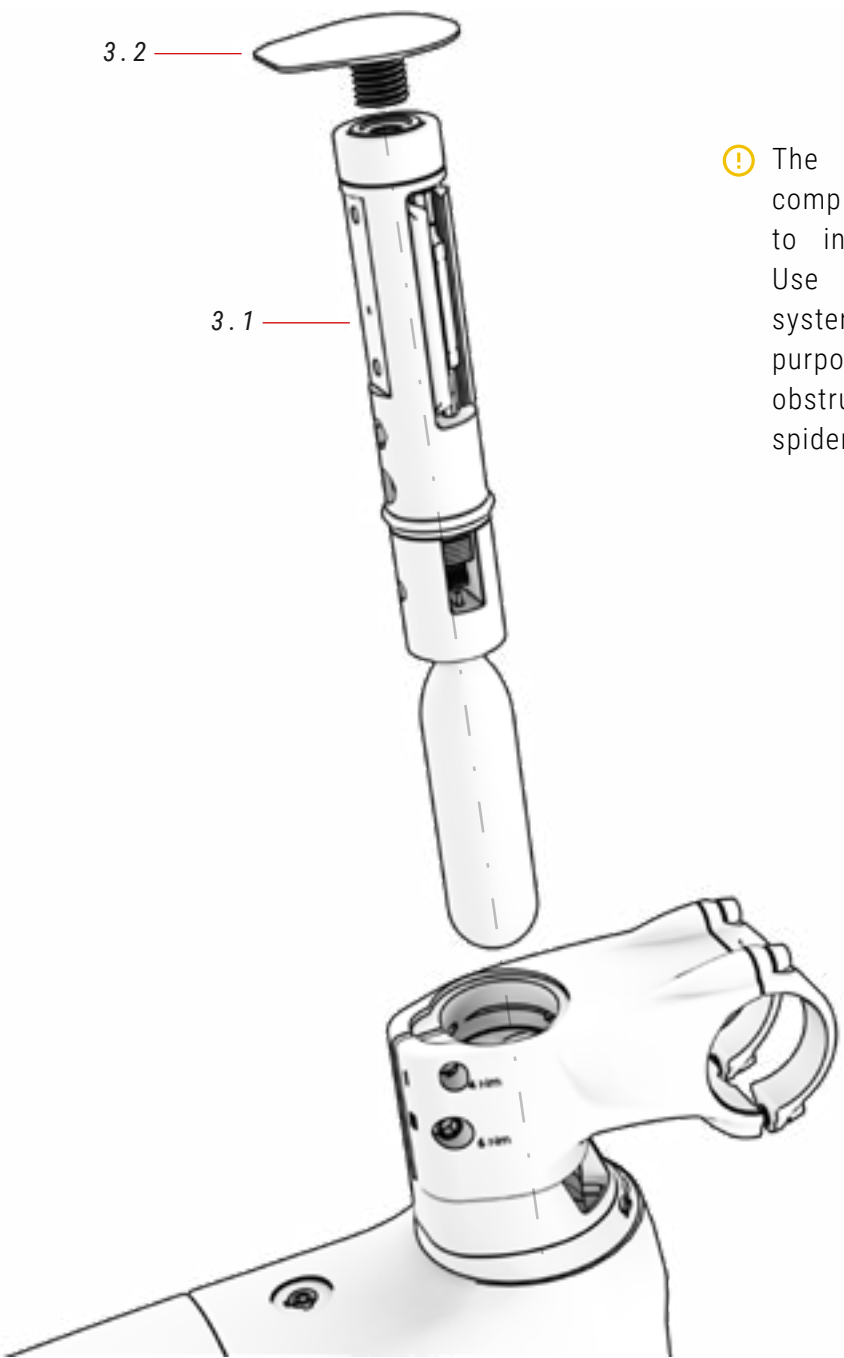
N°	Item	Qty
1.5	Screw	1
1.6	Screw	1

02 FIT STEM CAP

ref.: 363293900

N°	Item	Qty
2.1	FIT Stem cap	1

BH FIT TOOL ASSEMBLY

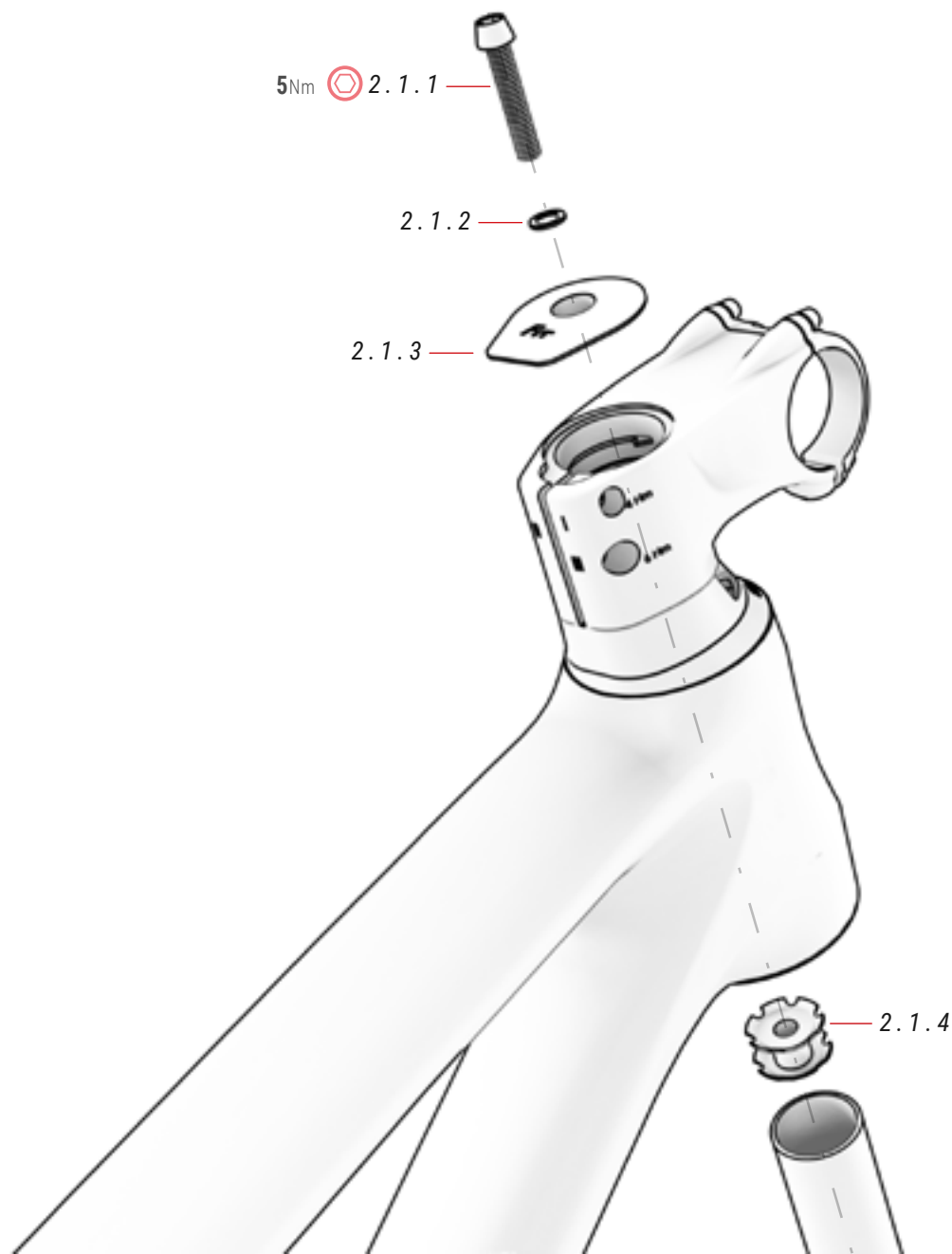


⚠ The headset must be completely empty inside to install the FIT tool. Use the FIT washer system designed for this purpose and remove any obstructions, such as the spider in the steerer tube.

03 FIT

N°	Item	Qty
3.1	FIT (sold separately)	1
3.2	FIT thread cap	1

STEM INSTALLATION WITH SPIDER



2.1 CAP AND SPIDER FIT ref.: 363297300

N°	Item	Qty
2.1.1	Screw	1
2.1.2	Washer	1

N°	Item	Qty
2.1.3	FIT Cap with Spider	1
2.1.4	Spider	1

The innovative washer system of the FIT stem allows you to eliminate play in the headset while keeping the steerer tube clear for installing the FIT tool. If you choose not to install the FIT tool, the FIT stem allows you to assemble the headset with the traditional spider system. Below are the steps to follow for assembling the headset using the spider system:

⚠ Not following the steps described in this section correctly can lead to a serious accident. Make sure to apply the specified torque to each screw.

1. INSERT THE SPIDER INTO THE STEERER TUBE OF THE FORK.



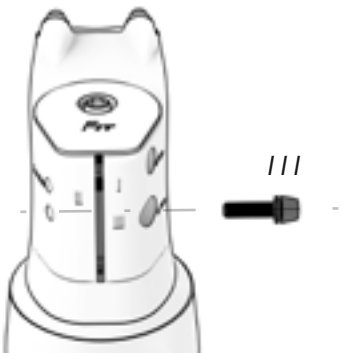
⚠ It is recommended to use a mallet to ensure that the spider is inserted into the steerer tube perfectly aligned.

2. INSERT THE FORK INTO THE HEAD TUBE AND TIGHTEN THE UPPER SCREW (5NM) TO ELIMINATE PLAY.



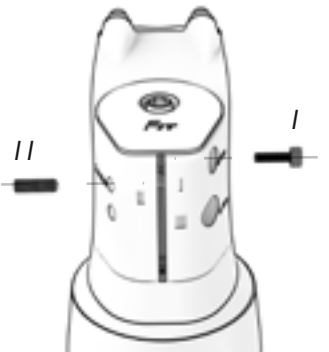
⚠ The washers will not serve any purpose when adding the spider. Therefore, you can choose to remove them or store them inside the stem.

3. TIGHTEN SCREW "III" ON THE STEM TO SECURE THE ENTIRE HEADSET.



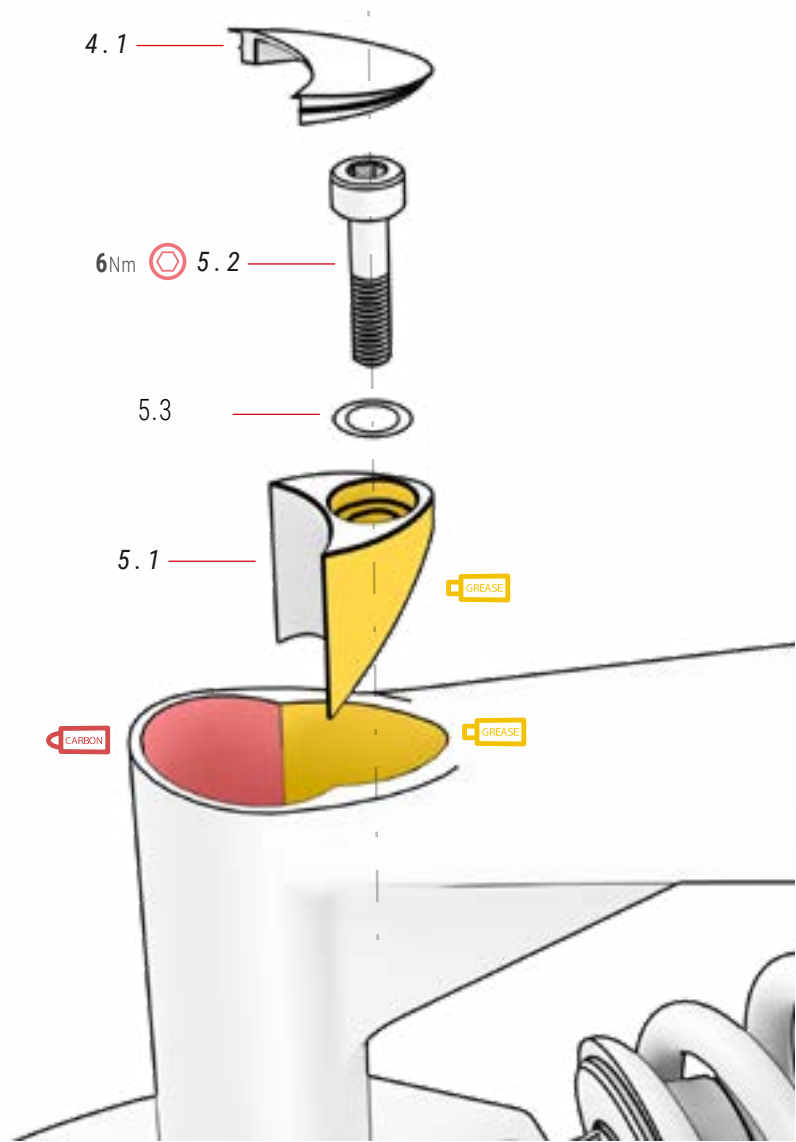
⚠ The stem should be perfectly aligned with the wheel.

4. IF YOU DO NOT REMOVE THE WASHERS, TIGHTEN SCREW "I" FIRST, AND THEN "II". TO DISASSEMBLE THE STEM, START BY REMOVING SCREW "II"



⚠ The goal of tightening the screws is to prevent the washers from moving. Therefore, do not apply too much torque.

SADDLE SEATPOST INTEGRATED CLAMP ASSEMBLY



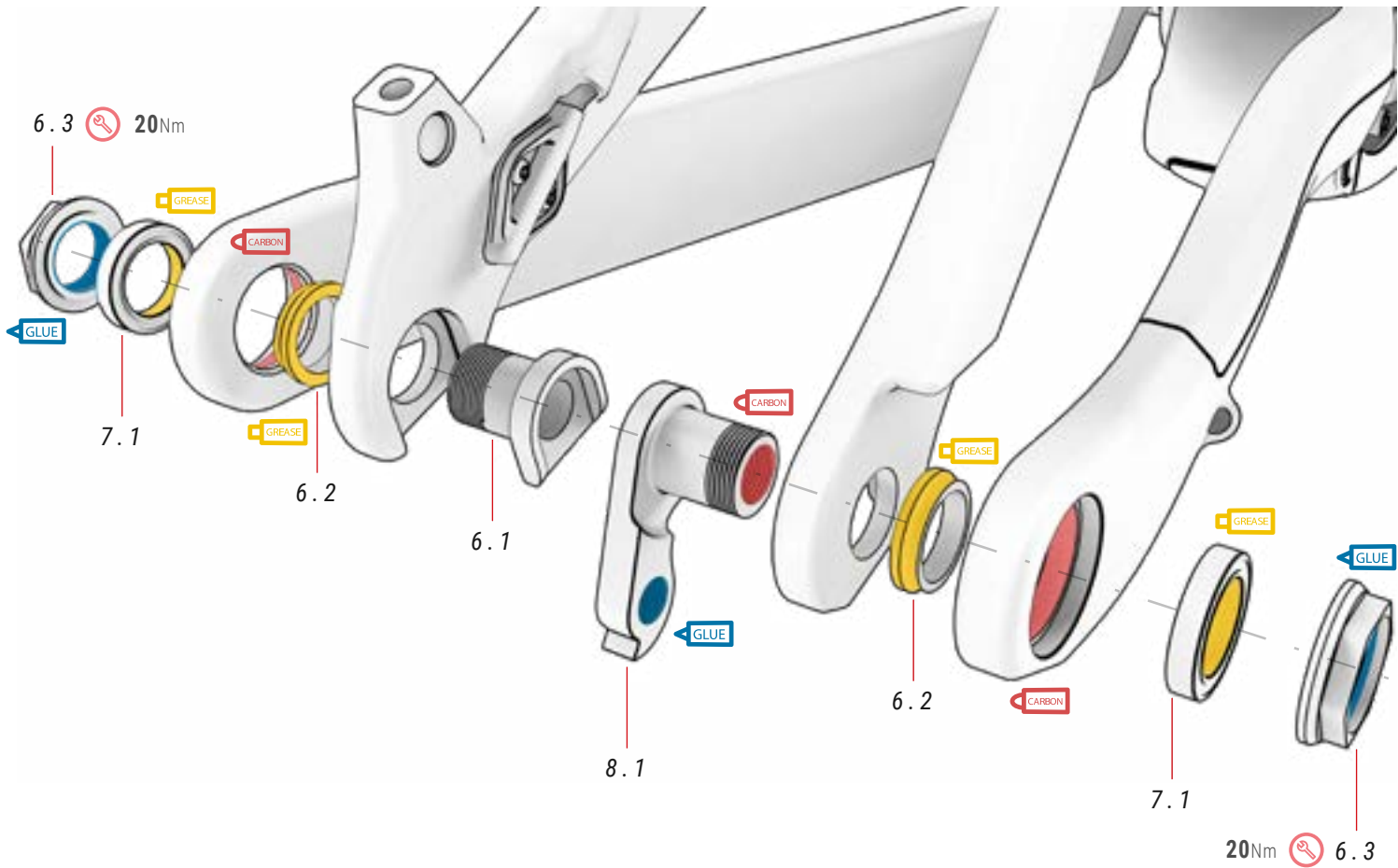
04 SEATPOST CAP *ref.: 391803400*

N°	Item	Qty
4.1	Seatpost cap	1

05 SEAT CLAMP *ref.: 386132900*

N°	Item	Qty
5.1	Clamp	1
5.2	Screw	1
5.3	Washer	1

SPLIT PIVOT REAR AXLE AND DERAILLEUR HANGER



06 SPLIT PIVOT PARTS *ref.: 381552200*

N°	Item	Qty
6.1	Screw set	1
6.2	Washer	2
6.3	Screw Dropout	2

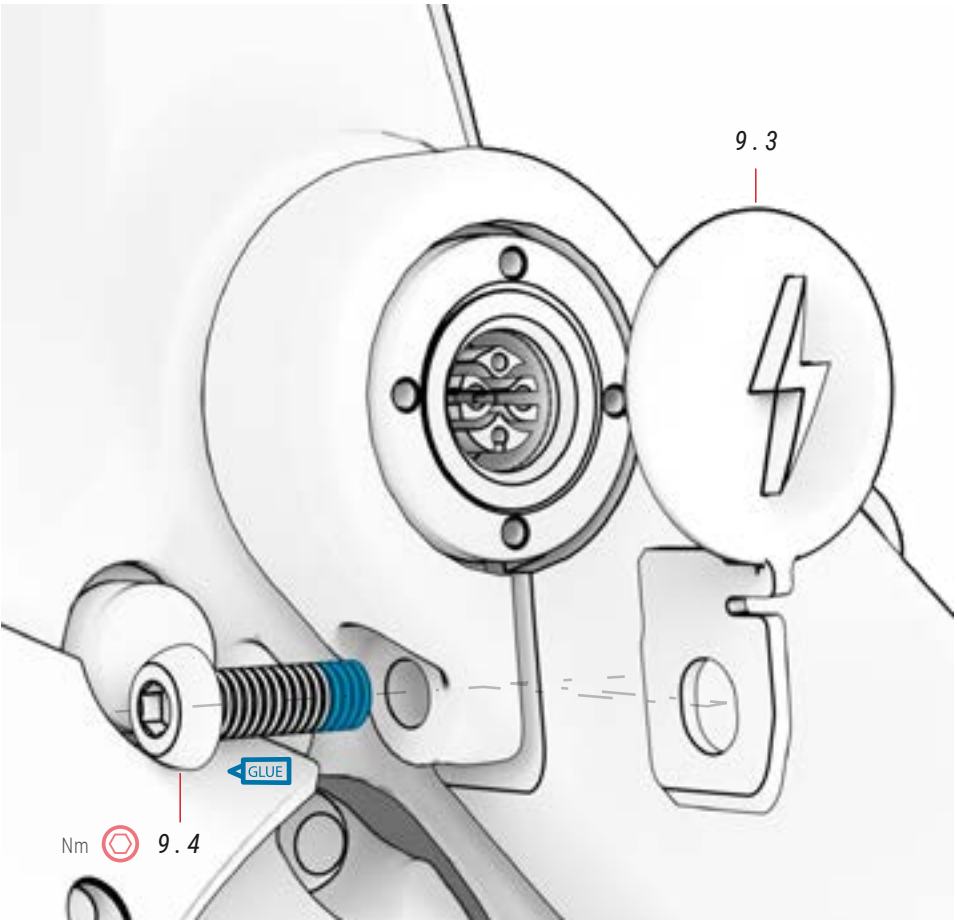
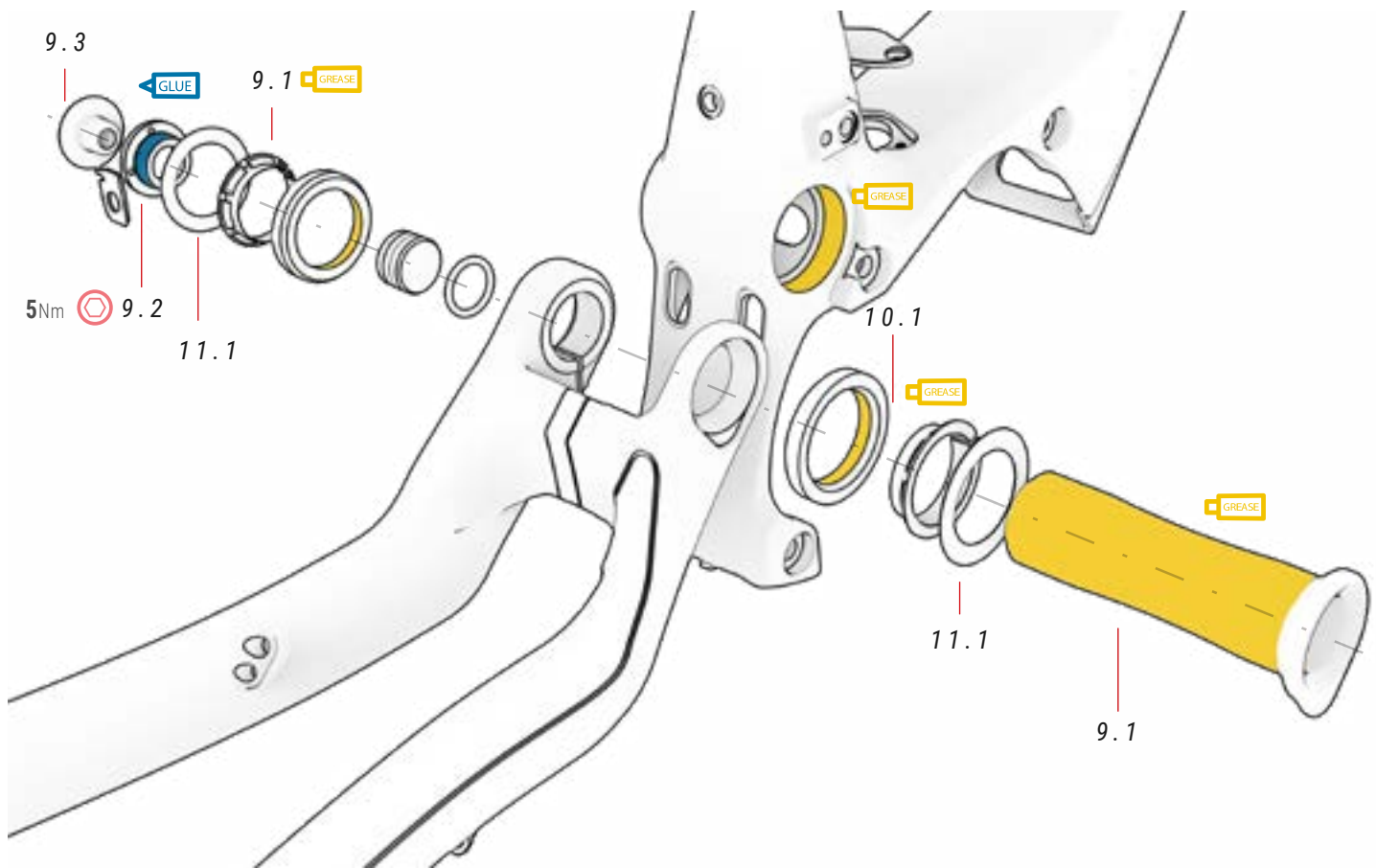
07 BEARING DROPOUT *ref.: 381215500*

N°	Item	Qty
7.1	Bearing Dropout	2

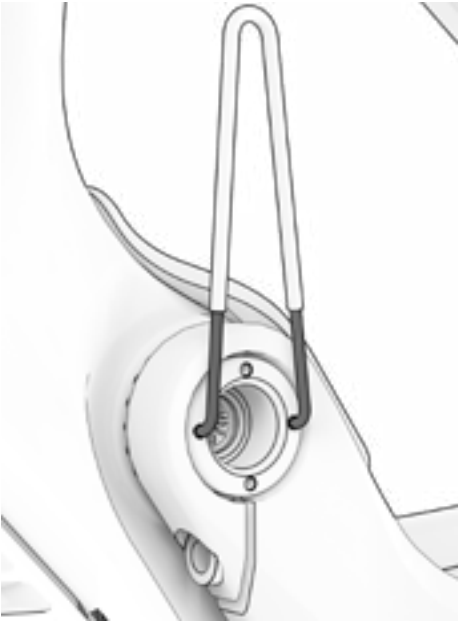
08 REAR HANGER *ref.: 381551800*

N°	Item	Qty
8.1	Rear hanger	1

MAIN PIVOT POINT OF THE SWINGARM



⚠ To assemble or disassemble piece 9.2, always loosen screw 15.2. Piece 9.2 has been designed to be screwed and unscrewed using a "Pin Spanner" or a similar tool. Hole diameter is 2.4mm



⚠ Piece 9.2 should not be tightened to more than 5 Nm as its function is to eliminate play. Piece 15.2 will secure piece 9.2 completely.

09 SWINGARM AXLE *ref.: 381552600 (9.1 y 9.2)*
ref.: 381552700 (9.3 y 9.4)

Nº	Item	Qty
9.1	Thru axle	1
9.2	Bolt	1
9.3	Cap	1
9.4	Screw	1

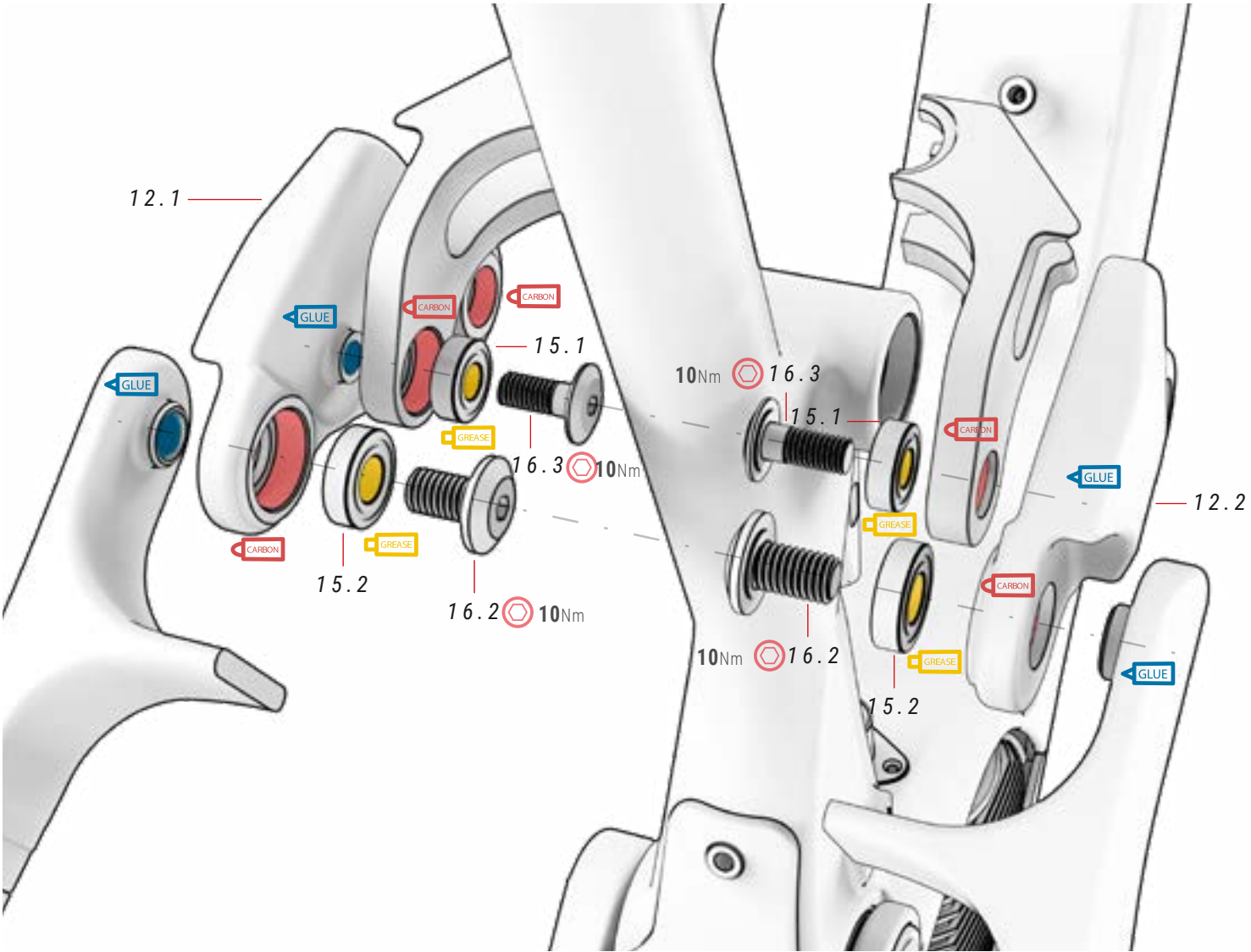
10 BEARINGS *ref.: 381552800*

Nº	Item	Qty
10.1	Bearings	2
10.2	Washers	2

11 MAIN PIVOT WASHER

Nº	Item	Qty
11.1	Washer 26x37x0.5	2

DISASSEMBLY OF THE LINKAGE



15 BEARINGS

ref.: 381216300 (15.1)

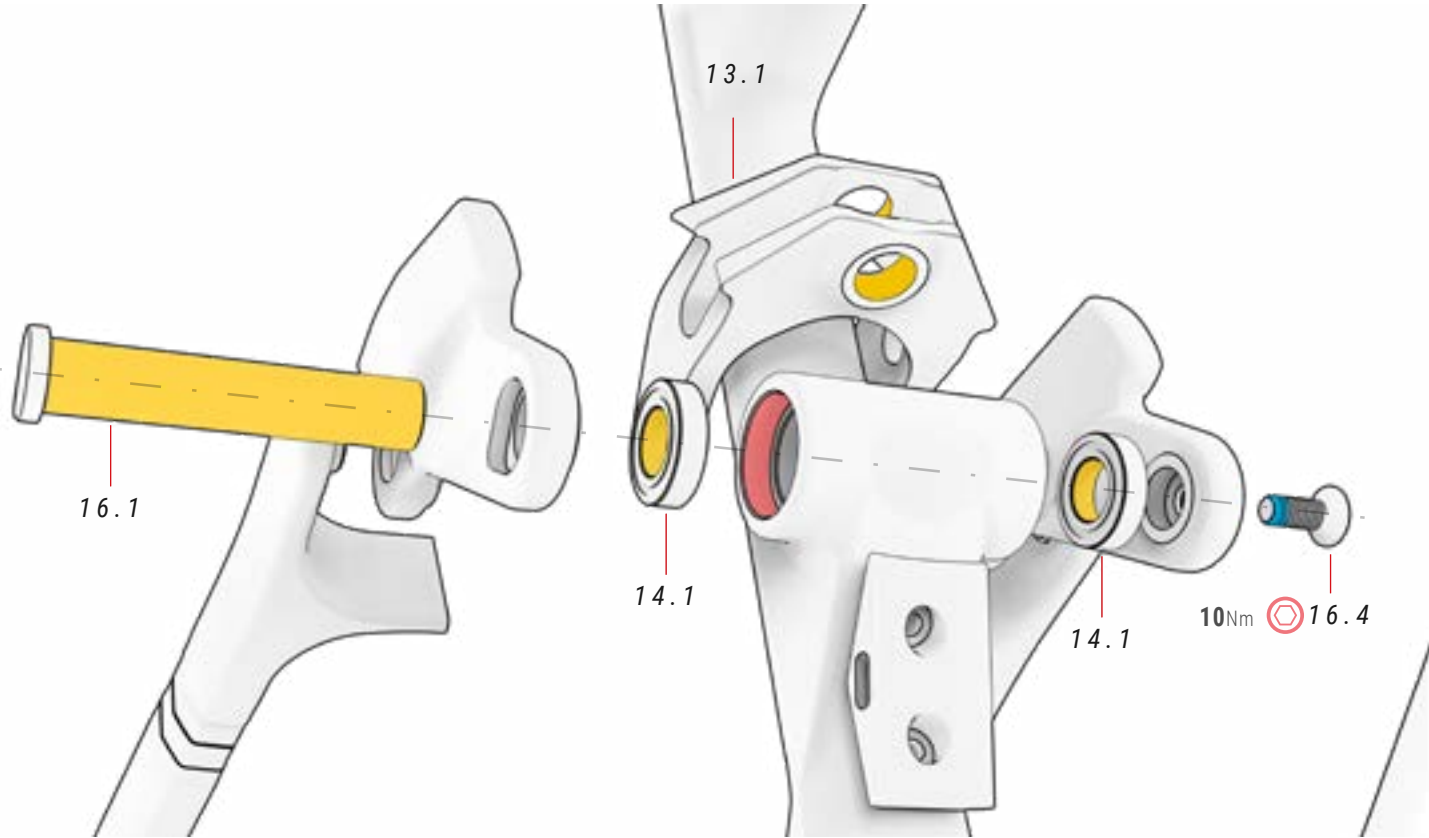
ref.: 381560300 (15.2)

N°	Item	Qty
15.1	Bearings	2
15.2	Bearings	2

16 AXLE COMPONENTS

ref.: 381552300

N°	Item	Qty
16.1	Thru axle	1
16.2	Screw	2
16.3	Screw	2
16.4	Screw	1



12 ROCKER

ref.: 381553100

N°	Item	Qty
12.1	Rocker left	1
12.2	Rocker right	1

13 CRANKARM

ref.: 381553900

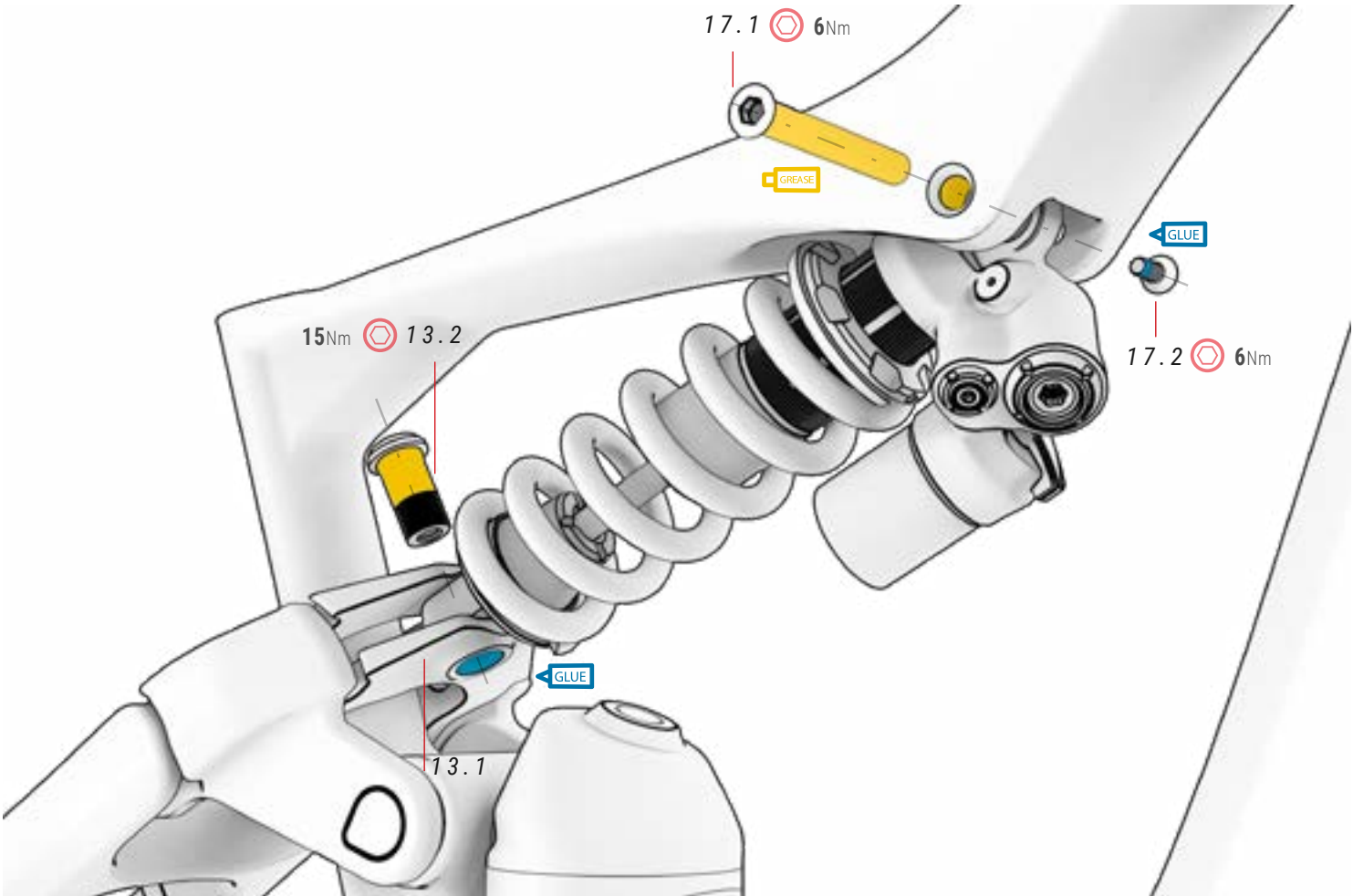
N°	Item	Qty
13.1	Crankarm	1
13.2	Crankarm screw	1

14 BEARINGS

ref.: 391844400

N°	Item	Qty
14.1	Bearings	2

SHOCK ABSORBER ASSEMBLY



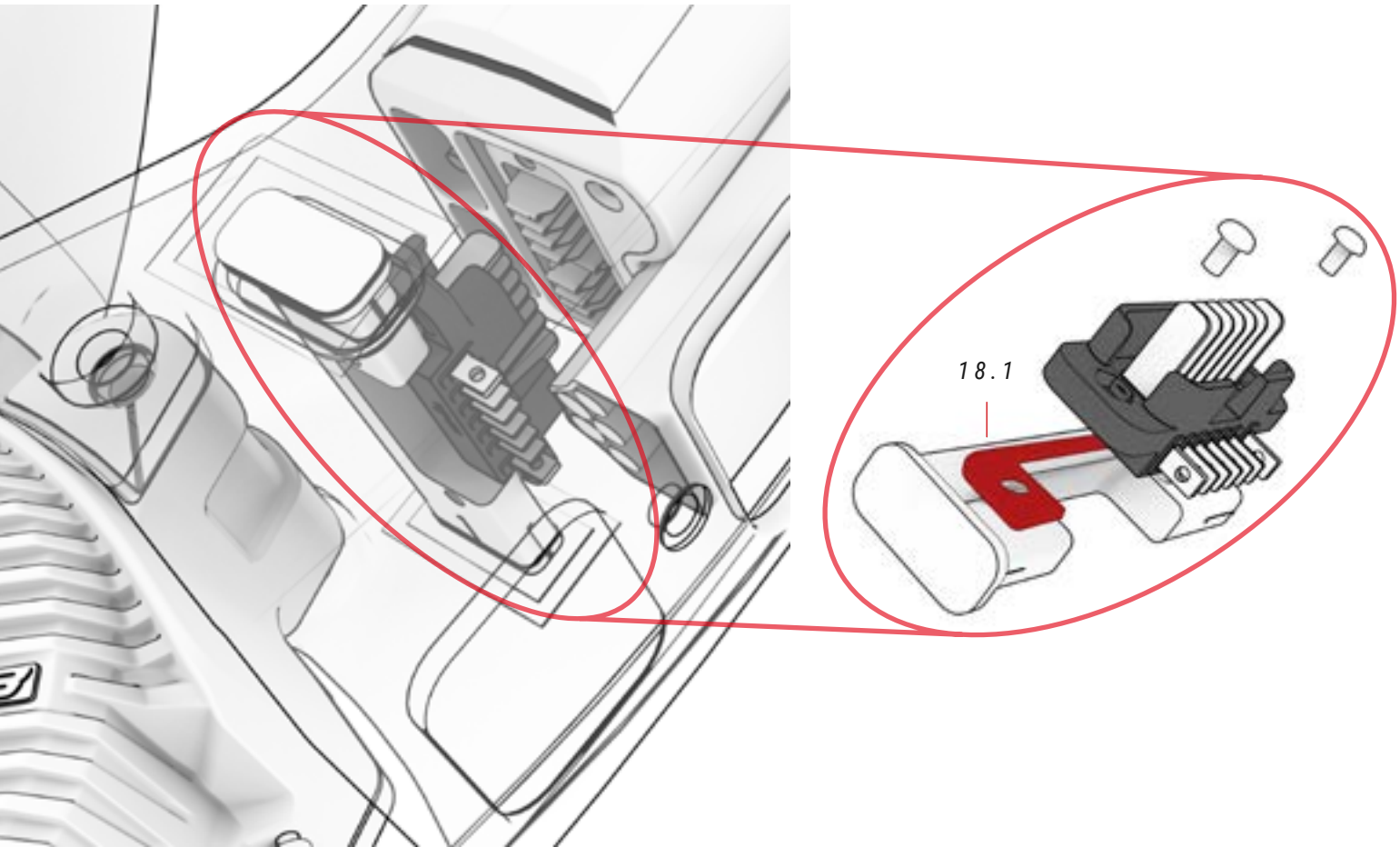
13 CRANKARM *ref.: 381553900*

N°	Item	Qty
13.1	Crankarm	1
13.2	Crankarm screw	1

17 SHOCK ABSORBER SCREWS *ref.: 381552900*

N°	Item	Qty
17.1	Shock axle	1
17.2	Shock screw	1

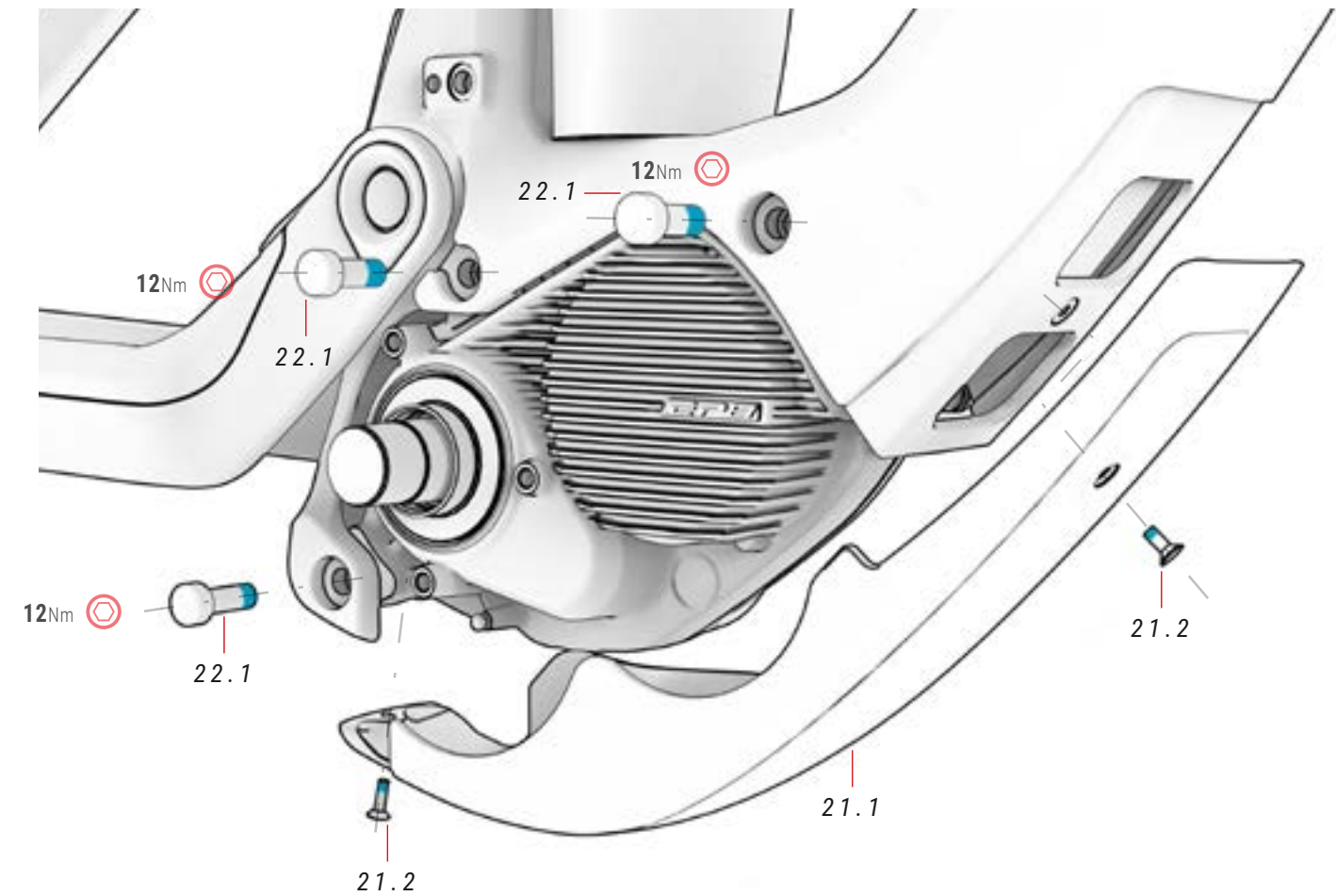
BATTERY DISCHARGE PORT



18 BATTERY SUPPORT *ref.: 381553300*

N°	Item	Qty
18.1	Support	1

MOTOR COVER



21 HOUSING AND SCREWS ref.: Shimano spare part

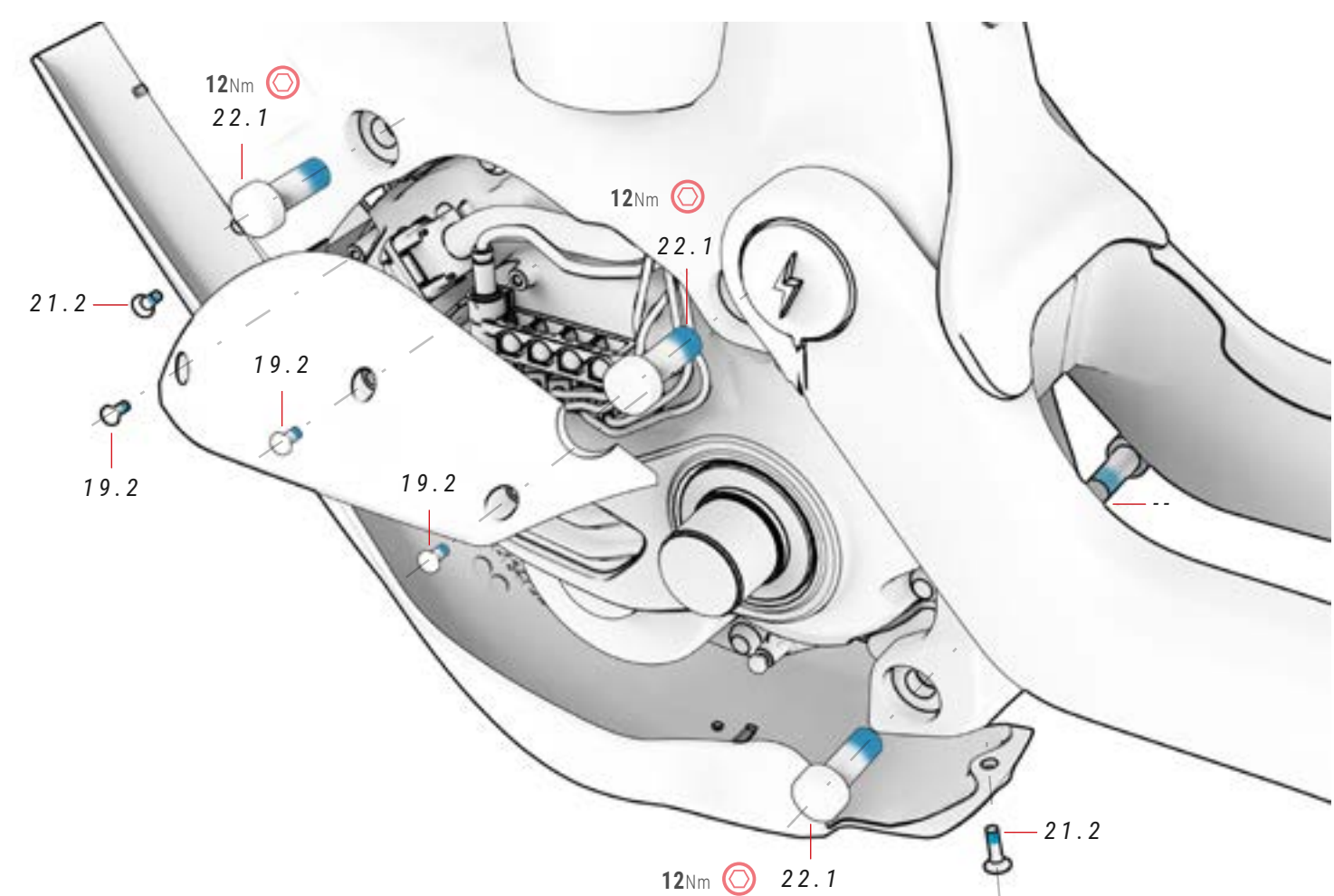
N°	Item	Qty
21.1	Motor housing	1
21.2	Motor housing screws	2

22 MOTOR SCREWS

N°	Item	Qty
22.1	Motor screws	6

19 MOTOR SIDE COVER

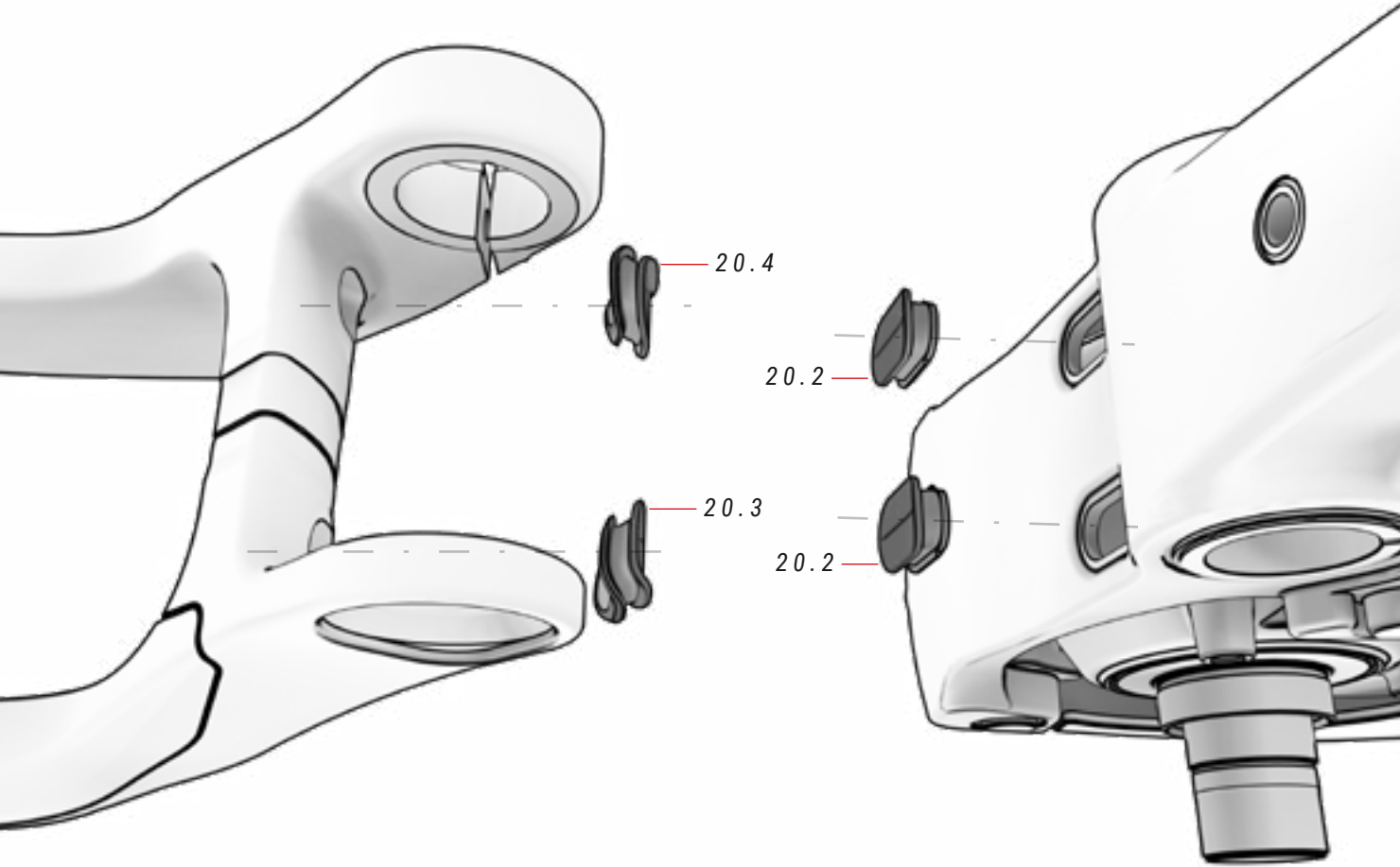
N°	Item	Qty
19.1	Side cover	1
19.2	Side cover screws	3



20 CABLE GUIDE SET ref.: 381553400

N°	Item	Qty
20.1	Screw	2
20.2	Front triangle cable guide	2
20.3	Cable guide for the right housing	1
20.4	Cable guide for the left housing	1
20.5	XPro Cap	1
20.6	Screws	4
20.7	Speed sensor guide	1

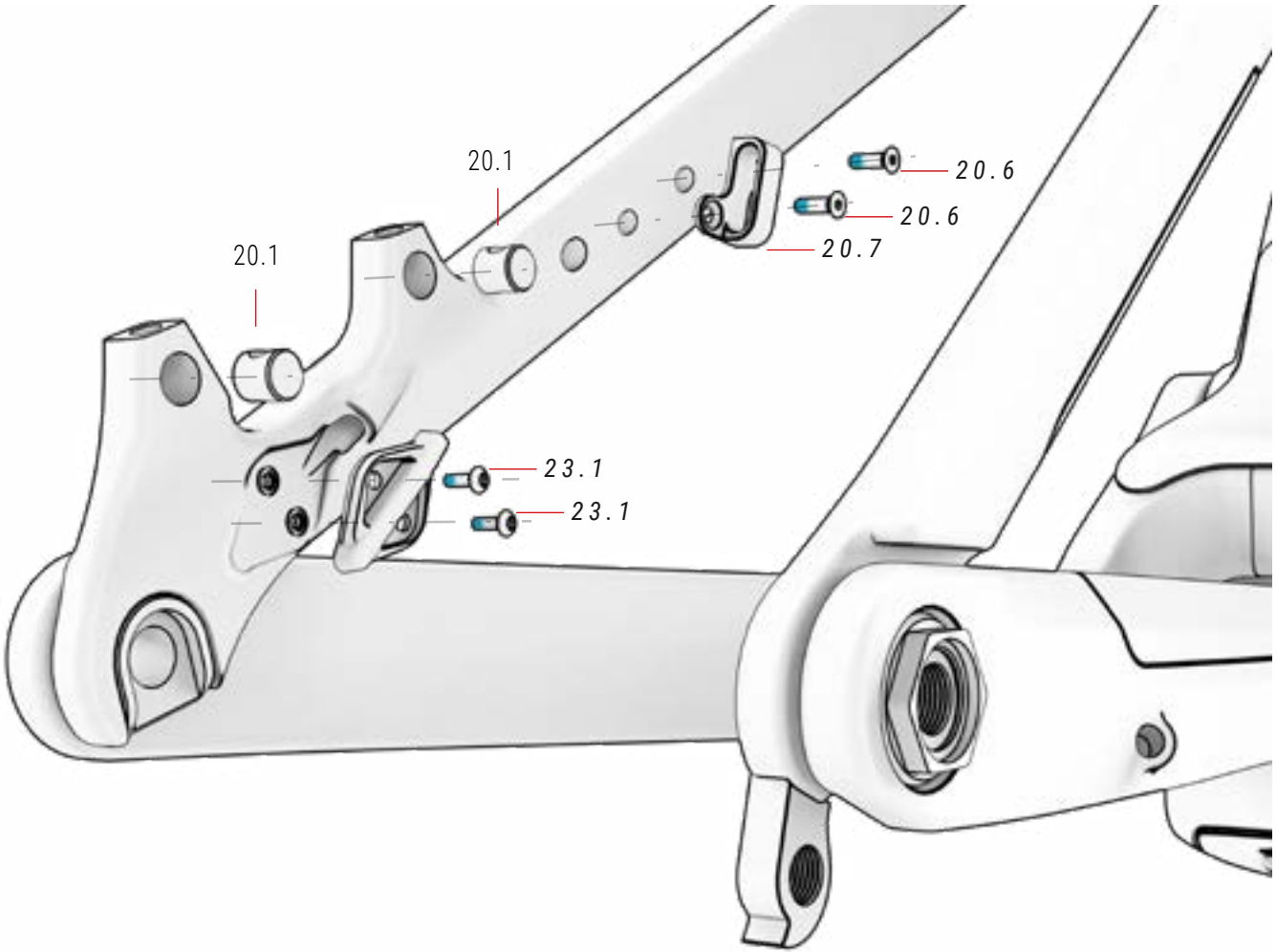
CABLE GUIDE CAPS



20 CABLE GUIDE SET *ref.: 381553400*

N°	Item	Qty
20.1	Screw	2
20.2	Front triangle cable guide	2
20.3	Cable guide for the right housing	1
20.4	Cable guide for the left housing	1
20.5	XPro Cap	1
20.6	Screws	4
20.7	Speed sensor guide	1

SPEED SENSOR, CABLE GUIDE, AND BOLTS FOR BRAKE ASSEMBLY

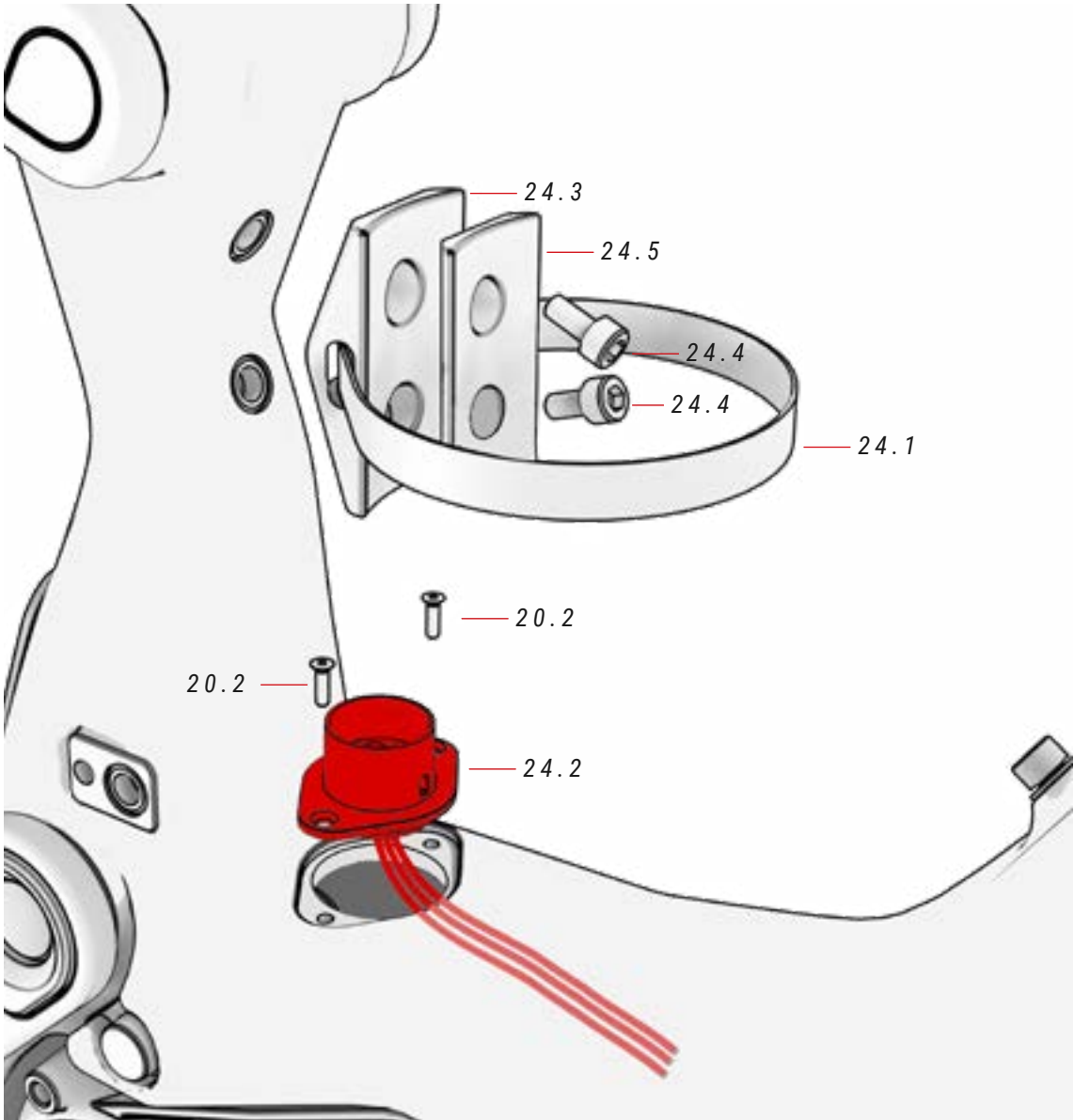


23 SPEED SENSOR SCREW

N°	Item	Qty
23.1	Speed sensor screw	2

CHARGING PORT AND BOTTLE CAGE FOR XPRO+

MODELS ES993 / ES893



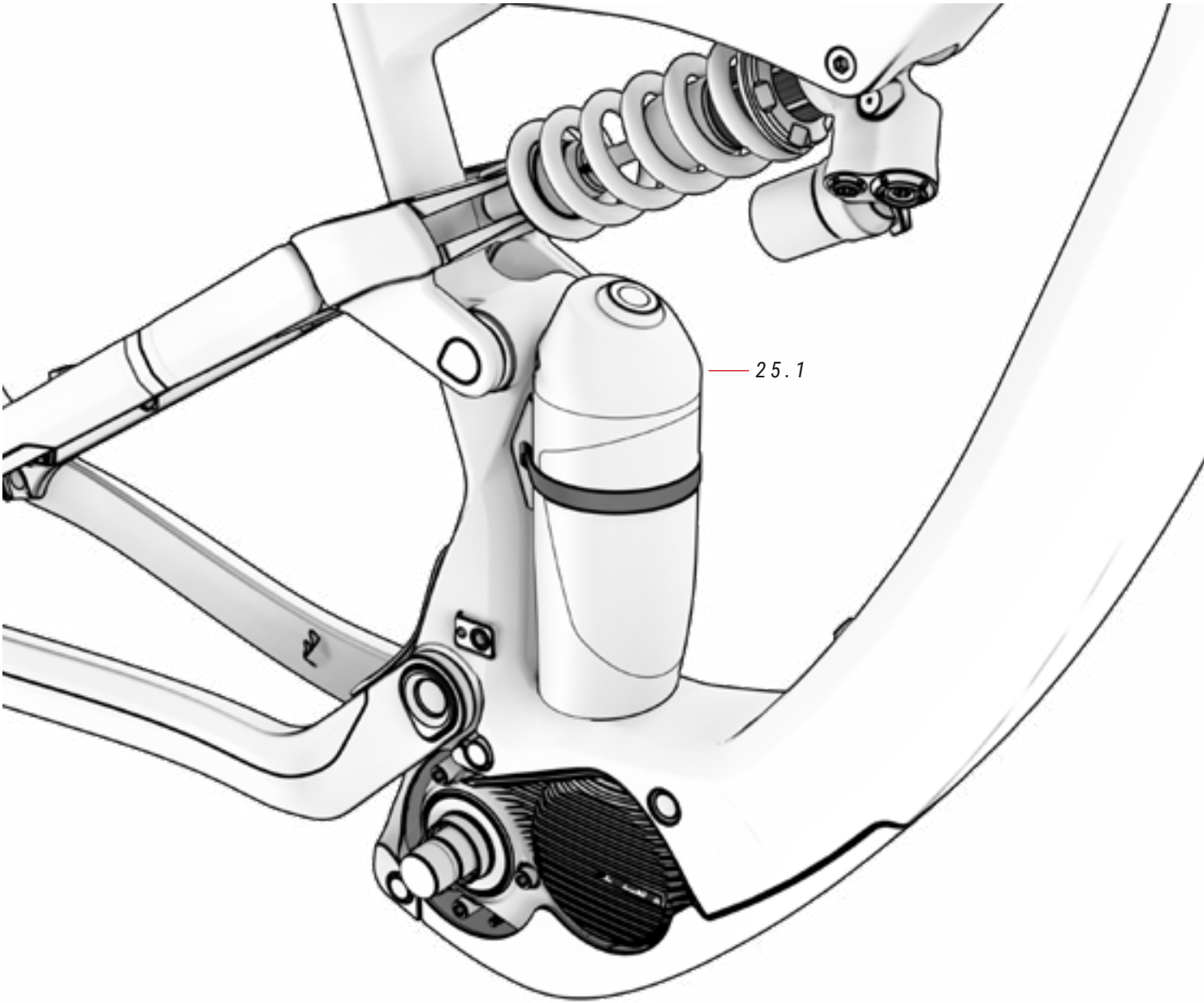
24 XPRO+ BATTERY KIT ref.: 387463900

N°	Item	Qty
24.1	Band	1
24.2	Discharge port	1
24.3	Battery holder	1

N°	Item	Qty
24.4	Bolt M5x16mm	2
24.5	Anti-slip plastic	1


XPRO+ BATTERY

MODELS ES993 / ES893



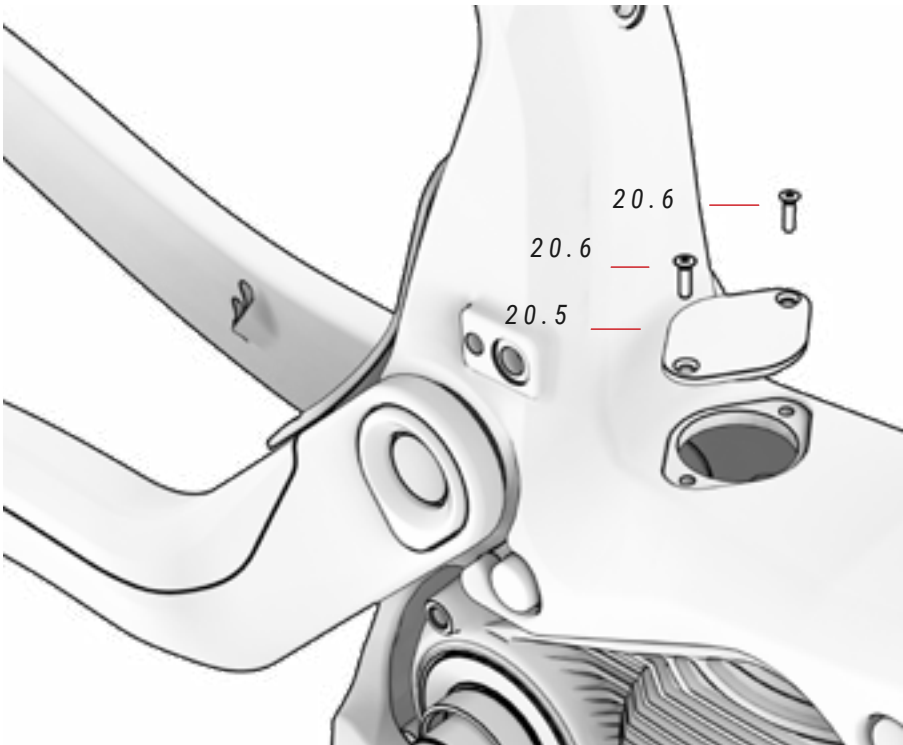
25 BOTTLE XPRO+ ref.: 387456300

N°	Item	Qty
25.1	Bottle	1

 The XPro+ battery designed to power Shimano motors is not compatible with XPro batteries for BH motors

CAP FOR MODELS WITHOUT XPRO+

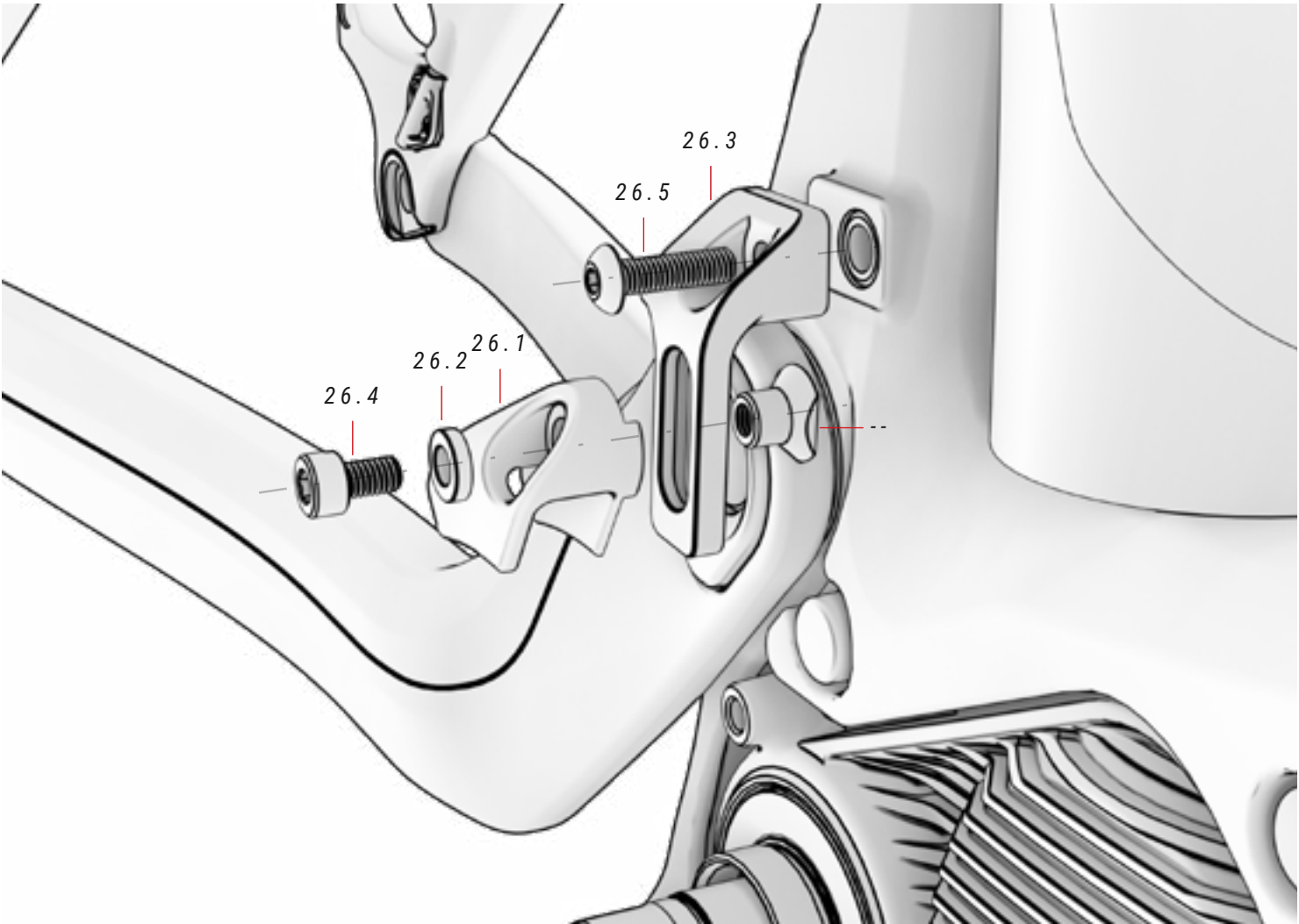
MODELS ES983 / ES973 / ES883 / ES873



20 CABLE GUIDE SET *ref.: 381553400*

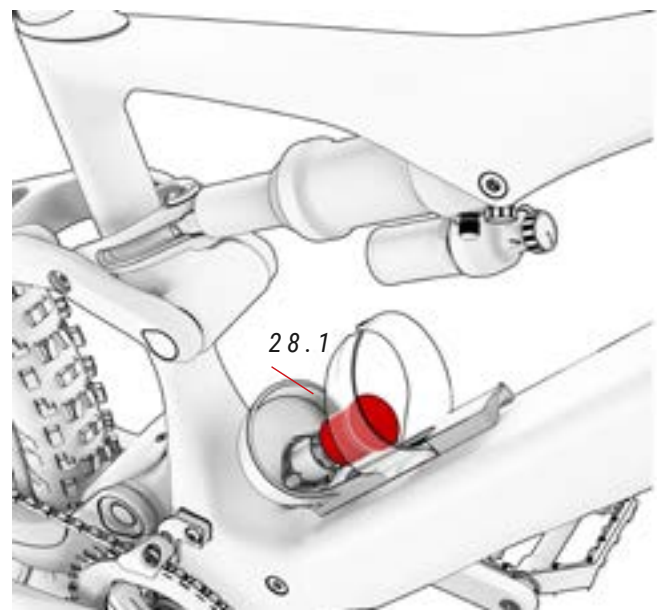
Nº	Item	Qty
20.1	Screw	2
20.2	Cable guide for front triangle	2
20.3	Cable guide for left housing	1
20.4	Cable guide for right housing	1
20.5	Tapa XPro+	1
20.6	Tornillos	4
20.7	Speed sensor guide	1

CHAINGUIDE



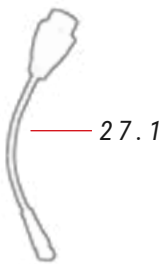
CAP FOR MODELS WITH XPRO+

MODELS ES993 / ES893



27 XPRO+ CHARGING CABLE *ref.: 387459600*

Nº	Item	Qty
27.1	Extension outern charging cable	1



⚠ Charger ref.387337700 needs to be used together with the charging cable for current adaptation.

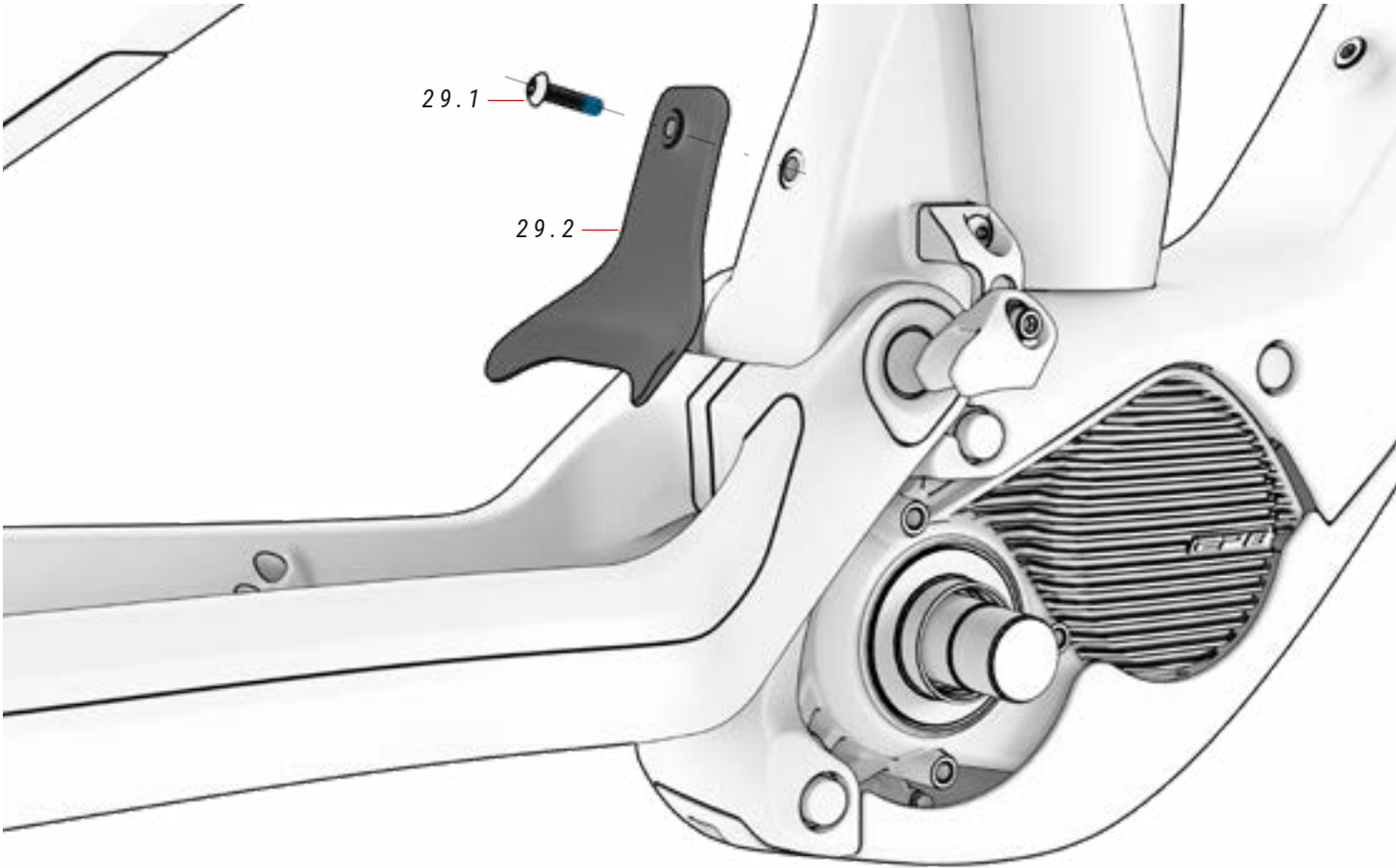
28 XPRO+ CAP *ref.: 386139400*

Nº	Item	Qty
28.1	Cap	1

26 CHAINGUIDE *ref.: 381553400*

Nº	Item	Qty
26.1	Guide	1
26.2	Washer	1
26.3	Support	1
26.4	Screw	1
26.5	Screw	1

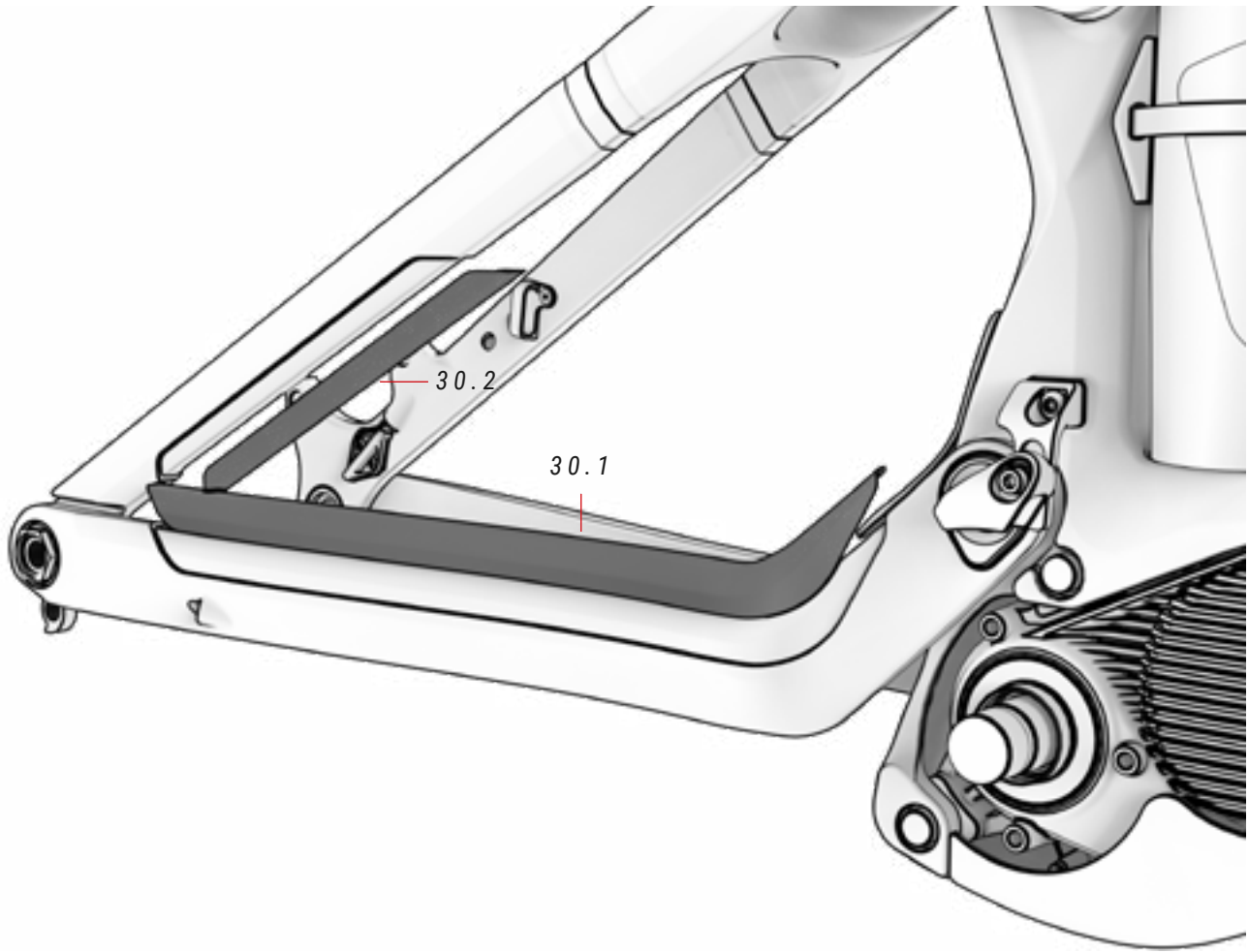
SWINGARM MAIN PIVOT POINT PROTECTOR



29 MUDWARDS ref.: 381554000

N°	Item	Qty
29.1	Screw	1
29.2	mudwards	1

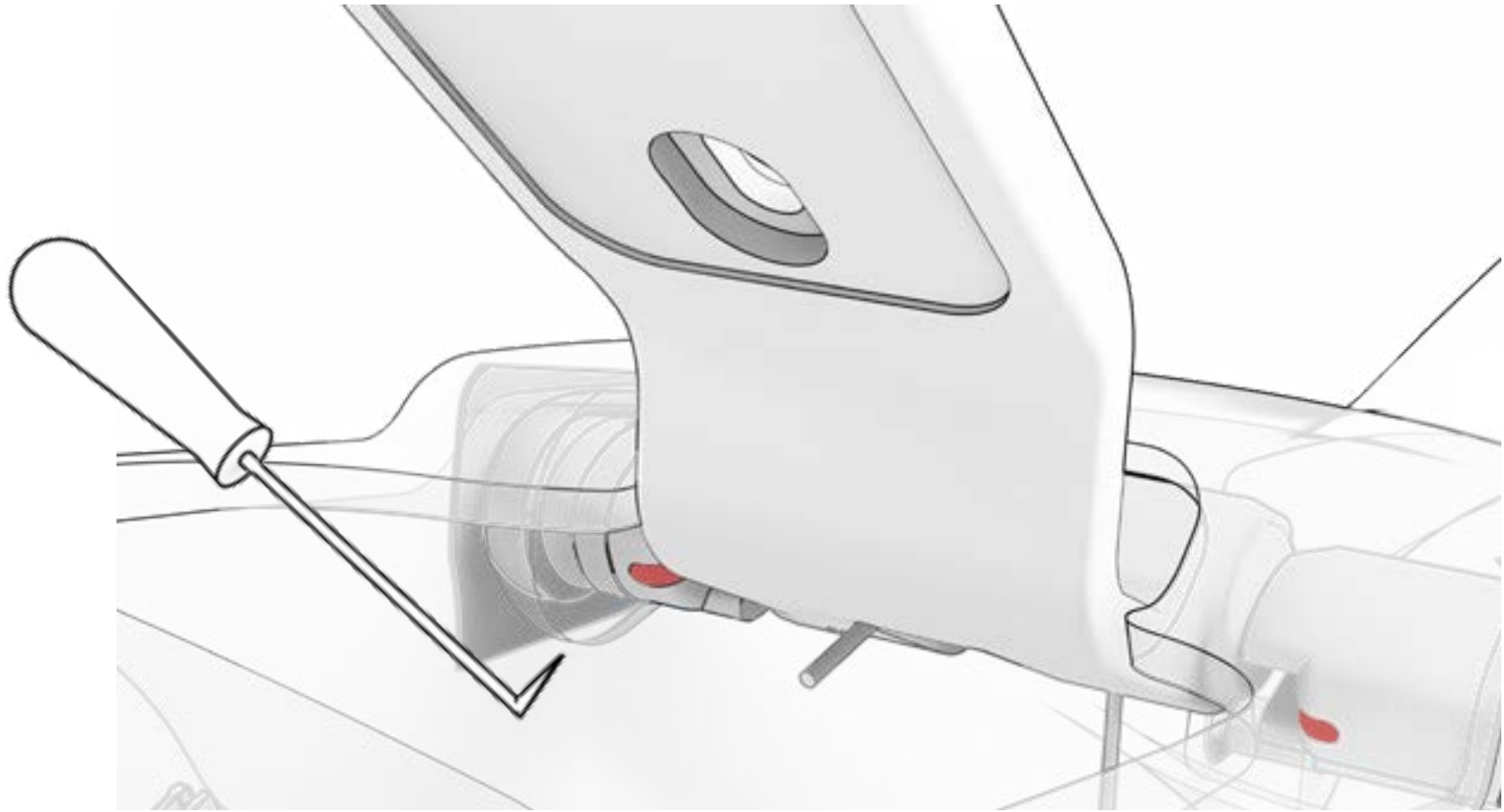
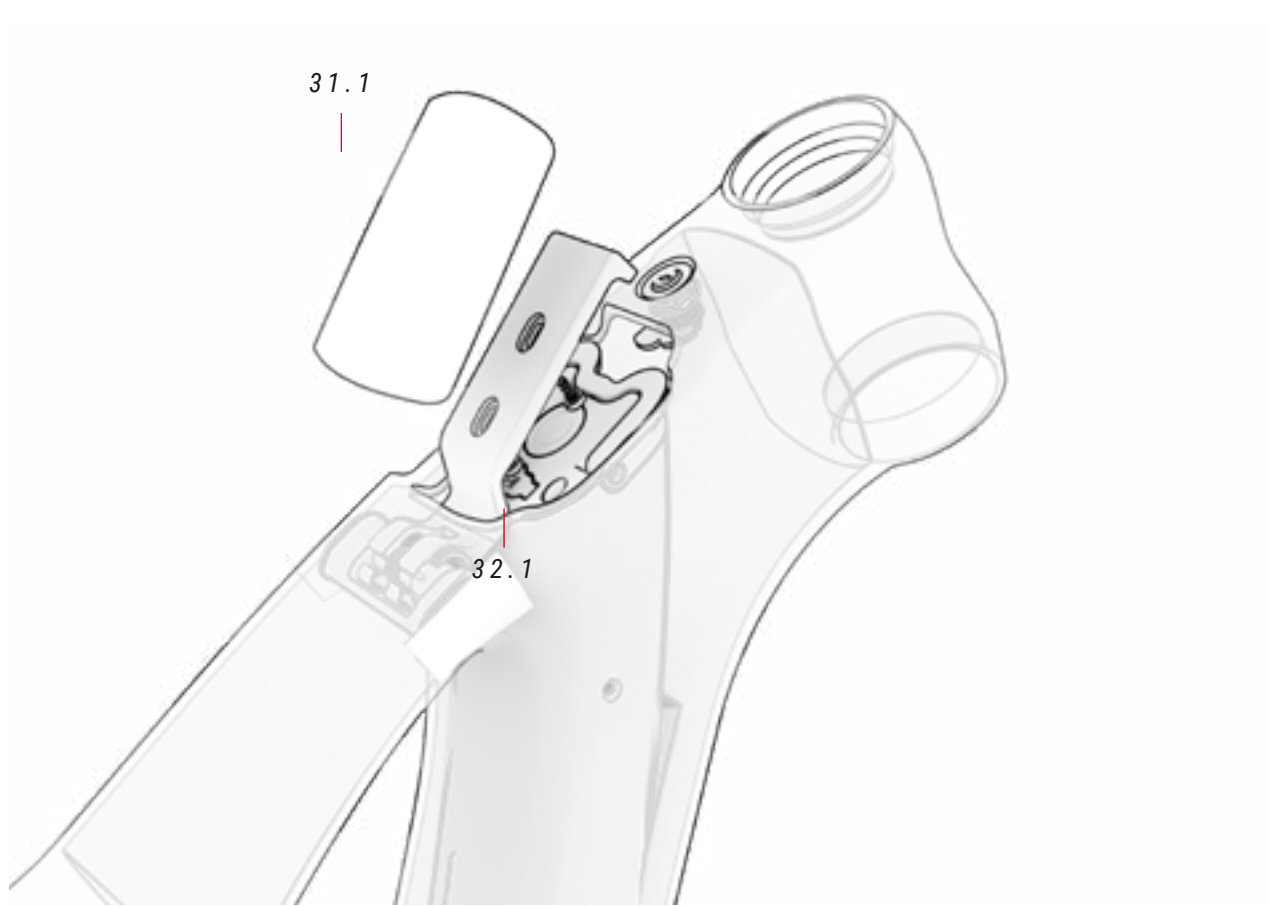
PROTECTORS



30 PROTECTORS ref.: 381553500

N°	Item	Qty
30.1	Protector chainstay	1
30.2	Protector seatstay	1

BATTERY COVER



⚠ To disassemble the fastening mechanism of the lid base, insert a punch at an angle into the designated slots, pushing inward the two springs on the sides of the base.

31 BATTERY COVER *ref.: 391822500*

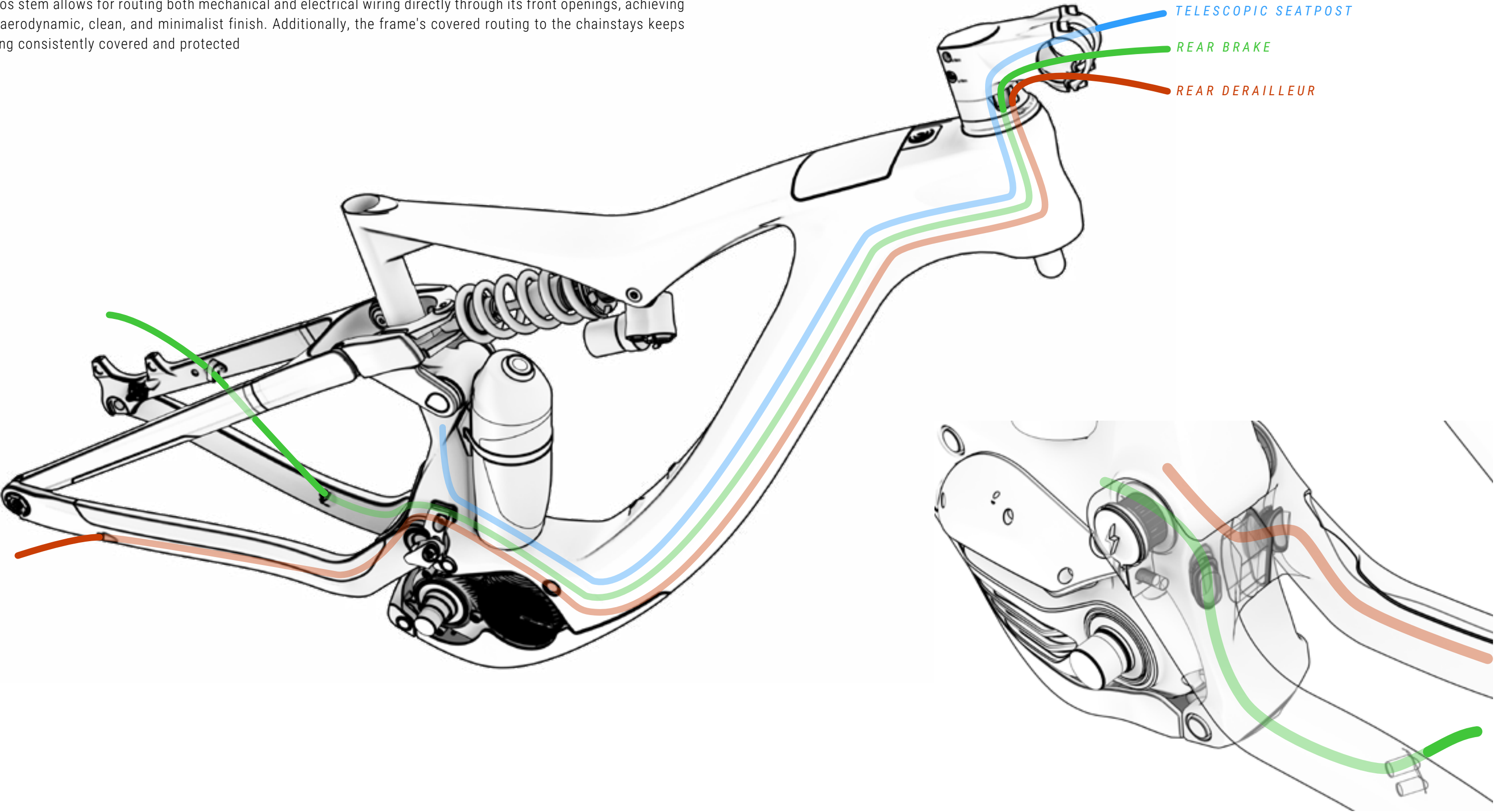
N°	Item	Qty
31.1	Cover	1

32 BATTERY COVER BASE *ref.: 391818800*

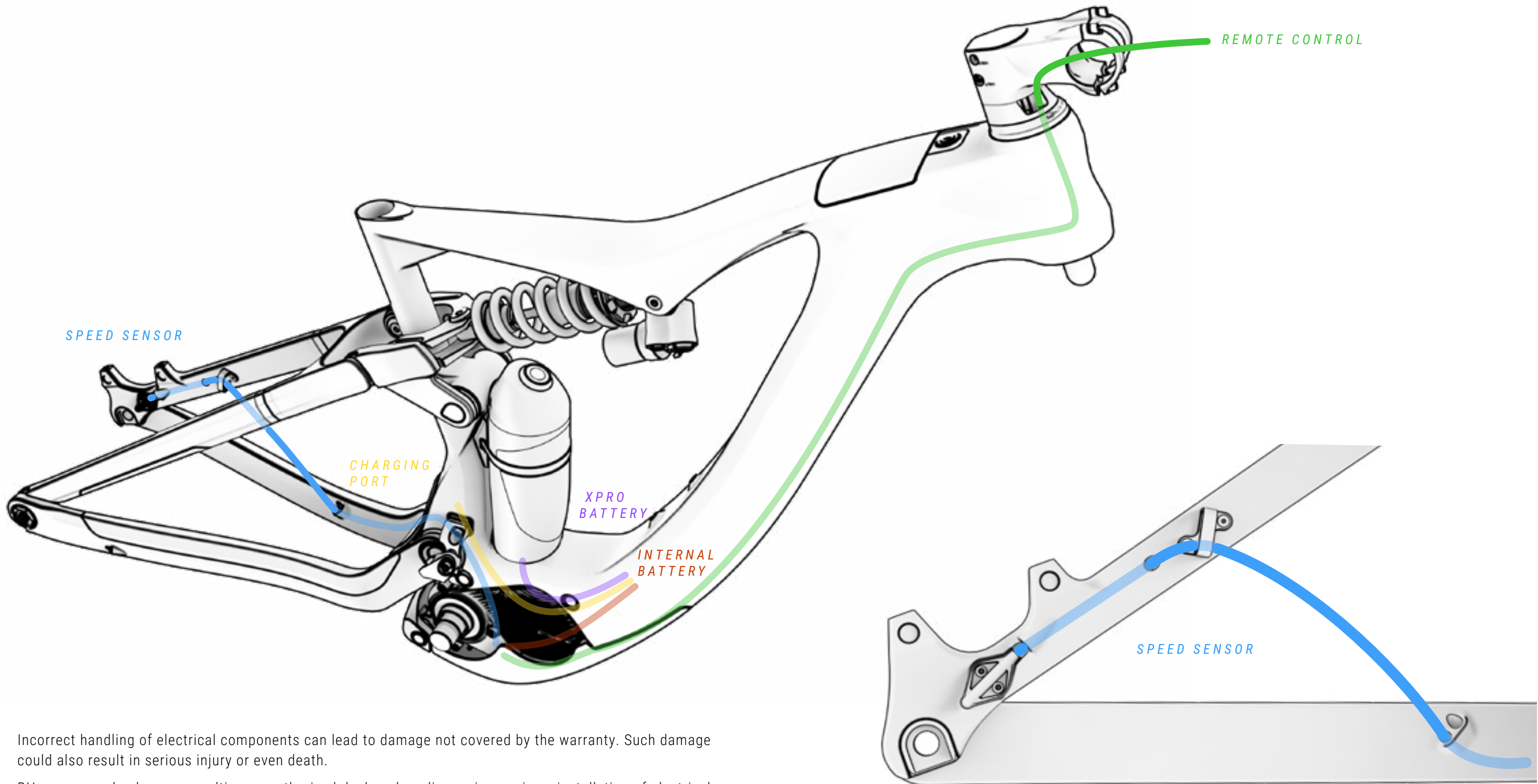
N°	Item	Qty
32.1	Cover base	1


ROUTING OF MECHANICAL COMPONENTS

The Acros stem allows for routing both mechanical and electrical wiring directly through its front openings, achieving a more aerodynamic, clean, and minimalist finish. Additionally, the frame's covered routing to the chainstays keeps the wiring consistently covered and protected



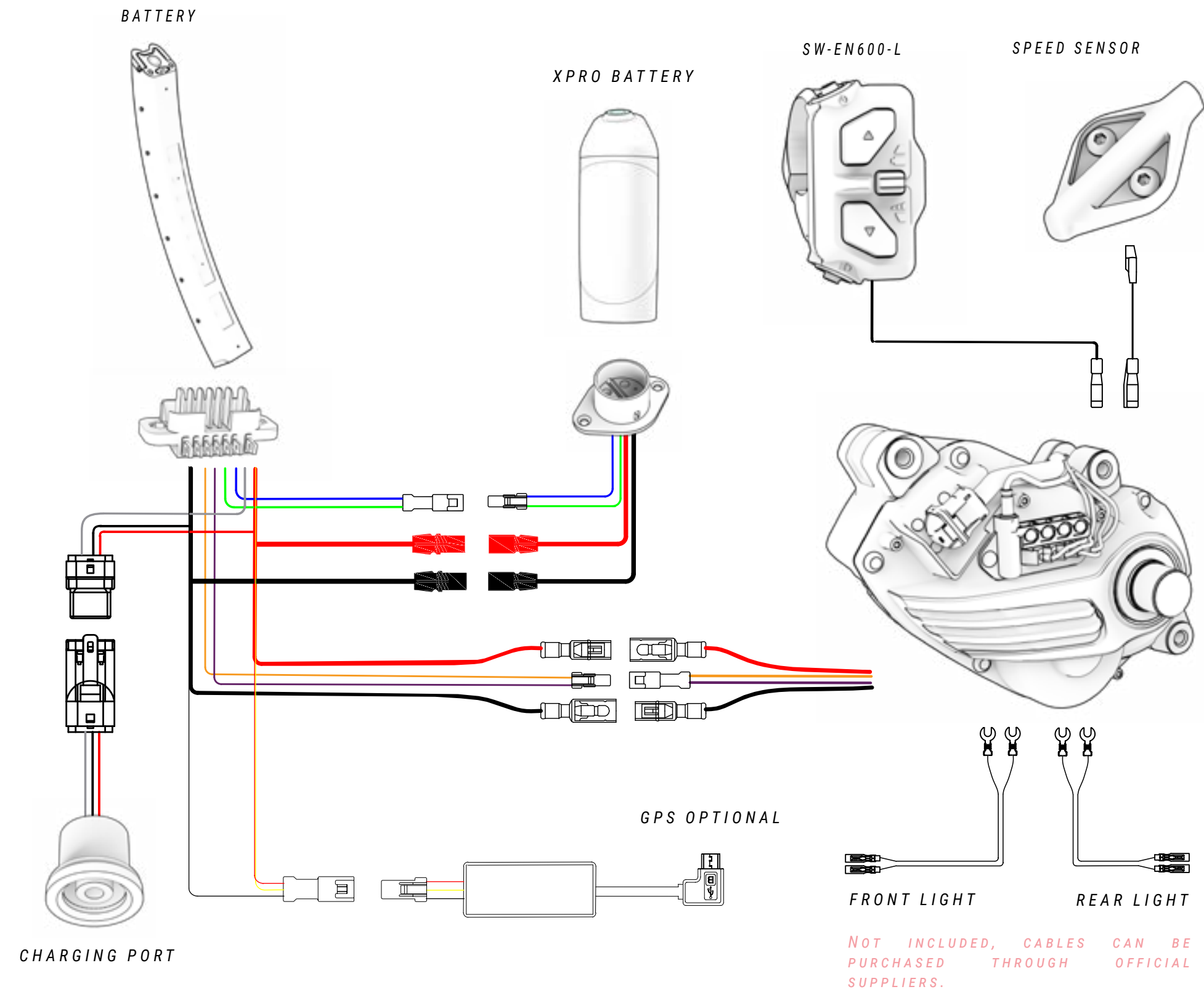
WIRING OF ELECTRICAL SYSTEM COMPONENTS



 Incorrect handling of electrical components can lead to damage not covered by the warranty. Such damage could also result in serious injury or even death.

BH recommends always consulting an authorized dealer when diagnosis, repair, or installation of electrical components is required. These actions require advanced technical knowledge.

DIAGRAM OF ELECTRICAL SYSTEM COMPONENTS



⚠ For precise and safe installation of Shimano components, please refer to the manufacturer's specific manual:
<https://si.shimano.com/en/pdfs/dm/DUE001/DM-DUE001-00-ENG.pdf>
<https://si.shimano.com/en/pdfs/dm/SCSW002/DM-SCSW002-00-ENG.pdf>

⚠ Incorrect handling of electrical components can lead to damage not covered by the warranty. Such damage could also result in serious injury or even death.

BH recommends always consulting an authorized dealer when diagnosis, repair, or installation of electrical components is required. These actions require advanced technical knowledge.



⚠ When an electrical connection comes into contact with moisture or becomes clogged due to external contamination, a chemical reaction occurs in which the connections become sulfated. In other words, the copper of the contacts oxidizes, leading to conductivity failures.

Warranty does not cover damage resulting from improper maintenance of connections. To prevent oxidation, it is sufficient to periodically clean the connections (male and female) with dielectric deoxidizers like the one shown in the image above.

10 DECLARATION OF CONFORMITY

EU Declaration of Conformity

The manufacturer:

BH BIKES EUROPE, SL
c/ Perretagana 10,
01015 Vitoria, Spain

Hereby declares that the following products:

Product description:

Cycles –Electrically power assisted cycles –EPAC Bicycles

Models designation:

Atom 27,5, Atom 29, Atom City, Atom City Pro, Atom City Wave, Atom City Wave Pro, Atom Cross, Atom Cross Pro, Atom Diamond Wave Pro, Atom Jet, Atom Jet Pro, Atom Lynx 5.5, Atom Lynx 5.5 Pro, Atom Lynx 8.0, Atom Lynx 8.1, Atom Lynx 8.2 Pro, Atom Pro, Atom Street, Atom Street Pro, Atom Suv Pro.

AtomE City Wave Pro, AtomE Diamond Wave Pro, AtomE Cross Pro, AtomE Jet Pro, AtomE Lynx 8.0, AtomE Lynx 8.2, AtomE Pro, AtomE Suv Pro, AtomE Suv Pro-S, AtomE Suv Pro-SE.

AtomS 27,5 Pro, AtomS 29 Pro, AtomS City Wave Pro, AtomS City Wave Pro-S, AtomS Cross Pro, AtomS Cross Pro-S, AtomS Diamond Pro, AtomS Diamond Wave Pro, AtomS Diamond Wave Pro-S, AtomS Jet Pro, AtomS Jet Pro-S, AtomS Pro, AtomS Pro-S, AtomS Street Pro, AtomS Suv Pro, AtomS Suv Pro-S.

AtomX Carbon Lynx 5.5 Pro, AtomX Carbon Lynx 5.5 Pro-S, AtomX Carbon Lynx 6 Pro, AtomX Carbon Lynx 6 Pro-S, AtomX Carbon Lynx 6 Pro-SE, AtomX Cross Nitro, AtomX Cross Pro, AtomX Cross Pro-S, AtomX Lynx 5.5 Pro, AtomX Lynx 5.5 Pro-L, AtomX Lynx 5.5 Pro-S, AtomX Lynx 6 Pro, AtomX Lynx 6 Pro-S, AtomX Lynx 6 Pro-SE, AtomX Lynx Pro 8.2, AtomX Lynx Pro 8.4, AtomX Lynx Pro 9.0, AtomX Lynx Pro 9.2, AtomX Lynx Pro 9.4, AtomX Lynx Carbon Pro 8.7, AtomX Lynx Carbon Pro 8.8, AtomX Lynx Carbon Pro 9.7, AtomX Lynx Carbon Pro 9.8 , AtomX Lynx Carbon Pro 9.9, AtomX Pro, AtomX Pro-S.

Core 29, Core Pro, Core City Wave, Core Cross, Core Gravel X 2.2, Core Gravel X 2.4, Core Gravel X Carbon 2.6, Core Gravel X Carbon 2.7 Pro, Core Jet, Core Pro, Core Race 1.2, Core Race 1.4, Core Race Carbon 1.5, Core Race Carbon 1.6, Core Race Carbon 1.8, Core Race Carbon 1.8 Pro, Core Race Carbon 1.9 Pro, Core Street.

iLynx Race Carbon 7.6 LT, iLynx Race Carbon 7.7 LT, iLynx Race Carbon 7.8 LT Pro, iLynx Race Carbon 7.9 Pro, iLynx Race Carbon 8.0 LT, iLynx Race Carbon 8.2 LT, iLynx Race Carbon 8.4 LT Pro, iLynx Race Carbon 8.6 Pro, iLynx Trail 8.0, iLynx Trail 8.1, iLynx Trail 8.2, iLynx Trail Carbon 8.6, iLynx Trail Carbon 8.7, iLynx Trail Carbon 8.8 Pro, iLynx Trail Carbon 8.9 Pro.

iLynx+ Trail Carbon 8.7, iLynx+ Trail Carbon 8.8, iLynx+ Trail Carbon Pro 8.9, iLynx+ Enduro Carbon 9.7, iLynx+ Enduro Carbon 9.8, iLynx+ Enduro Carbon Pro 9.9.

iAerolight 1.7, iAerolight 1.8, iAerolight Pro 1.9.

Xtep Carbon Lynx 5.5 Pro, Xtep Carbon Lynx 5.5 Pro-S, Xtep Carbon Lynx 6 Pro, Xtep Carbon Lynx 6 Pro-S, Xtep Carbon Lynx 6 Pro-SE, Xtep Cross Pro, Xtep Lynx 5.5 Pro, Xtep Lynx 5.5 Pro-L, Xtep Lynx 5.5 Pro-S, Xtep Lynx 5.5 Pro-SE, Xtep Lynx Carbon 8.7 Pro, Xtep Lynx Carbon 8.8 Pro, Xtep Lynx Carbon 9.7 Pro, Xtep Lynx Carbon 9.8 Pro, Xtep Lynx Carbon 9.9 Pro, Xtep Pro-S, Xtep Lynx Carbon Pro 0.7, Xtep Lynx Carbon Pro 0.8, Xtep Lynx Carbon Pro 0.9.

Year of manufacture:

2022 and 2023

Comply with all of the relevant requirements of the Machinery Directive (2006/42/EC).
Comply with Low Voltage Directive (LVD) 2014/35/EU
Comply with all of the relevant requirements of RD 339/2014, de 9 de Mayo.

Furthermore, the machine complies with all of the requirements of the Electromagnetic Compatibility Directive 2014/30/EU.

The production control is assured by our Quality Management System, which fulfills the requirements of the standard ISO 9001

The following harmonized standards have been applied:
DIN EN 15194 Cycles – Electrically power assisted cycles – EPAC bicycles;
DIN ISO 4210-1/2/3/4/5/6/7/8/9 Safety requirements for bicycles

Technical documentation filed at:
BH BIKES EUROPE, SL
c/ Perretagana 10,
01015 Vitoria, Spain

José Maria Chapinal
Quality Manager
BH BIKES EUROPE, SL

Rev.16

17/05/2022

Page 1 of 1

11 HELP AND ADDITIONAL RESOURCES

At BH, we provide you with various means to address all your doubts. Additionally, you can become a part of our global cycling community through our social media channels.

TECHNICAL RESOURCES

On the BH Bikes website, you will find all the necessary resources to tune up your bike. In the following link, you can access user manuals, apps, warranties, files for updating displays, and explanatory videos for various operations:

<https://www.bhbikes.com/manuals>

You can also check out our step-by-step tutorials to learn how to maintain and fine-tune your bicycle on our specialised

Youtube channel::

<https://www.youtube.com/user/ServicioTecnicoBH>

CONTACTOS

Our authorised dealers have the necessary knowledge and resources to help you with anything you need in relation to your bicycle. Don't hesitate to contact your nearest store. You can find it by clicking on the link below::

https://www.bhbikes.com/es_ES/busca-tu-tienda-mas-cercana/buscador-de-tiendas

To contact us directly:

Tel: + 34 945 13 52 02

info@bhbikes.com

P.I. Jundiz- Perretagana 10, 01015 Vitoria, Alava (Spain)

SOCIAL MEDIA

Join our global cyclist community. Discover the BH experiences of other cyclists and share yours.





www.bhbikes.com

YouTube

BH