User Manual

e-Cygnus

FORESTAL

Truly Extraordinary

Introduction

You are about to embark on a journey that combines nature and technology. Thank you for choosing Forestal.

Your new Forestal is the combination of many years of design and development by a team of passionate bicycle lovers, and we're extremely grateful that you have chosen to join us. We hope that you enjoy riding your new Forestal as much as we have producing it for you. Take to the trails, hit the road, and enjoy our unique fusion of nature and technology.

At Forestal we consider sustainability at every step, this is why we have developed our packaging to be reusable. Using high-quality packaging ensures your bike arrives in perfect condition and also enables you to reuse the box for transportation or storage.

This manual will serve you as a general guide on how to unbox, assemble, use and maintain your bicycle. It will also provide you with general information on liability, safety and keep you aware of potential dangers that may occur when operating your bicycle.

This manual contains useful safety information that will help you to understand your bicycle. We strongly recommend that you read it.

Before your first ride, please download Forestal Sync App by scanning the QR CODE below. To activate the warranty and safety features it is mandatory to register your bike via the Forestal Sync App.

Please scan this QR Code to download Forestal Sync App for Apple iOS.

Please scan this QR Code to download Forestal Sync App for Android.

For any questions, please don't hesitate to contact us by email contact@forestal.com or by phone +376 737 704

Table of Contents

A Introduction 1

B Illustration of Symbols 3

C General Safety 4

D Maintenance and Transport 6

- Cleaning the bicycle 6
- Cleaning the drivetrain parts 6
- Software maintenance 6
- Maintenance schedule 7

E Unboxing and setting up your bicycle 8

- Content of the bicycle box 9
- Bicycle parts and components 10
- Setting up your bicycle 11
- Brakes instructions 19

F Technical Characteristics 20

- Sizing Chart e-Cygnus 22
- Geometry chart e-Cygnus 23
- Seatpost insertion 24
- Frame specifications e-Cygnus 25
- Suspension curve e-Cygnus 26
- Rear spacing e-Cygnus 26
- Torque diagram e-Cygnus 27
- Exploded view e-Cygnus 28
- Components torque table 32

G Performance line SX Motor 32

- Specifications of the motor 32

H CompactTube 400 Battery 33

- Specifications of the battery 33
- Specifications of the charger 34
- Support levels 35
- BOSCH Mini Remote 36
- Dashboard Explanation 37

I Battery handling 38

- Charging the battery 38
- Battery charge indicator of the eBike battery 39
- Battery consumption and range 39
- Battery safety, handling and charging 40
- Storing the batteries 42
- Recycling 42
- Storing the bicycle 43
- Transportation 43
- Adjustment of gears and operation 43

J Starting the Bicycle 44

- Dashboard explanation 45

K Warranty 46

- Rewind Programme 47

L Disclaimers & Warnings 48

M Declaration of Conformity 49

Illustration of Symbols

Meaning and explanation of symbols:

Tip symbol
Provides the user with additional knowledge on the subject.

Note symbol
Provides important information to avoid potential problems.

Information symbol
Provides additional information that will help users to understand the situation more clearly.

Caution symbol
Warns about a situation that can cause potential material damage if users don't follow the instructions.

Warning symbol
Warns about a situation that can cause serious physical injury, death, and/or heavy material damage if one does not obey the safety instructions.

Attention symbol
Take special care of the object or action.

Disclaimer symbol
Statement of clear liability.

General Safety

To ensure safety, quality, and reliability, use only original parts or Forestal authorized parts for repair and replacement.

Use your bicycle responsibly within the limits of your capabilities. Mountain biking and road riding is considered as dangerous activity and can result in injury, even at slow speeds. Stunt riding, jumping your bicycle, riding at high speeds, racing, and other types of extreme riding is considered extremely dangerous, and increases your risk of injury and/or death. Even with the most advanced safety gear, you could become seriously injured or killed when stunt riding, jumping, riding at high speeds or competing.

To decrease your risk of injury, know your limits, use your bicycle correctly, and always wear helmet and appropriate safety equipment and before every ride, inspect your bicycle for irregularities or loose parts. If you notice anything strange or suspicious such as deep scratches, squeaks from components/frame, or a sudden drop in performance of electrical components of your bicycle, please contact us or your nearest Forestal representative for further advice.

Increased Braking Distance in Wet Weather. Wet or slippery conditions can significantly increase the distance required to stop your bicycle safely. Water on the rims, tires, or brake pads reduces braking efficiency, and it may take longer for the brakes to respond. Exercise extra caution when riding in wet weather, allowing more time and distance for braking. Always reduce your speed and avoid sudden or hard braking to maintain control. Regularly inspect and maintain your braking system to ensure optimal performance in all conditions.

Improper assembly or adjustment of the bicycle's components can result in serious injury or damage to the bicycle. It is essential that all parts, including the wheels, brakes, handlebars, headset, pedals, and drivetrain, are installed and adjusted according to the manufacturer's specifications. If you are unsure of how to correctly assemble or adjust any component, seek assistance from a qualified technician. Failure to do so may compromise the safety, performance, and durability of your bicycle. Always check that all parts are securely fastened and functioning properly before riding.

Make sure to follow the traffic rules and regulations of the country where you are intending to use your bicycle. You will be able to find out more information from local authorities. If you are riding on the public roads, you are obligated to use all the lighting, signalling and warning devices.

Be careful with high temperatures of the disc brakes after heavy use, it can cause burns to uncovered body parts.

Never exceed recommended measurements on tyre width or maximum and minimum insertions of the seat post. Adhere to all torque and sizing specifications for press fits and thread fits. Over-tightening can damage threads or cause parts to fail. Failing to follow these instructions can result in serious injuries or damage to the bicycle.

As with al mechanical components, EPAC is subjected to wear and high stresses.

Different materials and components may react to wear or stress fatigue in different ways. If the design life of a component has been exceeded, it may suddenly fail, possibly causing injuries to the rider.

Any form of crack, scratches or change of colouring in highly stressed areas indicate that the life of the component has been reached and it should be replaced.

For composite components, impact damage may not be visible to the user. In the event of an impact or accident, composite components should either be returned to the manufacturer for inspection or destroyed and replaced to ensure safety.

For composite components, be aware that exposure to high temperatures or radiation in a confined environment can cause damage to them.

Tampering typically refers to unauthorised modifications, alterations, or manipulations of the product that may affect its functionality, safety, or compliance with manufacturer standards

The handlebar, steering, and brake use interact with each other and can lead to dangerous consequences (e.g., braking too hard → going over the handlebar, turning too quickly → going off the line, etc.).

Tampering with a bike, such as altering components, bypassing safety features, or using non-compliant parts, can compromise safety, reduce performance, void warranties, and increase the risk of accidents by disrupting critical systems like brakes or steering.

Maintenance and Transport

Regular maintenance will prolong the life of your bicycle and ensure it is safe to ride.

Make sure to regularly clean your bicycle and check for wear. Replace worn parts as necessary.

For information on after-sales service and the supply of spare parts use only original Forestal spare parts available from our website, contact us at contact@forestal.com

Never use a high-pressure washer near electronic, pivots, or suspension components of the bicycle.

Do not clean components with excessive water. If the internal electrical parts are infected with water, the insulator may corrode which could lead to a power drain or other electrical problems.

Using non-neutral soap solutions may lead to colour change or colour distortion on some plastic parts of the bicycle or carbon frame.

For appropriate spares of you bicycle i.e. tyres, brakes, tubes, etc, please contact your local bicycle shop.

Make sure to equip your bicycle with all the necessary reflective accessories, lights and signalisation devices when used in the public roads.

Cleaning the bicycle

Never use a high-pressure washer near electronic parts and always use neutral soap for frame and components cleaning. Bear in mind that this is still bicycle with electronic part and need to be treated like any electronic device. Failure to follow these instructions can lead to damage to electronic system.

Cleaning the drivetrain parts

Chain and drivetrain parts are the most exposed moving parts of the bicycle. By keeping them clean you are preventing premature wear and tear of the chain and drivetrain sprockets. You can clean the chain and drivetrain parts with a dedicated chain degreaser. Make sure that while cleaning, degreaser, oil or grease doesn't come into contact with disc/rotors and brake pads! After cleaning ensure a quality lubricant is used on the drivetrain.

Software maintenance

We will occasionally provide you with system updates which we strongly recommend you download and install on your bicycle as soon as they are available. These system updates will make your bicycle more efficient and secure. Updates can also be performed through your smart device via the Forestal Sync App or BOSCH Flow App.

Maintenance schedule

Before every ride

Check the frame and fork for signs of stress: scratches, cracks, dents, deformation or discolouration.
Inspect the chain-stay guard and ensure it is correctly and securely attached.

Check that the wheels are in good conditions.

Check the tyre pressure.

Check the brakes, including brake pads and brake lines.

Check that both wheels are secured.

Check that the handlebar and stem are correctly positioned and inspect for signs of stress: scratches, cracks, dents, deformities, and discolouration.

Check that the suspension settings are at your preferences.

Check that the saddle is correctly positioned and tightened.

Check the smooth shifting operation.

Lubricate the chain.

Weekly

Check that all bolts are tightened to proper torque specifications. Make sure to include pedals and any accessories or luggage carriers.

Check the rims and spokes for damage.

Clean and degrease the bicycle.

Check the tyres for damage and wear.

Clean dust on suspension seals.

Monthly

Check the shifter and brake cables for wear.

Check that the engine is tightened to proper torque specifications.

Check that the headset is adjusted correctly.

Check that the chain is not worn.

Check regularly for firmware updates in dedicated apps.

Every 3 months

Inspect the drivetrain for wear.

Inspect the crank arms and pedals.

Check tyre sealant levels.

Inspect suspension parts for wear.

Annually

Annual servicing at your dealer: overhaul service and inspection of frame, suspension, and all other components. Repair, service, and/or replace parts as needed.

This list provides some guidelines, but is not to be considered a complete inspection from arising. Following these guidelines will help maintain the performance of your bicycle and prevent more serious problems from arising. It is important to remember that service intervals can vary depending on climate, trail conditions and riding cadence. For service instructions for your specific components, visit the manufacturer's website. If you detect any problems with your bicycle, and you are not able to repair them, take your bike to your authorised dealer for service problems.

Unboxing and setting up your bicycle

Congratulations, you have successfully reached your bicycle's assembly stage. Please follow the steps carefully in order to safely assemble your bicycle.

Forestal's bicycle box and packaging are fully recyclable and we strive to minimise the use of single-use plastics.

Handle the tools and box with safety in mind. By assuming this task, you are taking full responsibility for your safety.

Necessary tools for assembly:

- Tyre pump
- Suspension pump
- 6mm hex key
- 5mm hex key
- 4mm hex key
- T25 torx key
- Torque tool (supplied)

Put the other part of the box to one side.

Follow the instructions on the box to open it from correct side.

Please scan this QR Code for extended and detailed user manual.

Please scan this QR Code for external assembly video manual.

Content of the bicycle box

A Forestal bicycle

B Wheel holder

C Accessory Box:

- Lezyne x Forestal tool*
- User Manual
- Reflectors kit
- Lights
- Warranty documentation
- Bosch battery charger
- Pedals included

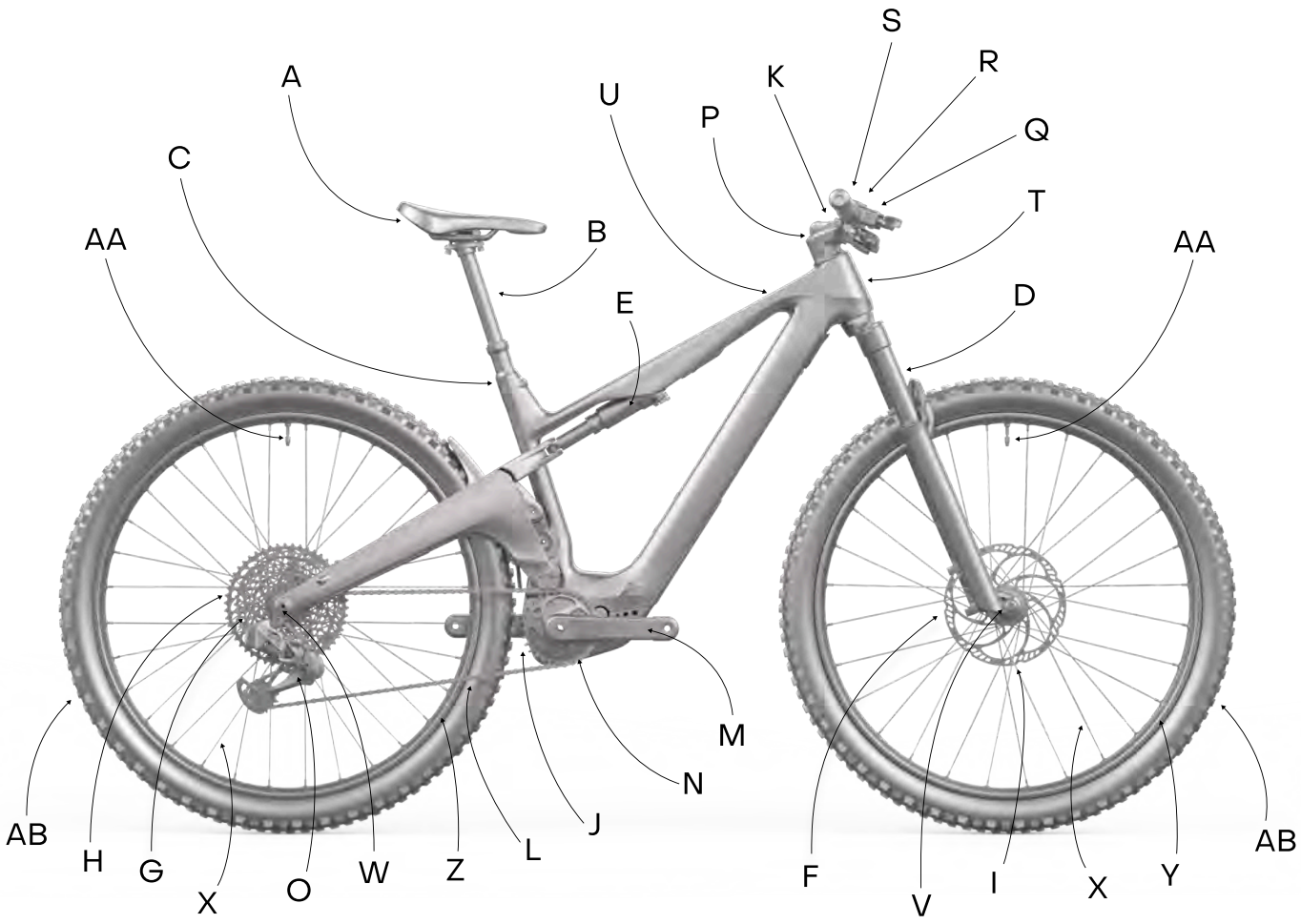
D Front wheel

E Handlebar

If bicycle is bought directly from Forestal's website, you can expect unpacking procedure as shown in the illustrations, together with an additional accessories inside the box.

*Only included in special edition version

Bicycle parts and components



A Saddle
B Seat-post - ⌀ 31.6
C Seat-clamp - ⌀ 34.9
D Fork
E Shock
F Front brake calliper - Post Mount
G Rear brake calliper - Post Mount
H Cassette - 12 speed XD body
I Disc - 6 bolt
J Chainring - 104 BCD
K Dropper-post trigger
L Chain - 114 Chain eyes
M Crankset - ISIS
N Motor protector
O Rear derailleur - 12 speed
P Stem - ⌀ 31.8
Q Brake lever
R Handlebar - ⌀ 31.8
S Shifter - 12 speed
T Headset - ZS56/ZS56
U Display - Touchscreen
V Front hub - 110 x 15 mm
W Rear hub - 148 x 12 mm
X Spokes
Y Front rim
Z Rear rim
AA Valve - Presta
AB Tyres - 29”

Setting up your bicycle

In the next few steps, you will learn how to adjust your bicycle to unlock the full potential and fully enjoy your ride.

Necessary tools for assembly:
Tyre pump / Suspension pump / 6mm hex key / 5mm hex key / 4mm hex key / T25 torx key / Torque tool

Inflate the tyres

Tyre pressure should be between 1.6 bar (23.2psi) and 3.6 bar (52.2psi). Please do not inflate the tyres beyond the maximum pressure as indicated on the tyre. The optimal tyre pressure depends on the rider's weight, the terrain and personal preferences.

Please occasionally check your tyre pressure as low tyre pressure may lead to lack of control and a major risk of damaging your tyres, tubes, rims and a sudden tyre pressure loss. On the other hand, too high tyre pressure may lead to a significant lack of grip, lack of comfort and control, and risk of damaging the tyre.

Install the pedals

Left and right side pedal threads are different. The left pedal is a non-drive side pedal and it should be threaded counter-clockwise. The right side pedal has a regular thread and it is threading clockwise.

Pedals are included in the box for all electric bicycles.

Adjust the seat height.

Extend the dropper post by pressing the left lever with the left thumb, then adjust the approximate height of the seat, and tighten the saddle with 4mm hex key. Sit on the seat and assess the height by placing your heel on the pedal and rotating the crank to the lowest position. If the leg is fully extended while your heel is on the pedal and you are sitting comfortably on the seat, this means you have the right seat height. If not, please repeat the process until you reach the correct seat height.

Observe the minimum and maximum insertion on the dropper post and never exceed it. By exceeding it, you are risking frame damage and injuries.

Adjust suspension pressure

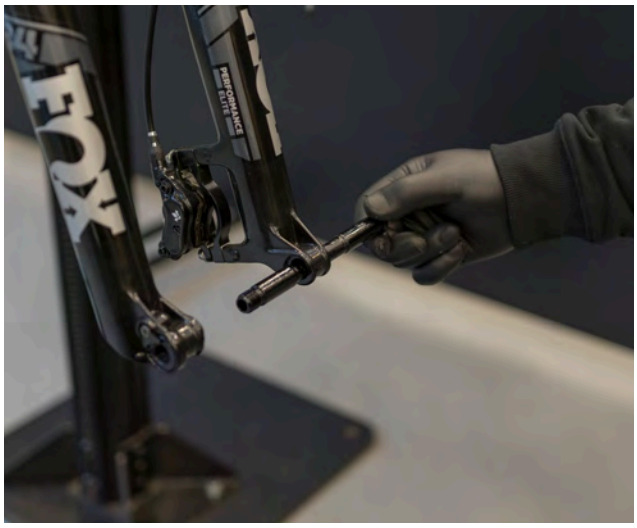
Adjust suspension pressure only with a high-pressure suspension pump. The air chamber for Rock Shox and Fox front suspension is located on top of the left leg while Öhlins uses the right leg for its air chamber assembly. Unscrew the protective cap from the top and attach the suspension pump.

Rear suspension air valve is usually located on the side of the shock.

Air pressure in air forks and shock need to be precisely adjusted to your weight before the first use of the bicycle. You can find detailed instructions on how to set up your suspension air pressure in our Suspension setup guide in:
www.forestal.com/usermanuals

Install the front wheel

Step 1. Use a bicycle mount or lift the bicycle to install the wheel on the fork.



Step 2. Unscrew the front axle from the fork in order to be able to install the wheel on it.

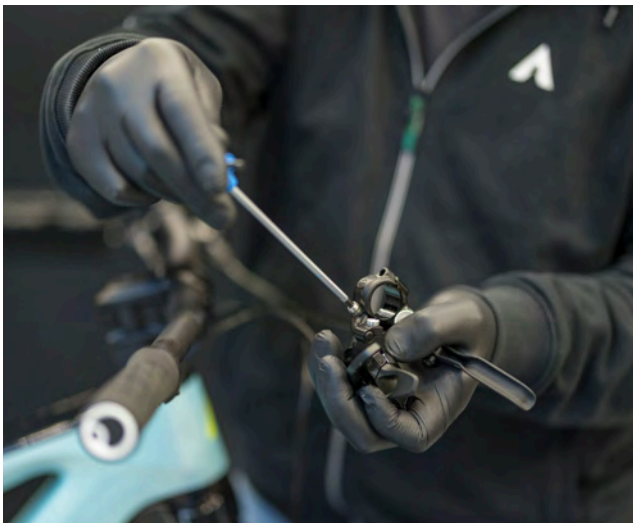
Make sure the brake disc of the front wheel is aligned with the brake caliper attached to the fork, this is necessary to install the wheel correctly on the fork.

Check the correct movement of the wheel, you might need to align the front caliper if the disc is rubbing it when in motion.

Step 3. Install the wheel and insert the axle through the fork.

Step 4. Tighten the axle with a torque tool and a 6mm hex key using the manufactures torque indicated on the axle.

Install the brake levers to the handlebar



Step 1. Unscrew the brake clamp from the left or right brake lever using a 4mm hex key and place it on the handlebar to a desired position

Step 2. Install the lever clamp on the brake lever.

Formula brakes use a 'no gap' installation method when attaching to the handlebar. Ensure there is no gap between the top of the clamp and the brake lever during installation.

Step 3. Screw the top bolt first using a torque tool with a 4mm hex key at 4Nm.

Step 4. Follow the same steps in order to install the other brake to the handlebar.

Install the lock-on grips

Step 1. Slide the lock-on grip to the handlebar.

Step 2. Tighten the lock-on grip to 2.5 - 4 Nm using a 3mm hex key.

Make sure that bicycle is placed not hanging from the service stand, but it's placed firmly at the ground with both wheels.

Install the handlebars to the stem

Step 1. Correctly place the handlebars in the stem slot and make sure to secure them from moving by applying the pressure to the stem clamp.

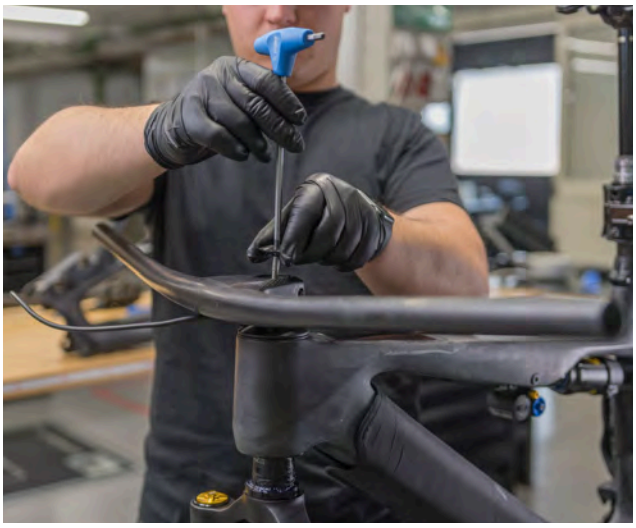
Make sure that bicycle is placed not hanging from the service stand, but it's placed firmly at the ground with both wheels.

Step 2. Tighten the T25 bolts on top of the stem clamp to 6 Nm.

Step 3. Add two 4 mm hex bolts to the front of the stem clamp and tight it to 6 Nm.

Install the integrated handlebars

Step 1. Correctly place the handlebars in the steerer and make sure to slide it firmly all the way to the first stem spacer.



Step 2. Tighten the stem top cap with 4 mm hex key to 5 Nm of torque making sure that fork is sitting at the correct position.

Make sure that bicycle is placed not hanging from the service stand, but it's placed firmly at the ground with both wheels.

Step 3. Secure the stem to the steerer by tightening the two side bolts with a 4mm hex key to a 6 Nm of torque.

All the information needed to carry out the assembly and adjustment operations left to the consumer, or likely to be carried out by the consumer in the context of reasonably foreseeable use of the bicycle is available in this QR code.

Brakes instructions

Please note that Forestal is shipping bicycles with the right brake that is operating the rear wheel and with the left brake that is operating the front wheel.

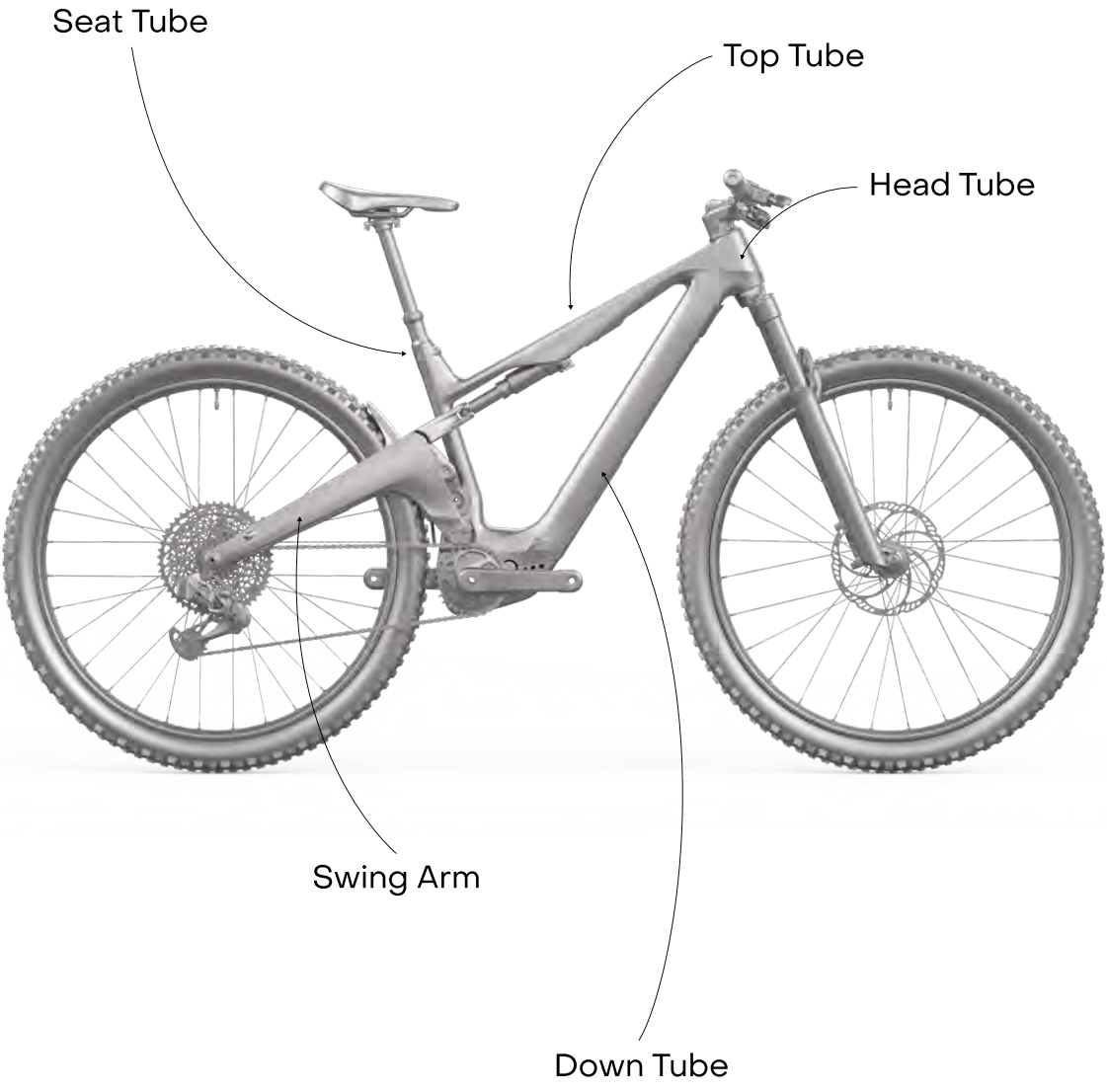
Follow all necessary instructions from the brake manufacturer to properly burnish and bed-in rotors and brake pads before any serious use of the bicycle. Following those instructions, you are ensuring that you will have secure brakes and be able to unleash their full potential.

Technical Characteristics

In this chapter, you will be familiarized with the characteristics of your bicycle.

Frame anatomy

Every bicycle frame consist of the following parts:

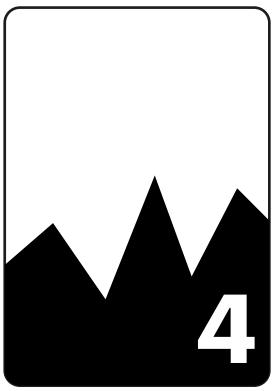


ASTM category and terrain type

e-Cygnus

Recommended for mild to moderate off-road terrains.

E-Cygnus bicycle model is designed to handle a wide range of off-road terrains. It perform exceptionally well on natural trails, dirt paths, and forested routes, where the terrain may include moderate climbs, descents, and uneven surfaces like gravel or rocks. These bikes are built for efficiency and speed on mixed terrain, making them ideal for riding on rugged singletracks, open fields, and hilly landscapes. While XC and DC bicycle can manage some technical sections, they are best suited for endurance rides over undulating, varied terrain rather than extreme downhill or highly technical routes.



These bicycles are specifically designed for use on the terrain types outlined in this manual. Using it on unsuitable surfaces—such as rough off-road paths, steep hills, or highly uneven terrain—can lead to loss of control, damage to the bicycle, and personal injury. Always ride on terrain appropriate for your bicycle's design and capabilities. Failure to do so may result in accidents, excessive wear, and may void your warranty. For your safety, avoid riding in conditions that exceed the bicycle's intended use.

The A-weighted emission sound pressure level at the driver ears is less than 70 dB(A).

Total System Weight Limit

This bicycle is designed to safely support a maximum total system weight of 128 kg (282 lbs). This includes the combined weight of the rider, the bicycle itself, and any additional luggage or accessories. Please note that this bicycle is not suitable for the installation of a luggage carrier, child seat or bicycle trailer. Exceeding this weight limit may compromise the performance, handling, and safety of the bicycle, potentially leading to damage or increased risk of accidents. Always ensure the total load remains within this limit for optimal performance and rider safety.

Sizing Chart e-Cygnus

Small / Medium

Recommended height
160 - 177 cm

Large

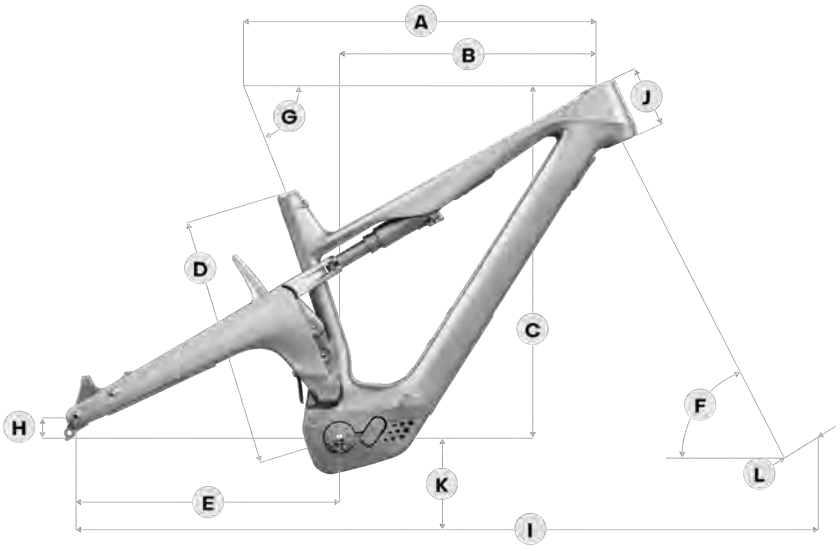
Recommended height
175 cm - 187 cm

Extra Large

Recommended height
> 185 cm

Size recommendations are based on a standard fit. For advice about sizing please feel free to contact our customer service team at contact@forestal.com

Geometry chart e-Cygnus



		S/M	L	XL
A	Top tube horizontal	595 mm	620 mm	650 mm
B	Reach	445 mm	470 mm	495 mm
C	Stack	602 mm	611 mm	625 mm
D	Seat tube lenght	415 mm	455 mm	500 mm
E	Chainstay horizontal	448 mm	448 mm	448 mm
F	Head tube angle	67 °	67 °	67 °
G	Seat tube angle	76 °	76 °	75.5 °
H	BB drop	-36 mm	-36 mm	-36 mm
I	Wheel base	1168 mm	1197 mm	1241 mm
J	Head tube length	100 mm	110 mm	125 mm
K	BB height	334 mm	334 mm	334 mm
L	Fork offset	44 mm	44 mm	44 mm

Seatpost insertion

Frame size	S/M	L	XL
Max. seatpost insertion	260 mm	300 mm	330 mm
Min. seatpost insertion	125 mm	150 mm	150 mm

The seatpost maximum extension mark is located on the backside of itself and should not be exceeded in any case. If the seat post mark and minimum frame insertion depths differ from each other, always use the longer measurement. If the maximum insertion point is reached, don't force the seat post deeper into the frame. By forcing the seatpost deeper, you can damage the frame and seat post cable.

Maximum seatpost insertion depth is measured from the top of the rubber part of the seat tube and it refers to measurements in the frame.

Minimum insertion mark is located from the backside of the seatpost and should not be exceeded in any case.

Frame specifications e-Cygnus

Material T700/800 Monocoque Carbon Fibre

Fork Travel 120 mm

Max Recommended Fork Travel 130 mm

Axle To Crown 531 mm

Fork Offset 44 mm

Rear Travel 120 mm

Wheels Size 29”

Recommended Shock Sag 20-25% (10 mm - 12,5 mm)

Shock Size 210 x 50 mm

Shock Compability Air (w.lockout remote)

Shock Hardware F (shaft) 20 x 8 mm

Shock Hardware R (body) 15 x 8 mm

Headtube 56 mm upper and lower bore

Headset ZS56/ZS56 with knock-block in lower cup

Bearings Required 6x61802-2RS; 2xBushing kit 20x18x6; 2x61804-2RS

Seatpost 31,6 mm (Internal Routing for Dropper Seatpost)

Seat Clamp 36,4 mm with rubber cap

BB Threaded 73 mm BSA

Rear Hub Boost 148 x 12 mm

Rear Axle Stealth M12 x 1.0

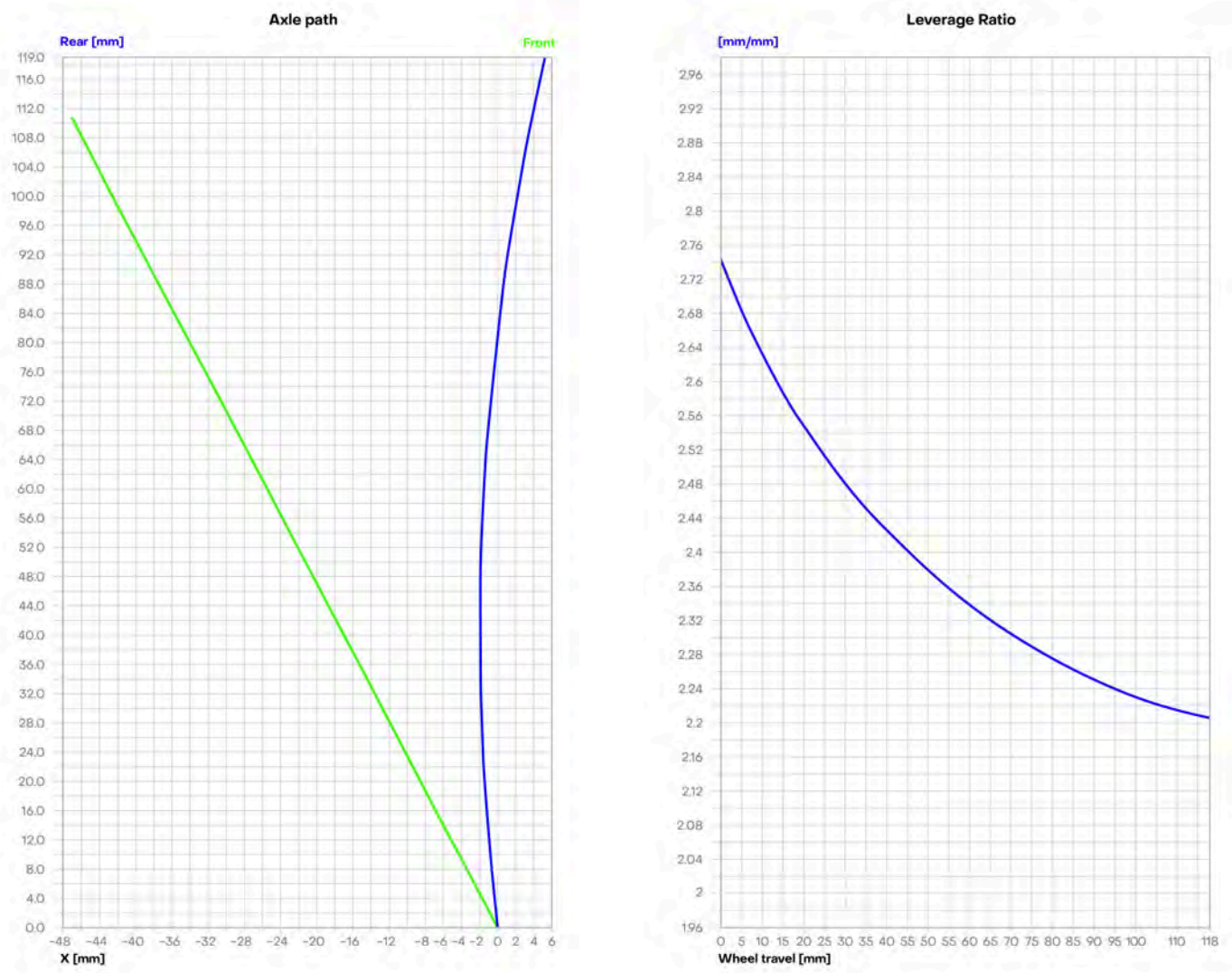
Max Chainring Size 36T/34T Oval

Brake Mount 180 mm Post mount

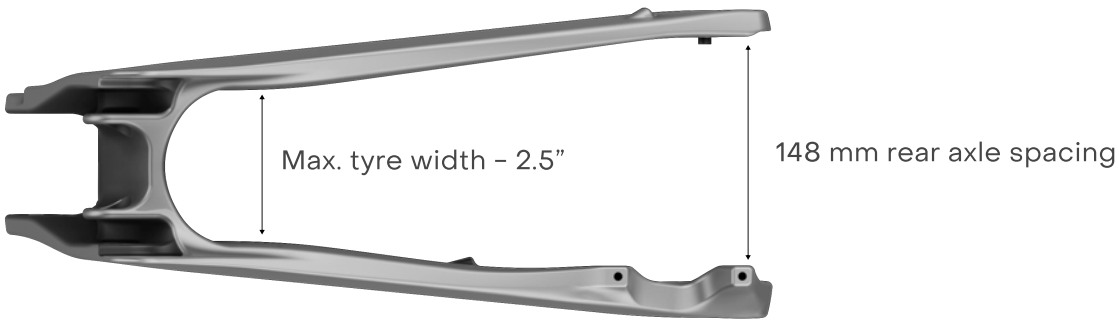
Protection 3D Countoured Rubber Frame Protection for DT/SS/CS

Internal Storage Fidlock magnetic lock with Fidlock bottle base and tool bag

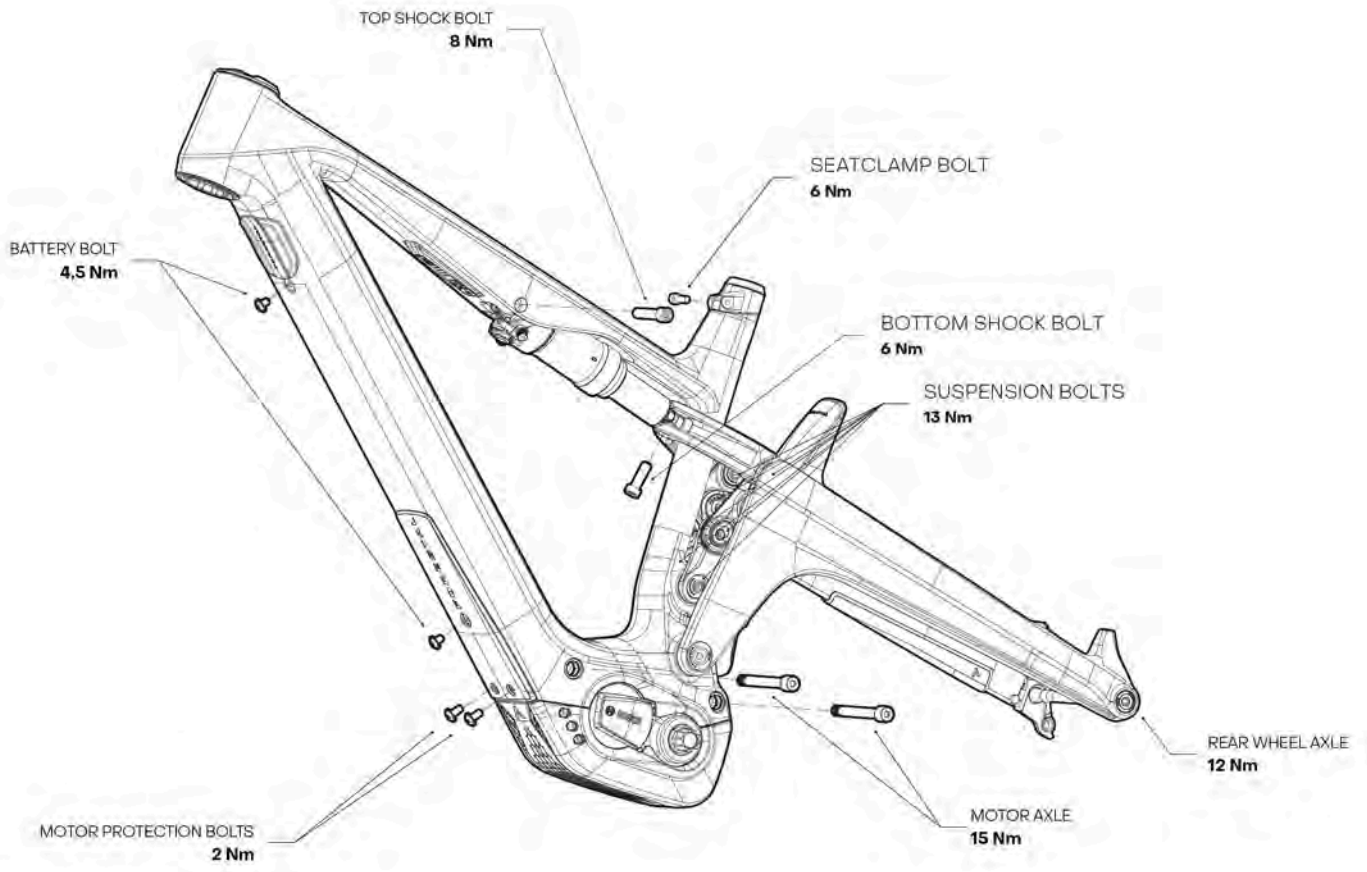
Suspension curve e-Cygnus



Rear spacing e-Cygnus

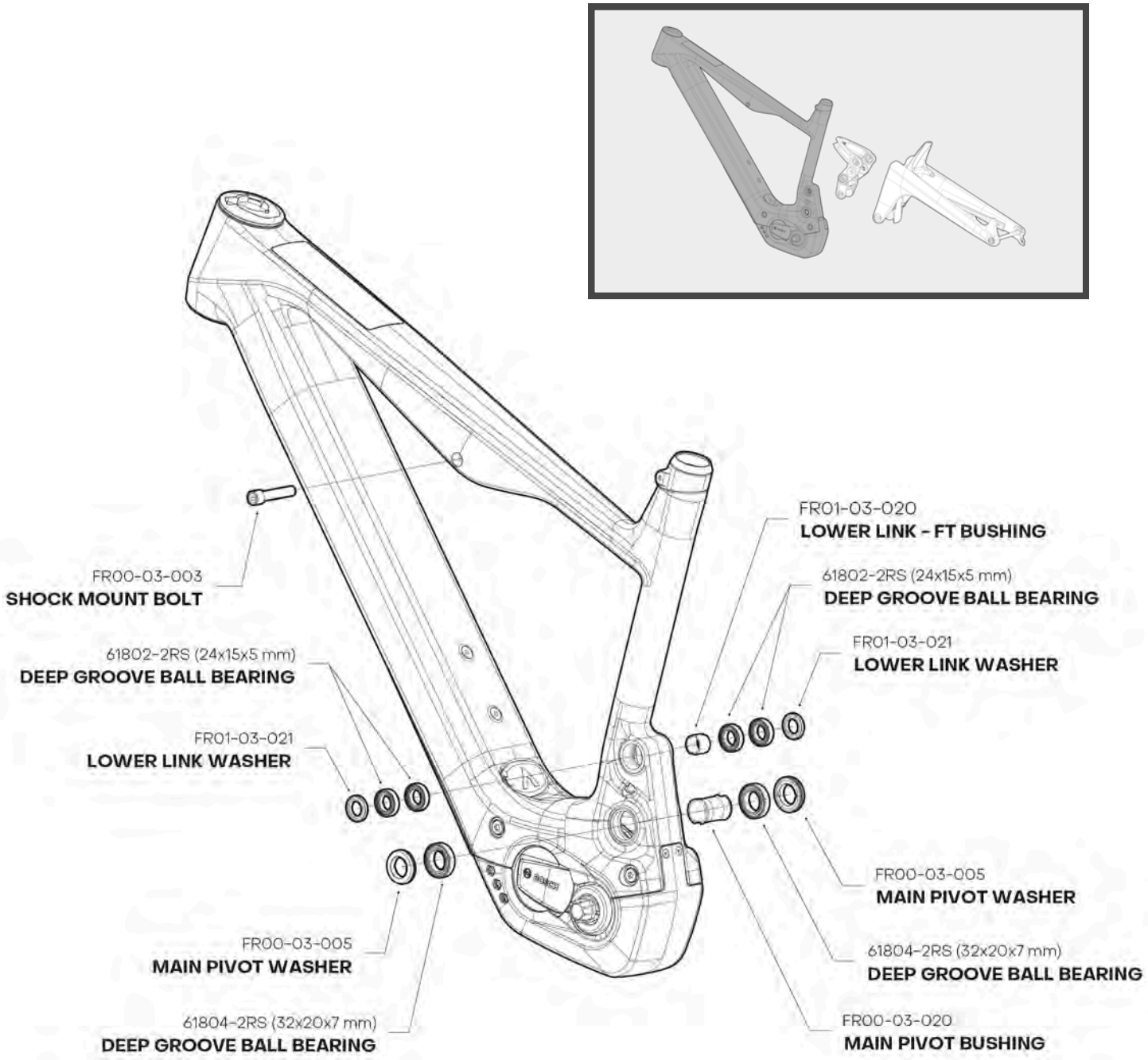


Torque diagram e-Cygnus



Torque recomendation - Frame	Newton-metre (Nm)	Pound-foot (lbf·ft)
Top Shock bolt	8 Nm	5.9 lbf·ft
Seatclamp bolt	6 Nm	4.4 lbf·ft
Bottom Shock bolt	6 Nm	4.4 lbf·ft
Twin Levity bolts	13 Nm	9.6 lbf·ft
Real wheel axle	12 Nm	8.9 lbf·ft
Main pivot bolt	15 Nm	11.1 lbf·ft
Motor bolts	30 Nm	22.2 lbf·ft
Battery bolts	4.5 Nm	3.3 lbf·ft

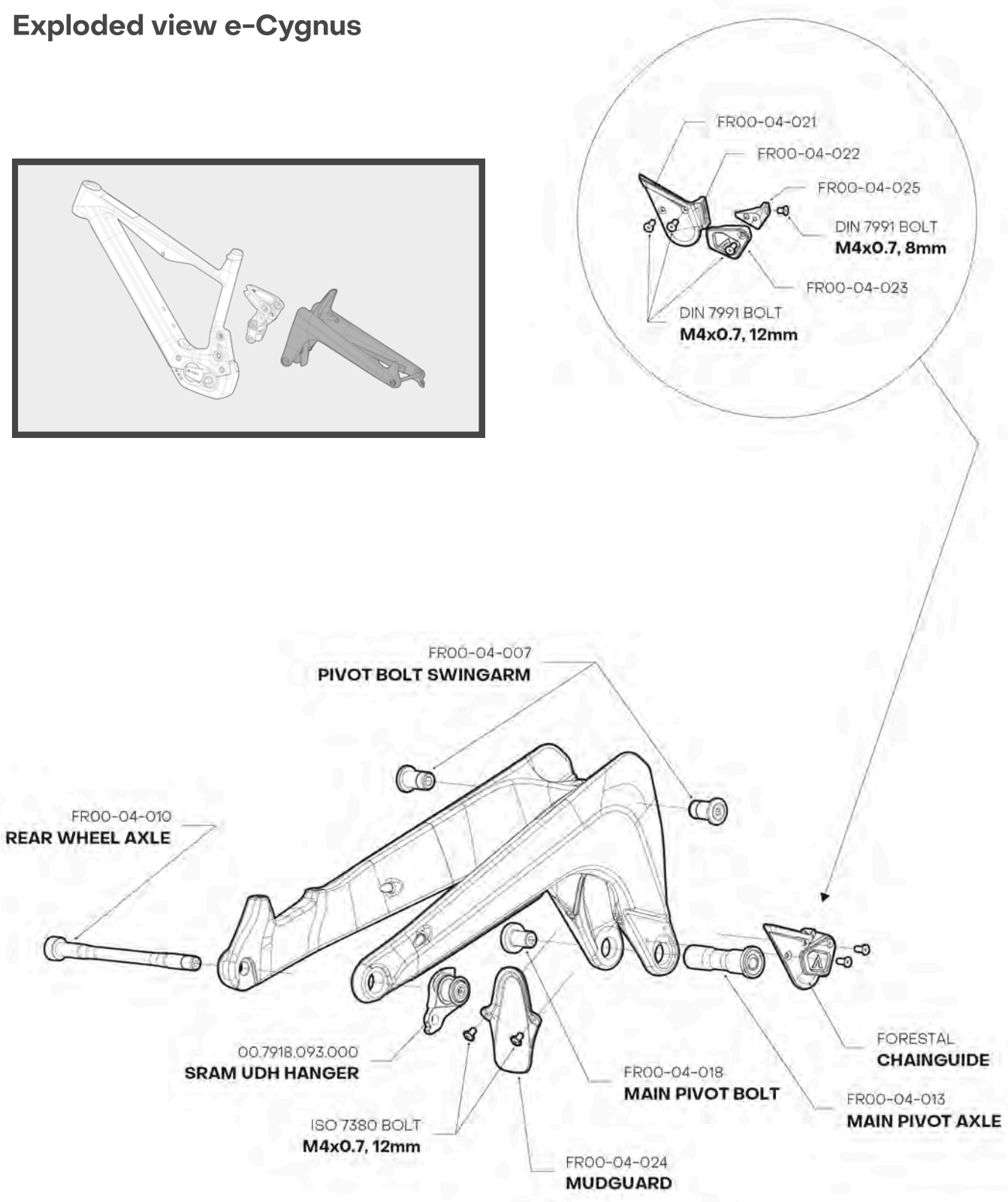
Exploded view e-Cygnus



Before assembly, apply a thin coat of grease to the bolt body as well as blue thread-locker on bolt threads.

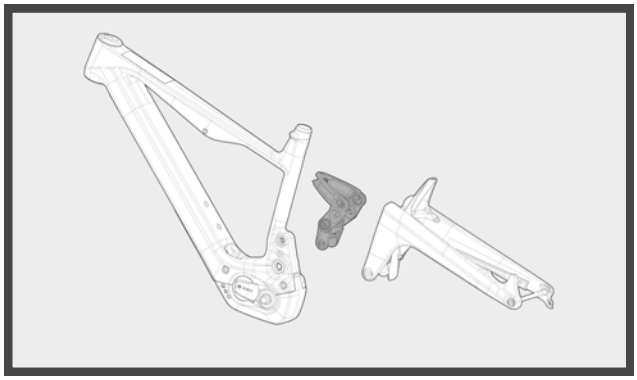
Use only the original Forestal parts available from the Forestal website or catalog.

Exploded view e-Cygnus



Exploded view e-Cygnus

Always use blue thread-locker whenever you assemble the linkage.



FR00-04-009
PIVOT AXLE

FR00-04-001
SHOCK EXTENSION

FR00-04-009
PIVOT AXLE

FR00-03-008
SHOCK EXTENSION BOLT

61802-2RS (24x15x5 mm)
DEEP GROOVE BALL BEARING

FR00-03-005
PIVOT BOLT

FR00-04-003
LOWER LINK

FR00-04-005
PIVOT BOLT

61802-2RS (24x15x5 mm)
DEEP GROOVE BALL BEARING

FR00-04-011
LOWER LINK AXLE

FR00-04-005-2
LOWER LINK PIVOT BOLT

61802-2RS (24x15x5 mm)
DEEP GROOVE BALL BEARING

FR00-04-005
PIVOT BOLT

FR00-04-005
PIVOT BOLT

61802-2RS (24x15x5 mm)
DEEP GROOVE BALL BEARING

FR00-04-006
RIGHT TOP LINK

FR00-04-002
LEFT TOP LINK

FR00-04-009
PIVOT AXLE

SAINT GOBAIN
BUSHING 020100154

LOWER LINK ASSEMBLY

SAINT GOBAIN
BUSHING 020100154

FR00-04-009
PIVOT AXLE

Components torque table

Torque - Components	Newton-metre (Nm)	Pound-foot (lbf·ft)
Lock-on grips	2.5 - 4 Nm	1.8 - 2.9 lbf·ft
Shifter to handlebar	2.5 - 4 Nm	1.8 - 2.9 lbf·ft
Brake lever to handlebar	4 Nm	2.9 lbf·ft
Headset Stem top cap	5 Nm	3.7 lbf·ft
Stem to handlebar clamp	6 Nm	4.4 lbf·ft
Stem to steering tube	7.2 Nm	5.3 lbf·ft
Seatpost bolt	5 Nm	3.7 lbf·ft
Wheels thru axle	40 Nm	29.5 lbf·ft
Cassette retainer	40 Nm	29.5 lbf·ft
Disc brake rotor to hub	6 Nm	4.4 lbf·ft
Disc brake caliper to frame / fork	6 Nm	4.4 lbf·ft
Rear derailleur fixing bolt	11 Nm	8.1 lbf·ft
Derailleur cable bolt	5 Nm	3.7 lbf·ft
Cranks to motor	48 - 55 Nm	35.4 - 40.5 lbf·ft
Chainring bolts	8 - 9 Nm	5.9 - 6.6 lbf·ft
Pedals to the cranks	30 Nm	22.1 lbf·ft
Fork axle	9 Nm	6.7 lbf·ft

This list provides some guidelines but is not to be considered a complete representation of needed service. Following these guidelines will help maintain the performance of your bicycle and prevent more serious problems from arising. For service instructions and torque values for your specific components, visit the manufacturer's website.

Performance line SX Motor

In this chapter, you will be familiarized with the technical specifications of the motor:

Performance line SX motor range is BOSCH electric motor unit with 250 W of power and 55 Nm of torque. It's most efficient at a cadence range of 80-100 rpm. It is IP67 graded which means it can be submerged at a depth of 1 m in water for 30 minutes. It uses the standard ISIS axle with a direct mount or standard 104 BCD chainring compatibility.

Specifications of the motor

Most efficient cadence range	80-100 rpm
Rated continuous output	250 W
Maximum power	600 W
Maximum power at 70 rpm	400 W
Torque	55 Nm
Protection	IP 67
Weight	2.0 kg
Max. support level %	340 %
Axle type	ISIS axle
Chainring type	Direct or 104 BCD

CompactTube 400 Battery

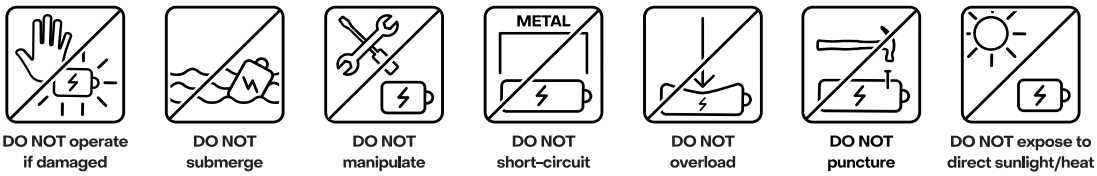
In this chapter, you will be familiarised with the characteristics of the CompactTube 400 Battery:

The high performance 400 Wh CompactTube battery is perfectly integrated with the lightweight Alpha Box frame and the Twin Levity suspension's efficient kinematics. It uses high-efficiency battery cells, known for their high performance, long life, and resistance to charge capacity reducing memory effect, making them the perfect choice for compact batteries.

Specifications of the battery

Voltage	36 V
Capacity	11.1 Ah
Charging time 4A	3.5h to 100%, 1.5h to 50%
Weight	2.0 kg
Dimensions	352 x 57 x 75 mm
Compatibility	DualBattery/Smart system
Operating battery temperature	-20 to 60 °C
Storage battery temperature	-20 to 60 °C
Charging battery temperature	0 to 45 °C
Dust resistance	IP6X

Please note that it will take between one and three complete charging cycles for batteries to achieve their optimum performance.



Store the battery for no more than 3 months without charging. Used batteries may contain harmful substances which, if not properly stored or disposed of, could damage the environment and your health. After replacing a battery, you are obligated to dispose of the old battery appropriately. In case of battery damage, don't use it in the bicycle, but hand it over to the nearest Forestal or BOSCH distributor or appropriate electronic waste bins.

Specifications of the charger

	Input	Output
Voltage	220 - 240 V	36 V
Amperage	1.6 A max.	4 A
Frequency	50 - 60 Hz	50 - 60 Hz

The values given are valid for a nominal voltage [U] of 230 V. For different voltages and models for specific countries, these values can vary.

Charging speed may vary depending on the age and state of the battery.

Support levels

BOSCH system has 4 support levels. Each level will seamlessly support you as you ride no matter your fitness level. You can see the current selected assist level at the top right corner of your screen

Assistance modes

Turbo	Direct, maximum support power up to highest cadence for sporty riding.
Sport/eMTB*	Powerful support for universal use - both for sporty riding and fast commuting in urban traffic.
Tour+**	Continuously incremented support for a natural riding sensation and energy-saving riding for sporty eBikers.
Tour	Consistent support for long distances.
Eco	Low level support with maximum efficiency for the greatest range.
Off	No assistance, all display functions are available.

*Progressive support for a natural riding sensation and optimal control on demanding terrain.

**Tour+ riding mode is for eBikes with the Performance Line CX drive unit riding mode with derailleur system (from model year 2020) and eMTB mode available and replaces Tour mode.

Forestal pedal-assisted bikes with BOSCH motors can be used as regular bicycles as the motor is significantly decoupled from the cranks when assistance is not engaged or when the bicycle is turned off.

Avoid using highest assistance mode for more than 15 minutes on steep climbs if the outside temp is above 30°C. Failure to do so can significantly increase the temperature of the motor unit which may lead to premature wear or damage to electronic components.

Using highest assistance mode can be dangerous for inexperienced riders. Please use it only when you are comfortable and in safe environment.

To see all the available assistance modes from BOSCH system, please visit:

https://www.bosch-ebike.com/en/products/riding-modes

BOSCH Mini Remote

BOSCH Mini Remote is an ergonomic control for toggling between BOSCH drivetrain assistance modes. Connected via Bluetooth to a drivetrain system, it integrates seamlessly to Forestal's Oxydon cockpit providing clean looks without unnecessary wires.

By pressing the + and – controls you can quickly toggle between support levels. As you change levels, relevant mode icon would appear in the upper right corner or your screen to indicate which assistance level you are currently in.

To activate walk assist mode, press and hold the "–" control. After slight delay, bicycle will begin to move forward. Releasing the "–" button will automatically disengage walk assist and the bicycle will stop.

By pressing the lights button, you an control dashboard ON and OFF state individual to BOSCH system.

Dashboard Explanation

The new Dashboard V2 redefines control and connectivity for the Forestal e-Cygnus. Featuring a streamlined interface and enhanced functionality, it integrates seamlessly with the Oxydon cockpit. It offers intuitive navigation, real-time performance data, and a sleek, modern aesthetic. Built on an Android platform, it also provides the capability to add apps in the future.

SRAM AXS App

The AXS Mobile App is a centralized place to control, personalize and measure AXS enabled components from SRAM, RockShox, Quarq, and Zipp. AXS Web is a complementary web-based tool.

Bosch eBike Flow App

The Bosch eBike Flow app is the centrepiece of our smart system and gives you a better, connected riding experience: safer, more personalised and more convenient.

ShockWiz

ShockWiz is an assistant designed to fine-tune the air forks and rear shocks of mountain bikes. It combines hardware with sensors and this app to optimize suspension settings for all types of terrains and riding styles. ShockWiz is compatible with most suspension forks and air rear shocks from a wide range of manufacturers.

Settings

Change the settings to tailor the app to your needs and enhance your experience. Here, you can adjust various options that will allow you to personalize the behavior, appearance, and features according to your personal preferences

OFF

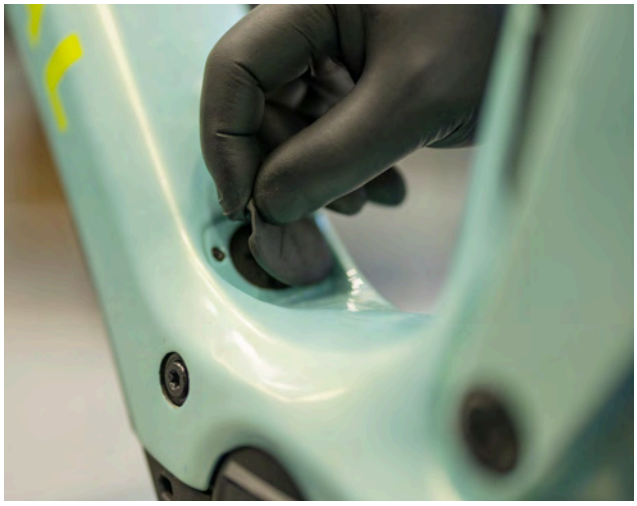
Turn the bicycle off.

Battery handling

In the next few steps, you will be informed on how to charge and handle your battery to fully enjoy longevity and safety of your bicycle.

Charging the battery

1. Connect the charger into the wall socket.



2. Slightly pull and twist the plastic cover on top of the motor to uncover the charging port.

3. Make sure to twist 180° the cover before accessing the charging port.

4. Connect the charger to the charging port.

Battery charge indicator of the eBike battery

In the battery charge indicator of the eBike battery (13), each ice-blue bar represents 20 % capacity and each white bar represents 10 % capacity. The topmost bar shows the maximum capacity.

Bar	Capacity
2 x orange	30 % to 21 %
1 x orange	20 % to 11 %
1 x red	10 % to reserve
1 x red flashing	Reserve to empty

If the eBike battery is being charged, the topmost bar on the battery charge indicator of the eBike battery (13) flashes. The eBike battery's state of charge is also indicated outside the eBike, by the LEDs on the eBike battery.

Before every charging cycle, cool down the battery below 30°C. Not doing so, you are risking permanent battery damage.

Before the first ride, please fully charge your bicycle! This bicycle uses electronic components and high-performance Lithium-Ion batteries. Please take the time to inspect the components and display regularly. Occasionally monitor the charging process. Batteries are considered dangerous flammable material, therefore make sure you carefully follow the manufacturer user manual instructions. Charge your bicycle according to the manufacturer specifications by using only the originally provided charger. Failure to do so may result in malfunction and serious injuries.

Battery consumption and range

Please note that the range can vary greatly from different factors such as tyre profile, tyre pressure, general condition of the bicycle and the battery, weather conditions, outside temperature, terrain conditions, the rider's weight, and preferred cadence while pedaling.

Battery safety, handling and charging

Do not try to open or burn the battery!

Do not operate the battery if it is damaged.

Avoid submersing or washing the battery with excessive water.

Do not manipulate the battery.

Do not expose the battery to direct sunlight / heat.

Do not puncture the battery!

A damaged battery can be flammable and dangerous and should be replaced immediately.

Do not short-circuit by connecting the opposite poles with any metal component.

Batteries may lose their capacity over time which may lead to a drop in the performance of your bicycle. Batteries that lose significant capacity need to be replaced since it may affect performance or correct use of other electrical components.

Forestal provides the battery specification printed on its label based on conservative measurements of performance, but also reserved additional capacity to extend the life of the battery and ensure the battery stays in its optimal condition during its lifetime.

Do not charge the battery if the battery temperature is more than 30°C. By doing so, you are risking permanent damage and warranty avoidance.

Used batteries may contain harmful substances which, if not properly stored or disposed of, could damage the environment and your health. After replacing a battery, you are obligated to dispose of the old battery appropriately. For disposal of used batteries from Forestal bicycles, contact us at contact@forestal.com

Battery handling

Handling the batteries safely and responsibly is crucial for personal and environmental safety. By avoiding complying with these recommendations in battery handling, you are elevating the risk of suffering property damage, injuries and/or death.

If the battery is damaged in any form or shape, internally or externally, please stop using it immediately and follow the battery storing, handling, and recycling procedure.

Short-circuiting the battery will lead to inevitable damage to the battery and potentially damage to property and/or personal health.

By manipulating the battery in any form or shape, meaning by trying to open, repair, or modify the battery physically or by using unauthorized software, you are causing potential damage to the battery itself, property, and/or personal health.

Even the Aurora batteries are IP63 waterproof rated, by submerging the batteries with the open charging port, you are risking a short circuit which inevitably leads to damage to the battery and potentially damage to property and/or health.

Puncturing the battery with any kind of sharp objects or drills will lead to inevitable damage to the battery and potentially damage to property and/or personal health.

Overloading the battery through the whole body length, width or height can lead to body deformation and malfunction of the cells or control board and ultimately to battery malfunction.

By exposing the battery to direct sunlight you are increasing the possibility of cell damage due to a high temperature and damage to a plastic part on the control board or body construction.

It's strictly prohibited to deposit any type of battery in the garbage can. In the case of high-voltage batteries like Aurora batteries, please follow the instructions on safely handling, storing, and recycling.

Storing the batteries

Every spare battery from BOSCH is shipped fully enclosed in a vacuum bag, charged in between 35% and 80% of its full capacity, and physically protected by individual packaging.

Forestal highly recommends to store spare batteries inside specific battery storage racks, which are temperature-stable, sealed and protected against fire and elements. In case battery is already used but needs to be stored, or you are storing the bicycle for a longer period of time, please make sure to charge it between 60% - 80% before storing it. Control the battery level every 3 months. If capacity drops below 60%, recharge it again between 60% - 80%. Never store a bicycle under 35% of the full battery capacity because this may lead to permanent damage or a premature decrease in its capacity and performance.

For storage purposes or extracted battery, it is recommended to remove the external packaging but always keep the vacuum bag. If a battery is damaged or has a known malfunction like a battery that was previously used, reported, and exchanged under the warranty conditions, or if they were simply at the end of their lifecycle, it is strongly recommended to store these batteries in a safety battery storage rack before recycling.

It's highly recommended to store the batteries at a temperature from 10°C - 20°C and never charge them if the outside temperature is below 0°C or above 40°C.

Recycling

Batteries with any kind of defect should not be charged further or forcefully discharge or manipulate. It is highly recommended that these batteries are recycled with the professional recycling company in your area in the shortest possible date. Since rules and regulation for recycling high-capacity batteries vary from country to country, professional recycling companies can assist you on this matter with the latest and most accurate information.

Forestal is not responsible for handling, storing, or recycling the batteries at any location outside the Forestal Group location.

Storing the bicycle

We recommend that you protect your bicycle from outside elements and store it in a clean and dry place at a temperature from 10 - 25 °C (50 - 77 °F). Before storing your bicyle for a longer period of time, it is recommended that you clean the whole bicycle, lubricate all moving parts and deflate the tyres to about the half of the normal tyre pressure.

If you are not planning to use the bicycle for more than 15 days, please make sure to charge the battery between 60% - 80% before storing it. Control the battery level every 3 months. If capacity drops below 60%, recharge it again between 60% - 80%.

Never store a bicycle under 35% of the full battery capacity because this may lead to permanent damage or a premature decrease in its performance.

Transportation

Whether it is for travelling, warranty or maintenance purposes, we strongly recommend you to use your bicycle's eco-friendly box. You can re-pack your bicycle in it by using all the packaging parts that originally came with the bicycle and by following packing/unpacking procedure that you can find on our website. In case of transportation by air, make sure to contact your particular airline for further advice.

Battery transportation

It is important to note that airlines have restrictions on electronic components such as batteries. It is only allowed to travel with up to 100 Wh lithium-ion battery in your checked bag. Therefore, we recommend you to contact your particular airline if you want to transport your bicycle by air to find out more information about the different rules and restrictions regarding this subject. Transporting the battery by land transport will require battery to be packed in secure transport box to avoid potential damage. Some particular transport companies have different packaging rules for dangerous goods so please contact your desired one for more details.

Adjustment of gears and operation

To operate SRAM Eagle, use the right shifter (big lever for easier gears, small lever for harder gears) and pedal lightly while shifting. For adjustment: Ensure the derailleur hanger is straight, align the derailleur with the smallest and largest cogs using the limit screws, set the B-gap with the SRAM tool, fine-tune cable tension with the barrel adjuster, and test ride to finalize.

Starting The Bicycle

In the next few steps, you will learn how to start your bicycle for the first time and become familiarised with the software of the Forestal and BOSCH system.

1. Press and hold the button on BOSCH System controller until led bar starts to glow.

2. When the bicycle turn on, you should see a current battery level at the BOSCH system controller.

Before the first ride, please fully charge your bicycle and check all the necessary components for safety.

The initial start-up time of Dashboard may be between 40-50 seconds. When starting your bicycle for the first time you will be obligated to first register your bicycle and connect it with your Forestal account before the first ride.

Completely turning off the bicycle is only possible through the BOSCH System controller power button. If you turn off the display through our Smart Dashboard's “turn off” feature or by pressing lights button at the trigger, the bicycle will still provide support and assist you depending on which assistance mode you chose.

Dashboard explanation

The Forestal V2 dashboard, seamlessly integrated into the top tube of all our Gen2 e-bikes equipped with the BOSCH drivetrain system, allows users to access essential apps directly from their bicycle, eliminating the need to reach for their mobile phones. Factory-installed apps include the BOSCH App and SRAM AXS App, with additional applications available through regular software updates.

Unlike the V1, the V2 dashboard operates as an open system, supporting the installation of any compatible app, similar to an Android phone. Featuring a significantly larger 3.99-inch display and enhanced computing power, the new dashboard ensures seamless usability for external apps while maintaining robust connectivity options, including 4G, Bluetooth, GPS, and ANT+.

Please scan this QR Code to visit “how to use” video for Dashboard V2.

Please scan this QR Code to visit BOSCH Flow App video.

Warranty

At Forestal we are committed to providing a first-class brand experience, not only by creating the most innovative and extraordinary products but also by being close and accessible to our customers when they need us the most.

For this reason, we are offering a Global Warranty policy for users who register their bicycle through Forestal Sync App:

Frame warranty: 7 Years
Normally you will read “lifetime warranty”, but this is related to the material’s lifetime. According to our research, we consider 7 years to be the optimal lifespan for carbon fibre.

Paint and graphics: 2 Years
Under any circumstances except physical damage due to the careless use of the bicycle.

BOSCH components: 2 Years
We recommend e-drive system components to be maintained only at certified BOSCH dealer/ shop/distributor/Service centre.

Bosch battery: 2 Years
Warranty period of 2 years of use or 500 charging cycles of the battery. After fulfilling one of this two conditions, warranty will be considered as expired.

Smart Dashboard: 2 Years
Under any circumstances except physical damage due to the careless use of the bicycle.

Other Forestal branded components: 2 Years
Under any circumstances except physical damage due to the careless use of the bicycle.

The rest of the non-Forestal components will be covered by the warranty of its related third party suppliers and manufacturer. Information about the conditions will be included with each bicycle in form of dedicated original instruction manuals.

Consumable parts including but not limited to tyres, bearings, brake pads, chains, chainrings, and cassettes are not covered by the warranty.

Incorrect use or modification to the bicycle frame, motor, and battery in any way that may change its design or intended use and operation may lead to voiding the warranty.

The warranty will begin from the moment in which the bicycle is delivered to its first owner but also, the warranty is transferable, taking into consideration that it will be calculated from the delivery date to the original owner.

Transferring the bicycle’s ownership and warranty from one user to another can be achieved via the Forestal App, where a unique confirmation code will be sent to both parties to approve the transaction.

From that point, the second user will become the registered owner of the bicycle and by that they gain all consumer rights and possession of the eventual warranty claims.

Rewind Programme

Forestal wants to make sure that our customers stay with the brand, therefore we are offering special pricing for those who are not eligible for a warranty. The Rewind Programme helps users to “go back in time” to avoid that precise moment in which their Forestal bicycle was severely damaged. You will find more information on the warranty page of our website. If you would like to take advantage of the Rewind Programme or have any related questions please email us at contact@forestal.com and our customer service team will gladly assist you.

It is necessary to register yout bicycle before the first ride in order to activate the warranty, and be able to use all benefits of rewind programme.

Disclaimers & Warnings

Please read the user manual carefully and follow all the recommended procedures.

By following this, you are extending the lifespan of your bicycle and preventing potentially dangerous situations and injuries to you or third parties.

Forestal is not responsible for any damage or injuries caused to you or third parties by the use or incorrect assembly of this bicycle or any product contained in this box.

The user manual is subject to change without previous notice. We will always try to improve the methods and the quality of our information and processes that are contained in this manual to provide a better user experience.

Use only original spare parts and Forestal parts that you can find on our website

Incorrect use or modifications to the bicycle frame, motor, and battery in any way affecting the design or intended use and operation will lead to voiding the warranty and render your bicycle not in compliance with the applicable consumer rights and regulations.

Declaration of Conformity

With this declaration of conformity, the Manufacturer:
FORESTAL GROUP, SL.U.
Borda del Prat de La Font, s/n
AD400 Arinsal
Andorra

We hereby declare, on our sole responsibility as manufacturers that:
The bicycles, year of construction 2024, and hereinafter referred to as

Description	Ref. Number
e-Cygnus Halo, Carmine Grey, S/M	F1.254010201
e-Cygnus Halo, Carmine Grey, L	F1.254010301
e-Cygnus Halo, Carmine Grey, XL	F1.254010401
e-Cygnus Halo, Teal Mindaro, S/M	F1.254010202
e-Cygnus Halo, Teal Mindaro, L	F1.254010302
e-Cygnus Halo, Teal Mindaro, XL	F1.254010402
e-Cygnus Diode, Anti-Flash White, S/M	F1.254030203
e-Cygnus Diode, Anti-Flash White, L	F1.254030303
e-Cygnus Diode, Anti-Flash White, XL	F1.254030403

They comply with the relevant provisions of the following European Directives

DIRECTIVE 2006/42/EC relating to machinery
DIRECTIVE 2014/30/EU on Electromagnetic Compatibility (EMC)

The following harmonised standards have been applied:

EN 15194 (October 2017) Bicycles. - Electrically assisted bicycles. - EPAC bicycles

Mr. Rafael Gil-Pérez Redondo, CEO of FORESTAL GROUP, S.L.U. and authorised to constitute the technical documentation

Andorra, 17th October 2024

Rafael Gil-Pérez Redondo
CEO

Thank you

for your purchase and for
becoming an essential part of the
Forestal team.

#BeTrueToYourNature

#RideForestal

If you have any questions, please do not hesitate
in contacting us as we will gladly help you.

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contact@forestal.com
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AD200 Encamp - Andorra

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