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June 2019

PI 10949

Evolution of the Performance Line CX **Bosch eBike Systems redefines eMountain biking**

- ▶ New, powerful drive for eMTB use from model year 2020 onwards
- ▶ Compact, lightweight drive unit enables agile eMountain biking
- ▶ Optimised for sporty, powerful and dynamic riding on the trail

Stuttgart/Reutlingen – No route is too steep, no challenge is too big: With the new Performance Line CX in model year 2020, Bosch eBike Systems is launching a drive system for eMTB use that is light and compact but at the same time extremely powerful and efficient. The most powerful Drive Unit from Bosch convinces even the most demanding of riders with up to 340 percent support. The motor accelerates extremely powerfully, reacts to the rider's pedal pressure without deceleration and provides dynamic handling from the first pedal stroke. For eMountain bikers this means even more agility and control over the bike – and increased riding enjoyment on the trails.

Performance Line CX: Tailor-made for eMTB

In the last few years, eMountain biking has been established as an independent eBike discipline and has expanded mountain biking. 'Bosch is one of the key drivers in the eMTB industry and has made a significant contribution to this development with its products. Now it's time for the next stage of evolution. With our new Performance Line CX we provide the ultimate Uphill Flow feeling. The CX will continue to be the first choice for eMountain bikers,' said Claus Fleischer, CEO of Bosch eBike Systems.

Thanks to the magnesium housing and a size reduced by almost 50 percent, at 2.9 kilograms it weighs around 25 percent less than its predecessor. 'The compact size of the Drive Unit allows bicycle manufacturers to better integrate the drive system and build frames with shorter chainstays. The weight of the eMTBs is also reduced. As a result, the bikes are just as manoeuvrable and agile as mountain bikes without an electric drive and also offer a clear advantage in riding enjoyment,' says Fleischer.

Perfect riding sensation on the trail

The drive provides a natural riding sensation when riding more than 25 km/h or in off mode. A freewheel completely decouples the motor and transmission, so that the eBiker pedals efficiently, even if the system does not provide support at that moment. Only very robust and lightweight materials are used in the high-quality transmission – this enables low-noise riding with high engine power at all cadence frequencies. The motor and gearbox work with optimum efficiency and also use the energy from the battery very efficiently, so that long, steep climbs can be mastered and many metres of altitude can be covered. The completely newly developed motor control of the Performance Line CX contributes to the sporty riding enjoyment. The multi-sensor concept enables dynamic and sensitive response of the Drive Unit, which supports up to a maximum of 340 percent. ‘eMountain bikers can achieve significant acceleration wherever it’s needed – for example on technical uphill sections or out of tight bends,’ Fleischer explains. ‘The drive delivers constant power output over a very wide cadence range. Fast intermediate sprints and crisp changes of tempo are easy to achieve. Also riding standing up feels natural.’ To control the bike even on difficult sections, the optimised ‘eMTB Mode’ supports eBikers with maximum sensitivity and at the same time progressive power delivery: Depending on the pedal pressure, the motor dynamically increases the rider’s own power, so eBikers don’t have to change the riding modes manually.

Fine-tuning down to the last detail

The new flagship among Bosch eBike drive systems has been thought through down to the very last detail. An additional 12-volt connection allows third-party suppliers to supply their components with power from the eBike battery. The Drive Unit allows chainrings to be mounted using “Direct Mount” or with 104 millimetre standard mounting. The Q-factor of 175 millimetres helps eMountain bikers to achieve an efficient, ergonomically favourable position on the bike and a natural pedalling feeling. So that eMTBs with short cranks can also transmit the force optimally, there is a special setting that the specialist dealer can make using the diagnostic software. In addition, the Performance Line CX has a powerful walk assistance that makes even steep climbs easier to master. ‘The many useful details also show how meticulously we have worked on setting new standards in eMountain biking. Anyone riding the new CX will feel it right away. It stands for pure riding enjoyment and from our point of view is once again the benchmark in the eMTB sector,’ adds Fleischer.

Press photos: #1864239, #1864240, #1864241, #1864242, #1864243

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About Bosch eBike Systems

A new generation of bikes is taking town and country by storm and is already a part of everyday life. eBikes are a modern means of transport for modern people: people in a hurry and people who prefer to take it easy, the fit and the comfort lovers, commuters and pleasure cyclists and, of course, young and old. The tailwind of technology-leading eBikes made by what are already more than 70 leading brands in Europe is powered by components that Bosch is developing to perfection. The Bosch portfolio ranges from the highly efficient drive unit (motor and gearbox) and high-quality batteries to a smart on-board and cycle computer that can be used intuitively. Perfect coordination of components holds the key to typical Bosch performance in terms of both comfort and efficiency. Like other Bosch products, the eBike systems benefit from the Bosch Group's technology and production know-how. From conception and engineering to manufacturing, marketing and after-sales service, Bosch eBike Systems constantly set new standards for the eBike industry. The Bosch Group's experience in the areas of electric motors, sensor technology, displays and lithium-ion batteries ensures that Bosch eBike systems use technology that is invented for life and that eBike users have their fun.

For more information please visit www.bosch-ebike.com

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June 2019

PI 10950

Constant sporty riding **The new Performance Line from Bosch is the perfect solution for eBikers on tour**

- ▶ Versatile drive system is ideal for sporty riders and commuters
- ▶ Natural riding sensation with barely noticeable pedal resistance
- ▶ Two variants: support up to 25 km/h or 45 km/h

Stuttgart/Reutlingen – Sporty rides in the mountains, active adventures through woodlands and meadows or a quick way to get to the office: the new Performance Line that Bosch eBike Systems is presenting for model year 2020, is the most versatile drive system in the portfolio. The efficient drive unit supports eBikers at just the right moment – up to 25 km/h with the Drive Unit Performance Cruise or up to 45 km/h with the Speed model. The drive offers a convincingly natural sporty riding sensation and accelerates dynamically and powerfully, even at low cadences. Designed for recreational athletes, trekking and touring riders as well as commuters - and for even more riding enjoyment over long distances.

Drive Unit Performance Cruise: active and dynamic trips through the mountains

With a maximum torque of 65 Nm and up to 300% support, the drive unit provides sufficient power for sporty riding, even in mountainous terrain. The dynamic acceleration supports the eBiker powerfully from the moment his/her foot first turns the pedal. The riding sensation always remains natural; in off-mode and over 25 km/h, pedal resistance is barely noticeable and the eBike runs like a conventional bike. The new drive concept makes the Performance Line Cruise light, compact and one of the quietest drives in its class. At the same time, the drive unit is extremely robust and ideally suited for the demands of trekking or eMTB use. Used on eMountainbikes, eMTB mode complements the Performance Line on sporty rides: the progressive motor support automatically adapts to the individual's riding style without having to change riding modes.

Drive Unit Performance Speed: the fast and nimble way to beat rush hour traffic

The Performance Line Speed supports S-pedelecs up to 45 km/h. The powerful motor has a maximum torque of 75 Nm and, weighing in at 2.9 kilograms, is compact and lightweight. This reduces the total weight of the pedelec and enables agile handling. High speeds are easily achieved thanks to powerful motor support of up to 340%. The faster you travel; the greater the support from the drive. This way, even long distances can be covered quickly and comfortably. This makes the Performance Line Speed the ideal drive for commuters, offering a relaxed and stress-free way to get to work.

Press photos: #1864244, #1864245, #1864246, #1864247, #1864248, #1864249

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PI 10951

Powerful drive for transporting heavy loads **Bosch eBike Systems presents the new Cargo Line**

- ▶ Powerful drive system optimised for cargo bikes
- ▶ Two variants: Drive Unit Cargo (25 km/h) and Cargo Speed (45 km/h)
- ▶ eCargobikes continue to drive the transport of goods in the city

Stuttgart/Reutlingen – The ideal solution for parcel and food deliveries, but also for the everyday trips to the supermarket or kindergarten: cargo bikes with electric support are becoming an increasingly common sight on the roads and are already replacing numerous delivery vans and cars. Bosch eBike Systems is presenting a new product line for the 2020 model year that has been specially developed for cargo bikes. The Cargo Line makes transport easy and comfortable, as the powerful motor enables controlled acceleration with or without loads. The drive is available in two versions: with support up to 25 km/h or as Cargo Line Speed for S-pedelecs up to 45 km/h. This also offers families the chance to get out and about in the fresh air, carrying shopping and children in a flexible and environmentally friendly way. Mail and parcel services can also deliver packages to their destinations quickly and efficiently.

Powerful support for cargo transport

The new Cargo Line (25 km/h) from Bosch is specially designed for eCargo bikes with a permissible total weight of up to 250 kilograms. With a maximum torque of up to 75 Newton metres (Nm) and up to 400 percent support, this powerful drive makes it easy to carry loads. Even at low cadences it delivers full power, something especially noticeable when starting off at traffic lights or on steep climbs. The drive unit always adjusts its support to the load. The precise motor control in combination with the multi-sensor concept not only ensures perfect interaction between the rider and the eBike, but also ensures a safe riding sensation: For optimum support, torque, speed and acceleration are precisely determined in every situation, and the cargo bike can also handle acceleration in a controlled way on bends or uneven roads. The drive unit is also characterised by a compact

and lightweight design; thanks to its magnesium housing, it weighs just 2.9 kilograms. The Cargo Line ensures a comfortable riding sensation, so that eCargo bikers are ready for the challenges of everyday life.

Get there faster with the Cargo Line Speed

The Cargo Line Speed is particularly suitable for longer distances, whether for transport in everyday life or for use in a delivery bike that needs to cover long distances every day across the city. The motor offers effective acceleration even when carrying heavy cargo and can reach speeds of up to 45 km/h. Riders will reach their destination quickly and comfortably with their cargo on board. The riding sensation is always under control, even on uphill climbs. Another positive point for long-distance use: the drive always operates extremely efficiently, offering long ranges with every charge. In combination with DualBattery 1250, cargo bike riders can go even further: connecting two PowerTubes 625 delivers up to 1,250 watt-hours of energy. This makes the Cargo Line Speed the ideal solution for urban deliveries and a low-noise, sustainable alternative for that crucial "last mile".

Cargo bikes are conquering the city

"eCargo bikes are becoming an increasingly common sight on city streets. The areas of use in both the private and commercial sectors are enormous. By providing a specially designed drive, we aim to further promote this positive development, helping to relieve road traffic and protect the environment," explains Claus Fleischer, CEO of Bosch eBike Systems. Various studies and pilot projects also confirm the potential of this means of transport. Someone traveling 20 kilometres a day in city traffic on a cargo bike instead of a small car will save around 800 kilograms of CO₂ a year, according to calculations by the VCD mobility pressure group. A study by the Polytechnic University of Milan confirms that three eCargo bikes could replace a delivery van for the daily transport of goods in town and city centres. In other words, cargo bikes offer many advantages as a transport solution in the city – they are practical, space-saving and enable fast, clean mobility.

Press photos: #1864250, #1864251, #1864252, #1864253, #1864254

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PowerTube 625 from Bosch **Integrable eBike battery for even more range and riding enjoyment**

June 2019

PI 10952

- ▶ PowerTube 625 for maximum range and altitude
- ▶ Further addition to the Bosch battery portfolio: the PowerTube 400
- ▶ PowerTubes enable optimal integration and clean eBike design

Stuttgart/Reutlingen – The new PowerTube 625 is Bosch’s energy supplier for maximum range and altitude. The powerful, integrable lithium-ion battery is the ideal companion for eMountain bikers and eBikers who travel long distances. Also new in the portfolio: the compact PowerTube 400, which can be elegantly integrated into the frame of city bikes. Bosch eBike Systems is thus offering three variants of integrable rechargeable batteries from model year 2020, which cover all application areas with different energy contents.

Combines highest demands on performance and aesthetics

“Any brand that offers eBikers new functions and features and provides more performance, as we do with our new Performance Line CX, must also offer more range. That’s what we are doing with the new PowerTube 625,” explains Claus Fleischer, CEO of Bosch eBike Systems. “With the PowerTube 500, which was introduced two years ago, we have already set new standards for integrated batteries. Today it is used by numerous manufacturers. Now we’re adding more with the PowerTube 625. With the two new models, we now offer the right battery solution for every wheel type and every requirement,” says Fleischer.

In addition to the aesthetic advantage, the PowerTubes from Bosch score above all with their high mileage and long service life. The lithium-ion batteries are particularly easy to handle and ensure untroubled riding enjoyment. A neat function allows the PowerTube to release about two centimetres out of the frame when opening, so it is easier to handle. A safety catch prevents the battery from falling out. The battery is additionally protected by the frame. There are two options for installing the PowerTube: horizontally or vertically.

PowerTube 625: Efficient power for demanding rides

The new PowerTube 625 has an energy content of approx. 625 watt hours and thus ensures long-lasting riding enjoyment even on mountainous terrain. Its compact size (416mm x 84mm x 65mm) and the weight of approx. 3.5 kilograms enables optimum integration into the downtube. The eBike thus achieves a slim and clean look. A completely emptied PowerTube 625 can be charged to 50% in less than 1.5 hours with the 6 A Fast Charger and to 100% in about 3.7 hours. The PowerTube 625 is also available in combination with DualBattery: The coupling of two batteries delivers up to 1,250 watt hours of energy to the pedelec.

PowerTube 400: Stylish energy supplier for city and country

With the new PowerTube 400, the stylish city eBike becomes a modern eye-catcher. The slim dimensions (349mm x 84mm x 65mm) and minimalist design allow seamless integration into the pedelec. With an energy capacity of approx. 400 watt hours, the lithium-ion battery has sufficient energy for daily trips in the city or smaller excursions to the countryside. With its low weight of around 2.9 kilograms, the PowerTube 400 can be easily stowed in a backpack and can also be used as a replacement battery for the PowerTube 500.

Press photos: #1864255, #1864256, #1864257, #1864258, #1864259

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Connected biking for the future **Clever connectivity with the SmartphoneHub from Bosch**

Juni 2019

PI 10953

- ▶ Digital all-rounder on the handlebar
- ▶ Connectivity with apps and services results in a smart riding experience
- ▶ Useful features for the "connected biker"

Stuttgart/Reutlingen – Digitisation on the pedelec takes things to the next level and opens up more and more choices for users. The new SmartphoneHub from Bosch eBike Systems connects the eBiker with the online world by means of the smartphone and the COBI.Bike app. The smart control centre offers a wide range of useful functions - from navigation, music control, fitness tracking and making calls to the connection to other services and apps, such as Strava or komoot. An integrated display that supplies the eBiker with the most important riding data, even without the smartphone, ensures sufficient flexibility while on the road. Bosch is offering pedelec riders a fully connected riding experience from model year 2020 onwards with the new SmartphoneHub.

Intelligent connectivity from the handlebar of your eBike

"Kitchen appliances, cars, lawnmowers: society has already embraced the Internet of Things. Connectivity is the ultimate topic of the future for bicycles, especially eBikes: In the future, connected bicycles will offer users almost unlimited possibilities. We are already working on solutions for the mobility of the future, as well as driving developments relating to all aspects of connected biking with new products like the SmartphoneHub," explains Claus Fleischer, CEO of Bosch eBike Systems.

If you also want to use your smartphone while riding your pedelec, you'll find the SmartphoneHub provides the perfect connection: click the smartphone into place, open the COBI.Bike app, start pedalling and the connected eBike experience can begin. Using a 2D or 3D map view, the app will reliably guide you to your destination; if you wish you can even get the navigation instructions as voice output. Accurate weather information enables you to enjoy carefree trips through the countryside. Fitness enthusiasts can keep a permanent eye on their training data such as performance, cadence and calorie consumption, while a heart rate

monitor can also be connected using Bluetooth. The SmartphoneHub can turn into a personal trainer by connecting to fitness and health services like Apple Health, Google Fit, Strava and komoot. Entertainment has not been forgotten: the COBI.Bike app allows eBikers access to music and audio book streaming services, such as Spotify or Audible.

Easy operation for more riding enjoyment

The SmartphoneHub and all applications can be easily and intuitively controlled with the separate control unit, enabling you to keep your hands on the handlebar. The voice output means that eBikers don't even have to look at the display while navigating or changing functions. Flexibility while on the move: the smartphone can also be stowed safely in a backpack, the most important riding data will then be displayed on the 1.52-inch LCD display integrated in the hub. Sufficient battery reserves are guaranteed: The smartphone can be charged via USB during the ride thanks to power from the eBike battery. Software updates for the SmartphoneHub can be installed with ease using wireless technology with the help of the COBI.Bike app.

Practical additional functions and matching accessories

In addition, there are other useful features for connected riders. The USB port is not only used to charge external devices, but also allows bicycle dealers to connect the Bosch diagnostic device. On request, intervals can be defined for the next service or software updates and fault diagnoses can be carried out on the eBike system. The two-stage walk assistance function can be activated at the push of a button, making it easier to push the pedelec when carrying luggage or negotiating obstacles. For iPhone users, there is also a special smartphone case that fits the SmartphoneHub and charges the smartphone using the integrated Lightning plug.

The SmartphoneHub can be retrofitted for eBikes of the Bosch product lines Active Line, Active Line Plus, Cargo Line, Performance Line and Performance Line CX from model year 2020 onwards. Exceptions are the Cargo Line Speed and Performance Line Speed as well as combinations with Bosch eBike ABS, eShift or eSuspension.

Press photos: #1864260, #1864262, #1864263, #1864264, #1864265

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A smart complement to the mechanical lock **New premium Lock function makes pedelecs less attractive to thieves**

- ▶ Digital solutions compliment classic anti-theft measures
- ▶ Function deactivates motor support when the Kiox display is disconnected
- ▶ Now available with the Kiox on-board computer

Stuttgart/Reutlingen – You just stop for a couple of minutes in front of the bakery, leaning your bike against the wall without locking it: a few moments of inattention are all that a bicycle thief needs. According to police crime statistics about 800 bicycles are stolen in Germany every day. This is particularly annoying when the bike in question is a costly eBike. That makes it all the more important to take appropriate protective measures. A mechanical lock is indispensable. The new premium Lock function from Bosch eBike Systems now offers pedelec riders additional digital protection: The function enables motor support to be deactivated by removing the on-board computer. Lock is available from model year 2020 at a cost of €9.99 and is can be used in conjunction with the Kiox on-board computer.

For a feeling of safety

"The fact is that digital solutions can't replace a classic mechanical bicycle lock, but they can enhance the traditional solution. With Lock, we have now developed a function that gives eBikers more security and makes things a little harder for bicycle thieves because it significantly reduces the value of the pedelec," explains Claus Fleischer, CEO of Bosch eBike Systems. When the new premium Lock function is activated by disconnecting the Kiox on-board computer, motor support is no longer available to the rider. The electronic lock only unlocks again when the same on-board computer is re-connected. This makes the pedelec less attractive to thieves: riding enjoyment is drastically curtailed without motor support, making the bike much more difficult to sell on.

Smart added protection with acoustic feedback

The lock function does not require a key and is easy to operate: Before being used for the first time, Lock must be purchased via the eBike Connect smartphone app and set up on the eBike with the Kiox on-board computer. After

that, the drive can only be activated with this on-board computer. An innovative extra that Bosch has developed for the premium function: the motor generates a sound to let the eBiker know that Lock has been activated or deactivated when connecting or disconnecting the on-board computer - similar to the central locking system on many cars. A lock symbol on the status line of the display indicates when the drive is "locked". The lock function is compatible with the Bosch Active Line and Active Line Plus drive systems from model year 2018 onwards, as well as Cargo Line, Performance Line and Performance Line CX from model year 2020 onwards.

A smart new development from Bosch that offers additional security, while also intelligently connecting the pedelec. "We are committed to developing products and digital solutions that deliver more riding enjoyment, comfort and safety in eBiking. We are constantly working on this. It is conceivable that many other theft-related functions will be developed in future," adds Fleischer.

Press photo: #1864268, #1864270, #1864267

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Connectivity and integration Technical innovation and advances take the eBike experience to a new level

- ▶ Kiox: Part of the connected eBike world
- ▶ eSuspension: Integrated electronic suspension from FOX
- ▶ Nyon update: Discovering routes with Outdooractive and komoot

Stuttgart/Reutlingen – Year after year, Bosch eBike Systems extends its portfolio, developing new products and integrating third-party components for different user groups and purposes. In addition, Bosch also optimises its products by adding new functions, developments and updates. The Kiox on-board computer now has connectivity functions that link the eBiker with the smartphone app and the eBike Connect online portal. The eSuspension solution provides more comfort for eMountainbiking, integrating an electronically controllable suspension system from FOX. The Nyon ecosystem offers the chance to discover a wide range of interesting cycle routes with Outdooractive or komoot.

Kiox – connectivity for the next model year

Kiox, the compact colour display for sporty riders, uses the eBike Connect smartphone app to connect eBikers with the digital world. As a result, riding and fitness data recorded by Kiox can be transferred to the eBike Connect online portal via the app. After the ride, activities can be conveniently evaluated using the smartphone or computer. The data is automatically synchronised between Kiox and the app via Bluetooth, and software updates can be downloaded to the on-board computer wirelessly. Another new feature with Kiox: The Bosch eBike ABS status indicator is integrated in the display, so there is no need for a separate indicator light. In addition, Kiox users can purchase the new premium Lock function from model year 2020 onwards. Lock is a smart complement to the mechanical lock: disconnecting the on-board computer deactivates motor support; the electronic lock is only released again when the same on-board computer is reconnected.

eSuspension – fully integrated electronic suspension

eSuspension for the Performance Line CX is the first time Bosch eBike Systems has teamed up with FOX to offer eMountain bikers an electronically controllable suspension designed for maximum performance on the trail. FOX E-Live Valve can be easily controlled via the Kiox on-board computer. There are five manually adjustable modes for different riding situations. Using a sophisticated system of sensors, the E-Live Valve determines the conditions of the terrain 1,000 times per second and adjusts the fork and rear shock accordingly within fractions of a second. This means that the eMountain biker can always be sure of the ideal suspension setting and can concentrate fully on the trail. Power is supplied to the eSuspension by the Bosch eBike battery.

Nyon – integrated with Outdooractive and komoot

The latest Nyon update offers users of the eBike Connect smartphone app and the eBike Connect online portal a new design and a revised user interface that makes it easier to navigate through the functions and individual screens. Nyon users can discover thousands of new bike rides thanks to the integration of Outdooractive content by means of the eBike Connect online portal. This enables members of the community to discover eBike rides in new regions and to transfer them to Nyon, so they can be navigated with ease. From autumn 2019, cyclists will also be able to discover new cycling routes with the route planning and navigation app komoot. Pedelec riders need to link their two accounts just once via the eBike Connect portal or the eBike Connect smartphone app, then they can easily synchronise their activities and routes with komoot. komoot activities will also be shown in the online portal. eBikers are always smart on the move with Nyon.

Press photos: #1864271, #1864272, #1864273, #1864274

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Tuned eBikes can be a risky business **New software from Bosch eBike Systems protects against tuning**

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- ▶ Anti-tuning software for eBike drive systems from Bosch
- ▶ Technical solution in the fight against eBike tuning
- ▶ Pedelec tuning isn't just some trivial offence

Stuttgart/Reutlingen – Tuning pedelecs is a risky business. Many people don't realise that using tuned eBikes on public roads may not only lead to technical problems and safety-related issues, but can also result in serious legal consequences. Awareness and prevention are important. Technological measures will also be taken to make manipulation more difficult in the future. For model year 2020, Bosch eBike Systems is launching software that recognises eBike tuning and consequently reduces support. This solution is the Bosch response to a requirement included in the current European standard (EN 15194: 2017) for electric motor-supported bicycles, marking another important step in the fight against tuning.

New software to protect against tuning

Bosch eBike Systems has developed software that uses a sensor to detect whether the pedelec has been tuned. If the software recognises that the drive has been manipulated, the eBike automatically switches to limp home mode. Consequence: an error code in the display indicates manipulation and electric support is reduced. The eBiker can restore the original riding settings by riding the pedelec for around 90 minutes. As soon as the system returns to normal mode, however, the manipulation check will be repeated. After the third time, limp home mode can only be deactivated by a specialist dealer using the Bosch DiagnosticTool. This reduces riding enjoyment and discourages manipulation. The software will be installed in all Bosch eBike drive systems from model year 2020 onwards. Specialist dealers can use the Bosch DiagnosticTool to detect manipulation of the eBike, even if the tuning kit was previously removed. The dealer can see whether the pedelec has been tuned and how often.

Equal status of bikes and pedelecs

For Claus Fleischer, CEO of Bosch eBike Systems, this innovation marks a major advance in the fight against tuning: "We are persistently fighting the practice of tuning and are continuing to develop our technology further. It is important to us that eBikes - in other words pedelecs with maximum support of 25 km/h - continue to be classified as bicycles in future, with all the associated rights and obligations. We must protect and preserve this status so that bikers can continue to enjoy an electric tailwind." That's why Bosch eBike Systems is committed to responsible, lawful and compliant eBiking.

What does "tuning" actually mean?

Pedelecs with support up to 25 km/h and a rated continuous output of the motor of up to 250 watts are regarded as equivalent to bicycles by law and thus do not require vehicle insurance, a registration plate or a driving licence. There's likewise no minimum age limit for operating an eBike. With the aid of tuning kits, it is possible to increase an eBike's maximum speed, i.e. to "soup up" the motor by having the speedometer transmit a significantly lower speed indication to the motor than the actual speed. The drive unit will support such commands until the speedometer reaches 25 km/h. The risk: there is a danger that buyers could lose existing guarantee and warranty entitlements on the Bosch eBike system and other bicycle components. There are also possible technical consequences: The improper use of the system can reduce the service life of the components, and eBikers can risk damaging the drive unit and the bike itself.

Tuning isn't just some trivial offence

Legally speaking, people who tune their pedelecs no longer ride an electric bike that is classified in the same way as a bicycle and should expect consequences. As a general rule, a tuned eBike is the equivalent of a moped (S-pedelec). Riders therefore require a driving license and vehicle insurance. Any infringement of these regulations can result in charges for operating a motor vehicle without a driving licence and violating Germany's Compulsory Automobile Insurance Act – punishable by fines and imprisonment or possibly civil consequences such as liability for personal injury, should accidents occur. What's more, tuning compromises the safety of the pedelec and endangers riders themselves as well as other road users. "If cyclists tamper with their eBikes by tuning them, thereby risking possible accidents and injuries, this will give rise to policies that include more stringent regulations and future bans. This would cancel out the benefits that all other eBike fans are able to enjoy. Tuning is completely unnecessary for fully enjoying everything that eBikes have to offer. On the contrary: any tuning ruins the real fun of it all – whether on a relaxed cruise, or pursuing sport riding fair and square" says Fleischer pointedly.

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