



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

June 2019

PI10956

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- ▶ 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.

**Media contact:**

Robert Bosch GmbH

Tamara Winograd

Director Marketing and Communications Bosch eBike Systems

Phone +49 (0)7121 35-394 64

[Tamara.Winograd@de.bosch.com](mailto:Tamara.Winograd@de.bosch.com)

**About Bosch eBike Systems**

*A new generation of bikes is taking town and country by storm and is already a part of every-day 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](http://www.bosch-ebike.com)

**About Bosch**

*The Bosch Group is a leading global supplier of technology and services. It employs roughly 410,000 associates worldwide (as of December 31, 2018). The company generated sales of 78.5 billion euros in 2018. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT company, Bosch offers innovative solutions for smart homes, smart cities, connected mobility, and connected manufacturing. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to deliver innovations for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 460 subsidiary and regional companies in over 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At nearly 130 locations across the globe, Bosch employs some 68,700 associates in research and development.*

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