LUBRICANTS.
TECHNOLOGY.
PEOPLE.

CHALLENGE

SOLUTION

NyoGel 760G for E-Bike Connectors

CASE STUDY

Industry: E-bike service

Location: Poland

CASE

The user operated two types of electric bicycles: a standard model with a single battery and a special three-wheeled vehicle equipped with two independent batteries. In both cases, the power connectors were a critical component, exposed to frequent disconnection during charging as well as to moisture, dust, and road salt. Vibrations occurring during riding further accelerated contact wear and fretting corrosion leading to increased risk of interruptions in the power supply to the electric assist system.

CHALLENGE

The key objective was to protect the connectors against corrosion and contamination, reduce micro-motions leading to fretting corrosion, and make battery assembly and disassembly easier. It was essential to extend the service life of the contacts and maintain a stable, reliable electrical connection under the demanding conditions of everyday use.

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SOLUTION

The user applied NyoGel 760G, a lubricant developed specifically for electrical connectors. By creating protective layer, the lubricant sealed the battery contacts against humidity, water ingres, dirt, and corrosive agents, while at the same time reducing the force required for assembling and disassembling cycles. The grease also eliminated wear caused by vibration, providing stable operation of the electrical system.

EFFECTS

- **Greater reliability — elimination of connection problems, stable assist functionality;**
- **Lower service costs — less frequent connector replacements and fewer downtimes;**
- **User comfort — easy opening/closing of connectors;**
- **Extended equipment life — reduced corrosion and contact wear.**

CONCLUSION

The application of NyoGel 760G in electric bicycles demonstrates how a dedicated connector lubricant can significantly enhance the durability and reliability of electrical systems in mobile vehicles. By protecting against moisture, contamination, and fretting corrosion, it delivers measurable benefits to both users and bike services staff.