

### Vehicle management system for mobile use

RDS Connected Fleet from Rosenbauer records processes in emergency vehicles. CAN data is stored on a telematics module installed in the vehicle and transmitted to the central data memory. Vehicle position, operation, and status is evaluated and can be called up online.



*The management system provides the condition of emergency vehicles, digital fleet management with proactive vehicle notifications, and real-time data and vehicle history on mobile devices (Source: Rosenbauer)*

The system provides information such as status of the operational fleet, which vehicles are ready for operation, the condition of the vehicles, where the vehicles are, as well as what and how much operating and extinguishing agents (water, foam, etc.) they have on board.

The system is the further development of the service4fire vehicle management system with new hardware, user interface, and functions. It provides real-time information on the "state of health" of an operational fleet and also logs all vehicle-related data including error messages for post-operational briefings. Fire departments, therefore, have a complete overview of their vehicle fleet at all times and can manage it digitally with the product.

#### Operational documentation

The system produces complete operational documentation for each vehicle. As soon as it leaves the station and until it returns after an operation, the data is recorded and evaluated. In addition to driving parameters such as speeds, brake actuations, engine speeds, distances traveled, and live positions, et cetera, this also includes further information. These information are for example: When the warning devices were switched on, when the vehicle arrived at the operational site, when it left the installation position or the defined area of operation (geofencing), when firefighting work began, and how much water or foam and what pump pressure was used to extinguish the fire etc.

Connected Fleet monitors the technical condition and operational readiness of the vehicle at the same time. Any malfunctions, faults or defects that occur are recorded in real time, described in detail and pro-actively reported to the vehicle operator. Service planning and management is also largely automated with the system providing information on upcoming service dates, for example, the next maintenance date for the built-in pump or portable pump, creating lists of defects and documenting maintenance work in the process. The various operating manuals will be stored.



*Numerous fire departments have participated in the development of the vehicle management system (Source: Rosenbauer)*

#### Hardware and software

High-performance telematics modules form the interface in the vehicle that docks onto the CAN network. CAN data is stored on the telematics module installed in the vehicle and transmitted via GSM to the central data memory. The modules serve as Connected Hubs for GPS and internet and open up the possibility of setting up a secure WLAN and improving remote services (e.g., remote diagnosis). The Connected Hubs are already integrated in the company's vehicles, and there will be a retrofit package for older models. A separate module is available for third-party vehicles and vehicles without CAN, as well as for vehicles that are to be retrofitted with a GPS connection (e.g., to display the live position).

The software and the user interface (UI) were also revised. Connected Fleet can now be used with common web browsers (Chrome, Safari, Firefox) and mobile operating systems (iOS, Android). The interactive design (User Experience/UX) is suitable for smartphones and the symbol language of the Rosenbauer control system RFC LCS adopted. This provides a uniform operating environment from vehicle control to fleet management. The software can also be used without hardware, for example, to keep a logbook.

According to the company, the latest encryption techniques ensure security in data traffic. In addition, the data is hosted on the cloud computing platform Microsoft Azure and, therefore, in Europe. In addition, GPS and error messages are now sent with priority and are available in real-time.