



PHOENIX^{CMS}

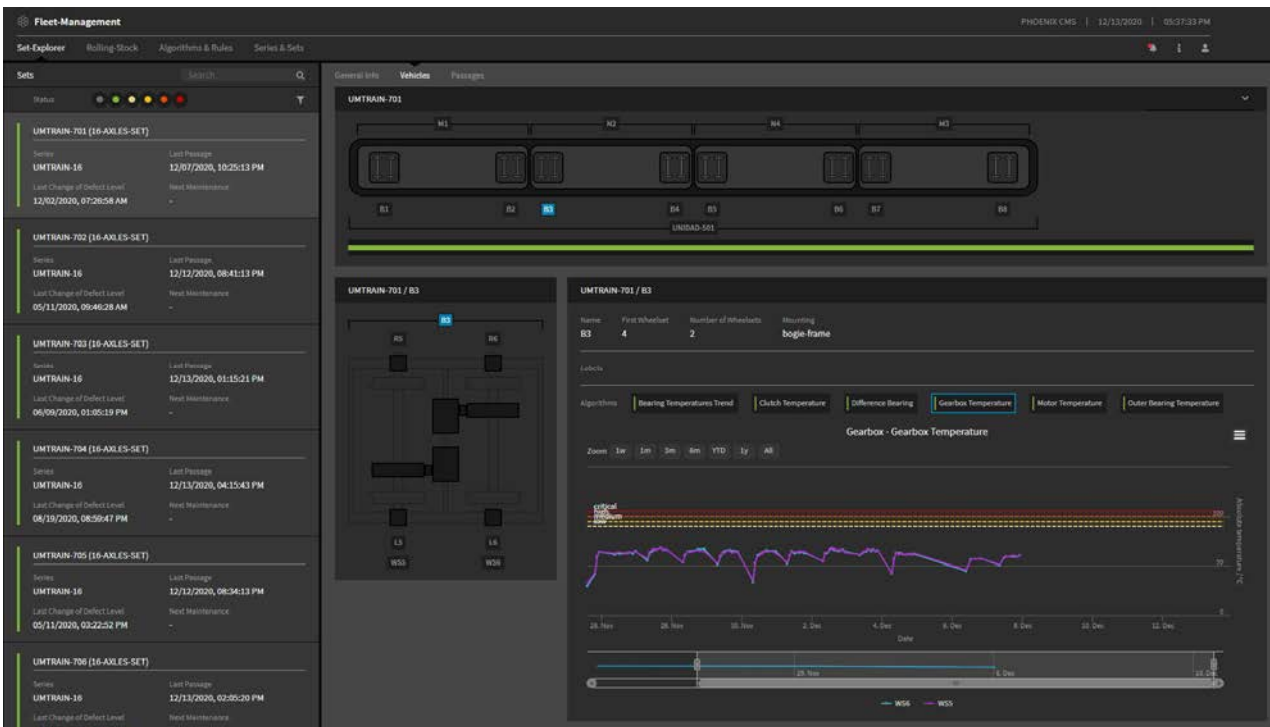
FLEET CONDITION MONITORING



PHOENIX^{CMS} Fleet Condition Monitoring is an application for fleet managers and maintenance technicians. It enables the clear presentation of the entire fleet condition and at the same time offers comprehensive detailed views of individual components such as bogies, axles, engines, or wheels. In addition, the application enables the tracking of historical measured values of individual components. Configurable algorithms permanently monitor the status of the fleet and automatically alert those responsible in the event of deviations. In this way, the application directs the user's attention exactly where it is needed.

Key Features

- » Simple fleet configuration through intuitive operation
- » Flexible engine for defining algorithms based on measured values
- » Integrated machine learning algorithms
- » Status check with drill-down to components such as bearing, wheel, clutch or engine
- » Support for fleet managers and maintenance technicians through trend analyses
- » Enriches your fleet with information for your needs
- » Better planning of maintenance through planning assistant: flexibly assign new priorities for maintenance planning (in the depot)
- » Vehicle information: Use your own labelling system to identify and search for vehicles



MAIN FUNCTIONS

Fleet configuration

Configures vehicle templates using the UIC classification, which can be used to instantiate individual vehicles or entire sets. To identify vehicles or sets RFID tags are configured and assigned to the vehicles. In order to increase the clarity, individual sets can also be combined into construction sets and assigned to construction series groups. The software also offers the possibility to de-/activate components such as wheels or couplings individually for monitoring.

Set Explorer

Enables the user to collect information about his fleet. For this purpose, a list of all configured sets is provided. The user can filter by defect level, series, and labels to find the desired vehicle quickly and easily.

The set details then contain comprehensive information about the last train journeys, the vehicles contained, and the current and historical status of the components installed.

Algorithms and rules

Defines algorithms based on the measured values of individual components (wheel, brake, engine, gearbox, clutch) provided by trackside systems such as HBD/HWD (temperatures) and WIM/WDD (weight, forces). The algorithms work on individual measured values or use a moving average to calculate the individual defect level of components. It is possible to configure up to 4 thresholds for the defect levels (low, medium, high, critical). The defect classification is also possible with machine learning algorithms, which can determine an intelligent defect level based on a holistic consideration of various influencing variables. For the individual component states based on the algorithms, notification rules can be created for automatic e-mail notifications at certain defect levels.

Labelling

Enables individual labelling (e.g. on wheel, axle, bogie, platform, vehicle, vehicle template) to reflect the desired standard in organisations.