Wabtec CORPORATION

WCM
Wheel Condition Monitor

Rolling wheel contact surface condition is able to be measured to unsurpassed accuracy using the Track IQ Wheel Condition Monitor (WCM), allowing resolution of wheel "flats" and spalling/shelling. The WCM provides accurate and repeatable data on wheel surface condition.

All installation mounts are clamp on, minimising traffic interruption during installation, reducing maintenance times and providing significantly lower whole of life cost.

The Wheel Condition Monitor is delivered with FleetONE™ – a pre-installed, dedicated software package that analyses and trends captured wheel data. Data can be trended over time and plotted vs vehicle speed.

All Wheel Condition Monitors are "systems ready" – ensuring rapid introduction into your railway network. All on-track components are electrically triple isolated, protected by stainless steel covers and mounted below the rail foot, reducing the opportunity of damage by dragging equipment.

Located over six cribs, each section is electrically and mechanically isolated; the ability to service/maintain individual crib sections reduces costs and downtime.

WCM system benefits include:

Modular design

Four hour track installation window (as traffic permits)

Trending database

Suitable for electrified environment

Alarms/Alerts

AAR rules compliant

Routine track maintenance without removal

Suitable for standard track structure

Defect detection resolution of 5mm diameter

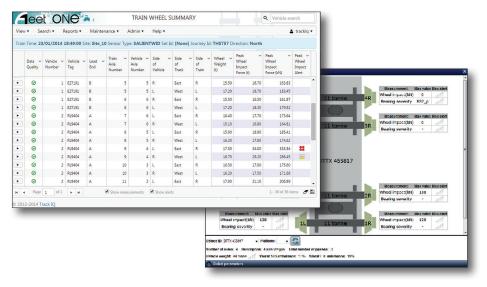Modular components reducing installation and maintenance times

Auto compensation for track modulus variations

Ability to issue alarms and alerts to system stakeholders

Track IQ
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Reliable Analysis with the FleetONE Web Application

The Wheel Condition Monitor results are able to be viewed at the fleet, depot, vehicle and wheelset level.

The WCM is installed with the FleetONE database, providing alarms, trending, data integration and fault modelling/analysis.

WCM General Specifications

Capacity	Train length – unlimited
RF Tags	Supports RF tagged vehicles (and visual imaging or virtual tagging)
Alarms	User configurable, impacts to five levels, loads to three levels, plus lateral imbalance to three levels
Resolution	5mm spall detection (nominal)
Environmental	Rail hardware suitable for arctic, tropical and desert environment
	Wayside rack mounted equipment suitable for arctic, tropical and desert environment
	Rail hardware IP65 or greater
Shipping weight	Nominally 600kg

Please Note: Outputs are derived from measured wheel forces, speed dependence exists – repeatability requires consistent pass by speeds.

Specifications are subject to change without notice.
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