NRS-260 Prime Rail Flaw Detection Vehicle

Key Features

- Proprietary wheel probe design, including XL9-11, Sweeper and Tracer wheels
- Dual-rail inspection
- Enhanced side-looking transducers for vertical split head (VSH) detection
- Enhanced gage corner defect detection
- On-board Run-on-Run technology
- Patented enhanced pattern recognition and defect classification
- Forced operator acknowledgment of all anomalies
- Fully integrated Windows operating system with redundant data collection and storage
- Enhanced electrical system capacity, eliminating auxiliary gen-sets and providing greater reliability and quieter operation
- GPS tagging of car movement and defect location, to the thousandth of a mile
- Testing speeds up to 30 mph (50 km/h) under optimal rail conditions

Additional Advantages

- Full-size 4 passenger, high roof vehicle for greater operator comfort
- Full height pass through between front truck cab and rear body to allow all passengers to exit from rear of vehicle and onto center of track during rail testing/ inspection
- 23,000lbs GVW does not require special CDL for driver

Full Feature Test Vehicle

The NRS-260 Prime Rail Flaw Detection Vehicle with Freightliner M2 Crew Cab offers a roomy four passenger, high roof front cabin with ample space for supervisors, track inspectors, auditors or other personnel.

Digital signal processing

The NRS-260 Prime features 48-channel digital signal processing, allowing real-time sequential data processing, superior signal-to- noise ratios, and higher testing speeds with fewer false positive test results.

Pattern recognition and defect analysis

Nordco's NRS-260 Prime Rail Flaw Detection Vehicles are fully automated and digital, incorporating the following key features:

- **Pattern recognition defect classification** - incorporates artificial intelligence to recognize common rail conditions, as well as recognize and classify defects. It is an adaptive learning system that adds new defects to the library as they are analyzed, allowing the system to recognize new defects automatically.
- **On-board Run-on-Run** - a comparative analytical tool that compares prior test results to current test results for the same portion of the rail. The system alerts the operator of a match to a prior indication and allows for real-time comparison and the opportunity to identify any changes in the rail's health.

Product Specifications

Category	Specification	Value
Flaw Detection Technology	Test Speed	Up to 30 mph (50 km/h)
	XL9-11 Wheel	9" Rolling Search Unit featuring 11 independent transducers for full coverage of the rail head, web and loss of base. Field and gage side looking transducers for vertical split head detection.
	Sweeper Wheel	9" Rolling Search Unit optimized to detect sub surface shelling and transverse detail fractures.
	Tracer Wheel	6.5" Rolling Search Unit optimized for detection of small gage corner defects.
General	Gross Vehicle Weight	23,000 lbs (10.5 t)
	Dimensions	Width: 9'-9" (3.0 m) with extended mirrors; 8'-8" (2.7m) with collapsed mirrors Height: 12'-3" (3.8 m) on highway Length: 32'-4" (9.9 m) with rear stairs in folded up position
	Hy-rail Gear	14" (356 mm) wheels
	Operating Conditions	-20°F to 110°F (-29°C to 43°F), all weather
Capacities	Couplant	150 gal (568 l)
	Fuel	100 gal (379 l)
	Crew	4 passenger Crew Cab with DOT rated passenger seating
Engine	Type	6.7L Diesel
	Power	200 HP @ 2300 RPM
	Torque	560 lb-ft (760 Nm) @ 1600 RPM

XL9-11 Wheel

The NRS vehicles use Nordco's exclusive XL9-11 wheel probe technology designed specifically to perform ultrasound testing on rail. This 9" rolling search unit includes eleven ultrasonic transducers:

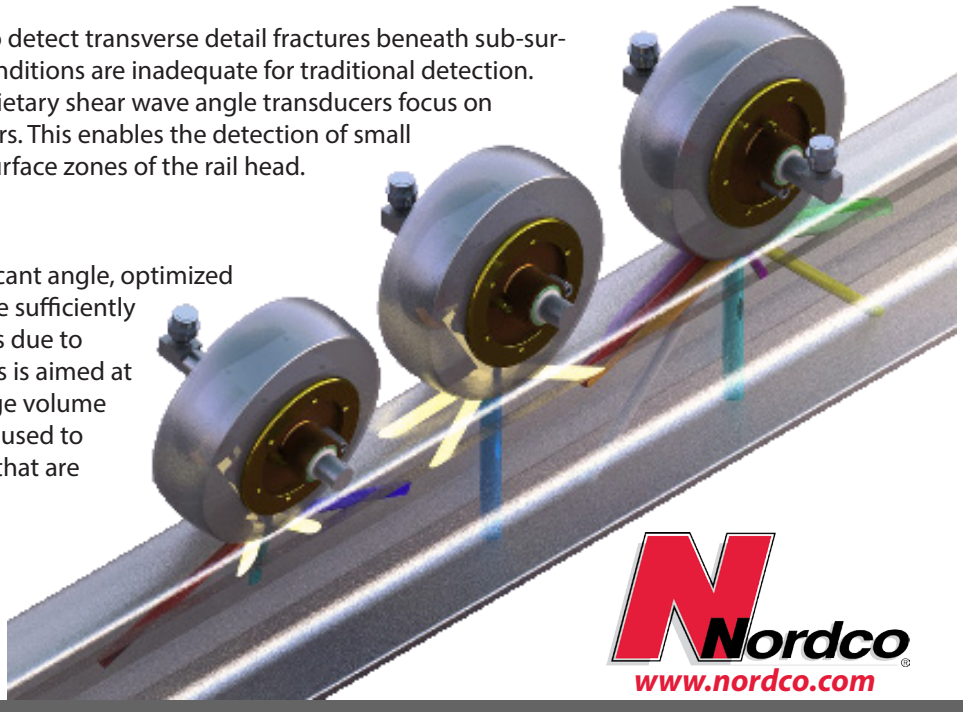
- One zero-degree crystal for both **web coverage** and **base detection**
- One 37.5-degree forward-facing crystal and one 37.5-degree rear-facing crystal for **full rail web coverage**
- Three 70-degree forward-facing crystals (field, center and gage) and three 70-degree rear-facing crystals (field, center and gage) for **full head coverage**
- One side-looking field crystal and one side-looking gage crystal for **longitudinal cross-rail coverage**

Sweeper Wheel

The 9" Sweeper wheel probe is optimized to detect transverse detail fractures beneath sub-surface shelling where field or gage surface conditions are inadequate for traditional detection. One zero-degree transducer and four proprietary shear wave angle transducers focus on head inspection in the field and gage corners. This enables the detection of small transverse defects in these compromized surface zones of the rail head.

Tracer Wheel

The 6.5" tracer wheel probe is oriented at a cant angle, optimized to inspect worn gage corners that cannot be sufficiently inspected with perpendicular oriented RSUs due to contact loss. A set of shear wave transducers is aimed at the gage corner to detect defects in the gage volume of the rail head. A zero degree transducer is used to detect compound features of gage defects that are typically caused by WRI mismatches.



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