

Flex Rail Flaw Inspection System

Vehicle-Mounted vs. Portable On-Demand (POD)
Comparison



Key Features

The Flex Rail Flaw Inspection System (both portable on-demand (POD) and vehicle-mounted) includes the following key features:

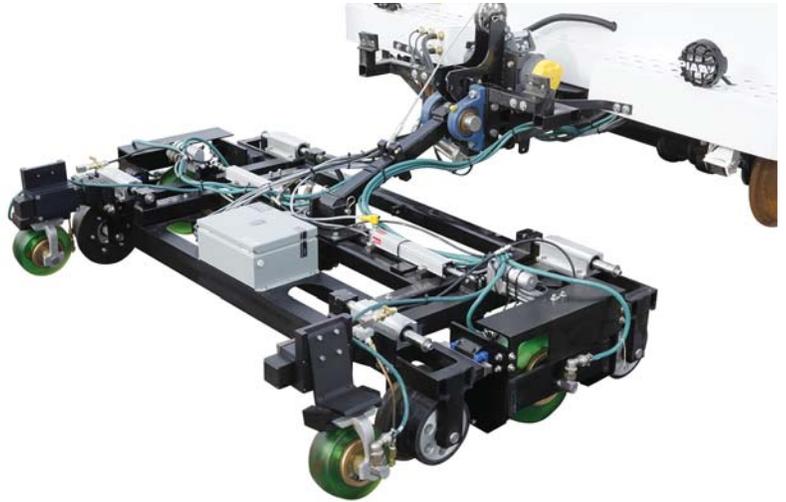
- Inspection carriage with two patented XL9-11 wheel probes, 32-channel digital signal processing, and on-board Run-on-Run software
- Couplant delivery system, including water tanks and supply hoses
- Computer with real-time data collection, including all necessary electronics and cables for operation
- Electric winch for raising and lowering inspection carriage

Minimum Requirements

The Flex Rail Flaw Inspection System requires the following minimum capabilities for the hi-rail equipped host vehicle:

- Ford F350 Crew Cab Utility Body equivalent or better
- 2500-3000 lbs. payload
- Pickup bed
- 12-volt power port access

Complete rail inspection system attaches quickly and easily.



Flex Rail Flaw Inspection System

Compare your Flex system options

Feature	Pod	Vehicle
XL9-11 wheel probes with 11 inspection transducers	Yes	Yes
Optional tracer wheel for gage corner fracture testing available	Yes	Yes
32-channel digital signal processing	Yes	Yes
On-board Run-on-Run software	Yes	Yes
Pattern recognition defect classification functionality	Yes	Yes
Recordable test results	Yes	Yes
Ability to attach to your current hi-rail track inspection vehicle through Class III hitch	Yes	Yes
Ability to handle multiple gauge sizes	Yes	Yes
Ability to switch between travel and inspection modes	Yes	Yes
Ownership of Flex system	Yes	Yes
Incorporated storage/shipping container	Yes	No
Setup and usage training included	Yes	No
Contract testing services available	Yes	No



Use your smartphone to scan this code for more information.

Wheel probe and tracer wheel technology

The Flex rail inspection system uses Nordco's exclusive, XL9-11 wheel probe technology designed specifically to perform ultrasound testing on rail, including the following inspection transducers:

- One zero-degree crystal for both **web coverage** and **base detection**
- One 45-degree forward-facing crystal and one 45-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**

The optional tracer wheel locates gage corner fractures that are not detectable by conventional methods, locating an average of 30% more defects.

Pattern recognition and defect analysis

The Flex system is 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.

Recordable test results

Test results are fully recordable, meaning you can store, evaluate, and compare results at a later time. Nordco can create reports for uptime, movement, defect details, and more.

Small footprint, multiple gauge sizes

While the Flex system is normally configured for standard gauge track, it can be customized to handle any gauge size. Easily maneuverable due to its smaller footprint, the system is ideal for yard tracks, sidings, and turnouts, as well as accommodating clearance envelope constraints.

Expands current track inspection capabilities

The Flex inspection carriage can be attached to your current track inspection vehicle, allowing you to perform ultrasonic rail inspections as well as your normal track inspection procedures during the same pass on the rail.

Mounts to most hi-rail vehicles

The Flex rail inspection system mounts to most hi-rail vehicles. After integration, the main carriage system can be quickly attached or removed. The compact low-powered hardware platform for signal processing is easily integrated into the interior of the cab. In addition, the system configuration is flexible enough that it can be operated from the driver, passenger, or extended cab seating areas.

Digital signal processing

The Flex system also features 32-channel digital signal processing, allowing real-time sequential data processing, improved signal-to-noise ratios, and higher testing speeds with fewer false positive test results.

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