

 Directory

Track & Infrastructure

LPS

LASER PRECISION SOLUTIONS

Experience Reliable Rail Operations All Year Round with LaserTrain Cleaning

Expect fewer brake-related incidents and maintenance, better train detection and more reliable rail services.

LaserTrain is a non-abrasive cleaning solution designed to remove tough railhead contaminants for better adhesion.

- Removes leaf debris, rust and oil contamination
- One pass improves coefficient of friction for up to 24 hours
- Cleans at any speed up to 120km/h
- Autonomous operation with obstacle detection
- Real-time performance tracking via a client dashboard
- Compliance with ISO 9001 and IEC 60825 laser safety standards

Endorsed by major rail operators: the MTA Metro-North Railroad, Long Island Rail Road in New York and and Keolis Commuter Services in Boston.



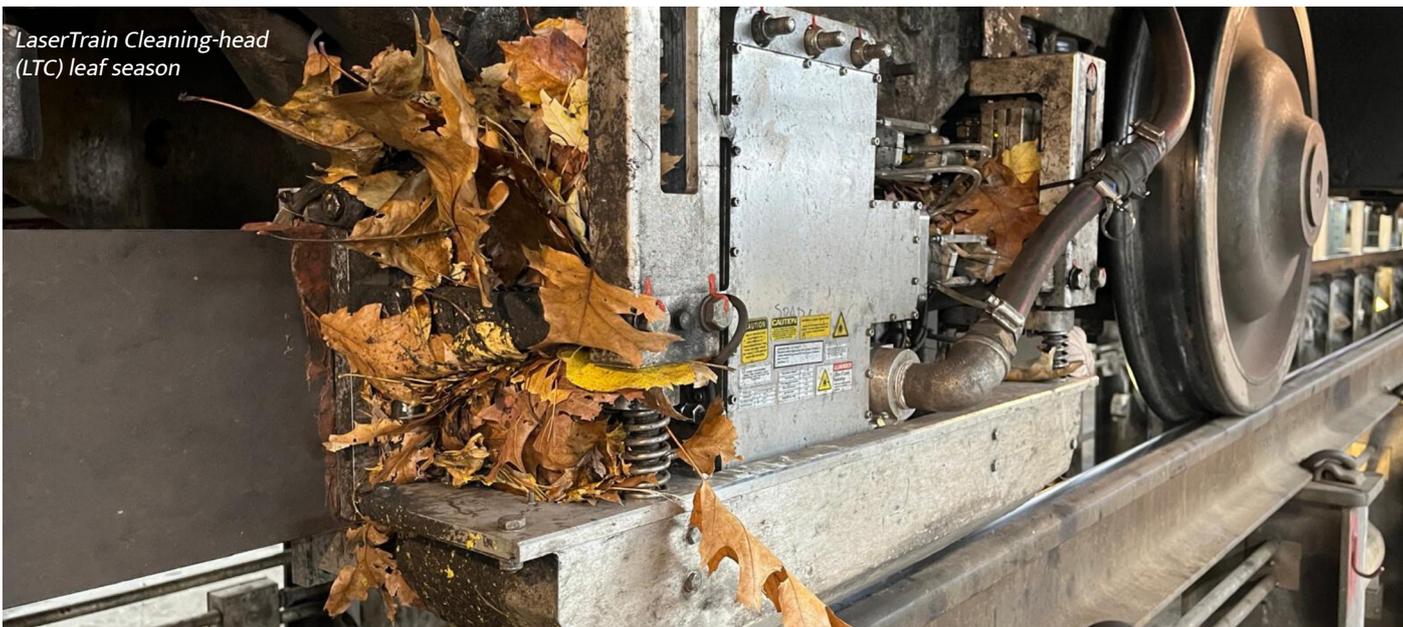
MTA Metro North Railroad Retro-Fit LaserTrain

“Record-breaking 2024 LaserTrain performance – again! ... The data is undeniable: the LaserTrain has significantly improved customer experience and Metro-North’s operational efficiency, contributing to our highest-ever on-time performance of 98.34%.”

Testimonial from Chad Scholes, Chief Innovation and Logistics Officer at Metro North Railroad

Technology that Delivers

Since 2018, LaserTrain has helped clients cut slip-slide events by 66%, delays by 70% and wheel maintenance costs by up to \$1.6 million per year. In 2023, Metro-North Rail road received the APTA Gold Award for Rail Safety for successfully implementing LaserTrain cleaning during peak hours at 100km/h.



LaserTrain Cleaning-head (LTC) leaf season

Built to Fit, Powered to Adapt

The LaserTrain Container Model is a modular, self-contained unit designed to integrate seamlessly with existing rolling stock. Compatible with Y25 or R141 bogies, the system fits within EU, UK, and US loading gauges and can be powered by third rail, catenary, locomotive, or generator for operational flexibility.

Capable of cleaning up to 200,000 km per season, it offers unmatched scalability and easy deployment across metro, commuter, or freight applications.

Click [here](#) to see a video of the LaserTrain Container Model.

Clean Smarter with Real-Time Insights

Beyond cleaning, LPS also offers Track Contamination



LaserTrain Container Model

Detector (TCD) – a compact sensing module that installs on any train truck to monitor rail-head contamination in real time, generating heat maps of problem zones to help target cleaning efforts. Currently at TRL 6–7 prototype stage, the TCD system is poised to become a crucial tool in predictive rail maintenance.

Beyond Traditional Rail Cleaning

Fixed upfront costs and a non-abrasive, chemical-free cleaning method significantly reduces CO2 emissions, removes the need for consumables and lowers energy consumption compared to traditional techniques. Less rail-wheel wear adds to asset life – translating to long-term maintenance cost savings, more uptime and fewer cars out of service.

Click [here](#) to watch our LaserTrain laser cleaning video.

Work With LPS

LaserTrain is available for lease or purchase, with a selection of support packages. Choose between our modular Container model or the Retro-Fit model for integration into existing train cars. Get in touch to explore how LPS can support your operations and receive a custom quote.

To find out more visit our [website](#) or [contact one of the team](#) for a custom quote!



LPS

ENHANCED FRICTION LESS TRACK WEAR

Remove railhead contamination fast for optimal adhesion, less flat spot maintenance and reduced costs. **Discover LaserTrain.**

