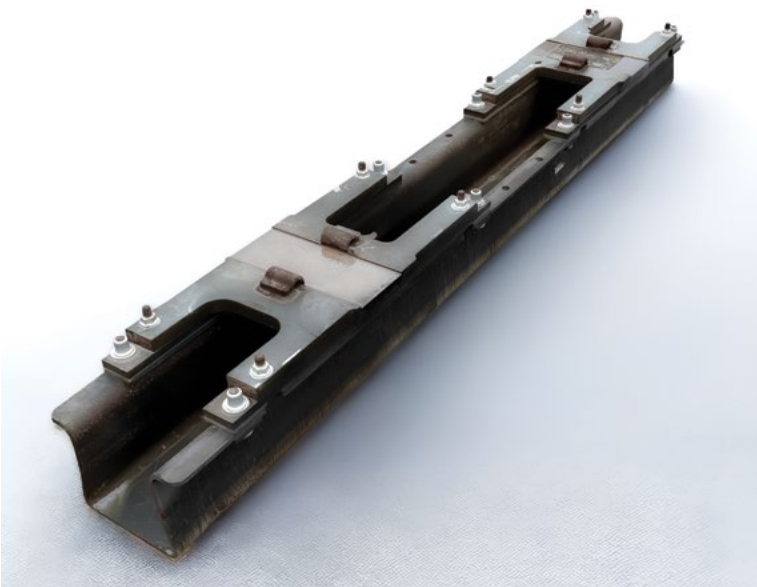


PROBLEM SOLVER

Engineering Resilience into Turnout Maintenance: The Universal HST® from voestalpine Railway Systems Nortrak

Problem: Turnouts are a critical component of track infrastructure—critical for routing trains safely and efficiently, yet notoriously difficult and costly to maintain. Traditional headblock tie solutions and crib-mounted switch rods, present a host of challenges. From unreliable tamping surfaces to decaying timber compromising track geometry and cracked concrete headblock ties, the vulnerabilities are many—and the costs, significant.

Solution: Enter the next generation of innovation: the Universal HST® from voestalpine Railway Systems Nortrak. Building on the proven foundation of the Hollow Switch Tie® (HST®), this new system is engineered to address these challenges through modularity, structural integrity, and mechanized maintenance compatibility—increasing track stability while reducing operational costs.



A Smarter, Stronger Switch Support System

At its core, the HST® is a robust switch support system composed of maintenance-free, redundantly insulated formed steel ties, high-strength composite “Blue Rods,” and an optional rotary assist back-drive assembly. Unlike traditional designs, the HST® relocates switch rods from the ballast cribs into the hollow interior of the tie itself allowing for uninterrupted mechanized tamping through the turnout.

The use of composite “Blue Rods” eliminates the weak points found in bolted steel rods, while permanent Huck fasteners secure the switch plates, delivering over 40,000 pounds of gauge-widening resistance. A steel mounting plate, permanently affixed to the tie, accommodates any switch machine, ensuring long-term reliability.

Geometry is no longer compromised, track voiding can be managed, no more cracked and broken headblock ties, and no more removing and reinstalling rods.

Universal Flexibility for Real-World Conditions

Problem: Previous HST® models required custom configurations for each turnout size, hand, and machine location. This meant that even minor changes—like relocating a switch machine—required new components, disassembly, and re-insulation.

Solution: The Universal HST® changes the game. Designed with adaptability in mind, it features a permanently insulated shim plate that allows switch plates to be easily bolted on and off. Need to switch from a left-hand to a right-hand turnout?

Just swap the switch plate—no insulation handling required. The Universal HST® reduces the number of spare parts required, reduces lead time for materials, improves flexibility in field, and allows customers to put track into service faster.

This modular approach simplifies inventory, streamlines conversions, and empowers maintainers to respond quickly to field conditions. It's a leap forward in both engineering and practicality.

With the Universal HST®, voestalpine Railway Systems Nortrak delivers a solution that not only addresses the structural and maintenance challenges of traditional turnouts but also anticipates the dynamic realities of operations. For railroads seeking to enhance track stability and reduce maintenance costs, the Universal HST® is more than an upgrade—it's a transformation. It is Systems Solutions in practice.