A firm foundation is paramount to proper track performance and proper drainage is key to maintaining that foundation. Trapped water in the ballast decreases the necessary interlocking mechanics, which causes a loss of ballast and subgrade strength. This loss of strength deteriorates track geometry, creates batter, and loosens fasteners. Excess water also leads to premature tie deterioration and leaves the track vulnerable to frost heaves in cold weather. Proper drainage maintenance is an essential part of your maintenance plan and shoulder ballast cleaning is the most cost-effective way to eliminate subsurface saturation problems.

Shoulder ballast cleaning breaks open mud pockets and releases trapped water to restore drainage. It extends tonnage between surfacing and undercutting cycles, extends ballast and tie life, and reduces the occurrences of frost heaves.

Productive, Adaptable Machinery.

While there have been many machines designed to clean shoulder ballast, the Loram® High Performance (HP) Shoulder Ballast Cleaner sets the standard for production, quality, reliability and overall cost effectiveness.

Loram HP Shoulder Ballast Cleaners are self-propelled and use twin 30-inch wide digging buckets to clean ballast from the tie ends outward to the edge of the ballast section, digging as deep as 16-inches below the top of tie. Scarifier teeth undercut the tie ends to 5-inches, breaking up mud pockets and restoring drainage. A conveyor transfers the fouled ballast to a series of vibrating screens where fines are separated and discharged up to 29 feet from the centerline of track. The screen is set at an optimum angle for proper separation of fines and ballast. Screen level is adjustable to compensate for super elevation and to transfer ballast from side-to-side as required.

The Loram HP then distributes the cleaned ballast along either or both shoulders and regulates to the shape specified by the railroad. Any ballast that may have come to rest on top of the tie ends is then broomed into the ballast section.

When the job is done, the Loram HP moves efficiently to the next work site at speeds of up to 48 mph.

Reliable Service and Support.

Loram leads the way in experience when it comes to cleaning shoulder ballast. A formal training program required of all operators before assignment to a HP crew adds to their skills with a wide variety of on-the-job railroad experiences. The well-qualified crews produce high-quality and clean ballast sections.

For more information on developing a shoulder ballast cleaning program that will satisfy your needs, contact Loram at (763) 478-6014.
Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length:</strong></td>
<td>136 feet (41.4 m) excluding air dump and water cars</td>
</tr>
<tr>
<td><strong>Width:</strong></td>
<td>10 feet 8 inches (3.25 m)</td>
</tr>
<tr>
<td><strong>Height:</strong></td>
<td>Variable to 18 feet 6 inches working (5.6 m), 15 feet 6 inches (4.7 m) traveling</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>406,000 lbs. (182,700 kg.) excluding air dump and water cars</td>
</tr>
<tr>
<td><strong>Travel Speed:</strong></td>
<td>48 mph (77 kph) in both directions</td>
</tr>
<tr>
<td><strong>Working Speed:</strong></td>
<td>Variable to 2 mph (3.2 kph) depending on conditions and depth of cut</td>
</tr>
<tr>
<td><strong>Production Rate:</strong></td>
<td>Up to 2,000 tons per hour (1,814 tonnes/hour)</td>
</tr>
<tr>
<td><strong>Depth of Cut:</strong></td>
<td>Up to 16 inches (400 mm) below top of tie</td>
</tr>
<tr>
<td><strong>Width of Cut:</strong></td>
<td>30 inches (760 mm)</td>
</tr>
<tr>
<td><strong>Material Discharge:</strong></td>
<td>Air dump or waste up to 29 feet (8.8 m) either side of track center</td>
</tr>
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</table>

Subject to change

Digging wheel. Two digging wheels rip through compacted ballast to a depth of up to 16 inches (400 mm) from the top of the tie. Each wheel is 30 inches (760 mm) wide to allow cleaning from the ends of the ties to the edge of the shoulder.

Scarifier tooth. A scarifier tooth on each side of the machine undercuts the tie ends up to 5 inches (125 mm) to break up mud pockets and restore drainage.

Vibrating screen. Double deck with adjustable screen level and angle.

Ballast discharge. The HP distributes the cleaned ballast along the shoulders, at a rate that can be varied for local conditions. Plus, it establishes the railroad specified shoulder slope as it works at speeds of up to 2 mph (3.2 kph).

Reliable, Cost Effective Service Solutions

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Speed, Performance, and Reliability

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