# **FASTENERS**





#### **LOADMASTER & LOADMASTER TIMBER TIE**

Progress Rail extended the success of the Loadmaster with the introduction of a track fastener solution for wood ties.

The Loadmaster direct fixation track fastener was specifically designed toprovide commuter and freight rail systems with a greater range of options for shared use and higher axle load environments. The Loadmaster Timber Tie rounds out the product line with a lowmaintenance, long-term solution for wood ties.

- Proven fail-safe design
- Buy America compliant
- Low maintenance

# **Progress Rail**

A Caterpillar Company

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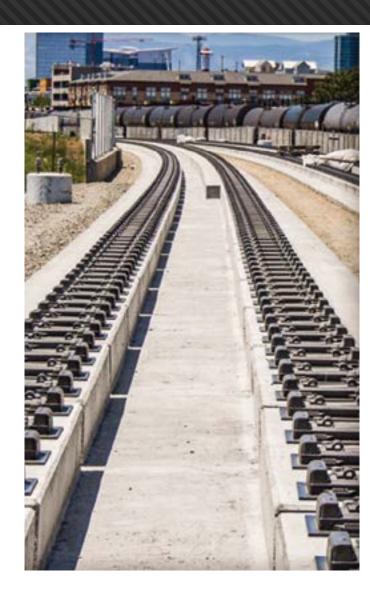












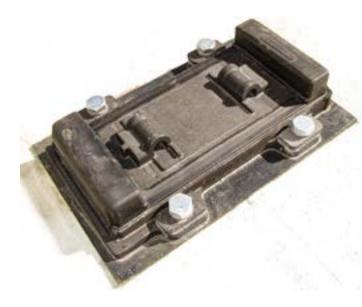
Loadmaster is the only direct fixation fastener on the market that is designed and tested for up to 40-ton axle loads. It has been a proven performer in heavy haul and passenger rail systems, with a track record of more than 25 years in service with no maintenance.

#### **ADVANCED ENGINEERING**

Loadmaster's containment design provides many advantages over the traditional sandwich concept used for decades. It allows for versatility with both single and dual vertical stiffness versions and innate fail-safe characteristics not seen in similar products.

#### **BENEFITS**

- Superior acoustical effectiveness
- Unique dual stiffness design
- Significant reduction of impact forces
- Reduce tie and ballast maintenance on bridge approaches with loadmaster transition areas





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#### **BEYOND DURABILITY**

Loadmaster has proven to be more than a durable fastener. It actually absorbs impact forces normally transmitted to supporting structures, thereby also extending their useful life. Some suggest that rails even last longer with Loadmaster.

- Reduce ground and structure-borne vibrations
- Matches track modulus between ballasted and ballast-less track
- Low life-cycle cost
- Low to NO maintenance
- Improved "ride" quality
- Reduced vertical and lateral deflections of bridge structuralcomponents of up to 90%\*
- Eliminate plate cutting and spike kill on timber tie bridges

#### **SAVING BRIDGES**

Plate-cutting spike kill has met its match. Loadmaster Timber Tie helps protect wooden ties by minimizing the effects of ground-to-bridge impacts. It's the bonded fastener engineered specifically to reduce the need for expensive bridge track maintenance.

- Reduces surfacing maintenance on ballasted approaches
- Large bearing area minimizes tie cutting
- Mitigates noise and vibration above 25 hertz
- Reduces impact and extends structure life
  - 40% reduction in impact loads on heavy haul loadings of 32 ton and above\*
  - Virtual elimination of vertical and lateral deflection of bridge deck support\*





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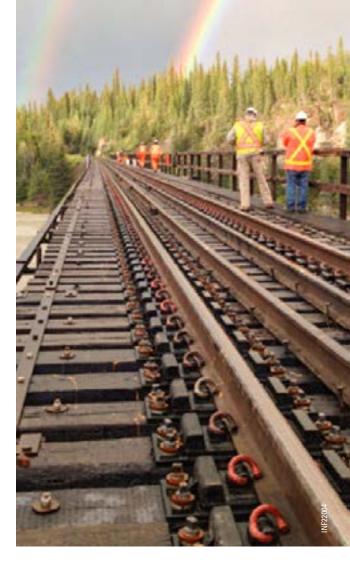
#### **CUTTING COSTS**

Loadmaster Timber Tie can also enhance asset utilization, because initial costs are mitigated by long-term maintenance savings. It's a durable solution designed to be affordable over the long run.

- 25-year lifespan according to TTCI testing
- Track modules on bridge that match ballasted track
- Dual stiffness: 110,000 lbs. fin. initial, 350,000 lbs/in. maximum
- Screw clamping force: 14,000 lbs

#### **PRODUCT SPECIFICATIONS:**

Rail Base Dimensions	Loadmaster 6"	Loadmaster 5 ½"	Loadmaster Timber Tie TT10	Loadmaster Timber Tie TT8
Body length	19 <sup>5</sup> /8"	19 ½"	27"	21 ½"
Body width	9 ¼"	9 ¼"	10"	8 ¼"
Width across anchor bolt holes	11"	11"	5½" (2 holes)	2" (3 holes)
Rail seat elevation	1 7/8"	1 <sup>15</sup> / <sub>16</sub> "	1 <sup>15</sup> / <sub>16</sub> "	1 <sup>15</sup> / <sub>16</sub> "
Weight	Factory assembled	Factory assembled	82 lbs. (Direct fixation plate only)	49 lbs. (Direct fixation plate only)
Metal Parts	Top plate and containment frame are all ASTM 536. Grade 65-45-12 ductile iron castings			
Elastomer	Natural rubber			
Assembly	Metal parts fully bonded together with elastomer			
Hardware	<sup>7</sup> / <sub>8</sub> " A-325 Bolt		<sup>7</sup> / <sub>8</sub> " x 8" Lag screw 1" lock washer cast fender	
Torque	325 ft./lbs.		250 ft./lbs.	



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