



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 to provide 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 low-maintenance, long-term solution for wood ties.

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

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A Caterpillar Company

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LOADMASTER & LMTT



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 structural components 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 TTCl 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 1/2"	Loadmaster Timber Tie TT10	Loadmaster Timber Tie TT8
Body length	19 5/8"	19 1/2"	27"	21 1/2"
Body width	9 1/4"	9 1/4"	10"	8 1/4"
Width across anchor bolt holes	11"	11"	5 1/2" (2 holes)	2" (3 holes)
Rail seat elevation	1 7/8"	1 15/16"	1 15/16"	1 15/16"
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	7/8" A-325 Bolt		7/8" x 8" Lag screw 1" lock washer cast fender	
Torque	325 ft./lbs.		250 ft./lbs.	



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