- Optimized ride quality
- Optimized road stability
- Optimized durability

Driving Innovation
Hendrickson pioneered the use of a single, large-diameter bushing in trailer air suspensions with our TRI-FUNCTIONAL® bushing. Used in unison with rigid beams and solid axle connections, TRI-FUNCTIONAL bushings deliver enhanced road stability and ride quality in approved on- and off-highway applications. The result is a dependable suspension system that offers extended life, reduced maintenance and maximum protection for cargo, drivers and equipment.

Three Main Functions
The void design and material composition of these unique bushings are critical to controlling the horizontal, vertical and roll forces a trailer generates rolling down the road. A key element of the pivot connection, the TRI-FUNCTIONAL bushing is contained inside the beam with sufficient compression to permit it to flex but not rotate. Compression of one bushing combined with expansion of the opposing bushing helps keep wheels on the road during turns and over irregular surfaces.

Industry-Leading Warranty*
- Approved on-highway applications — up to seven years
- Approved vocational applications — up to seven years
- Approved raw wood applications — up to seven years
- Aftermarket — one year

*Contact Hendrickson for complete warranty terms, conditions and limitations.
TRI-FUNCTIONAL® Bushings Features and Benefits

TRI-FUNCTIONAL™ III Bushing (TF III)
For INTRAAX® and VANTRAAX® narrow-beam systems
- Increased durability
- Expanded service life
- Enhanced cargo protection and ride
- Broader range of applications

TRI-FUNCTIONAL II BUSHING (TF II)
For INTRAAX, VANTRAAX and HT™ SERIES wide-beam suspensions
- Heavy-duty successor to the original TRI-FUNCTIONAL Bushing (TF I)
- Improved fatigue over TF I
- Couple with bushing tube spacers to control lateral movements

Optimally Designed Voids
- Absorb varying road forces
- Improved road stability
- Smooth ride
- Cargo protection

Solid Rubber
- Provide fore- aft assistance
- Maintain proper axle alignment and suspension tracking

Specially Formulated Rubber Compound
- Stands up against tough operating conditions

Bushings’ Three Functions (Tri-Functional)

Hendrickson’s bushings control three primary road forces:

**Vertical Forces**
- Voids expand and compress to absorb road induced forces allowing optimum suspension articulation without over stressing the axle
- Ride quality and payload protection surpass other bushing designs

**Horizontal Movement**
- Solid rubber areas resist forward and backward movement to maintain suspension tracking and alignment during braking and acceleration

**Roll Stability**
- Voids allow increased articulation to provide exceptional control during turning and roll events
- The special void shapes enhance the axle’s ability to act as a torsion bar, resisting trailer roll forces

Hendrickson Genuine Parts are the same quality components installed in Hendrickson original equipment suspensions — consisting of the same design, construction, performance and durability. There’s only one way to maintain and protect your suspension’s original performance. Ask for the name that is synonymous with the finest manufactured suspensions in the world.

Actual product performance may vary depending upon vehicle configuration, operation, service and other factors. All applications must comply with applicable Hendrickson specifications and must be approved by the respective vehicle manufacturer with the vehicle in its original, as-built configuration. Contact Hendrickson for additional details regarding specifications, applications, capacities, and operation, service and maintenance instructions.

Call Hendrickson at 330.489.0045 or 866.RIDEAIR (743.3247) for additional information.

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