# TORQUE RODS

**Truck Torque Rods** 





# **TORQUE RODS**

### **Durability Tested to Hendrickson's Rigorous Standards**

Component development begins with state-of-the-art engineering software models to identify stress points and simulate suspension performance in various real-world road and load conditions.

Initial designs are then built and tested in our advanced research lab and installed on vehicles for validation in the field.



## **Integrated Concept Development in Collaboration with Suspensions and Springs**

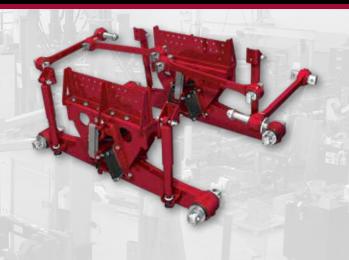
Our labs feature advanced testing equipment that can test a full range of products to include specific components to complete suspension systems.

These simultaneous testing and design capabilities reduce time to market and further enhance full suspension system quality.



## **Optimized System Performance and Weight to Meet Application Criteria**

All components are designed to strict product requirements, just like our full spring assemblies and suspension systems. Hendrickson understands the importance of each component being designed to meet evolving application criteria.



# TRAAK ROD®

**Family of Torque Rods** 

#### TRAAX ROD® Advantage

#### Extended Life

Advanced bushings and flat rod body construction work together to provide up to 5 times the performance life of conventional double shot bushings.\*

#### Encapsulated Bushing / Curled Hub

Pre-compressed bushing to harness energy for superior durability and performance. TRAAX ROD bushings are encapsulated to help prevent walkout and are non-rebushable.

#### Broad Application

Bushing and rod bodies specifically designed for demanding capacity and application criteria. See Torque Rod Application Guide later in this publication.

#### Weight Efficiency with High Strength

No castings needed. Manufactured using high strength materials utilizing Hendrickson's expertise in robotically-welded fabrications.

#### Packaging

Available in a variety of lengths and hub sizes. Easily replaces and upgrades standard torque rods in the market.

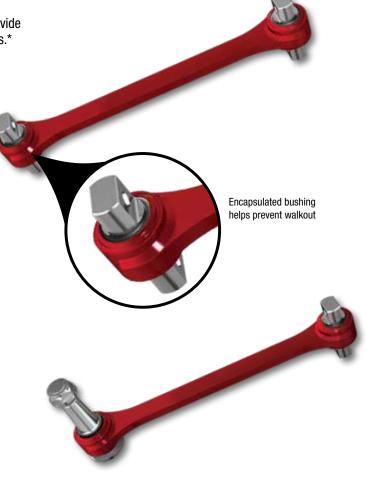
#### Multiple Bushing Configurations

Available with straddle or taper pin bushing designs.

#### Durability

Rod body and bushing designs meet Hendrickson's rigorous testing parameters.

\* Based on internal testing of bushing walkout, retention and durability. Actual product performance may vary depending on component and vehicle configuration, operation, service and other factors.





#### TRAAX ROD® Bushings



Offering a wide variety of bushing designs to meet global application or attachment requirements, we customize solutions to deliver extended performance and restrict walkout. Whatever the application requires – reliability, outstanding durability, articulation, innovative designs – we are pushing the boundaries of torque rod performance for your vehicle needs.

- For more information on TRAAX ROD torque rod and bushing combinations, refer to the Hendrickson publication 45745-148.

# **ULTRA ROD®**

**Family of Torque Rods** 

#### **One-Piece Rods**

ULTRA ROD® torque rods are forged or cast body construction with unique bonded bushings.

Both forged and cast rod bodies provide structural integrity, while the unique bonded bushings reduce the friction and heat that can damage ordinary bushings — providing longer life and greater payload.

• Available for use in on-highway and vocational applications

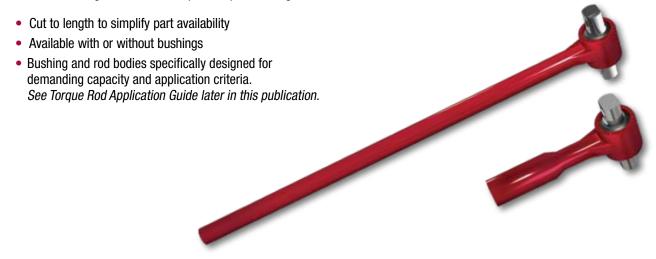
• Designed for straddle or taper bushing configurations

• Bushing and rod bodies specifically designed for demanding capacity and application criteria.

See Torque Rod Application Guide later in this publication.

#### **Two-Piece Rods for Light to Severe-Duty Applications**

Two-piece ULTRA ROD torque rods are an excellent replacement option for one-piece torque rods for both on-highway and vocational applications. Two-piece design allows for minimal part number stocking and covers multiple one-piece configurations.



- For more information on ULTRA ROD bushing combinations, refer to the Hendrickson publication 45745-148.

**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.

# **Torque Rod Application Guide**

1. Find Application

2. Determine Rod Position

3. Select Suspension

4. Match with Torque Rod

					Rear Air Su	spension S	ystem & Ra	ating (lbs.)				
Torque Roc	l Applicatio	n Matrix	H.	<b>√S</b> ™		COMFO	PRIMAAX® EX / FIREMAAX® EX					
			≤ 40,000	46,000	≤ 21,000	23,000	40,000	46,000	< 46,000	≥ 46,000		
Application	Segment	Rod Position				Percent Of	f-Highway					
пррисанон	Cogilloni	1104 1 00111011	≤2	25%		≤2	5%		10	100%		
Beverage	On-Highway			ULTRA ROD®						TRAAX ROD®		
Building Materials / Construction	Vocational		ULTRA ROD	Heavy-Duty TRAAX ROD	ULTRA ROD	Heavy-Duty TRAAX ROD	Contact Hendrickson	Heavy-Duty TRAAX ROD	ULTRA ROD	Heavy-Duty TRAAX ROD		
Crane / Boom			Co	ntact Hendricks	on for torque ro	od approval in t	hese applicatio	ns	Heavy-Duty TRAAX ROD	Heavy-Duty TRAAX ROD		
Dump				ULTRA ROD	Heavy-Duty TRAAX ROD	ULTRA ROD	Heavy-Duty TRAAX ROD	Contact Hendrickson	Hea	vy-Duty TRAAX	ROD	
Local Pickup & Delivery	On-Highway					ULTRA ROD				Heavy-Duty TRAAX ROD		
Logging			Heavy-Duty	r TRAAX ROD	Conta	ct Hendrickson f in these ap						
Mining	Severe						Heavy-Duty	TRAAX ROD				
Mixer (Concrete) - Front Discharge	Contact Hendrickson for torque rod approval in these applicat						hese applicatio	ns				
Mixer (Concrete) - Rear Discharge	Vocational	- Vocational								ULTRA ROD	Heavy-Duty TRAAX ROD	
Municipal			Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD	ULTRA ROD	Heavy-Duty TRAAX ROD	Contact Hendrickson	Heavy-Duty TRAAX ROD			
Oil Field	Severe								Heavy-Duty	TRAAX ROD		
Pumper (Concrete)												
Refuse (Front & Rear Loader)	Vocational		Co	Contact Hendrickson for torque rod approval in these applications						Heavy-Duty TRAAX ROD		
Refuse Side Loader / Roll-Off Containers												
Regional Haul	On-Highway		ULTRA ROD									
Snowplow				Heavy-Duty	TRAAX ROD		Contact Hendrickson	Heavy-Duty TRAAX ROD	ULTRA ROD	Heavy-Duty TRAAX ROD		
Tank (Milk)	Vocational		Co	Contact Hendrickson for torque rod approval in these applications								
Tank (Fuel, Water & Dry)			ULTRA ROD	Heavy-Duty TRAAX ROD	ULTRA ROD	Heavy-Duty TRAAX ROD	Contact Hendrickson	Heavy-Duty TRAAX ROD	Heavy-Duty	TRAAX ROD		
Tank (Airport Refueler)	Severe		Col	ntact Hendricks	on for suspensi	on approval in	these application	ons				

**Note:** Applicable one-piece and two-piece ULTRA ROD part numbers are approved for use in each above-referenced ULTRA ROD application listing. See Hendrickson publication 45745-148 for further information.

Note: Transverse torque rods are required for certain Hendrickson rear suspension models and applications. See Hendrickson publications 59310-004 and 59310-058 for further information.

# **Torque Rod Application Guide (Cont)**

			Rear Air Suspension System & Rating (lbs.)									
Torque Roc	Torque Rod Application Matrix			HAS™		COMFO	PRIMAAX® EX / FIREMAAX® EX					
			≤ 40,000	46,000	≤ 21,000	23,000	40,000	46,000	< 46,000	≥ 46,000		
Application	Coamont	Rod Position	Percent Off-Highway									
Аррисации	Segment	nou rosition	≤2	25%		≤ <b>2</b>	5%		100%			
Tractor (On-Highway)	On-Highway		ULTRA ROD®									
Tractor (Heavy-Haul)	Severe	Transverse	Heavy-Duty	TRAAX ROD®			Contact	Heavy-Duty TRAAX ROD	Heavy-Duty TRAAX ROD			
Tow Truck (Hook, Roll-Back)	Vocational		ULTRA ROD	Heavy-Duty TRAAX ROD	ULTRA ROD	Heavy-Duty TRAAX ROD	Hendrickson for torque rod	Heavy-Duty TRAAX ROD		ROD		
Utility	1000000		ULTRA ROD	Heavy-Duty TRAAX ROD	OETHA HOD		approval in these	Heavy-Duty TRAAX ROD		ROD		
Wrecker Service	Severe		Heavy-Duty	TRAAX ROD			applications	Heavy-Duty TRAAX ROD				
Emergency / Aerial / Ladder / Fire / Rescue / Tanker									Heavy-Duty	TRAAX ROD		
Pumper (Emergency)	Fire / Rescue	e / Rescue	C	ontact Hendricks	ns .							
Tanker (Emergency)												

			Walking Beam Suspension System & Rating (lbs.)											
Torque Rod Application Matrix			HAULMAAX® EX			ULTIMAAX®				RT™				
			<b>≤40,000</b>   <b>46,000</b>   <b>52,000</b>		≤ 46,000	52,000	60,000	70,000	40,000	46 - 52,000	60 - 70,000			
Application	Application Segment Rod				Percent Off-Highway									
Application	ocyment	Position					1	100%						
Davagaga	On Highway	Longitudinal			Com	aka ak I lamaki alka	for town.		al in Mana	andinations.				
Beverage	On-Highway	Transverse	Contact Hendrickson for torque rod approval in these applications											
Building		Longitudinal	U	ILTRA ROD®	)									
Materials / Construction	Vocational	Transverse	ULTRA ROD		y-Duty X ROD®									
Crane /	Vocational	Longitudinal	ı	JLTRA ROD		Heavy-	Duty	V-Ro	V-Rod or		Heavy-Duty			
Boom	Vocational	Transverse	ULTRA ROD		y-Duty X ROD	TRAAX	ROD		e-Duty X ROD		TRAAX ROD	Severe-Duty		
Dump	Vocational	Longitudinal	ULTRA ROD									TRAAX ROD		
2 2		Transverse	ULTRA ROD		y-Duty X ROD									
		Longitudinal	dinal ULTRA ROD											
Local Pickup & Delivery	On-Highway	Transverse	ULTRA	ROD	Heavy-Duty TRAAX ROD	Contact Hendrickson for torque rod approval in these applications			ULTR					

**Note:** Applicable one-piece and two-piece ULTRA ROD part numbers are approved for use in each above-referenced ULTRA ROD application listing. See Hendrickson publication 45745-148 for further information.

Note: Transverse torque rods are required for certain Hendrickson rear suspension models and applications. See Hendrickson publications 59310-004 and 59310-058 for further information.

# **Torque Rod Application Guide (Cont)**

				Wa	ılking Beam	Suspen	nsion System & Ra	ating (lbs.)			
			HAU	LMAAX® EX		ULTIMA	AAX®		RT™		
Torque Ro	d Application	on Matrix	≤ 40,000	46,000 52,000	<b>≤46,000   52,000   60,000   70,000</b>			40,000	46 - 52,000	60 - 70,000	
		Rod	· · · ·				Off-Highway		· · · · ·	, <u>-</u>	
Application	Segment	Position					100%				
		Longitudinal		LTRA ROD®				ULTRA ROD	Heavy-Duty		
Logging		Longituumai	0	LINA NOD	Heavy-D			OLINA NOD	TRAAX ROD®	Severe-Duty TRAAX ROD  Severe-Duty TRAAX ROD  Severe-Duty TRAAX ROD  Severe-Duty TRAAX ROD  Severe-Duty TRAAX ROD	
-33 3	Severe	Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD	TRAAX R	UD	V-Rod or Severe-Duty	Contact Hendrickson	Contact Hendrickson		
Mining		Longitudinal		ct Hendrickson que rod approval	Heavy-D		TRAAX ROD	for torque rod approval	for torque rod approval in these	TRAAX ROD	
		Transverse	I .	se applications	TRAAX R	OD		in these applications	applications	Severe-Duty TRAAX ROD  Severe-Duty TRAAX ROD  Severe-Duty TRAAX ROD  Severe-Duty TRAAX ROD	
Mixer		Longitudinal	ι	ILTRA ROD	Heavy-D	utv					
(Concrete) - Front Discharge		Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD	TRAAX R						
Mixer		Longitudinal	l	ILTRA ROD	Heave D		V-Rod or				
(Concrete) - Rear Discharge	Vocational	Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD	Heavy-Duty TRAAX ROD		Severe-Duty TRAAX ROD	ULTRA ROD	Heavy-Duty TRAAX ROD	,	
Municipal		Longitudinal	ι	ILTRA ROD	Heavy-D	uty					
Municipal		Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD	TRAAX R	0D					
		Longitudinal	ULTRA ROD			V-Rod or		Harris Duta	Caucas Duty		
Oil Field	Severe	Severe Transverse ULTRA ROD Heavy-Duty TRAAX ROD			Severe-Duty TRAAX ROD	ULTRA ROD	Heavy-Duty TRAAX ROD	, , ,			
Pumper		Longitudinal	ULTRA ROD								
(Concrete)		Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD							
	,, ,,	Longitudinal	ι	JLTRA ROD	Heavy-D	utv	V-Rod or	ULTRA ROD	Heavy-Duty TRAAX ROD		
Refuse (Front & Rear Loader)	Vocational	Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD	TRAAX R	0Ď	Severe-Duty TRAAX ROD				
Refuse Side		Longitudinal	ι	ILTRA ROD							
Loader / Roll-Off Containers		Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD							
<b>D</b>	0 11: 1	Longitudinal							I		
Regional-Haul	On-Highway	Transverse		Cor	ntact Hendrickso	n for torqu	ue rod approval in thes	e applications			
		Longitudinal	ι	ILTRA ROD							
Snowplow		Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD							
Tank (Milk)		Longitudinal	ι	ILTRA ROD	Heavy-D	utv	V-Rod or		Heavy-Duty	Severe-Duty	
	Vocational	Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD	TRAAX R		Severe-Duty TRAAX ROD	ULTRA ROD	TRAAX ROD	Severe-Duty TRAAX ROD  Severe-Duty TRAAX ROD  Severe-Duty TRAAX ROD  Severe-Duty TRAAX ROD	
Tank		Longitudinal	ι	JLTRA ROD							
(Fuel, Water & Dry)		Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD							
Tank	0	Longitudinal	ι	ILTRA ROD	Heavy-D	utv	V-Rod or	LILEDA DOS	Heavy-Duty	Severe-Duty	
(Airport Refueler)	Severe	Transverse	ULTRA ROD	Heavy-Duty TRAAX ROD	TRAAX R		Severe-Duty TRAAX ROD	ULTRA ROD	TRAAX ROD		

**Note:** Applicable one-piece and two-piece ULTRA ROD part numbers are approved for use in each above-referenced ULTRA ROD application listing. See Hendrickson publication 45745-148 for further information.

Note: Transverse torque rods are required for certain Hendrickson rear suspension models and applications. See Hendrickson publications 59310-004 and 59310-058 for further information.

### **Torque Rod Application Guide (Cont)**

				Walking Beam Suspension System & Rating (lbs.)									
Tarress Da	d Annlineti	an Makin	HAI	ULMAAX®	EX	ULTIMAAX®					RT™	RT™	
Torque Rod Application Matrix			≤ 40,000	46,000	52,000	≤ 46,000	52,000	60,000	70,000	40,000	46 - 52,000	60 - 70,000	
Application	Segment	Rod	PERCENT OFF-HIGHWAY										
прриосион	Cogmont	Position						100%					
Tractor		Longitudinal										vy-Duty	
(On-Highway)	On-Highway	Transverse	Contact Hendrickson for torque rod approval in these applications										
Tuestan		Longitudinal	ι	JLTRA ROD®									
Tractor (Heavy-Haul)	Severe	Transverse	ULTRA ROD	Heavy TRAA							Heavy-Duty TRAAX ROD		
		Longitudinal		ULTRA ROD									
Utility	Vocational	Transverse	ULTRA ROD	Heavy TRAA						ULTRA ROD	TRAAX ROÓ		
		Longitudinal	ULTRA ROD										
Wrecker Service	Severe	Transverse	ULTRA ROD	Heavy TRAA	r-Duty X ROD	Heavy- TRAAX		Sever	od or e-Duty				
Emergency / Aerial / Ladder		Longitudinal						IRAA	X ROD				
/ Fire / Rescue / Tanker		Transverse											
Pumper	Fire /	Longitudinal	Heavy-	-Duty TRAAX	ROD						vy-Duty		
(Emergency)	Rescue	Transverse	riouvy	Daty Hire	THOD					TRA	AX ROD		
Tanker		Longitudinal											
(Emergency)		Transverse											

**Note:** Applicable one-piece and two-piece ULTRA ROD part numbers are approved for use in each above-referenced ULTRA ROD application listing. See Hendrickson publication 45745-148 for further information.

Note: Transverse torque rods are required for certain Hendrickson rear suspension models and applications. See Hendrickson publications 59310-004 and 59310-058 for further information.



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, operation, service and maintenance instructions.

Call Hendrickson at 630.910.2800 or 855.RIDERED (743.3733) for additional information.



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