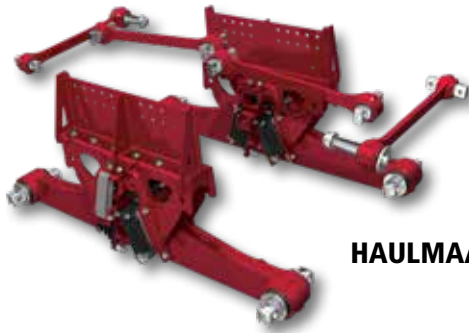




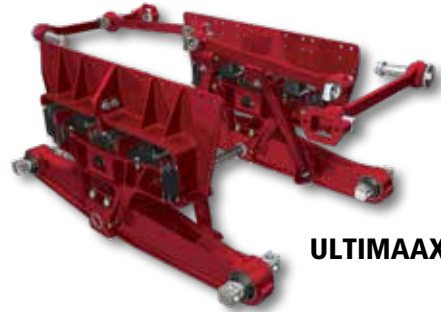
**VSAS**

Vocational Rear Suspension Application Summary  
United States and Canada

Value, performance and reliability  
established around the world



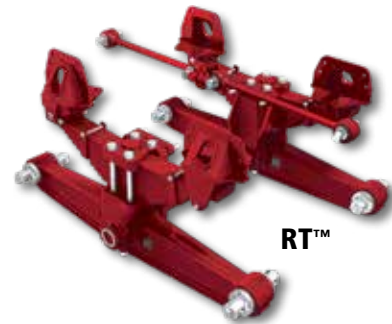
**HAULMAAX® EX**



**ULTIMAAX®**



**PRIMAAX® EX /  
FIREMAAX® EX**  
FIRE / RESCUE



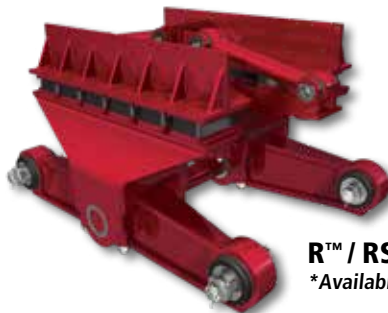
**RT™**



**ROADMAAX®**  
FIRE / RESCUE



**HAS™**



**R™ / RS™**  
\*Available above 70K



To learn more about truck vocational  
suspensions, call 855-743-3733 or visit  
[www.hendrickson-intl.com](http://www.hendrickson-intl.com)

**HENDRICKSON**  
*The World Rides On Us®*

# Vocational Rear Suspension Application Summary

Hendrickson offers a series of suspensions for a wide variety of vocational truck application requirements and performance preferences. The following matrix illustrates which suspensions are approved by Hendrickson for use in the respective general applications. See the additional charts starting on page 6 for further information.

Application <sup>1</sup>		Hendrickson Suspensions <sup>3</sup>							
		HAS	PAX EX	HMX EX	R / RS	RT	UMX	FMX EX	RDMX
		Percent off-highway							
		Up to 25%	100%	100%	100%	100%	100%	N/A	N/A
Vocational	Beverage	X	X	X					
	Building Materials Supply	X	X	X <sup>4,5</sup>					
	Crane / Boom		X	X <sup>8</sup>					
	Dump	X	X	X		X <sup>7</sup>	X		
	Logging	X	X	X <sup>5</sup>			X		
	Mining		X	X	X		X		
	Mixer (Concrete) Front Discharge		X	X			X		
	Mixer (Concrete) Rear Discharge		X	X			X		
	Municipal	X	X	X <sup>6</sup>		X	X		
	Oil Field		X	X	X	X <sup>7</sup>	X		
	Pumper (Concrete)		X	X <sup>8</sup>			X		
	Refuse - Front Loader		X	X			X		
	Refuse - Rear Loader		X	X			X		
	Refuse - Side Loader		X	X			X		
	Roll-off Containers		X	X <sup>5</sup>			X		
	Tank (Milk)	X	X	X		X	X		
	Tank Truck (Fuel, Water, Dry Bulk)	X	X	X			X		
	Tank (Airport Refueler)				X				
	Tractor (On-Highway)	X	X						
Tractor (Heavy-Haul)	X	X	X		X <sup>7</sup>	X			
Utility <sup>9</sup>	X	X	X <sup>5,8</sup>			X			
Fire / Rescue	Aerial / Ladder / Fire / Pumper (Emergency)			X			X	X	X
	Rescue / Tanker (Emergency)	X		X			X	X	

**PAX EX = PRIMAAX® EX, HMX EX = HAULMAAX® EX, UMX = ULTIMAAX®,  
FMX EX = FIREMAAX® EX, RDMX = ROADMAAX® FIRE / RESCUE**

- Note that table above represents general applications and may not apply for specific applications.
- For additional capacities, please contact Hendrickson at 630-910-2800, or visit [hendrickson-intl.com](http://hendrickson-intl.com).
- Other Hendrickson suspensions may be available upon request, per Hendrickson Engineering approval.
- Not recommended for forklift mounted behind center of tandem suspension.
- Shocks required in this application.

- Not recommended for vehicles with crash cushion attenuator.
- RT™ / RTE™ suspensions must be equipped with rubber center bushings and transverse torque rods for Central and South American applications.
- Dual rebound straps required for outrigger applications.
- Utility applications include, but are not limited to: digger derricks, bucket trucks and pole setters.

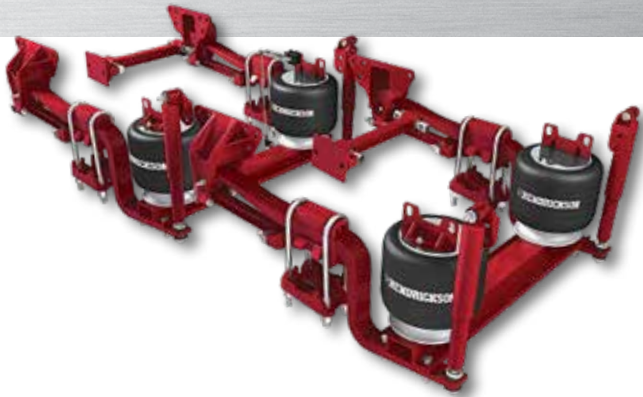
## PRIMAAX® EX / FIREMAAX® EX Fire / Rescue

- Ideal for heavy-haul, dump, logging, refuse, mixer, building / material supply and crane applications
- FIREMAAX® EX variant for fire and rescue applications
- Optimized configuration helps improve handling and roll stiffness for expanded applications
- Axle connection and torque rods help reduce torsional axle stress and driveline vibration
- Large-volume, low-frequency air springs provide a smooth ride for on- and off-highway usage
- Up to 12.5 in. of diagonal wheel articulation for superior mobility
- PRIMAAX® EX capacities of 23,000 and 26,000 lbs. (single), 46,000 and 52,000 lbs. (tandem) and 69,000 and 78,000 lbs. (tridem)
- Approved for 100 percent off-highway use
- FIREMAAX EX capacities of 24,000, 27,000 and 31,000 lbs. (single) and 48,000, 54,000 and 62,000 lbs. (tandem)
- Available with Air Disc Brake compatibility



PRIMAAX® EX Capacity	Installed Weight	Ride Heights	Axle Spacing
23,000 lbs.	542 lbs.	8.5-10.5 / 12 / 12.5-15.5 in.	N/A
26,000 lbs.	651 lbs.	8.5-10.5 / 12 / 12.5-15.5 in.	N/A
46,000 lbs.	1,078 lbs.	8.5-10.5 / 12 / 12.5-15.5 in.	52, 54, 60, 72.5 in.
52,000 lbs.	1,292 lbs.	8.5-10.5 / 12 / 12.5-15.5 in.	54, 60, 72.5 in.
69,000 lbs.	1,629 lbs.	8.5-10.5 / 12 / 12.5-15.5 in.	52, 54, 60, 72.5 in.
78,000 lbs.	1,931 lbs.	8.5-10.5 / 12 / 12.5-15.5 in.	54, 60, 72.5 in.

## HAS™



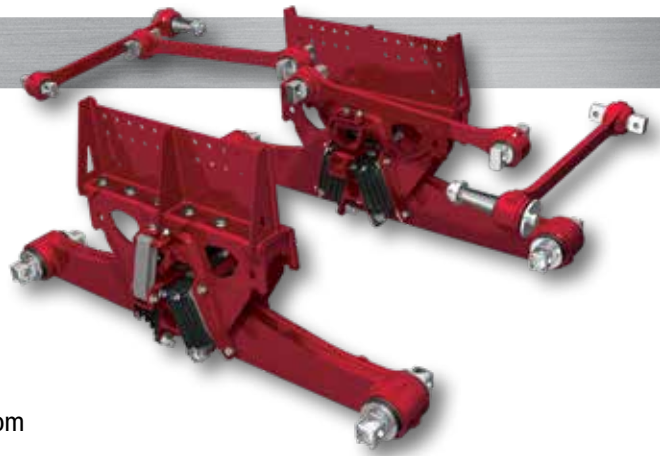
- Suited for both on- and off-highway applications
- Excellent ride quality
- Approved for up to 25 percent off-highway use
- Approved for use with lift axles
- Optional inboard shocks available
- Capacities of 21,000 and 23,000 lbs. (single) and 40,000 and 46,000 lbs. (tandem)
- Available with Air Disc Brake compatibility

	Capacity*	Installed Weight	Ride Heights	Axle Spacing
HAS 210	21,000 lbs.	454 lbs.	8.5, 9.5, 10.5 in.	N/A
HAS 230	23,000 lbs.	470 lbs.	8.5, 9.5, 10.5 in.	N/A
HAS 40LH	40,000 lbs.	797 lbs.	8.5, 9.5, 10.5 in.	52, 54, 55, 60, 72.5 in.
HAS 400	40,000 lbs.	905 lbs.	8.5, 9.5, 10.5 in.	52, 54, 55, 60, 72.5 in.
HAS 402	40,000 lbs.	920 lbs.	8.5, 9.5, 10.5 in.	52, 54, 55, 60, 72.5 in.
HAS 460	46,000 lbs.	937 lbs.	8.5, 9.5, 10.5 in.	52, 54, 56, 60, 72.5 in.

\* For higher capacity ratings, contact Hendrickson Engineering.

## HAULMAAX® EX

- Hundreds of pounds lighter than competitive suspensions
- Increased job site rating for expanded applications
- Superior combination of empty ride and loaded stability
- Improved durability through advanced elastomer technology
- Reduced maintenance due to optimized geometry and lubrication-free components
- Up to 17 in. of diagonal articulation for greater mobility\*
- 315 tire clearance
- Recommended applications: dump, refuse, mixer, logging, crane / boom
- Capacities of 40,000, 46,000 and 52,000 lbs.\*\*



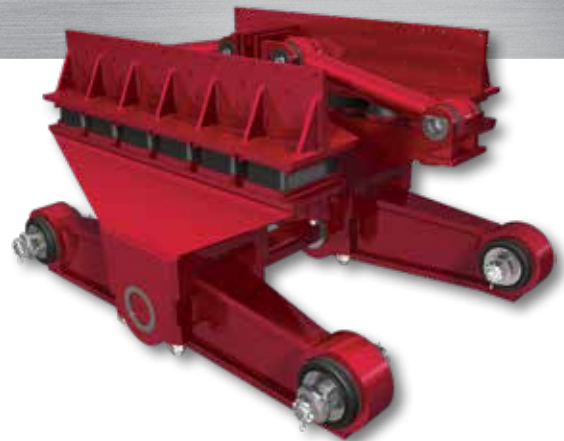
Capacity	Installed Weight	Ride Heights	Axle Spacing
40,000 lbs.	855 lbs.	9.5, 10.5, 11.5, 13.25 in.	52, 54 in.
46,000 lbs.	864 lbs.	9.5, 10.5, 11.5, 13.25 in.	52, 54, 60, 72.5 in.
52,000 lbs.	958 lbs.	9.5, 10.5, 11.5, 13.25 in.	52, 54, 60 in.

\* Suspension articulation may exceed vehicle capability and may be limited by vehicle manufacturer; vehicle manufacturer-installed axle stops may restrict suspension articulation.

\*\* Additional capacities available for Emergency applications.

## R™ / RS™

- Recommended for mining, oil field and other specialty applications
- R™ solid mount is an extra heavy-duty suspension where maximum roll stability is essential
- RS™ rubber-loaded cushions absorb shock and provide high roll stability for severe-service applications
- Available in capacities of 85,000, 100,000 and 120,000 lbs. For higher capacities, please contact Hendrickson.



R Capacity	Installed Weight	Saddle Height*	Axle Spacing
85,000 lbs.	2,470 lbs.	17.25", 18.5", 20.25", 25"	60 in.
100,000 lbs.	3,894 lbs.	20.7", 22.88", 23.9", 27.88", 28.4"	64 in.
120,000 lbs.+	N/A	Contact Hendrickson for details	64 in.

\* Suspension articulation may exceed vehicle capability and may be limited by vehicle manufacturer; vehicle manufacturer-installed axle stops may restrict suspension articulation.



## RT™

- RT™ is well suited for dump, municipal, oil field and other specialty applications
- Engineered with low-maintenance bushings and spring assemblies

Capacity	Installed Weight	Ride Heights	Axle Spacing
40,000 lbs.	1,207 lbs.	9.45, 9.64, 10, 13.45 in.	52, 54 in.
46,000 lbs.	1,301 lbs.	10, 11.20, 11.94 in.	52*, 54*, 60, 72.5 in.

\* Heavy-duty beam option available.

## ULTIMAAX®

- Recommended for mining, refuse, logging and other specialty applications
- Lightweight design for additional payload and route consolidation
- Reduced maintenance with fewer bushings and no lubrication requirements
- Up to 17.5 in. of diagonal articulation\*
- Capable of handling severe loads in tough conditions
- Capacities of 46,000, 52,000, 60,000 and 70,000 lbs.\*\*\*

Capacity**	Installed Weight	Ride Heights	Axle Spacing
46,000 lbs.	1,179 lbs.	9.5 - 13 in.	52, 54, 56, 60 in.
52,000 lbs.	1,198 lbs.	9.5 - 13 in.	52, 54, 56, 60 in.
60,000 lbs.	1,407 lbs.	9.5 - 13 in.	54, 56, 60 in.
70,000 lbs.	1,750 lbs.	12 in. +	56, 60 in.

\* Suspension articulation may exceed vehicle capability and may be limited by vehicle manufacturer; vehicle manufacturer-installed axle stops may restrict suspension articulation.

\*\* For higher capacity ratings, contact Hendrickson Engineering.

\*\*\* Additional capacities available for Emergency applications.

## ROADMAAX® Fire / Rescue

- Designed specifically for heavy-duty fire and rescue markets
- Ride quality and equipment protection are its cornerstone features
- Enhanced stability, handling and ride quality, even in challenging environments where vehicles encounter sharp turns and unexpected ground and environmental conditions
- Capacities of 35,000 (single) and 70,000 lbs. (tandem)

Capacity	Installed Weight	Ride Heights	Axle Spacing
35,000 lbs.	775 lbs.	8.25 - 12 in.	N/A
70,000 lbs.	1,550 lbs.	8.25 - 12 in.	Up to 72 in.

\* Heavy-duty beam option available.

Application <sup>1</sup>	Axle Capacity <sup>2</sup> (Pounds)	Truck				Tractor				
		Recommended		Optional <sup>3</sup>		Recommended		Optional <sup>3</sup>		
		Air	Rubber / Mechanical	Air	Rubber / Mechanical	Air	Rubber / Mechanical	Air	Rubber / Mechanical	
Beverage	20,000	HAS		PAX EX	Call Hendrickson	HAS	Call Hendrickson	PAX EX	Call Hendrickson	
	23,000	HAS		PAX EX		HAS		PAX EX		
	26,000	PAX EX				PAX EX				
	40,000	HAS	HMX EX	PAX EX		HAS		PAX EX		
	46,000	HAS	HMX EX	PAX EX		HAS		PAX EX		
	52,000	PAX EX	HMX EX			PAX EX				
Building Materials / Flatbed	23,000	PAX EX		HAS	Call Hendrickson	PAX EX		HAS	Call Hendrickson	
	26,000	PAX EX				PAX EX				
	40,000	PAX EX	HMX EX <sup>4,5</sup>	HAS		PAX EX	HMX EX <sup>5</sup>	HAS		
	46,000	PAX EX	HMX EX <sup>4,5</sup>	HAS		PAX EX	HMX EX <sup>5</sup>	HAS		
	52,000	PAX EX	HMX EX <sup>4,5</sup>			PAX EX	HMX EX <sup>5</sup>			
Crane / Boom	40,000	PAX EX	HMX EX <sup>9</sup>		Call Hendrickson	PAX EX	Call Hendrickson		Call Hendrickson	
	46,000	PAX EX	HMX EX <sup>9</sup>			PAX EX				
	52,000	PAX EX	HMX EX <sup>9</sup>			PAX EX				
Dump	20,000	PAX EX		HAS		PAX EX		HAS		
	23,000	PAX EX		HAS		PAX EX		HAS		
	26,000	PAX EX				PAX EX				
	40,000	PAX EX	HMX EX	HAS		PAX EX	HMX EX <sup>5</sup>	HAS	RT <sup>8</sup>	
	46,000	PAX EX	HMX EX	HAS	UMX	PAX EX	UMX	HAS	HMX EX <sup>5</sup>	
	52,000	PAX EX	HMX EX		UMX	PAX EX	UMX		HMX EX <sup>5</sup>	
	60,000		UMX				UMX			
	69,000 <sup>6</sup>	PAX EX				PAX EX				
	70,000		UMX				UMX			
78,000 <sup>6</sup>	PAX EX				PAX EX					
Logging	40,000	PAX EX	HMX EX <sup>5</sup>	HAS		PAX EX	HMX EX <sup>5</sup>	HAS	Call Hendrickson	
	46,000	PAX EX	HMX EX <sup>5</sup>	HAS	UMX	PAX EX	HMX EX <sup>5</sup>	HAS		
	52,000	PAX EX	HMX EX <sup>5</sup>		UMX	PAX EX	UMX			
Mining	46,000		UMX	PAX EX	HMX EX	Call Hendrickson	Call Hendrickson	Call Hendrickson		
	52,000		UMX	PAX EX	HMX EX					
	60,000		UMX							
	70,000		UMX							
	85,000		R		RS					
Mixer (Concrete) Front Discharge	40,000	PAX EX	HMX EX			Call Hendrickson	Call Hendrickson			
	46,000	PAX EX	HMX EX		UMX					
	50,000	PAX EX								
	52,000	PAX EX	HMX EX		UMX					
	69,000 <sup>6</sup>	PAX EX								
	78,000 <sup>6</sup>	PAX EX								
Mixer (Concrete) Rear Discharge	23,000	PAX EX				PAX EX				
	26,000	PAX EX				PAX EX				
	40,000	PAX EX	HMX EX			PAX EX	HMX EX <sup>5</sup>		RT	
	46,000	PAX EX	HMX EX		UMX	PAX EX	HMX EX <sup>5</sup>		UMX	
	50,000	PAX EX	HMX EX		UMX	PAX EX	UMX		HMX EX <sup>5</sup>	
	52,000	PAX EX	HMX EX		UMX	PAX EX	UMX		HMX EX <sup>5</sup>	
	69,000 <sup>6</sup>	PAX EX				PAX EX				
	78,000 <sup>6</sup>	PAX EX				PAX EX				
Municipal	20,000	PAX EX		HAS		Call Hendrickson	Call Hendrickson			
	23,000	PAX EX		HAS						
	40,000	PAX EX	HMX EX <sup>7</sup>	HAS	UMX					
	46,000	PAX EX	HMX EX <sup>7</sup>	HAS	UMX					
	52,000	PAX EX	HMX EX <sup>7</sup>		UMX					

Reference notes on page 8

		Truck						Tractor					
Application <sup>1</sup>	Axle Capacity <sup>2</sup> (Pounds)	Recommended			Optional <sup>3</sup>			Recommended			Optional <sup>3</sup>		
		Air	Rubber / Mechanical		Air	Rubber / Mechanical		Air	Rubber / Mechanical		Air	Rubber / Mechanical	
Oil Field	23,000	PAX EX						PAX EX					
	26,000	PAX EX						PAX EX					
	40,000	PAX EX		HMX EX			UMX	PAX EX		HMX EX <sup>5</sup>			RT
	46,000	PAX EX		HMX EX			UMX	PAX EX		HMX EX <sup>5</sup>			UMX
	52,000	PAX EX		HMX EX			UMX	PAX EX		UMX			HMX EX <sup>5</sup>
	60,000			UMX						UMX			
	69,000 <sup>6</sup>	PAX EX						PAX EX					
	70,000			UMX						UMX			
	78,000 <sup>6</sup>	PAX EX						PAX EX					
	85,000			R			RS			R			RS
100,000			R			RS			R			RS	
Pumper (Concrete)	40,000	PAX EX		HMX EX <sup>9</sup>				Call Hendrickson			Call Hendrickson		
	46,000	PAX EX		HMX EX <sup>9</sup>		UMX							
	52,000	PAX EX		HMX EX <sup>9</sup>		UMX							
	69,000 <sup>6</sup>	PAX EX											
	78,000 <sup>6</sup>	PAX EX											
Refuse – Front Loader	23,000	PAX EX						Call Hendrickson			Call Hendrickson		
	26,000	PAX EX											
	40,000	PAX EX		HMX EX									
	46,000	PAX EX		HMX EX		UMX							
	52,000	PAX EX		UMX		HMX EX							
Refuse – Rear Loader	23,000	PAX EX						Call Hendrickson			Call Hendrickson		
	26,000	PAX EX											
	40,000	PAX EX		HMX EX									
	46,000	PAX EX		HMX EX		UMX							
	52,000	PAX EX		HMX EX		UMX							
Refuse – Side Loader	40,000	PAX EX		HMX EX				Call Hendrickson			Call Hendrickson		
	46,000	PAX EX		HMX EX		UMX							
	52,000	PAX EX		HMX EX		UMX							
Roll-Off Containers	40,000	PAX EX		HMX EX <sup>5</sup>				Call Hendrickson			Call Hendrickson		
	46,000	PAX EX		HMX EX <sup>5</sup>		UMX							
	52,000	PAX EX		HMX EX <sup>5</sup>		UMX							
	60,000			UMX									
Tank (Milk)	40,000	PAX EX		HMX EX	HAS		PAX EX		HMX EX <sup>5</sup>	HAS		RT	
	46,000	PAX EX		HMX EX	HAS	UMX	PAX EX		HMX EX <sup>5</sup>	HAS		UMX	
	52,000	PAX EX		HMX EX		UMX	PAX EX		UMX			HMX EX <sup>5</sup>	
Tank (Fuel, Water and Dry Bulk)	20,000	PAX EX			HAS		HAS				PAX EX		
	23,000	PAX EX			HAS		HAS				PAX EX		
	26,000	PAX EX					PAX EX						
	40,000	PAX EX		HMX EX	HAS	UMX	HAS				PAX EX		
	46,000	PAX EX		HMX EX	HAS	UMX	HAS		HMX EX <sup>5</sup>		PAX EX		UMX
	52,000	PAX EX		HMX EX		UMX	PAX EX		UMX				HMX EX <sup>5</sup>
Tanker (Airport Refueler)	85,000			R		RS	Call Hendrickson			Call Hendrickson			
	110,000			R		RS							
	120,000			R		RS							
Tractor (On-Highway)	20,000						HAS	Call Hendrickson			PAX EX	Call Hendrickson	
	23,000						HAS				PAX EX		
	40,000						HAS				PAX EX		
	46,000						HAS				PAX EX		

Reference notes on page 8

		Truck				Tractor				
Application <sup>1</sup>	Axle Capacity <sup>2</sup> (Pounds)	Recommended		Optional <sup>3</sup>		Recommended		Optional <sup>3</sup>		
		Air	Rubber / Mechanical	Air	Rubber / Mechanical	Air	Rubber / Mechanical	Air	Rubber / Mechanical	
Tractor (Heavy-Haul)	20,000	Call Hendrickson		Call Hendrickson		PAX EX		HAS		
	23,000					PAX EX		HAS		
	26,000					PAX EX				
	40,000					PAX EX		HMX EX <sup>5</sup>	HAS	RT <sup>8</sup>
	46,000					PAX EX		HMX EX <sup>5</sup>	HAS	UMX
	52,000					PAX EX		UMX		HMX EX <sup>5</sup>
	70,000							UMX		
Utility <sup>10</sup>	20,000	PAX EX		HAS		Call Hendrickson		Call Hendrickson		
	23,000	PAX EX		HAS						
	40,000	PAX EX	HMX EX <sup>5,7,9</sup>	HAS	UMX					
	46,000	PAX EX	HMX EX <sup>5,7,9</sup>	HAS	UMX					
	52,000	PAX EX	UMX		HMX EX <sup>5,7,9</sup>					
Aerial / Ladder / Fire / Pumper (Emergency)	31,000	FMX EX				FMX EX				
	35,000	RDMX				RDMX				
	42,000	FMX EX	UMX		HMX EX					
	48,000	FMX EX	UMX		HMX EX	FMX EX	UMX		HMX EX <sup>5</sup>	
	54,000	FMX EX	UMX		HMX EX					
	58,000	FMX EX	UMX							
	62,000	FMX EX	UMX							
	63,000	RDMX	UMX							
	70,000	RDMX	UMX							
Rescue / Tanker (Emergency)	21,000	FMX EX		HAS		Call Hendrickson		Call Hendrickson		
	24,000	FMX EX								
	27,000	FMX EX								
	31,000	FMX EX								
	42,000	FMX EX	UMX		HMX EX					
	48,000	FMX EX	UMX		HMX EX					
	54,000	FMX EX	UMX		HMX EX					

**HMX EX = HAULMAAX® EX, PAX EX = PRIMAAX® EX, UMX = ULTIMAAX®, FMX EX = FIREMAAX® EX, RDMX = ROADMAAX® FIRE / RESCUE**

### Single-, Tandem- and Tridem-axle Vocational Suspension Chart

Application <sup>1</sup>	Axle Capacity <sup>2</sup> (Pounds)	Recommended
Vocational	23,000 single	PRIMAAX® EX
	26,000 single	PRIMAAX EX
	46,000 tandem	PRIMAAX EX
	52,000 tandem	PRIMAAX EX
	69,000 tridem	PRIMAAX EX
	78,000 tridem	PRIMAAX EX
Emergency	24,000 single	FIREMAAX® EX
	27,000 single	FIREMAAX EX
	31,000 single	FIREMAAX EX
	35,000 single	ROADMAAX® Fire / Rescue
	48,000 tandem	FIREMAAX EX
	54,000 tandem	FIREMAAX EX
	62,000 tandem	FIREMAAX EX
	63,000 tandem	ROADMAAX Fire / Rescue
	70,000 tandem	ROADMAAX Fire / Rescue

- Note that table above represents general applications and may not apply for specific applications.
- For additional capacities, please contact Hendrickson at 630-910-2800, or visit [hendrickson-intl.com](http://hendrickson-intl.com).
- Other Hendrickson suspensions may be available upon request, per Hendrickson Engineering approval.
- Not recommended for forklift mounted behind center of tandem suspension.
- Shocks required in this application.
- Rear Tri-Drive.
- Not recommended for vehicles with crash cushion attenuator.
- RT™ / RTE™ suspensions must be equipped with rubber center bushings and transverse torque rods for Central and South American applications.
- Dual rebound straps required for outrigger applications.
- Utility applications include, but are not limited to: digger derricks, bucket trucks and pole setters.

*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 630.910.2800 or 855.RIDERED (743.3733) for additional information.**



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