



Primaax EX Kenworth Service Manual

Pro Gear's Hendrickson Primaax EX Kenworth Service Manual to assist in identifying your Hendrickson unit.

If you need any assistance identifying the correct transfer case unit for your truck and equipment, contact your Hendrickson replacement part specialists at Pro Gear and Transmission.

Pro Gear Transmission has same day shipping and 1000's of products in stock and ready to ship internationally for your next project.

For parts or service contact the Hendrickson specialists at Pro Gear & Transmission, Inc.

1 (877) 776-4600
(407) 872-1901
parts@eprogear.com

PARTS LIST

PRIMAAX® EX • PRIMAAX® Rear Air Suspension for Mack Vehicles

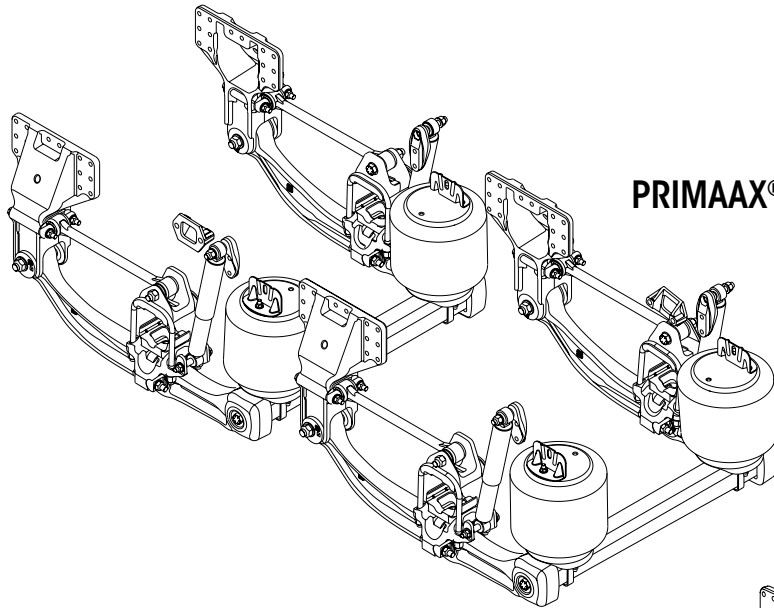
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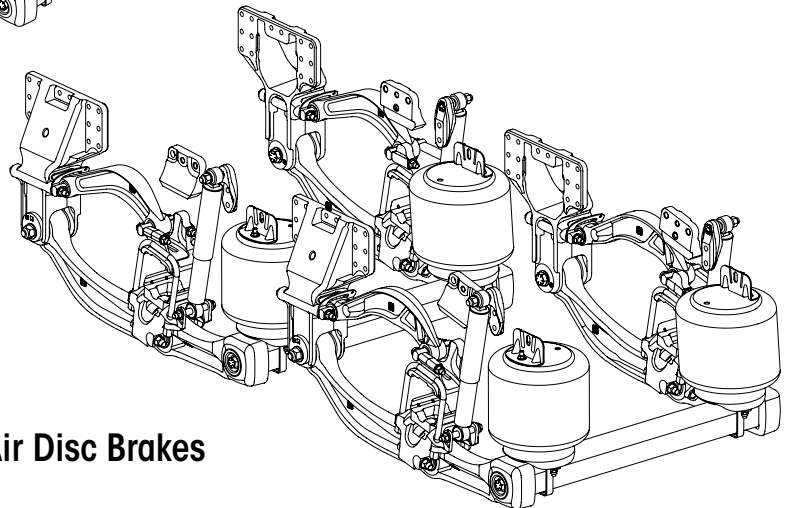
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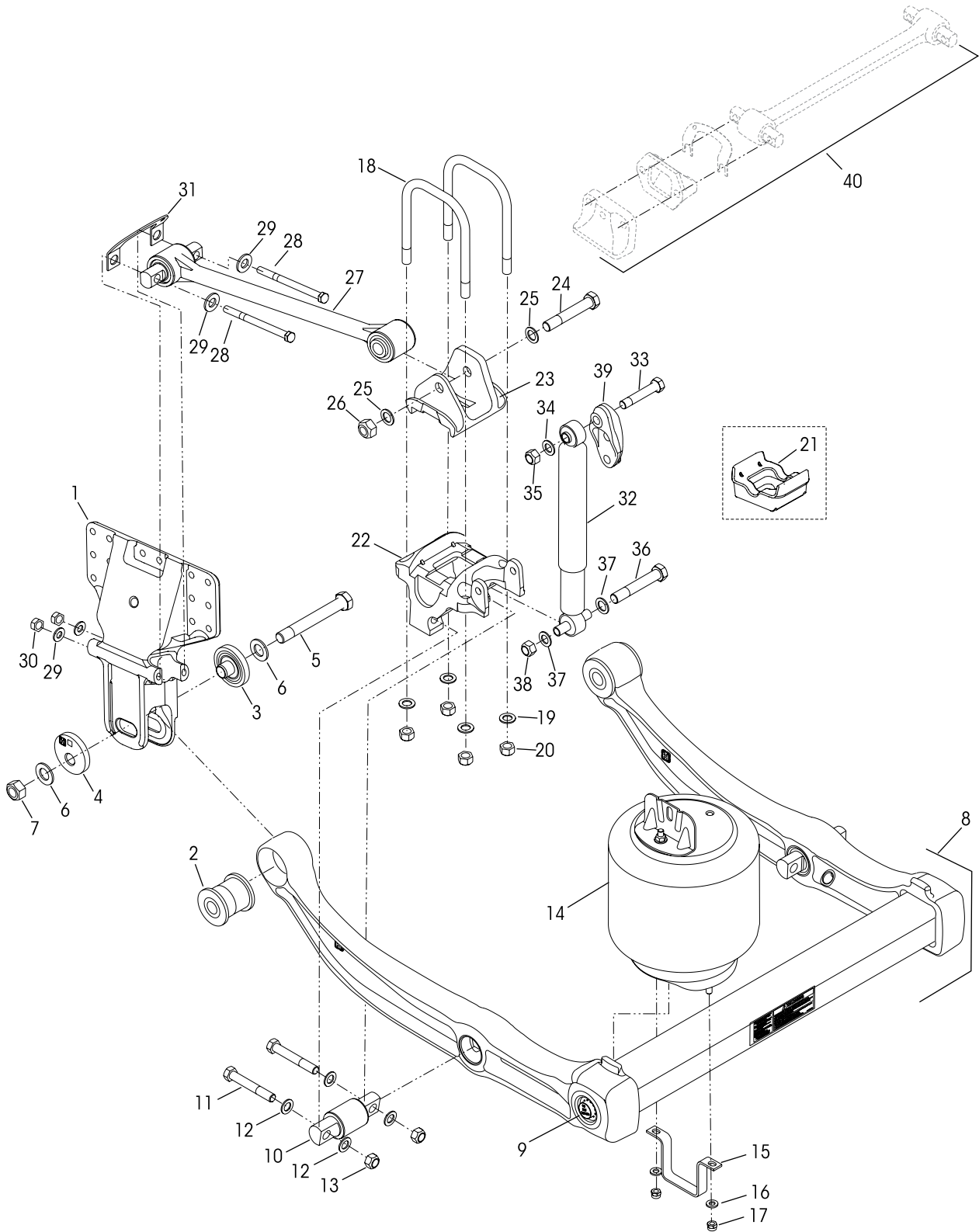
PRIMAAX® EX with Drum Brakes



PRIMAAX® EX with Air Disc Brakes



8½" • 10" Ride Height, Drum Brakes





PRIMAAX® EX for Mack Vehicles with Drum Brakes

KEY NO.	PART NO.	DESCRIPTION	VEHICLE QTY.	KEY NO.	PART NO.	DESCRIPTION	VEHICLE QTY.
1	67222-000	Frame Hanger	4	18		* 3/4"-16 UNF Square U-bolt	8
		QUIK-ALIGN® Pivot Bushing Service Kit, Includes Key Nos. 2-7, 41		a		10 3/8" Length - 8 1/2" Ride Height	
	60961-720	One Wheel End		b		9 7/8" Length - 10" Ride Height	
	60632-020	Axle Set		19		*3/4" Flat Washer	16
		QUIK-ALIGN Collar Service Kit, Includes Key Nos. 3-7		20		*3/4"-16 UNF U-bolt Locknut	16
	60632-019	One Wheel End		21	65139-003	Axle Spacer, 8 1/2" Ride Height Only	4
	60632-021	Axle Set		22	60556-XXX	Bottom Cap, <i>See Selection Guide below</i>	4
	60632-018	QUIK-ALIGN Fastener Service Kit, One Wheel End, Includes Key Nos. 5-7		Longitudinal Torque Rod Fastener Service Kits, One Side			
2		*QUIK-ALIGN Pivot Bushing	4	58821-012		To Top Pad, Includes Key Nos. 24-26	
3		*QUIK-ALIGN Concentric Collar	4	58821-027		To Frame Hanger, Includes Key Nos. 28-30	
4		*QUIK-ALIGN Eccentric Collar	4	23		Top Pad	4
5		*1"-14 UNF x 7 1/2" Hex Bolt	4	60877-001		8 1/2" Ride Height	
6		*1" Flat Washer	8	65641-000		10" Ride Height	
7		*1"-14 UNF Locknut	4	24		*7/8"-14 UNF-2A x 5 1/2" Hex Bolt	4
8		U-beam Assembly, Includes Key Nos. 2, 9-10		25		*7/8" Flat Washer	8
	67249-003	Rear	1	26		*7/8"-14 UNF-2B Locknut	4
	67249-004	Front	1	27	67274-XXX	Longitudinal Torque Rod, <i>Replaces 64981-XXX</i> <i>See Selection Guide below</i>	4
9	69565-001	U-beam Assembly Enhancement Aftermarket Service Kit, See page 8 for contents		28		*5/8"-11 UNC x 8" Hex Bolt or **M16 x 2-6G Bolt	8
		D-pin Bushing Service Kits, See Selection Guide		29		*5/8" Flat Washer or **M16 Washer	16
	34013-XXX	Single, Includes Key Nos. 10-13		30		*5/8"-11 UNC Locknut or **M16 x 2-6H Locknut	8
	56659-XXX	Fasteners Only, Axle Set, Includes Key Nos. 11-13		31	70240-001	Torque Rod Shim, 3.0 mm	As Req.
10		*D-pin Bushing	4		70240-002	Torque Rod Shim, 1.5 mm	
11		*3/4"-16 UNF Bolt, <i>See Selection Guide below</i>	8	32		Shock Absorber	4
12		*3/4" Flat Washer	16	60657-007		8 1/2" Ride Height	
13		*3/4"-16 UNF Locknut	8	60657-003		10" Ride Height	
		Air Spring Service Kits		50754-030		Single Shock Absorber Fastener Service Kit, Includes Key Nos. 33-38	
	60961-230	One Wheel End, Includes Key Nos. 14-17		33		*3/4"-10 UNC x 4 1/4" Upper Shock Bolt	4
	49177-006	Single, Fasteners only, Includes Key Nos. 16-17		34		*3/4" Flat Washer	4
14	67043-002	Air Spring Assembly	4	35		*3/4"-10 UNC Locknut	4
15	60911-002	Lower Air Spring Mounting Bracket	4	36		*5/8"-11 UNC X 6" Lower Shock Bolt	4
16		*1/2" Flat Washer	8	37		*5/8" Flat Washer	8
17		*1/2"-13 UNC Locknut	8	38		*5/8"-11 UNC Locknut	4
		U-bolt Service Kit, One Wheel End		39	67463-006	Upper Shock Frame Bracket	4
	48718-125	8 1/2" Ride Height, Includes Key Nos. 18a, 19-20		40		**Transverse Torque Rod Assembly	2
	48718-126	10" Ride Height, Includes Key Nos. 18b, 19-20		41	70867-001	P-80 Lubricant - 10 ml (Not Shown)	Per Bushing 1
				Not Shown		**Height Control Valve and Linkage Assembly	1

NOTES: Quantities shown are for tandem configuration.

* Item included in kit/assembly only, part not sold separately.

** Item required, component supplied by vehicle manufacturer. Hendrickson is not responsible for components not supplied by Hendrickson, for assistance with maintenance and rebuild instructions on these components see vehicle manufacturer.

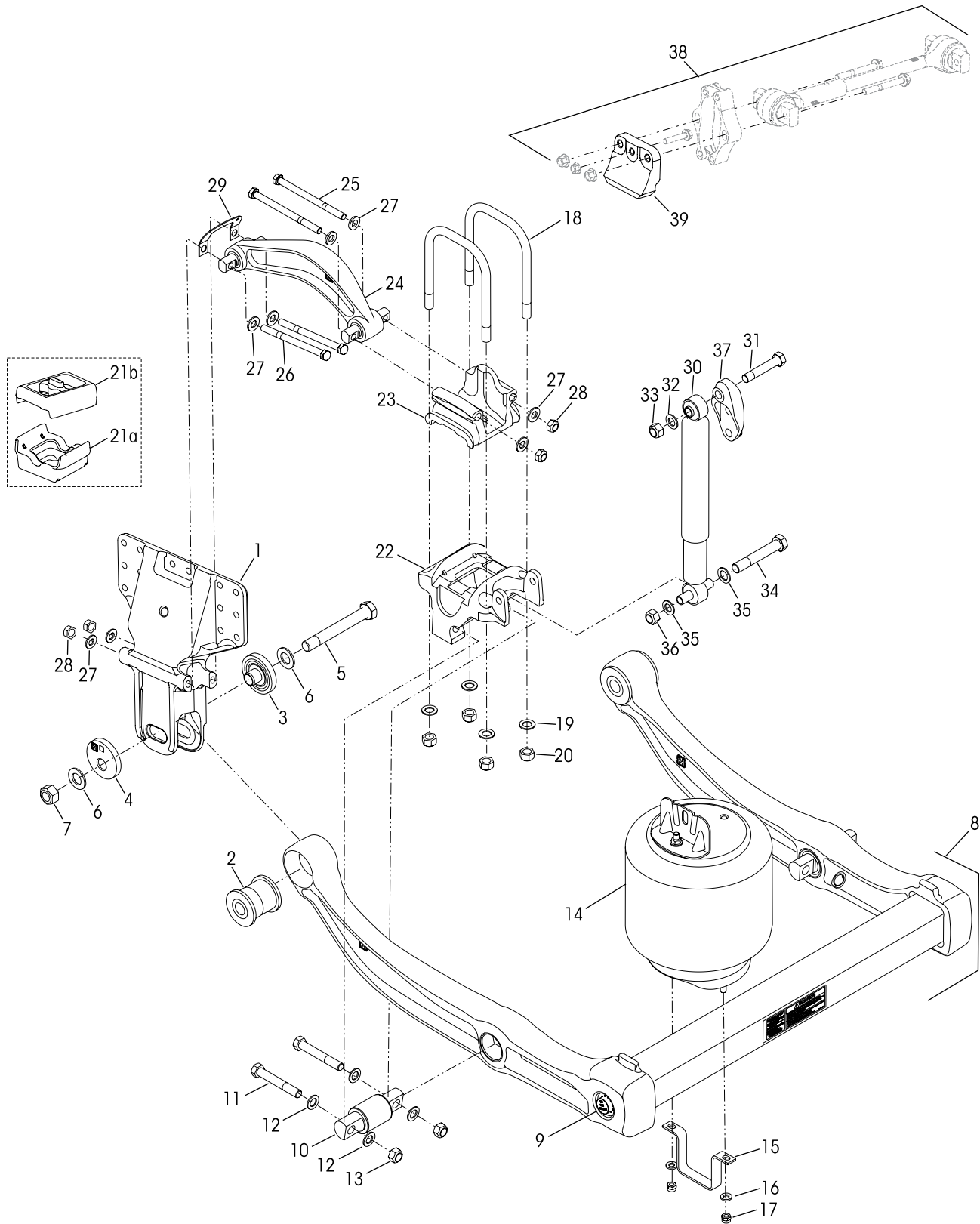
■ Selection Guide

*Pinion Angle		Key No. 11			Key No. 22	Key No. 27
8 1/2" Ride Height	10" Ride Height	D-pin Bolt Length	D-pin Bushing Service Kit No.	D-pin Fasteners Service Kit No.	Bottom Cap Part No.	**Longitudinal Torque Rod Part No.
FRONT						
2.9°	2.9°	4 3/4"	34013-117	56659-012	60556-025	67274-530
6.0°	6.1°	5 1/4"	34013-201	56659-014	60556-060	
7.9°	8.2°	5"	34013-107	56659-009	60556-120	
REAR						
10.3°	9.8°	4 3/4"	34013-117	56659-012	60556-100	67274-575
10.7°	10.2°				60556-105	
11.2°	10.7°				60556-110	
11.6°	11.2°				60556-115	
12.1°	11.6°	5"	34013-107	56659-009	60556-120	
13.0°	12.6°	5 1/4"	34013-201	56659-014	60556-130	
13.4°	13.1°				60556-135	

* Measured with QUIK-ALIGN pinion set at neutral position (12 O'Clock)
 ** Torque rod bushings are non-serviceable, replacement requires complete torque rod assembly with bushings.



8½" • 10" Ride Height, Air Disc Brakes





PRIMAAX® EX for Mack Vehicles with Air Disc Brakes

		VEHICLE				VEHICLE	
KEY NO.	PART NO.	DESCRIPTION	QTY.	KEY NO.	PART NO.	DESCRIPTION	QTY.
1	67222-002	Frame Hanger	4	18		* 3/4"-16 UNF Square U-bolt	8
		QUIK-ALIGN Pivot Bushing Service Kit,		a		10 5/8" - 8 1/2" Ride Height	
		Includes Key Nos. 2-7, 40		b		9 7/8" - 10" Ride Height	
	60961-720	One Wheel End		19		*3/4" Flat Washer	16
	60632-020	Axle Set		20		*3/4"-16 UNF U-bolt Locknut	16
		QUIK-ALIGN Collar Service Kit, Includes Key Nos. 3-7		21		Axle Spacer	4
	60632-019	One Wheel End		a	65139-003	8 1/2" Ride Height, Lower	
	60632-021	Axle Set		b	76960-001	10" Ride Height, Upper	
	60632-018	QUIK-ALIGN Fastener Service Kit,		22	60556-XXX	Bottom Cap, <i>See Selection Guide below</i>	4
		One Wheel End, Includes Key Nos. 5-7		23	76961-000	Top Pad	4
2		*QUIK-ALIGN Pivot Bushing	4	24		Longitudinal Torque Rod, <i>See Selection Guide</i>	4
3		*QUIK-ALIGN Concentric Collar	4	Longitudinal Torque Rod Fastener Service Kits,			
4		*QUIK-ALIGN Eccentric Collar	4	One Side			
5		*1"-14 UNF x 7 1/2" Hex Bolt	4	49176-060		To Top Pad, Includes Key Nos.25, 27-28	
6		*1" Flat Washer	8	49176-050		To Frame Hanger, Includes Key Nos.26-28	
7		*1"-14 UNF Locknut	4	25		*5/8"-11 UNC x 5 1/2" Hex Bolt	8
8		U-beam Assembly, Includes Key Nos. 2, 9-10		26		*5/8"-11 UNC x 10 1/2" Hex Bolt	8
	67249-003	Rear	1			**M16 x 2-6G Bolt	
	67249-004	Front	1	27		*5/8" Flat Washer	32
9	69565-001	U-beam Assembly Enhancement Aftermarket Service Kit, <i>See page 8 for contents</i>				**M16 Washer	
		D-pin Bushing Service Kits, <i>See Selection Guide</i>		28		*5/8"-11 UNC Locknut	16
	34013-XXX	Single, Includes Key Nos. 10-13				**M16 x 2-6H Locknut	
	56659-XXX	Fasteners Only, Axle Set, Includes Key Nos. 11-13		29	70240-001	Torque Rod Shim, 3.0 mm, <i>See Selection Guide</i>	
10		*D-pin Bushing	4		70240-002	Torque Rod Shim, 1.5 mm	
11		*3/4"-16 UNF Bolt, <i>See Selection Guide below</i>	8	30	60657-007	Shock Absorber	4
12		*3/4" Flat Washer	16		50754-030	Single Shock Absorber Fastener Service Kit,	
13		*3/4"-16 UNF Locknut	8			Includes Key Nos. 31-36	
		Air Spring Service Kits		31		*3/4"-10 UNC x 4 1/4" Upper Shock Bolt	4
	60961-230	One Wheel End, Includes Key Nos. 14-17		32		*3/4" Flat Washer	4
	49177-006	Single, Fasteners only, Includes Key Nos. 16-17		33		*3/4"-10 UNC Locknut	4
14	67043-002	Air Spring Assembly	4	34		*5/8"-11 UNC X 6" Lower Shock Bolt	4
15	60911-002	Lower Air Spring Mounting Bracket	4	35		*5/8" Flat Washer	8
16		*1/2" Flat Washer	8	36		*5/8"-11 UNC Locknut	4
17		*1/2"-13 UNC Locknut	8	37	67463-006	Upper Shock Frame Bracket	4
		U-bolt Service Kit, One Wheel End		38		**Transverse Torque Rod Assembly	2
	48718-130	8 1/2" Ride Height, Includes Key Nos. 18a, 19-20		39	77207-001	Axle Stop	4
	48718-178	10" Ride Height, Includes Key Nos. 18b, 19-20		40	70867-001	P-80 Lubricant - 10 ml (Not Shown) Per Bushing	1
				Not Shown		**Height Control Valve and Linkage Assembly	1

NOTES: Quantities shown are for tandem configuration.

* Item included in kit/assembly only, part not sold separately.

** Item required, component supplied by vehicle manufacturer. Hendrickson is not responsible for components not supplied by Hendrickson, for assistance with maintenance and rebuild instructions on these components see vehicle manufacturer.

■ Selection Guide

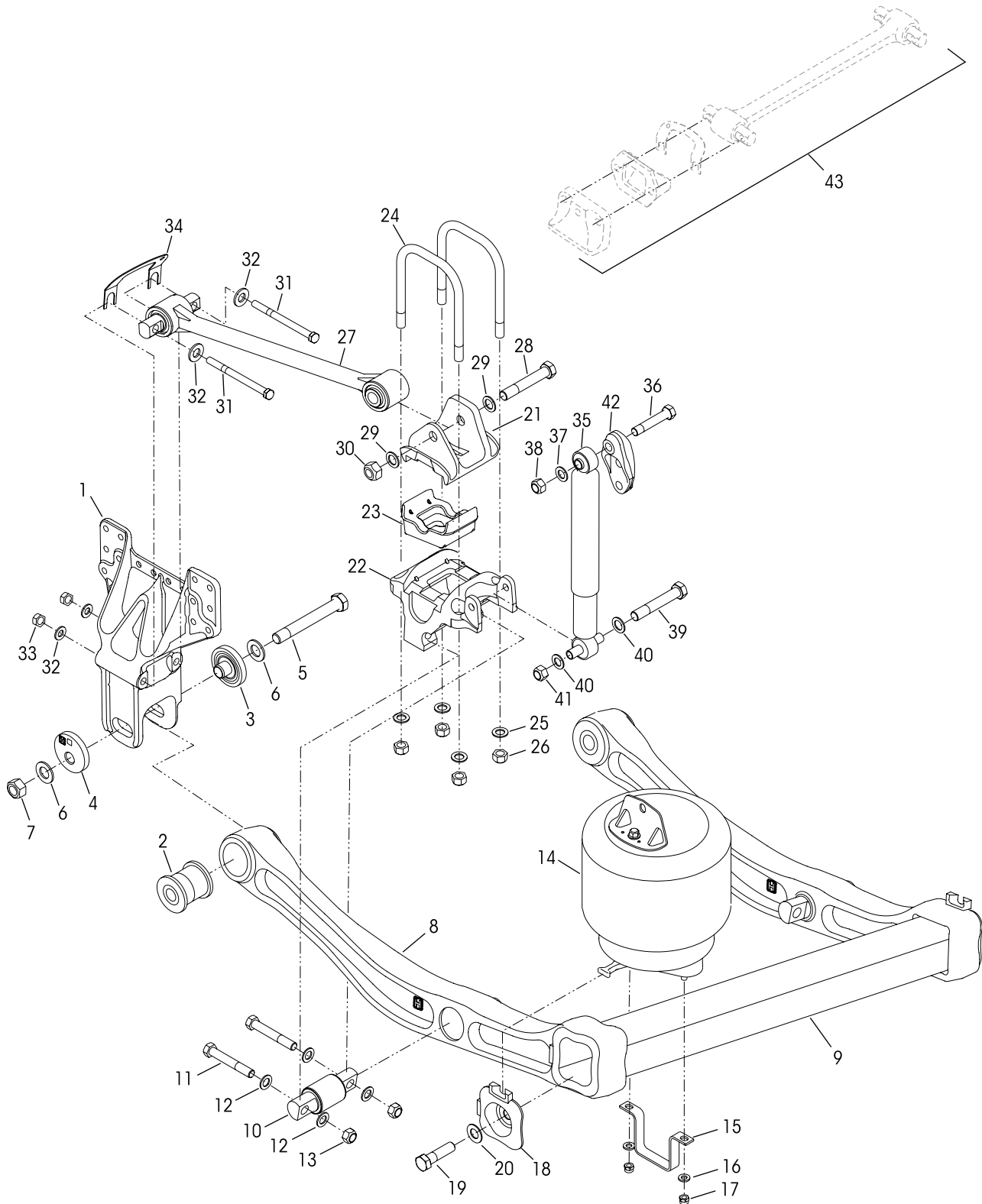
*Pinion Angle	Brake Clocking		Key No. 11			Key No. 22	Key No. 24	Key No. 29	
	Ride Height		D-pin Bolt Length	D-pin Bushing Service Kit No.	D-pin Fasteners Service Kit No.	Bottom Cap Part No.	**Longitudinal Torque Rod Part No.	Torque Rod Shims	
	8 1/2"	10"						8 1/2"	10"
1.5°	92°	84°	4 3/4"	34013-117	56659-012	60556-025	67219-435	3 mm	3 mm
2.5°			5"	34013-107	56659-009	60556-035		4 mm	4 mm
4°			5 1/2"	34013-116	56659-013	60556-050		5 mm	
6°	95°	90°	6"	34013-200	56659-024	60556-845	77128-435	6 mm	6 mm
7°			4 3/4"	34013-117	56659-012	60556-805		5 mm	
9°			5"	34013-107	56659-009	60556-810	68801-205	4 mm	3.0 mm
9.5°			5 1/4"	34013-201	56659-014	60556-820		6 mm	
10°			5 1/2"	34013-116	56659-013	60556-825			
10.5°						60556-830			
11°						60556-835			
11.5°						60556-840			
12°				60556-845					
12.5°						6 mm	4 mm		

* Measured with QUIK-ALIGN pinion set at neutral position (12 O'Clock)

** Torque rod bushings are non-serviceable, replacement requires complete torque rod assembly with bushings.



8½" • 10" Ride Height, Drum Brakes





PRIMAAX® for Mack Vehicles with Drum Brakes

			VEHICLE				VEHICLE
KEY NO.	PART NO.	DESCRIPTION	QTY.	KEY NO.	PART NO.	DESCRIPTION	QTY.
1	65702-001	Frame Hanger	4	20		*7/8" Flat Washer	4
		QUIK-ALIGN Pivot Bushing Service Kit, Includes Key Nos. 2-7, 44		21	60877-001	Top Pad	4
	60961-720	One Wheel End		22	60556-XXX	Bottom Cap, <i>See Selection Guide on page 3</i>	4
	60632-020	Axle Set		23	65139-003	Axle Spacer	4
		QUIK-ALIGN Collar Service Kit, Includes Key Nos. 3-7			48718-125	U-bolt Service Kit, One Wheel End, Includes Key Nos. 24-26	
	60632-019	One Wheel End		24		*3/4"-16 UNF x 10 3/8"	8
	60632-021	Axle Set		25		*3/4" Flat Washer	16
	60632-018	QUIK-ALIGN Fastener Service Kit, One Wheel End, Includes Key Nos. 5-7		26		*3/4"-16 UNF U-bolt Locknut	16
2		*QUIK-ALIGN Pivot Bushing	4	27	67274-XXX	Longitudinal Torque Rod, <i>Replaces 64981-XXX</i> <i>See Selection Guide on page 3</i>	4
3		*QUIK-ALIGN Concentric Collar	4			Longitudinal Rod Fastener Service Kits, One Side To Top Pad, Includes Key Nos. 28-30	
4		*QUIK-ALIGN Eccentric Collar	4		58821-012	To Top Pad, Includes Key Nos. 28-30	
5		*1"-14 UNF x 7 1/2" Hex Bolt	4		58821-027	To Frame Hanger, Includes Key Nos. 31-33	
6		*1" Flat Washer	8	28		*7/8"-14 UNF-2A x 5 1/2" Hex Bolt	4
7		*1"-14 UNF Locknut	4	29		*7/8" Flat Washer	8
8		***Support Beam Assembly, 60831-, <i>see Replacement Guide below</i>		30		*7/8"-14 UNF-2B Locknut	4
9		***Cross Tube, 60912-005, <i>see Replacement</i> <i>Guide below</i>		31		*5/8"-11 UNC x 8" Hex Bolt	8
	34013-107	D-pin Service Kit, Single, Includes Key Nos. 10-13				**M16 x 2-6G Bolt	
10		*D-pin Bushing	4	32		*5/8" Flat Washer	16
	56659-009	D-pin Fastener Service Kit, Axle Set, Includes Key Nos. 11-13				**M16 Washer	
11		*3/4"-16 UNF x 5" Bolt	8	33		*5/8"-11 UNC Locknut	8
12		*3/4" Flat Washer	16			**M16 x 2-6H Locknut	
13		*3/4"-16 UNF Locknut	8	34		Torque Rod Shim	As Req.
	60961-062	Air Spring Assembly Service Kit, One Wheel End, Includes Key Nos. 14-17			70240-001	3.0 mm	
14	60271-002	Air Spring Assembly	4		70240-002	1.5 mm	
15	60911-000	Lower Air Spring Mounting Bracket	4	35	60657-007	Shock Absorber	4
	49177-006	Lower Air Spring Fastener Service Kit, Single, Includes Key Nos. 16-17			50754-030	Single Shock Absorber Fastener Service Kit, Includes Key Nos. 36-41	
16		*1/2" Flat Washer	8	36		*3/4"-10 UNC x 4 1/4" Upper Shock Bolt	4
17		*1/2"-13 UNC Locknut	8	37		*3/4" Flat Washer	4
	46772-001	End Cap and Fastener Kit, Axle Set, Includes Key Nos. 18-20		38		*3/4"-10 UNC Locknut	4
18		*End Cap	4	39		*5/8"-11 UNC X 6" Lower Shock Bolt	4
19		*7/8"-9 UNC x 3 1/2" Hex Bolt	4	40		*5/8" Flat Washer	8
				41		*5/8"-11 UNC-2B Locknut	4
				42	67463-006	Upper Shock Frame Bracket, <i>Replaces 65000-006</i>	4
				43		**Transverse Torque Rod Assembly	2
				44	70867-001	P-80 Lubricant - 10 ml (Not Shown)	Per Bushing 1
					Not Shown	**Height Control Valve and Linkage Assembly	1

NOTES: Quantities shown are for a tandem configuration.

* Item included in kit/assembly only, part not sold separately.

** Item required, component supplied by Vehicle Manufacturer. Hendrickson is not responsible for components not supplied by Hendrickson, for assistance with maintenance and rebuild instructions on these components see vehicle manufacturer.

*** No longer available for service, see replacement guide below. For more information, refer to Hendrickson Technical Bulletin Literature No. SEU-0229 or contact Hendrickson Tech Services.

■ Support Beam And Cross Tube Replacement Guide

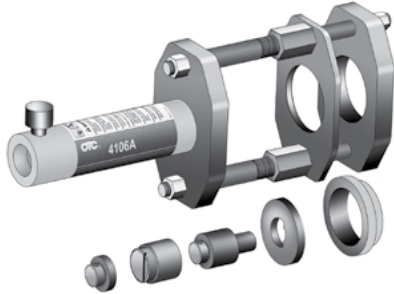
Drive Axle	DISCONTINUED		Cross Tube Part No.	NEW	COMMENTS
	Support Beam Assembly Part No. Left Hand	Support Beam Assembly Part No. Right Hand		U-beam Assembly Replacement Kit No.	
Forward	60831-003	60831-004	60912-005	60961-237	Each U-beam assembly replacement kit is intended to service the associated suspension parts on one axle. It includes two new support beam assemblies, one cross tube, two air spring assemblies, air spring fasteners, QUIK-ALIGN fasteners and D-pin fasteners.
Rear	60831-001	60831-002		60961-238	



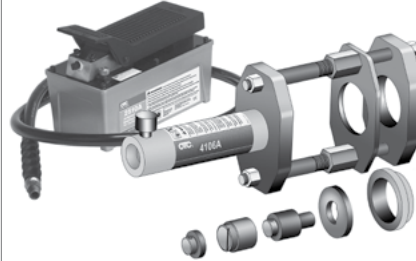
■ Special Tools

D-PIN / QUIK-ALIGN PIVOT BUSHING SERVICE TOOLS

Hendrickson Part No. 66086-202
 OTC Part No. 4246 Visit otctools.com



Hendrickson Part No. 66086-204
 OTC Part No. 4247 Visit otctools.com



NOTE: In conjunction with this tool, additional adapter tool kit Part No. 66086-205 (OTC 4254) is available to be used on Hendrickson SOFTEK NXT suspension (not needed for this suspension)

QUIK-WRENCH TOOL

Hendrickson Part No. 66086-201
 OTC Part No. 1768 Visit otctools.com



QUIK-ALIGN SOCKET TOOL

Hendrickson Part No. 66086-200
 OTC Part No. 1767 Visit otctools.com



QUIK-ALIGN PIVOT BUSHING SERVICE TOOL

Hendrickson Part No. 66086-203L
 Reference Literature No. 59310-061



■ U-beam Assembly

AFTERMARKET SERVICE KIT NO. 69565-001, AXLE SET CONTENTS

PART NO.	DESCRIPTION	QTY.	
69351-000	Sikaflex 221 Polyurethane Sealant, 300 ml Tube	1	In the event any service to the suspension that requires disassembly of a U-beam Assembly (equipped with integrated end caps) the Loctite 277, tamper resistant caps, and Sikaflex 221 polyurethane sealant MUST BE properly installed to ensure components function to their highest efficiency. The enhancement components can be purchased individually or as an aftermarket service kit.
69570-000	Loctite® 277 - 10 ml Bottle	1	
*	Tamper Resistant Cap	2	
*	7/8"-9 UNC x 3 3/4" Hex Bolt	2	
*	7/8" H-Coat Flat Washer	2	

* Item included in kit/assembly only, part not sold separately.

This is a general parts list to provide directional information. Components may vary by model. Questions in regards to parts, contact Hendrickson Truck Parts at 1.866.755.5968 (Toll-free U.S. and Canada), 1.630.910.2800 (Outside U.S. and Canada) or e-mail: truckparts@hendrickson-intl.com.

www.hendrickson-intl.com



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1.866.755.5968 (Toll-free U.S. and Canada)
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 Fax 1.630.910.2899