

Asia Pacific Region Only



PARTS LIST

INTRAAX® AAT Trailer Suspension

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INTRODUCTION

The purpose of this parts list is to document the available repair parts, accessories, special tools and lubricants available for the Hendrickson AAT230 and AAT250 INTRAAX® (Integrated Axle Assembly) suspension systems.

The major components included in this parts list is as follows:

- AAT230 and AAT250 INTRAAX Axle Assemblies (HALFTRAAX™)
- Air springs, relevant mounting hardware and fasteners
- Shock Absorbers, relevant mounting hardware and fasteners
- Frame Hangers
- QUIK-ALIGN® hardware and fasteners
- Height Control Valve (HCV) system
- Axle lift system

Parts published in this parts bulletin are the latest available parts. Unless otherwise noted, they are functionally equivalent to, or better than, the originally supplied components.

This parts list should be used in conjunction with:

- [97114-100](#) Trailer Wheel End Systems Parts List
- [97114-097](#) Trailer Brake Systems Parts List

NOTE: All quantities listed within this parts list are as applicable for a single axle.

Document Interactivity

The interactive **Table of Contents** allows users to quickly navigate to the appropriate page with a single mouse click. The **INDEX** button at the bottom of each page returns you to the **Table of Contents**. Other links within the document are identified by black underlined text, whereas links to external websites are identified by blue underlined text.

ABBREVIATIONS

Abbreviations used in this document may include the following terms:

- AR – As Required
- ARL – Auxiliary Rebound Limiter
- Assy – Assembly
- HCV – Height Control Valve
- NSS – Not Serviced Separately
- PCD – Pitch Circle Diameter
- TFB™ – TRI-FUNCTIONAL™ Bush

AXLE AND SUSPENSION IDENTIFICATION

To assist with the identification of an INTRAAX® axle or suspension system, reference should be made to the axle identification plate (refer to [Figure 1](#)) and suspension assembly number plate (refer to [Figure 2](#)).



Figure 1: Axle ID Plate



Figure 2: Assembly Plate

AXLE ID PLATE

The axle ID plate is usually located on the inboard side of the left-hand trailing arm and provides the following:

- MODEL
- DESCRIPTION
- CUSTOMER PART NUMBER
- AXLE SERIAL NUMBER
- AXLE CAPACITY

The axle serial number (e.g. SK1804270628) provides the following details:

MANUFACTURING PLANT IDENTIFIER

The first two digits of the axle serial number identify the manufacturing plant that originally manufactured the HALFTRAAX™ Assembly as follows:

- SK – Somerset Kentucky
- LI – Lebanon Indiana
- CO – Canton Ohio

DATE OF MANUFACTURE

The third to eighth digits of the axle serial number identify the date the HALFTRAAX Assembly was manufactured in date format: Year - Month - Date. For example, the code 180427 shows that it was manufactured on 27 April 2018.

MANUFACTURING SEQUENCE NUMBER

The final four digits (e.g. 0628) of the axle serial number provide the manufacturing sequence number.

SUSPENSION ASSEMBLY NUMBER PLATE

The suspension assembly number plate is usually located on the inboard side of the right-hand trailing arm. It indicates that the suspension has been assembled in Australia and provides the following:

- RIDE HEIGHT
- ASSEMBLY PART NUMBER
- DATE OF ASSEMBLY

ASSEMBLY NUMBER

The first six digits of the assembly part number identify the suspension system base model, while the remaining digits identify specific options such as wheel end and brake system configuration.

Base Model Identification

Manufacturer (Digit 1)	TRI-FUNCTIONAL™ Bush Width (Digit 2)	Load Capacity (Digit 3 & 4)	Model (Digit 5)	Specific Option Code (Digit 6)	Tyre Pressure Control (Digit 7)
H= Hendrickson	W = Wide 6 Inch (152.4 mm)	23 = 23,000 lbs (10,430 kg) 25 = 25,000 lbs (11,334 kg)	T = Top Mount	See below.	C = None P = TIREMAAX™ PRO

Specific Option Code (Digit 6)

SOC	Axle Track	Brake Type	Spindle type	Axle Diameter
K	73 Inch	16.5 Inch Drum	HN – Tapered	5.75 Inch (LDA)
L	73 Inch	16.5 Inch Drum	HP – Parallel	5.75 Inch (LDA)
M	73 Inch	377 & 430 mm Disc	HN – Tapered	5.75 Inch (LDA)
N	83.5 inch	16.5 Inch Drum	HN – Tapered	5.75 Inch (LDA)
P	77.5 Inch	16.5 Inch Drum	HN – Tapered	5.75 Inch (LDA)
Q	71.5 Inch	16.5 Inch Drum	HN – Tapered	5.75 Inch (LDA)
R	71.5 Inch	430 mm Disc	HN – Tapered	5.75 Inch (LDA)
S	71.5 Inch	16.5 Inch Drum	HP – Parallel	5.75 Inch (LDA)
T	83.5 Inch	16.5 Inch Drum	HP – Parallel	5.75 Inch (LDA)
V	73 Inch	415 mm Disc	HP – Parallel	5.75 Inch (LDA)

RIDE HEIGHT LABEL

The ride height label (refer to [Figure 3](#)) is usually affixed to the trailer frame, and provides an additional means of identification for an INTRAAX® axle or suspension system, as well as confirming system ride height for service purposes.

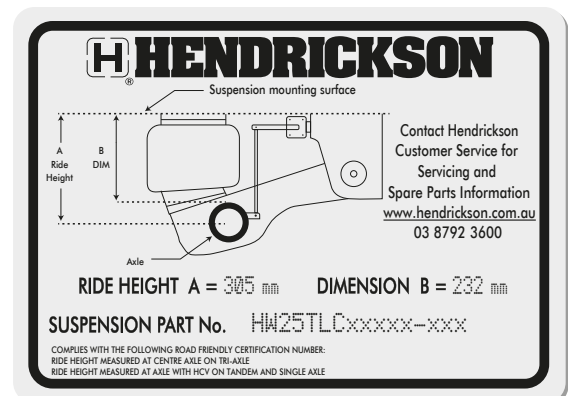


Figure 3: Ride Height Label

AXLE ASSEMBLY

If a replacement HALFTRAAX™ assembly is needed, collect all details from axle identification and assembly plates and then contact Hendrickson customer service who recommend the best and most suitable components to suit your application.

HALFTRAAX™ ASSEMBLY COMPONENTS

All replacement AAT Drum Brake HALFTRAAX axle assemblies are supplied complete with the following components:

- TRI-FUNCTIONAL™ Bushes
- S-Cams and tubes
- Air spring pedestals
- Brake anchor pins and bushes

Refer to Figure 4 for detailed view of the AAT drum brake HALFTRAAX assembly as supplied.

All replacement AAT Disc Brake HALFTRAAX axle assemblies are supplied complete with the following components:

- ABS Brake Sensor Locating Bush
- TRI-FUNCTIONAL Bushes (TFB)
- Air spring pedestals (if applicable)

Refer to Figure 5 for detailed view of the AAT disc brake HALFTRAAX assembly as supplied.

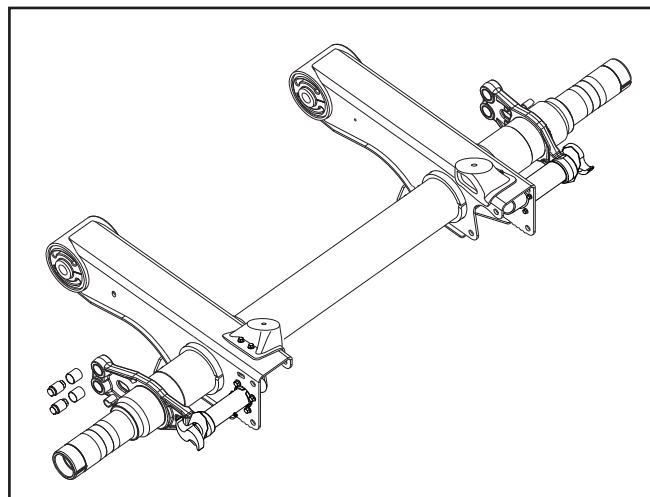


Figure 4: Drum Brake HALFTRAAX

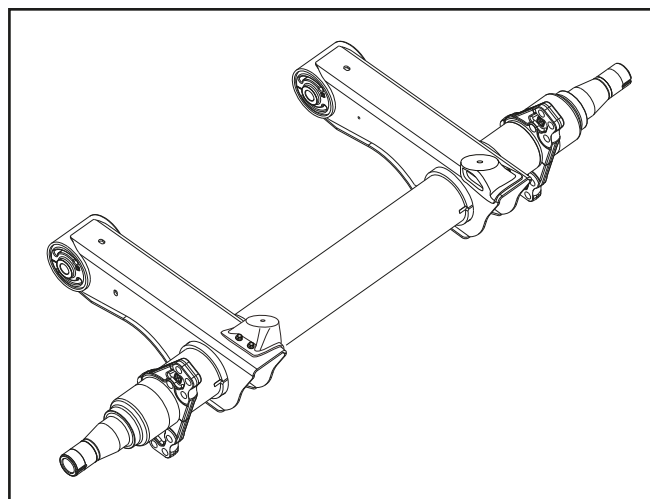


Figure 5: Disc Brake HALFTRAAX

NOTE: These new HALFTRAAX axle assemblies are the latest design 5.75 inch Large Diameter Axle (LDA). They have severe service camshaft tubes (if drum brake) and are a direct replacement for earlier 5 inch axles. However, if using clamp on brake dust shields, they will need to be updated, to suit the 5.75 inch axles.

All HALFTRAAX assemblies for 12-inch ride height are supplied pre-drilled to mount the air spring directly to the beam and do not include/require air spring pedestals.

HALFTRAAX SPINDLE IDENTIFICATION

AAT INTRAAX suspension systems are available with HN (Tapered) and HP (Parallel) type spindles. Refer to Figure 6.

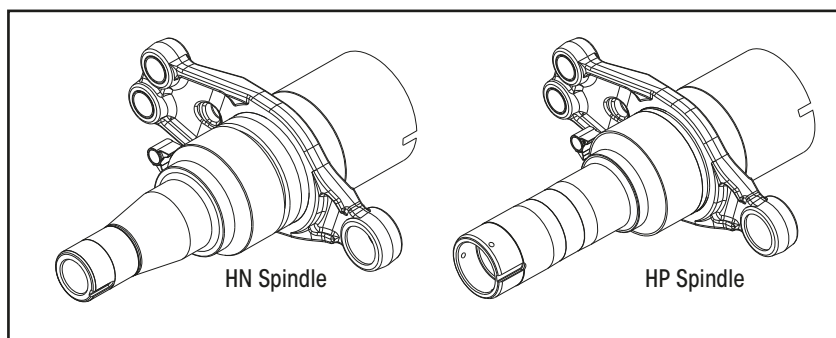


Figure 6: HN Tapered Spindle and HP Parallel Spindle

HALFTRAAX Number	Description	Notes
E1INTSUSP.3419	HALFTRAAX [™] AAT230 73" Track 16.5" Drum HN LDA	Except 12" RH
98544-208		12" RH
E1INTSUSP.3427	HALFTRAAX AAT250 71.5" Track 16.5" Drum HN LDA	Except 12" RH
98544-232		12" RH
E1INTSUSP.3446	HALFTRAAX AAT250 71.5" Track Drum HP LDA	Except 12" RH
98544-233		12" RH
E1INTSUSP.3422	HALFTRAAX AAT250 73" Track 16.5" Drum HN LDA	Except 12" RH
98544-209		12" RH
E1INTSUSP.3423	HALFTRAAX AAT250 73" Track 16.5" Drum HP LDA	Except 12" RH
98544-210		12" RH
INTSUSP.14202	HALFTRAAX AAT230 71.5" Track 430 mm Disc HN LDA	–
E1INTSUSP.3519	HALFTRAAX AAT230 73" Track 377/430mm Disc HN LDA	Except 12" RH
98544-167		12" RH
E1INTSUSP.3520	HALFTRAAX AAT250 73" Track 377/430 mm Disc HN LDA	–
INTSUSP.15016	HALFTRAAX AAT250 73" Track 430 mm Disc HP LDA	–
E1INTSUSP.3508	HALFTRAAX AAT250 73" Track MAXX22T 415 mm Disc HP LDA	Except 12" RH
98544-234		12" RH

FRAME HANGER & PIVOT

FRAME HANGER IDENTIFICATION

To determine the applicable frame hanger for a specific suspension, the hanger 'drop' will often need to be determined.

Frame drop is the measurement in millimetres from the underside of the trailer frame to the centre of the pivot bolt hole. Refer to dimension A in [Figure 7](#).

Frame hangers are available in both standard and tapered styles. Refer to [Figure 8](#) for a pictorial comparison of standard (view A) and tapered (view B) frame hanger designs.

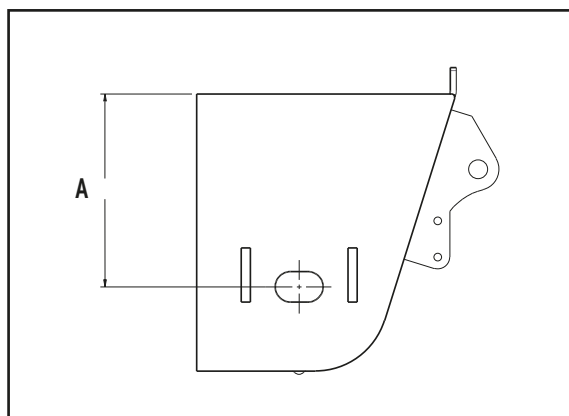


Figure 7: Framer Hanger Drop Identification

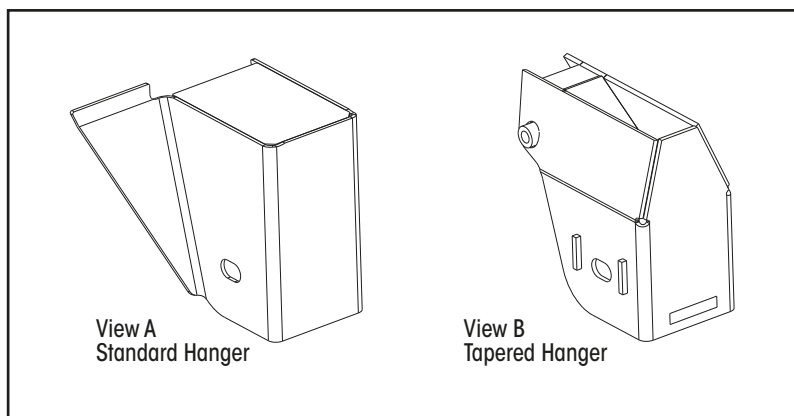
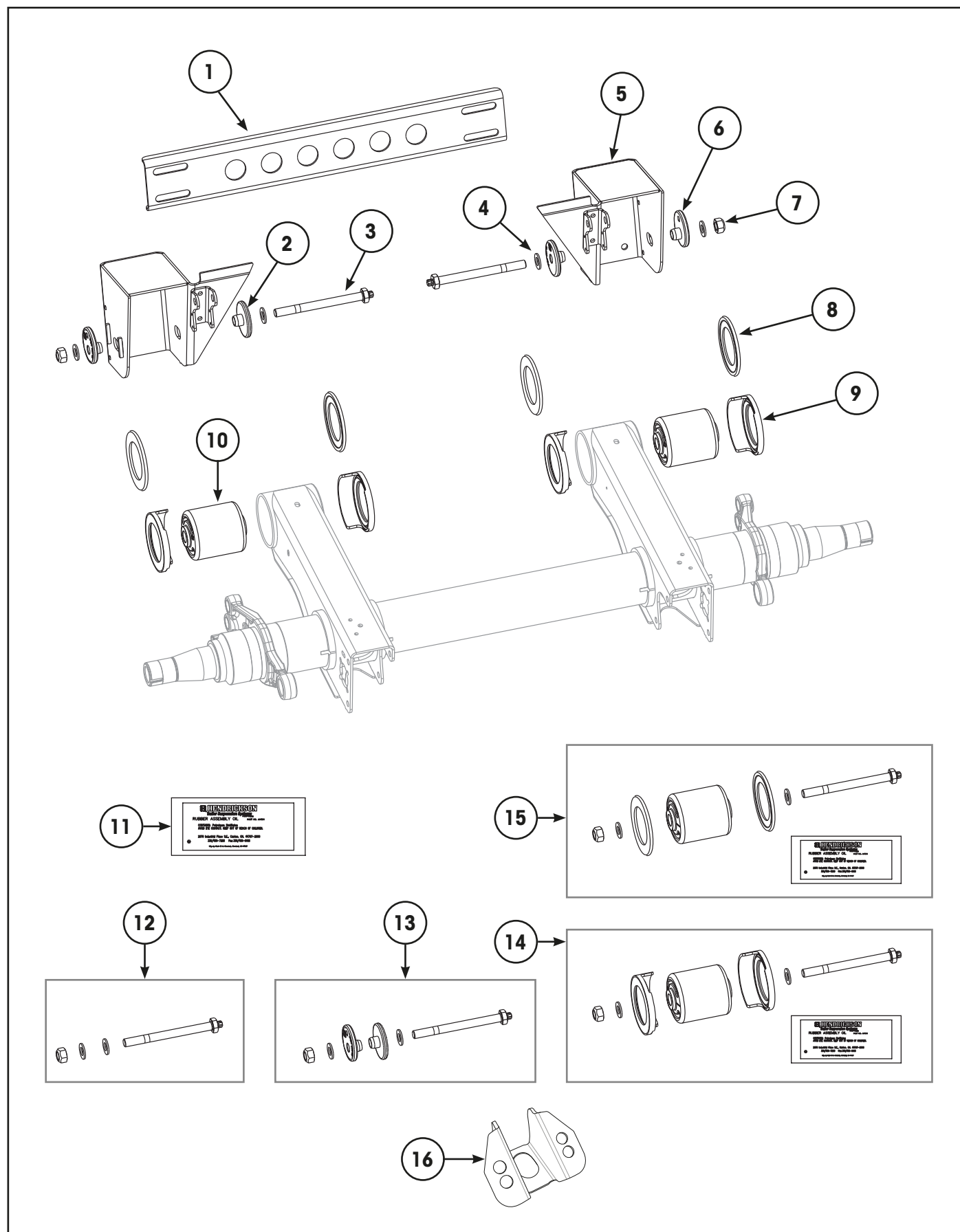


Figure 8: Standard and Tapered Hanger Identification

FRAME HANGER & PIVOT





FRAME HANGER & PIVOT

Item	Part Number	Description	Qty	Notes
1	98870-016	Brace Channel, Hanger Support	1	Suits 254 & 305 mm drop. 40 x 202 x 1040 mm.
2	C-20924	Flanged Washer, Inner – QUIK-ALIGN®	2	Concentric. Use Item 13.
3	NSS	Shear Bolt – QUIK-ALIGN	2	Use Item 12, 13, 14 or 15.
4	NSS	Hardened Washer – 7/8"	4	Use Item 12, 13, 14 or 15.
5	S-21028-2	Frame Hanger, RH – Standard [1]	1	203 mm Drop, 13.5", 14" & 15" Ride Height, except High Control. Refer "Frame Hanger Identification" on page 7.
	S-21028-1	Frame Hanger, LH – Standard [1]	1	
	98938-118	Frame Hanger, RH – Standard [1]	1	203 mm Drop, 12" Ride Height. Refer "Frame Hanger Identification" on page 7.
	98938-117	Frame Hanger, LH – Standard [1]	1	
	S-21082-2	Frame Hanger, RH – Standard [1]	1	254 mm Drop, 16" & 17" Ride Height. High Control suspension 13.5", 14" & 15". Refer "Frame Hanger Identification" on page 7.
	S-21082-1	Frame Hanger, LH – Standard [1]	1	
	98938-050	Frame Hanger, RH – Tapered [1]	1	254 mm Drop. Refer "Frame Hanger Identification" on page 7.
	98938-049	Frame Hanger, LH – Tapered [1]	1	
	S-21083-2	Frame Hanger, RH – Standard [1]	1	305 mm Drop, 19" Ride Height. Refer "Frame Hanger Identification" on page 7.
	S-21083-1	Frame Hanger, LH – Standard [1]	1	
6	C-20925	Flanged Washer, Outer – QUIK-ALIGN	2	Eccentric. Use Item 13.
7	NSS	Nut, Prevailing Torque – 7/8" UNC	2	Use Item 12, 13, 14 or 15.
8	S-21099-4P	Kit – Wear Bushing, Flat Style	1	Included in item 15.
	S-40230-1	Wear Bush, Heavy Duty Flat	4	For severe off-highway applications.
9	S-26551-4P	Kit - Wear Bushing, Glove Style	1	Not recommended for off-road applications. Included in item 14.
10	NSS	Bush, TRI-FUNCTIONAL™	2	[2] Use Item 14 or 15.
11	A-14011	Lube Pack, TRI-FUNCTIONAL Bush	2	Included in items 14 and 15.
12	S-31623	Kit, Pivot Bolt	2	Includes Items 3, 4 & 7.
13	S-31625	Kit, QUIK-ALIGN	2	Includes Item 2, 3, 4, 6 & 7.
14	98591-009	Kit, TRI-FUNCTIONAL Bush - GloveWasher	2	[2] Includes Items 3, 4, 7, 9, 10 & 11.
15	A-31624	Kit, TRI-FUNCTIONAL Bush - Flat Washer	2	[2] Includes Items 3, 4, 7, 8, 10 & 11.
16	S-39879-1	Brake Chamber Mount	2	

[1] Hanger Repair Kits: Two hanger repair kits are available to assist with repair of cracked, worn or gouged hangers. Depending on the damage involved it may be possible to use one of these kits instead of replacing the entire hanger. A hanger that has been repaired with kit 98690-001 will require a unique pivot bolt and collars. These are available as pivot bolt 98591-013 (item 12), bolt & collar kit 98591-012 (item 13) and bolt, flat wear washer & bush kit 98591-011 (item 15). For more details refer to Hendrickson [Technical Bulletin 97117-101](#).

- 98690-001 is for worn or gouged hangers
- 98544-024 is for hangers with minor cracking

[2] NOTE: The TRI-FUNCTIONAL™ bush (TFB™) is larger than the inner diameter of axle beam tube. To avoid damaging the TFB, the correct installation tool MUST be used along with the appropriate lubricants. Refer to the "Special Tools" on page 23 section for tool details. For bush replacement procedures, refer to Hendrickson [Technical Bulletin L427](#).

AIR SPRINGS

AIR SPRING IDENTIFICATION

To assist with the correct air spring identification a visual inspection of the air spring is recommended. There are two air spring identification markings:

- The air spring part number is provided on a decal on the upper bead-plate (refer to Item 1 in [Figure 9](#))
- Moulded into the air spring rubber bellows (refer to Item 2 in [Figure 9](#)).

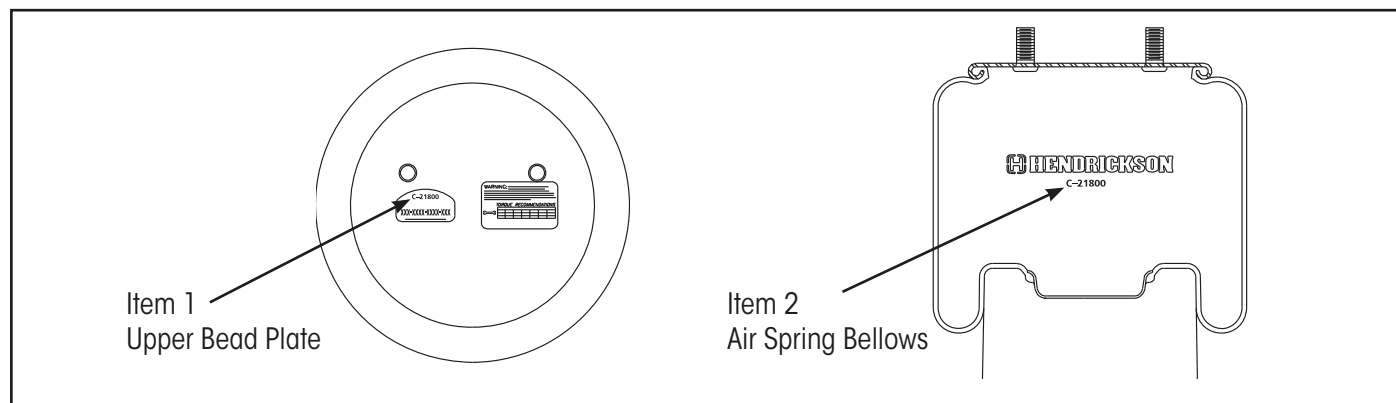
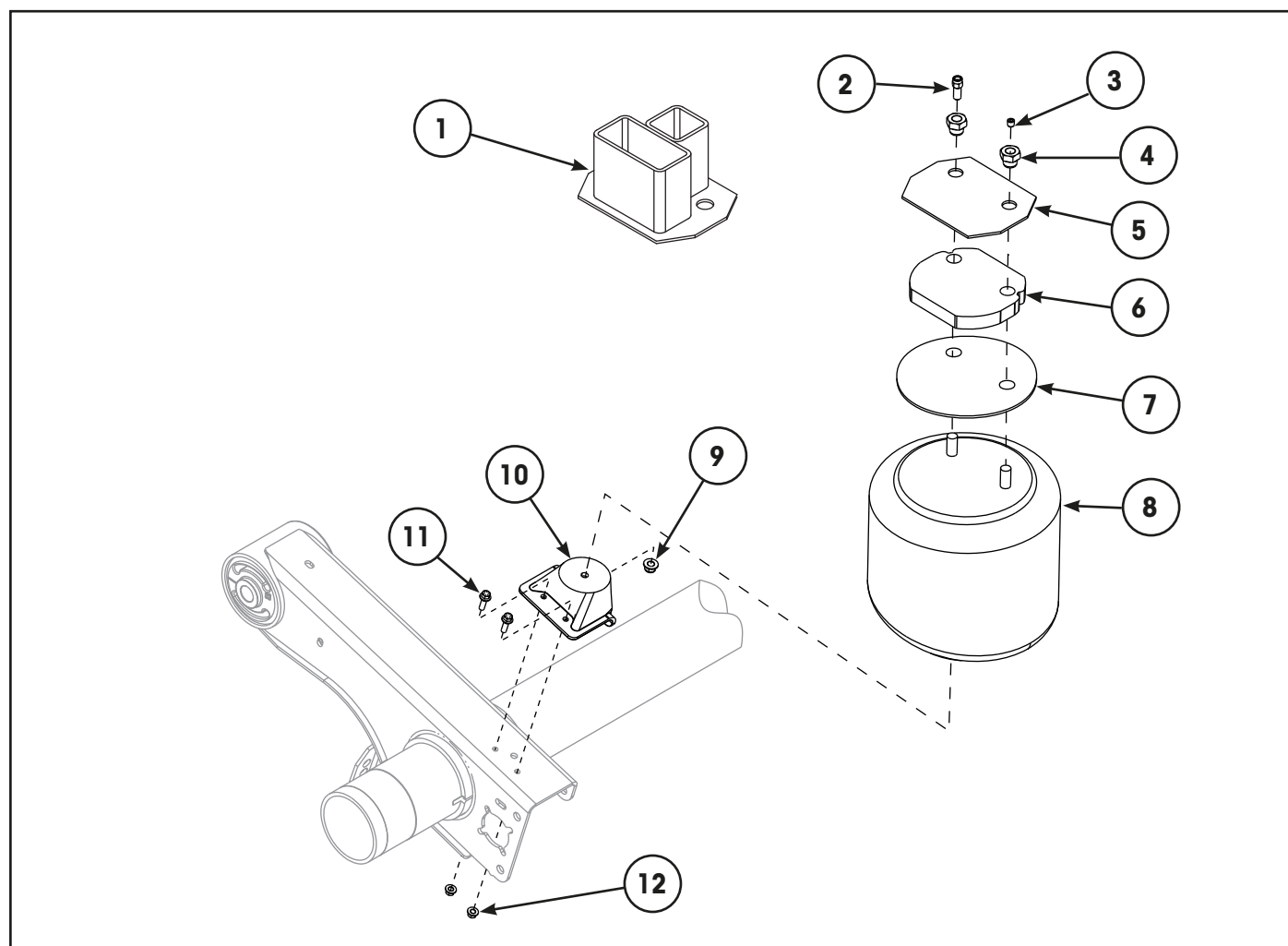


Figure 9: Air Spring Identification

AIR SPRINGS & HARDWARE

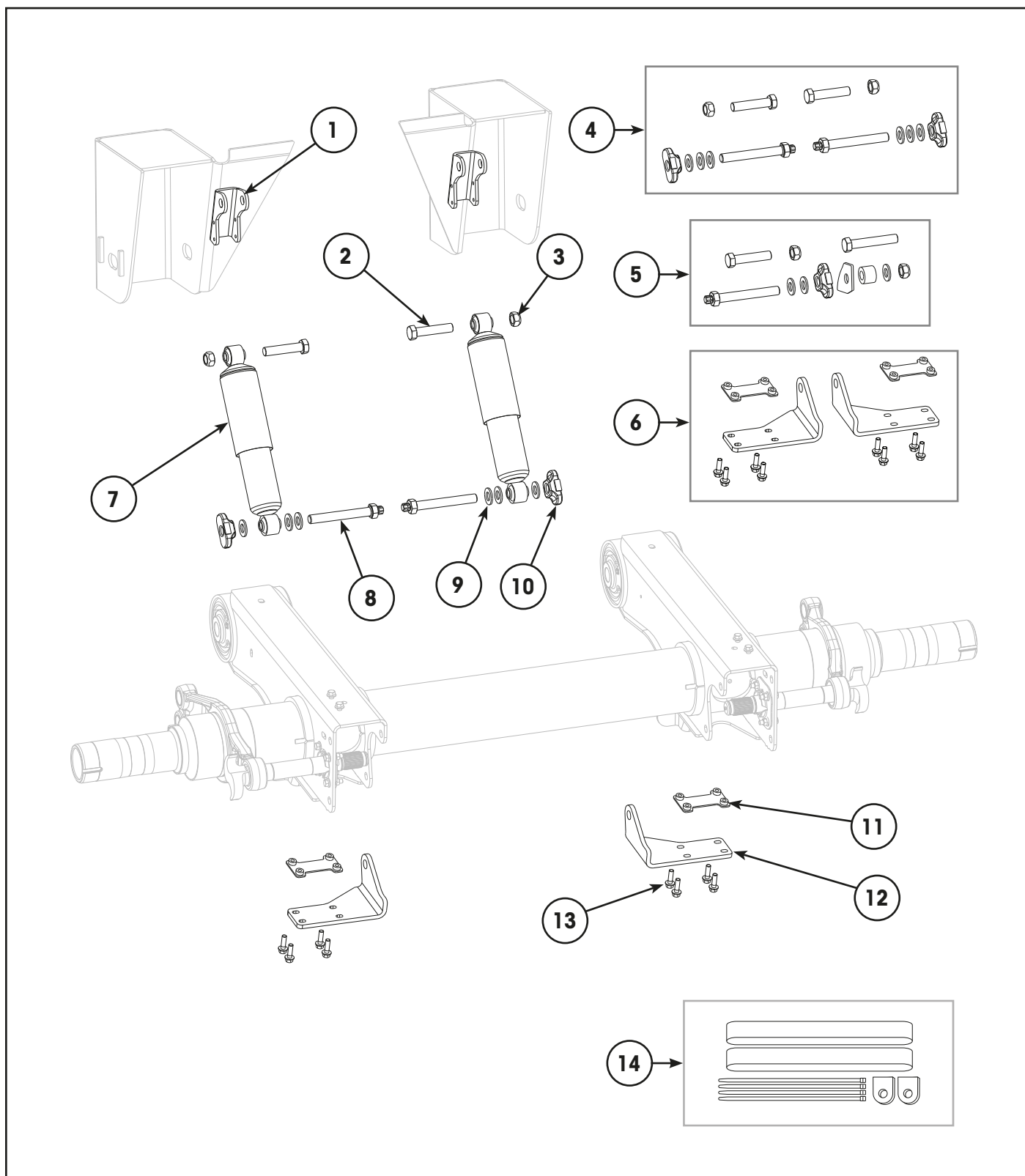



AIR SPRINGS & HARDWARE

Item	Part Number	Description	Qty	Notes
1	S-22302-5	Frame Spacer, Air Spring – 103 mm	2	19" ride-height, liftable.
	S-22302-6	Frame Spacer, Air Spring – 135 mm	2	19" ride-height, except liftable.
2	NSS	Air Fitting – 1/4"	2	Use Item 14.
3	NSS	Plug, Air Fitting – 1/4" NPT	2	Use item 14.
4	NSS	Air Fitting Nut – Air Spring	AR	Use Item 14.
5	B-20905	Frame Plate, Air Spring - Upper Mount	2	Except 19" ride-height.
6	S-22510-4	Spacer, Air Spring – 19 mm	2	14" ride-height.
	S-22510-1	Spacer, Air Spring – 29 mm	2	15" ride-height.
	S-22510-2	Spacer, Air Spring – 48 mm	2 2	16" ride-height. 17" ride-height, liftable, except MAXX22T.
	S-22510-3	Spacer, Air Spring – 80 mm	2 2	17" ride-height, except liftable. 17" ride-height, MAXX22T.
7	S-23294	Air Spring Plate	2	14" ride height.
8	S-21800	Air Spring Assembly	2	AAT230, except 12" ride-height.
	C-20901	Air Spring Assembly	2	AAT250, except 12" ride-height.
	S-26773	Air Spring Assembly	2	12" ride-height.
9	SA-7000-1	Nut, Flanged – Air Spring	2	1/2"-13. Included in item 14.
10	NSS	Pedestal, Air Spring – Welded	2	Welded type. See Note below.
	NSS	Pedestal, Air Spring – Bolted	1	Bolted type. Use item 13.
11	SA-6900-5	Bolt, Flanged - Air Spring Pedestal	4	3/8"-16 UNC.
12	SA-7000-3	Nut, Flanged - Air Spring Pedestal	4	3/8" UNC.
13	S-32164-1R	Kit, RH Air Spring Pedestal (Not Illustrated)	1	49 mm. Includes items 10, 11 & 12.
	S-32164-1L	Kit, LH Air Spring Pedestal (Not Illustrated)	1	49 mm. Includes items 10, 11 & 12.
	S-32164-2R	Kit, RH Air Spring Pedestal (Not Illustrated)	1	74 mm. Includes items 10, 11 & 12.
	S-32164-2L	Kit, LH Air Spring Pedestal (Not Illustrated)	1	74 mm. Includes items 10, 11 & 12.
14	S-22907/2	Hardware Kit – Air Spring (Not Illustrated)	2	12" ride-height. Includes items 3, 4 & 9.
	S-22619	Hardware Kit – Air Spring (Not Illustrated) Includes items 3, 4 & 9.	1	13.5" ride-height. 14" ride height with tapered hangers 15" ride-height, liftable. 19" ride-height.
	S-22630	Hardware Kit – Air Spring (Not Illustrated) Includes items 3, 4 & 9.	1	14" ride height with standard hangers 15" ride-height, except liftable.
	S-22631	Hardware Kit – Air Spring (Not Illustrated) Includes items 2, 3, 4 & 9.	1	16" ride-height. 17" ride-height, liftable.
	S-22632	Hardware Kit – Air Spring (Not Illustrated) Includes items 2, 3, 4 & 9.	1	17" ride-height, except liftable.

NOTE: Early design HALFTRAX™ axle assemblies were manufactured with welded type air-spring pedestals, which are not available as a service part. Bolted type air-spring pedestals cannot be used to replace welded type.

SHOCK ABSORBERS & HARDWARE – STANDARD



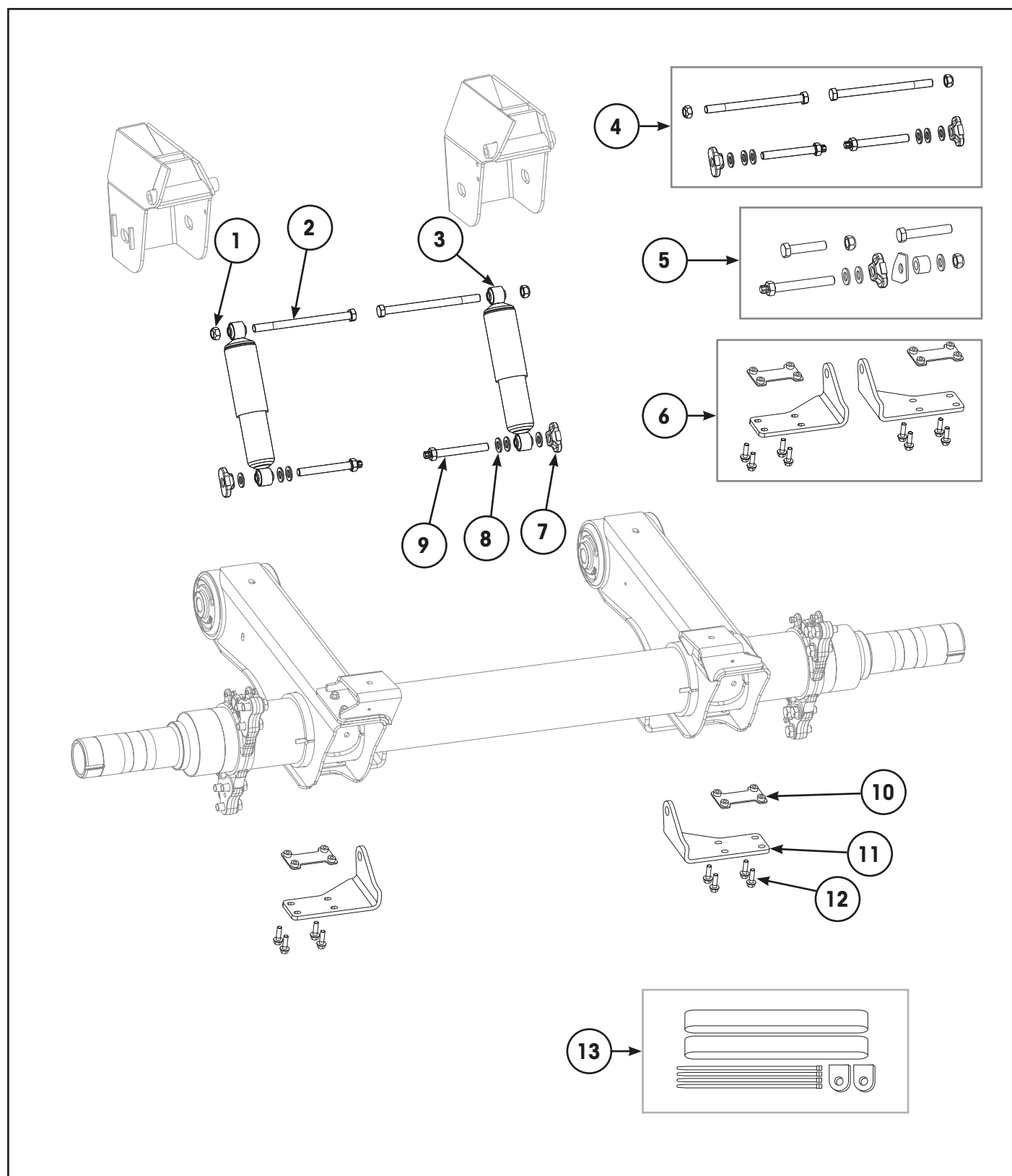


SHOCK ABSORBERS & HARDWARE – STANDARD

Item	Part Number	Description	Qty	Notes
1	S-20918	Clevis, Shock Absorber Upper Mount	2	Included in frame hanger.
2	NSS	Bolt, Shock Absorber Upper, 3/4"-10 UNC x 3.5"	2	Use item 4.
3	NSS	Nut, Shock Absorber Upper, 3/4"-10 UNC	2	Use item 4.
4	98111-103	Bolt Kit, Shock Absorber Mounting	1	Includes items 2, 3, 8, 9 & 10.
5	S-24021	Bolt Repair Kit, Shock Absorber Mounting	2	[1] Refer to Note below.
6	98918-012	Kit, Lower Shock Absorber Support Bracket	1	Includes items 11, 12 & 13. Suits 5.5" to 7" Slack.
7	S-21699	Shock Absorber - Standard	2	Road friendly.
	S-20889	Shock Absorber	2	Non-road friendly.
8	NSS	Bolt, Shock Absorber Lower 3/4"-10 UNC x 5.75"	2	Use item 4.
9	NSS	Washer, Hardened	6	3/4" Inch. Use item 4.
10	NSS	Shock Absorber Spacer, Cast	2	Use item 4.
11	B-31050	Nut Plate, Lower Shock Support Bracket	2	
12	B-31037-1	Bracket, LH Lower Shock Support – 5.5" to 7" Slack	1	
	B-31037-2	Bracket, RH Lower Shock Support – 5.5" to 7" Slack	1	
	98870-241	Bracket, LH Lower Shock Support – 5" Slack	1	
	98870-242	Bracket, RH Lower Shock Support – 5" Slack	1	
13	SA-6900-5	Bolt, Lower Shock Support Bracket	8	3/8"-16 x 1.25.
14	98918-009	Shock Strap Kit – Suits S-21699 & S-20889	1	Includes straps, cable ties & clevises (if required).

[1] NOTE: Repair kit includes upper and lower mounting hardware for one side, including extra nut and [L635](#) repair instructions to repair damaged lower bolt thread.

SHOCK ABSORBERS & HARDWARE – TAPERED





SHOCK ABSORBERS & HARDWARE – TAPERED

Item	Part Number	Description	Qty	Notes
1	NSS	Nut, Shock Absorber – Upper	2	3/4" -10 UNC. Use Item 4.
2	NSS	Bolt, Shock Absorber – Upper	2	3/4" -10 UNC x 10.5". Use Item 4.
3	S-21699	Shock Absorber – Standard	2	Road Friendly.
	S-20889	Shock Absorber	2	Non-Road Friendly.
4	98111-106	Bolt Kit, Shock Absorber Mounting	1	Includes Items 1, 2, 7, 8 & 9.
5	S-24021	Bolt Repair Kit, Shock Absorber Lower Mounting	2	[1] Refer to Note below.
6	98918-012	Kit, Lower Shock Support Bracket	1	Includes Items 10, 11 & 12. Suits 5.5" to 7" Slack.
7	NSS	Shock Absorber Spacer, Cast	2	Use Item 4.
8	NSS	Washer, Hardened	6	3/4". Use Item 4.
9	NSS	Bolt, Shock Absorber – Lower	2	3/4" -10 UNC x 5.7". Use item 4.
10	B-31050	Nut Plate, Lower Shock Support Bracket	2	
11	B-31037-1	Bracket, LH Lower Shock Support – 5.5" to 7" Slack	1	
	B-31037-2	Bracket, RH Lower Shock Support – 5.5" to 7" Slack	1	
	98870-241	Bracket, LH Lower Shock Support – 5" Slack	1	
	98870-242	Bracket, RH Lower Shock Support – 5" Slack	1	
12	SA-6900-5	Bolt, Lower Shock Support Bracket	2	3/8"-16 x 1.25".
13	98918-009	Shock Strap Kit – Suits S-21699 & S-20889	1	Includes straps, cable ties & clevises (if required).

[1] NOTE: Repair kit includes upper and lower mounting hardware for one side, including extra nut and [L635](#) repair instructions to repair damaged lower bolt thread..

HEIGHT CONTROL VALVE

HCV SYSTEM IDENTIFICATION

The HCV mounting bracket varies between standard & tapered hanger.

The lower linkage mounting bracket is available in three variations as follows:

- Fixed to the brake chamber bracket (Refer to [Figure 10](#))
- Fixed to the axle tube (Refer to [Figure 11](#))
- Fixed to the lower shock absorber bracket (Refer to [Figure 12](#))

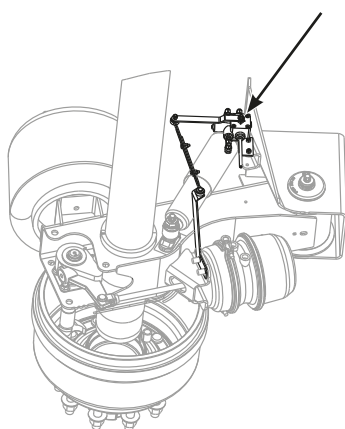


Figure 10: Brake Chamber Bracket

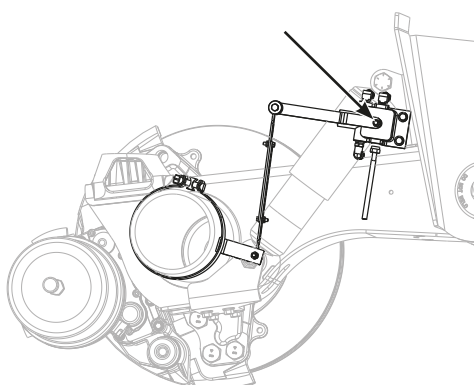


Figure 11: Axle Tube Clamp

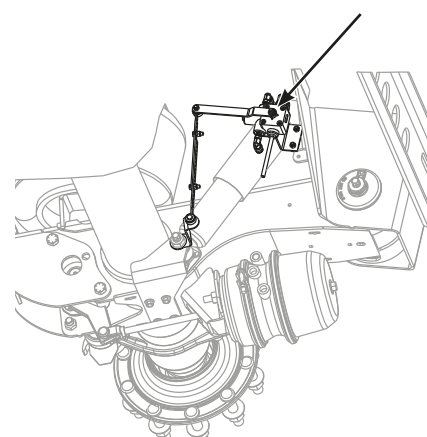


Figure 12: Lower Shock Bracket

NOTICE: The HCV assembly (Part no. 98603-022) includes the lever arm. The nut that retains the lever arm to the HCV shaft is held tight with thread lock and **MUST NOT** be removed! (Refer arrows.) Attempting to remove the nut will most likely result in fracture of the HCV shaft.

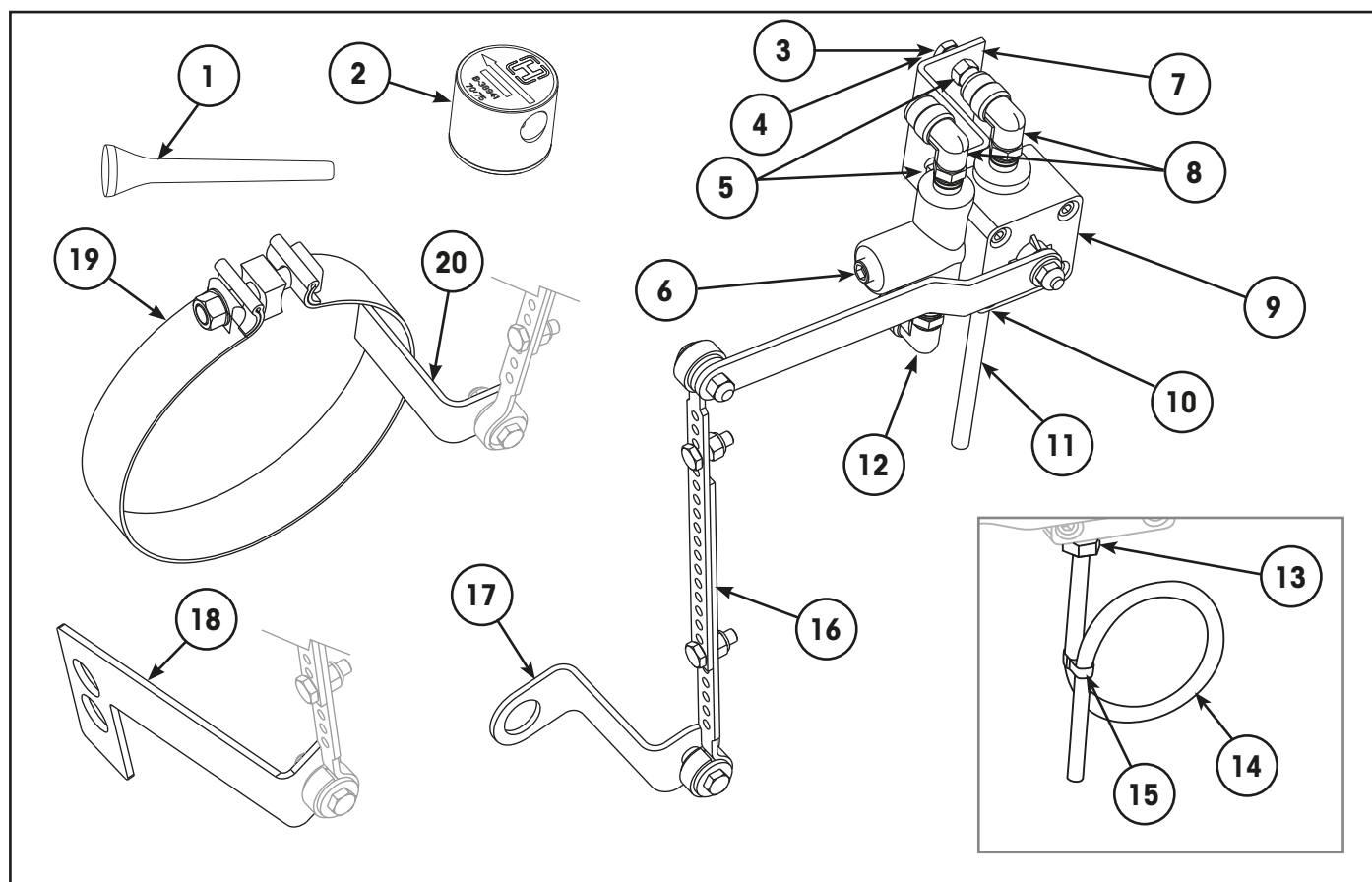
Complete HCV Kits

Complete Height Control Valve kits include HCV, protection valve, linkages, brackets, clamps and necessary hardware.

Number	Suitable For	Components
98606-090	Brake Chamber Mount - Standard Hanger	Includes items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16 & 18.
98606-123	Brake Chamber Mount - Tapered Hanger	Includes items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16 & 18.
98606-092	5" Axle Tube Mounted Linkage - Std Hanger	Includes items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 19 & 20.
98606-122	5-3/4" Axle Tube Mounted Linkage - Std Hanger	Includes items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 19 & 20.
98606-231	Shack Absorber Mounted Linkage - Std Hanger	Includes items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16 & 17.

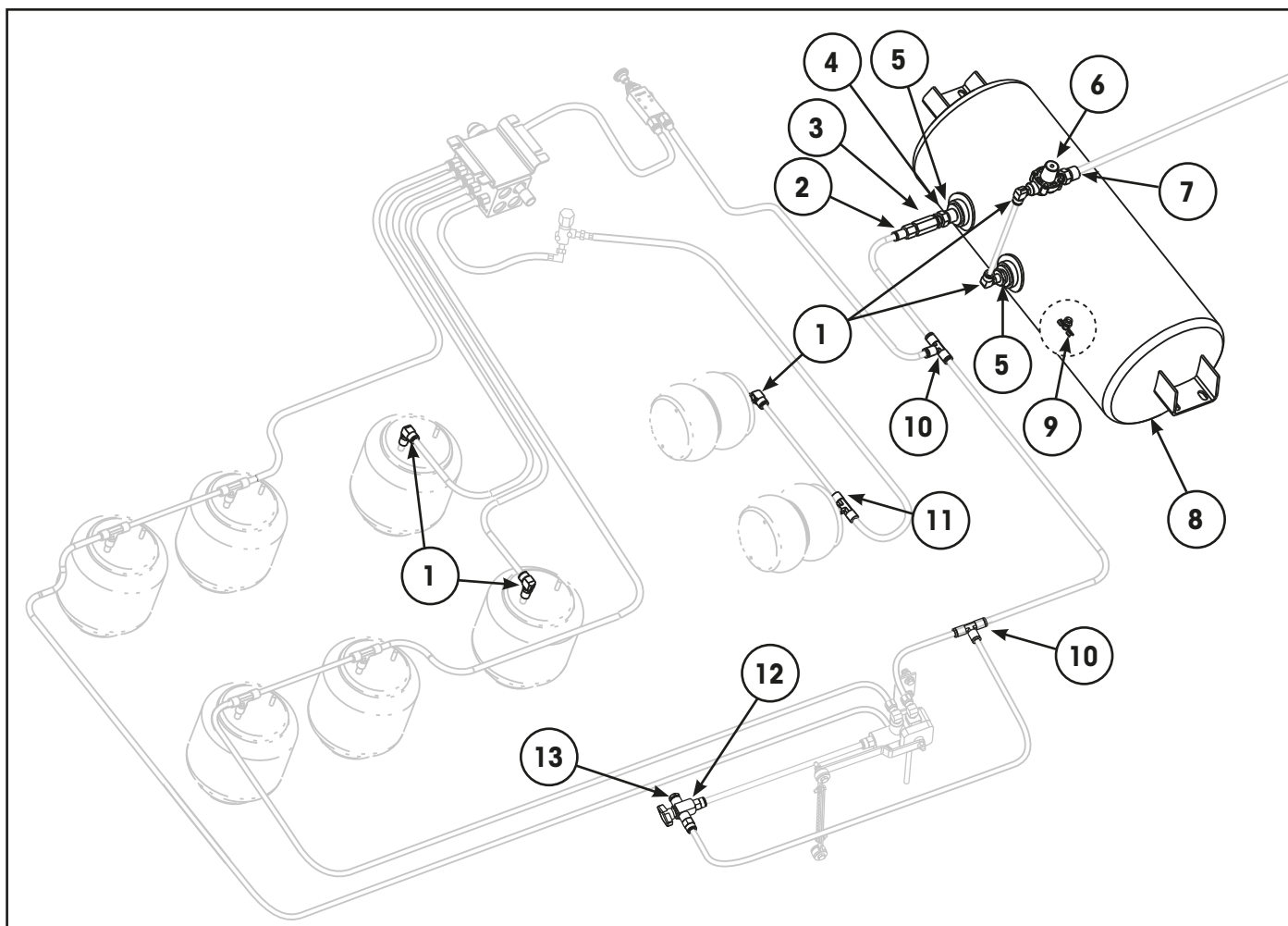


HEIGHT CONTROL VALVE



Item	Part Number	Description	Qty	Notes
1	NSS	HCV Centring Dowel	1	Use item 21.
2	S-38941	Pressure Protection Valve	1	
3	NSS	Bolt, 1/4" -20 UNC x 3/4"	2	Use item 21.
4	22962-028	Washer, Hardened – 1/4"	6	
5	NSS	Nut Lock Hex 1/4" -20 UNC	4	Use item 21.
6	NSS	Pipe Plug 1/4" NPT	1	Use item 21.
7	57975-000	Bracket, HCV Mounting	1	Standard hanger
	98677-007	Bracket, HCV Mounting	1	Tapered hanger
8	98732-003	Elbow 90° x 1/4" NPT Compression	2	Compression. Two are included in item 21.
9	98603-022	Height Control Valve 1/4" NPT	1	
10	NSS	Barbed Tube Fitting, 1/4" NPT, Plastic	1	Use item 21. For heavy duty applications use items 13, 14 & 15.
11	NSS	Tube 1/4" ID x 4" Long	1	
12	98934-031	Elbow 90° Swivel x 1/4" NPT	1	Push to connect, swivel.
13	98934-035	Fitting 1/4 NPT, Metal	1	Optional vent tube & fitting suitable for heavy duty axle use.
14	SA-6400-2	Tube, Black Nylon – 1/4" x 12" Long	1	
15	S-11430-1	Tie, Nylon	1	
16	S-14187	Link Assembly – Bolted	1	
17	98677-002	Bracket, Lower – HCV Link	1	Shock bracket mounted.
18	S-22477	HCV Bracket	1	Brake chamber bracket mounted
19	S-26593-1	Clamp, Bracket - HCV Link	1	5.00" axle tube mounted.
	S-26593-3	Clamp, Bracket - HCV Link	1	5.75" axle tube mounted.
20	S-23293	Bracket, Lower – HCV Link	1	Axle tube mounted. Use with clamp, item 19.
21	S-29870	HCV Sub Kit (See also "Complete HCV Kits")	1	Includes items 1, 3, 5, 6, 8, 10 & 11. (Not illustrated)

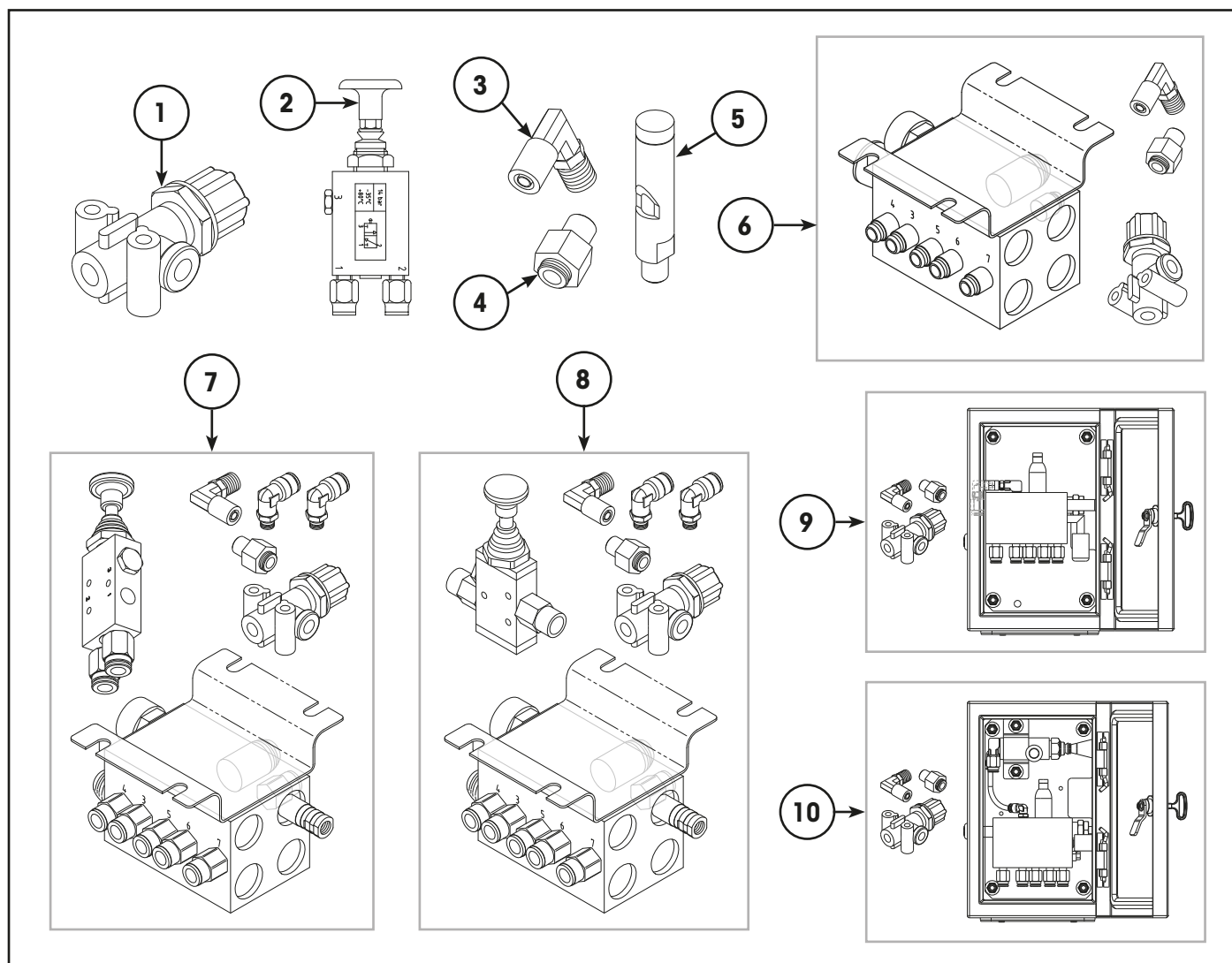
AXLE LIFT SYSTEM CONTROL



Item	Part Number	Description	Qty	Notes
1	98934-031	Male 90° Elbow – 3/8" x 1/4" NPT	AR	
2	98934-005	Connector – Female 3/8" x 1/4" NPT	1	For in-line filter, item 3.
3	98499-006	Air In-Line Filter – 1/4" NPT	1	Use with fitting, item 2.
4	98934-025	Fitting, 1/4" Male x 1/4" Male	1	For in-line filter, item 3.
5	98934-028	Reducing Bush – 3/4" NPT x 1/4" NPT	1	
6	S-38941	Pressure Protection Valve	1	
7	98934-026	Fitting – 1/2" x 1/4" NPT	2	
8	97065-004	Air Tank – 24 Litre, 240 x 630 mm	1	
9	98934-027	Drain Valve	1	
10	98934-015	Tee – 3/8"	1	
11	98934-032	Tee Male Swivel – 3/8"	AR	
12	A-22535	Dump Valve, 3-Way Ball	1	For suspension dump option.
13	98732-015	Silencer Fitting	1	To suit dump valve, item 12.

IMPORTANT: These axle lift system control parts are only applicable to LACV systems supplied by Hendrickson Australia.

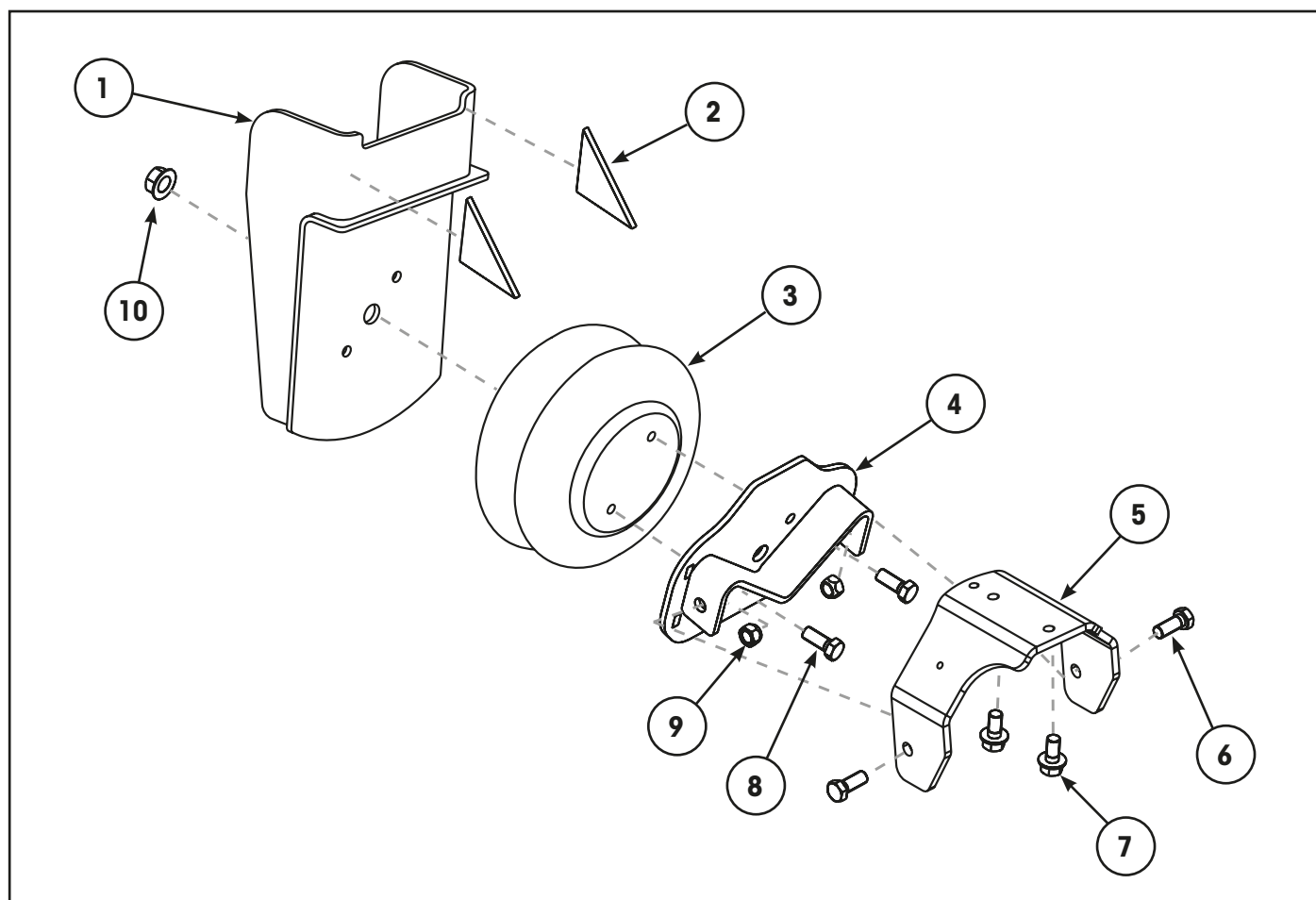
LIFT AXLE CONTROL VALVE



Item	Part Number	Description	Qty	Notes
1	98732-006	Pressure Regulator – 80 psi	1	Included in items 6, 7, 8, 9 & 10.
2	98402-003	Valve – Manual Override	1	Standard override valve for Auto/Auto LACV. Includes fittings. Included in items 7 & 10.
3	98732-003	Air Fitting – 90° Elbow	1	Use with pressure regulator, item 1.
4	98732-002	Air Fitting – Straight	1	
5	98732-059	Whistle	2	Included in complete LACV, items 9 & 10.
6	98975-004	Manual/Auto – With 80 psi Regulator	1	LACV with fittings & decal. Includes item 1, 3 & 4.
7	98975-005	Auto/Auto – With 80 psi Regulator	1	LACV with standard override valve, fittings & decal. Includes items 1, 2, 3 & 4. Refer illustration.
8	98975-008	Auto/Auto – With 80 psi Regulator	1	LACV with alternate override valve, fittings & decal. Includes items 1, 3, 4 & alternate (straight) version of item 2. Refer illustration.
9	98975-013	Manual/Auto – With 80 psi Regulator	1	Enclosure with LACV, regulator & fittings, item 6.
10	98975-014	Auto/Auto – With 80 psi Regulator	1	Enclosure with LACV, valve, regulator & fittings, item 7.

IMPORTANT: These axle lift control system components are only applicable to systems supplied by Hendrickson Australia.

UBL™ AXLE LIFT SYSTEM HARDWARE

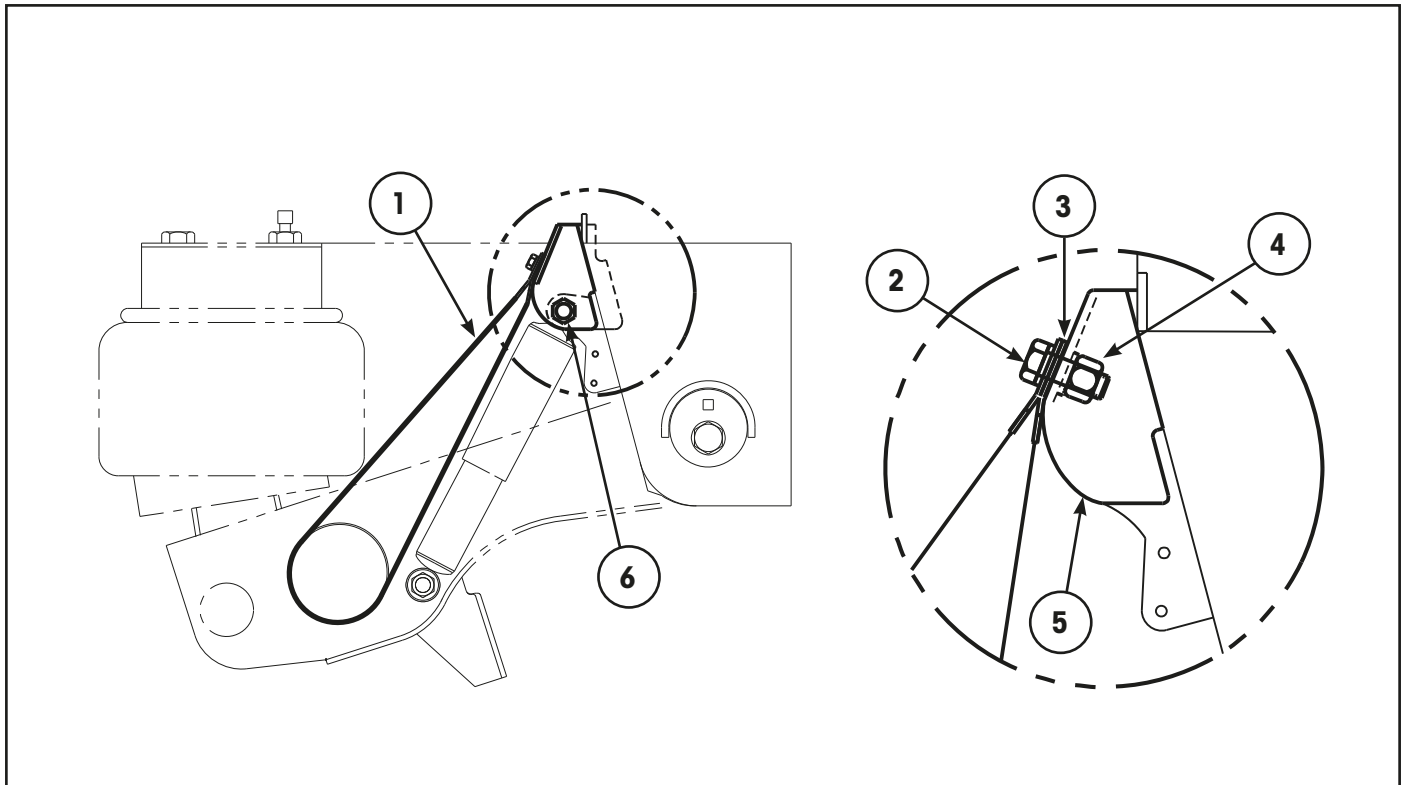


Item	Part Number	Description	Qty	Notes
1	D-23301C	Bracket Assembly – Hanger Support	2	
2	S-2901-37	Gusset, Hanger Support Bracket	4	
3	S-23114	Air Spring – Axle Lift	2	
4	B-27945	Plate Assembly – Beam, Air Spring	2	
5	C-23299C	Bracket Assembly – Beam, Air Spring	2	
6	NSS	Bolt, Plate to Bracket – 1/2\"-13 x 1.25\"	4	Use item 11.
7	NSS	Self-Tapping Bolt – 3/8\"-16	4	[1] For installation only.
8	NSS	Bolt, Air Spring to Plate – 3/8\"-16 x 0.75\"	4	Use item 11.
9	NSS	Nut, Plate to Bracket – 1/2\"-13	4	Use item 11.
10	S-22490-5	Nut, Air Spring – 3/4\"-16 Spiralock	2	Included in item 11.
11	S-24614	Fastener Kit – Axle Lift (Not Illustrated)	1	[1] Includes items 6, 7, 8, 9 & 10.
12	S-24343	Complete Kit – Axle Lift, AAT (Not Illustrated)	1	Complete kit, includes all listed items.

[1] NOTE: The S-24614 fastener kit includes four 3/8\"-16 self-tapping bolts (item 7). These are only required during initial system installation and must be removed and discarded once system installation is complete.

AXLE REBOUND LIMITERS

AXLE REBOUND LIMITER – 5" AXLE TUBE MOUNTED

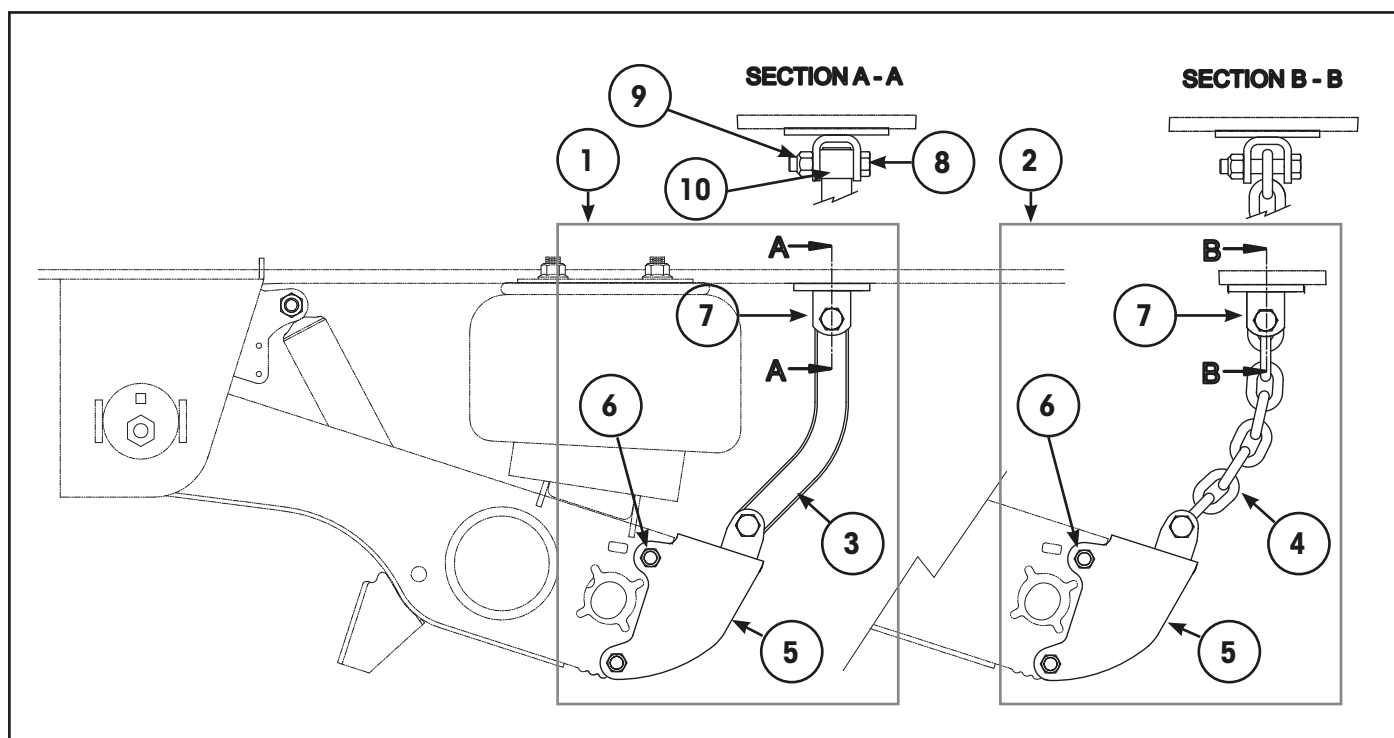


Item	Part Number	Description	Qty	Notes
1	NLA	Strap, Restraining - ARL	2	[1]
2	32043-010	Bolt – ARL Strap to Bracket	2	5/8" UNC x 1.75".
3	22962-004-4P	Pack, 5/8" Hardened Washer	1	Includes 4 washers.
4	47764-000	Nut, Lock – ARL Strap to Bracket	2	5/8" UNC.
5	98899-002	Bracket – ARL Strap Mounting, RH	1	
	98899-003	Bracket – ARL Strap Mounting, LH	1	
6	98766-003	Bolt – Shock Absorber, Upper	2	3/4" UNC x 4".
	49842-000	Nut, Lock – Shock Absorber, Upper	2	3/4" UNC.

[1] NOTE: Straps for 5" axles are no longer available from our supplier. Alternative axle restraint is available with "Axle Rebound Limiter – Trailing Arm Mounted" on page 22 or by using shock straps. For shock absorber straps refer to "Shock Absorbers & Hardware – Standard" on page 12 or "Shock Absorbers & Hardware – Tapered" on page 14.

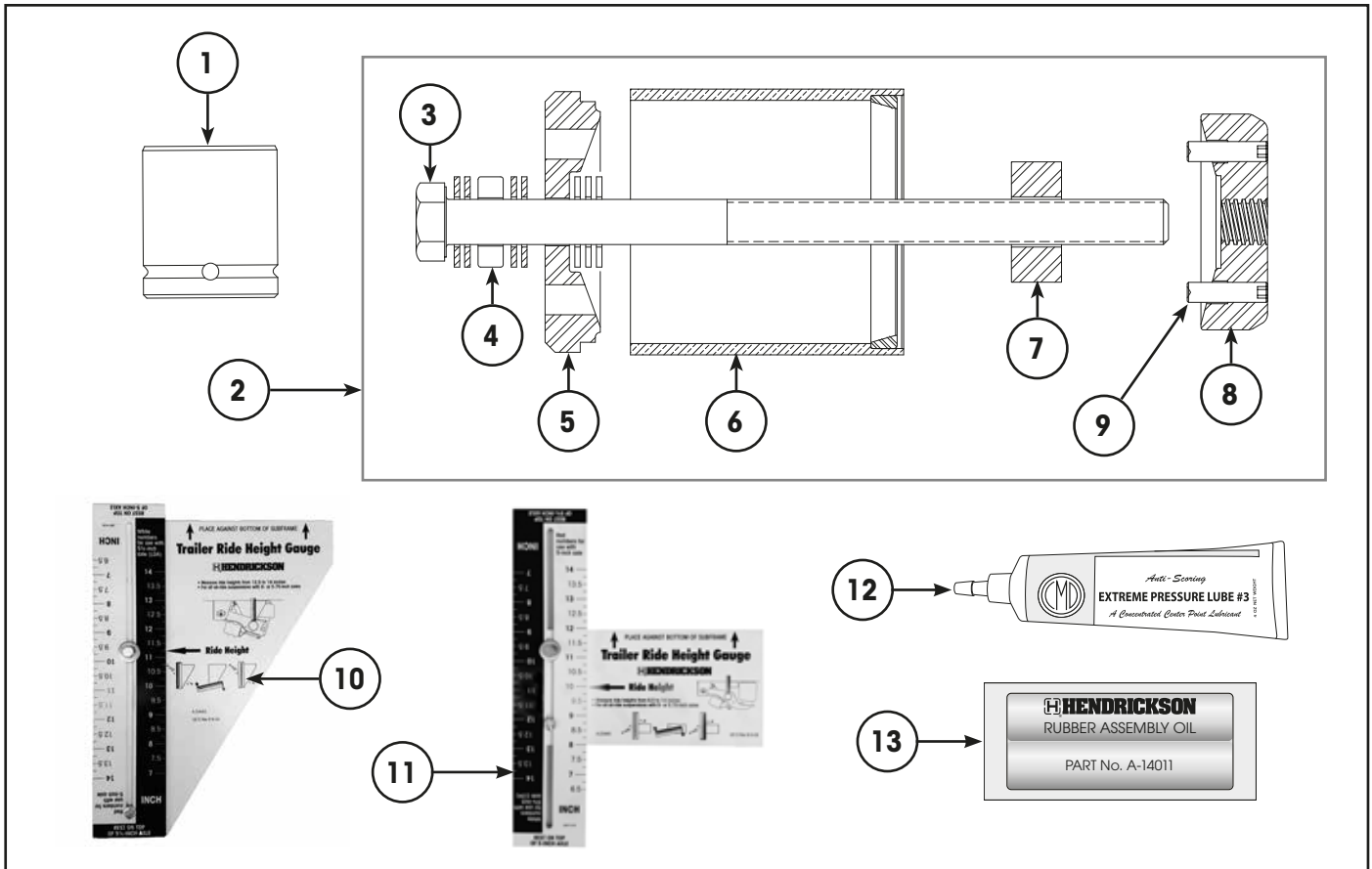
APPLICATION NOTE: The axle tube mounted ARL Kit is only suitable for standard hangers with a 5-inch axle. It is not suitable for use with tapered type frame hangers or LDA (Large Diameter Axle).

AXLE REBOUND LIMITER – TRAILING ARM MOUNTED



Item	Part Number	Description	Qty	Notes
1	98918-005	Kit, ARL – Strap Type	1	13.5" & 15" ride height.
	98918-006	Kit, ARL – Strap Type	1	16" & 17" ride height.
	98918-007	Kit, ARL – Strap Type	1	19" ride height.
2	98918-013	Kit, ARL – Chain Type	1	13.5" & 15" ride height.
	98918-014	Kit, ARL – Chain Type	1	16" & 17" ride height.
	98918-015	Kit, ARL – Chain Type	1	19" ride height.
3	S-24041-8	Strap, ARL	2	13.5" & 15" ride height.
	S-24041-12	Strap, ARL	2	16" & 17" ride height.
	S-24041-2	Strap, ARL	2	19" ride height.
4	SA-15100-12	Chain, ARL – 1/2" x 12 Link	2	13.5" & 15" ride height.
	SA-15100-13	Chain, ARL – 1/2" x 13 Link	2	16" & 17" ride height.
	SA-15100-14	Chain, ARL – 1/2" x 14 Link	2	19" ride height.
5	B-30840-1	Trailing Arm Extension, - LH	1	
	B-30840-2	Trailing Arm Extension, - RH	1	
6	32043-001	Bolt - Extension to Trailing Arm	8	5/8" UNC x 1.5".
	47764-000	Nut, Lock – Extension to Trailing Arm	8	5/8" UNC.
7	S-11473	Clevis, ARL - Upper	2	
8	NSS	Bolt - ARL Clevis	4	3/4"-10 UNC x 3.25" Grade 5. Use item 11.
9	NSS	Nut, Lock - ARL Clevis	4	3/4"-10 UNC. Use item 11.
10	S-20913-4	Spacer, ARL Strap	4	Suits strap type.
11	A-20031	Fastener Kit – ARL Clevis (Not illustrated)	1	Includes items 8 & 9.

SPECIAL TOOLS



Item	Part Number	Description	Qty	Notes
1	S-24303	Socket, Pivot Bolt – E20	1	3/4 inch drive
	S-24536	Socket, Pivot Bolt – E20	1	1 inch drive standard duty
	S-25119	Socket, Pivot Bolt – E20	1	1 inch drive heavy duty
2	S-21307A	Tool Kit - Wide TRI-FUNCTIONAL™ Bush	1	Refer Note.
3	S-21308	Bolt, Acme Thread – 18 Inch	1	Included in item 2.
4	98762-001	Bearing, Thrust – TFB™ Tool	1	Included in item 2.
5	S-21312	Plate, Front – TFB Tool	1	Included in item 2.
6	S-21313	Tube, Transition – TFB Tool	1	Included in item 2.
7	S-21314	Spacer, Removal – TFB Tool	1	Included in item 2.
8	S-21309	Plate, Rear Drive – TFB Tool	1	Included in item 2.
9	SA-2800-4	Set Screw – 1/2"-13 x 4 inch	2	Removal only. Included in item 2.
	SA-2800-7	Set Screw – 1/2"-13 x 2 inch	2	Installation only. Included in item 2.
10	S-23442	Gauge, Ride Height – 13.5 to 19 Inch	1	
11	S-23445	Gauge, Ride Height – 6.5 to 14 Inch	1	
12	S-21337	Grease, Extreme Pressure	1	Refer Note. Essential for use with tool on installation. Included in item 2.
13	A-14011	Lube Pack - TRI-FUNCTIONAL Bush	1	To lubricate bushes on installation.

NOTE: The TRI-FUNCTIONAL™ tool kits are supplied with one tube of extreme pressure grease. It is essential to use this grease on the tool's Acme thread to avoid thread form damage.



REVISIONS TABLE

DATE	REV	PAGE	DESCRIPTION
Dec-2019	D	16, 17	Update HCV, ECN 11464.
Dec-2019	D	13, 15	Correct shock bolt kit contents. Add shock strap kits.
Dec-2019	D	18, 19, 20	Expand lift axle components, ECN 11515.
Nov-2020	E	19, 22	Add whistle, ECN 11559. Correct bolt/nut descriptions.
Nov-2020	E	8, 9	Add brake chamber mount. Correct TFB kit inclusions.
Nov-2020	E	17, 18	Update PP valve, ECN 11716.
Sep-2021	F	17	Update HCV band clamp, ECN 11822.
Sep-2021	F	9	Update brake chamber mount, ECN 11719. Add HD wear bush, ECN 11834.
Sep-2021	F	23	ARL straps no longer available, ECN 11882.
Jul-2023	G	9, 13, 15	Remove incorrect chamber bracket. Add 5' slack shock support brackets.

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