

H TECHNICAL PROCEDURE

HENDRICKSON TRAILER COMMERCIAL VEHICLE SYSTEMS

SUBJECT: Comprehensive Warranty Statement
USA and Canada

LIT NO: L583

DATE: November 2020

REVISION: AC

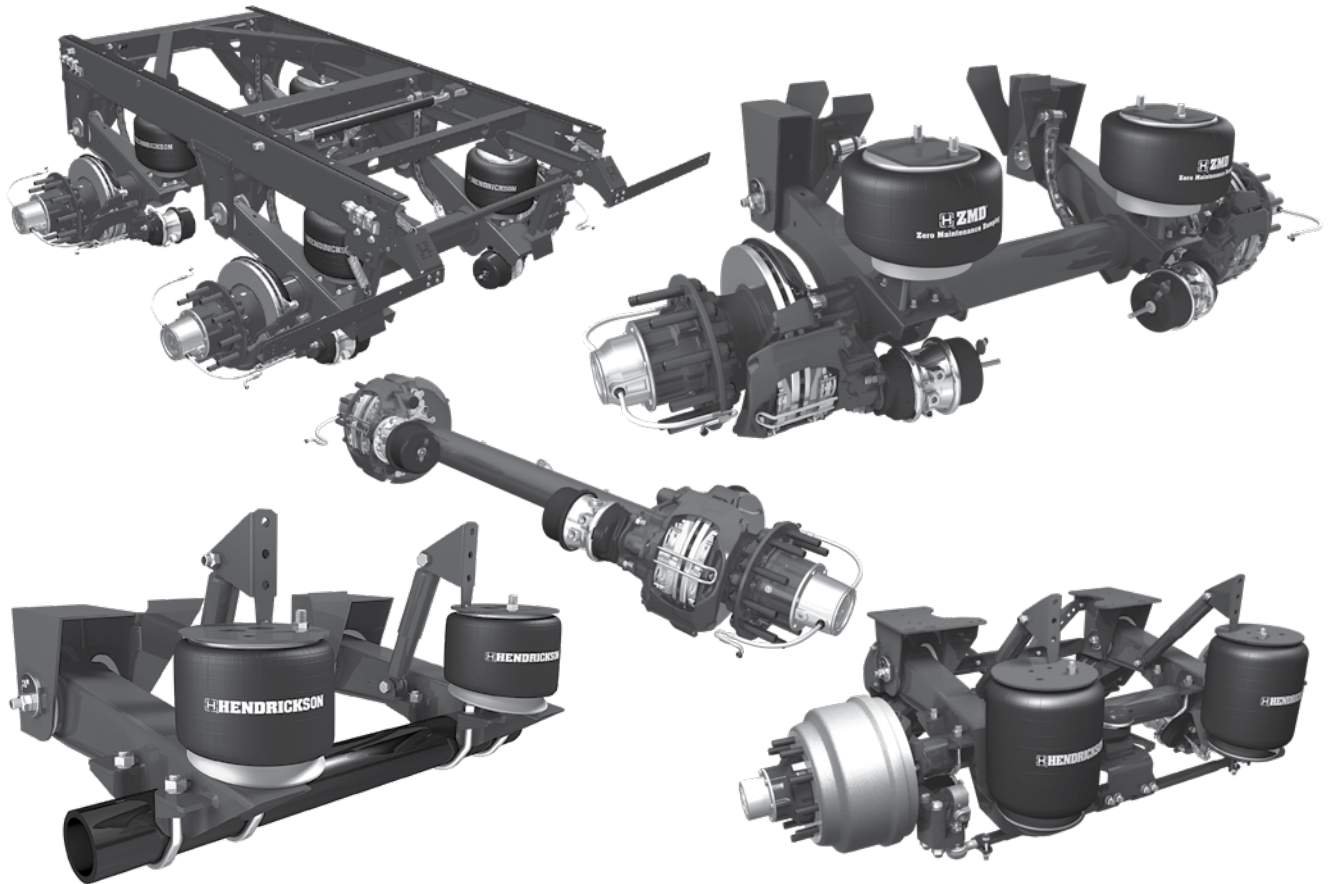


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Hendrickson Trailer Commercial Vehicle Systems (Hendrickson) warrants that all trailer suspensions listed on the following pages shall be free of defects in material or workmanship, from original date of service. This warranty coverage only applies to those suspensions that have been properly assembled and installed by a trailer OEM (Original Equipment Manufacturer), properly maintained (as described in all applicable Hendrickson publications) and used in the recommended application and within the rated capacities (as described in Hendrickson literature number L707 *Hendrickson Application Guide*). Refer to TRAILER APPLICATIONS on the back cover of this publication. All non-recommended suspension applications must receive written approval from Hendrickson in order to be covered under this warranty.

The terms and coverages in this warranty document apply only to the United States and Canada.

CONTACT HENDRICKSON

Hendrickson Trailer Technical Services Department can be contacted using these methods:

Email: HTTS@hendrickson-intl.com

FAX: 800-696-4416
Attn. Warranty

Phone: 866.RIDEAIR (743.3247)

From the audio menu, select "Technical Services / Warranty".

NOTE: If you need warranty information for other markets, contact the responsible market directly by phone or refer to the applicable Hendrickson website (e.g. Mexico, contact Hendrickson Mexicana at +52-442-296-3600). The terms and coverages in this warranty document may apply only to the United States and Canada.

COVERAGE

The Hendrickson suspension warranty coverage begins when the vehicle is originally put into service and ends when the time period, specified in the warranty COVERAGE on page 2 through page 11, is reached. Before filing a claim, review warranty coverage for the component(s), reference COVERAGE TABLES on page 5 through page 11.

- **Prior to the warranty repair or replacement** of suspension systems or parts (by a dealer, fleet, or other service provider authorized by the OEM of the subject trailer), the warranty claim must first be approved by the Hendrickson Technical Services Department. Trailer dealers should inspect all suspensions involved in a warranty claim and then contact Hendrickson for assistance.
- **Hendrickson has the sole discretion and authority** to approve or disapprove a warranty claim, authorize the repair or replacement of non- functioning systems and authorize the repair or replacement of parts.
- **Approved labor hours will be reimbursed** at the dealer’s posted retail labor rate. All warranty claims are subject to review and approval by the Warranty Administrator. Upon review, the dealer’s labor hours may be approved, if applicable, in accordance with the warranty policies, coverage guidelines and published labor allowances. For a listing of typical repairs, refer to LABOR ALLOWANCES on page 15 through page 22. CONTACT HENDRICKSON Technical Services Department to discuss allowances for anything not listed.
- **Hendrickson does not reimburse part costs.** Hendrickson will directly replace damaged or non-functioning Hendrickson parts relative to a warranty claim. Hendrickson is not responsible for any additional costs that may be incurred when replacement parts or materials are not acquired through Hendrickson.
- **Only Hendrickson Genuine Parts** or parts sold through Hendrickson may be used to repair Hendrickson trailer suspension products. Hendrickson's warranty also applies only to genuine Hendrickson parts.
- **Replacement parts provided under warranty** inherit the remainder of the original suspension warranty. Goodwill or giveaway (sales policy) parts provided at no charge have no warranty.



- **Do not destroy parts** being considered for warranty. All parts in question must be returned to Hendrickson for evaluation. Returned warranty parts must be returned to Hendrickson within 45 days for timely processing of the warranty claim. Failure to return such parts may result in partial or complete loss of warranty coverage.
- **Parts requested to be returned** under warranty must be accompanied by a warranty claim number issued by the Hendrickson Technical Services Department.
- **Freight charges** will be reimbursed if the returned parts are found defective or not functioning. Parts returned under a warranty claim number must be sent prepaid.
- **Product returned** to Hendrickson under this warranty shall become the property of Hendrickson.
- **Shop supply**, miscellaneous supply or job supply reimbursement is 4 percent of invoiced labor charges, up to a maximum of \$20.
- **Costs and procedures will be determined** when contacting the Hendrickson Technical Services Department to receive warranty authorization. Hendrickson will pay specified LABOR ALLOWANCES, listed beginning on page 15, when applicable following material inspection, determined by the Hendrickson Technical Services Department for the authorized repair or replacement of any defective component.

CONDITIONS

Warranty is subject to certain conditions, exclusions and limitations. **Hendrickson reserves the right** to reject a warranty claim for any or all of the following reasons.

- Failure to receive prior Hendrickson authorization.
- Claim information provided is insufficient.
- Failure occurred beyond coverage as published in COVERAGE TABLES on page 5 through page 11.
- Product requested to be returned was not returned for failure inspection within 45 days from date of request.
- Original components or parts requested for return were not returned for inspection.
- Product inspected does not substantiate claim or indicate a failure.
- Original claim was submitted to Hendrickson for a prior year following 60 days into the new year.

Warranty shall not apply to or include any repair or replacement as a result of the following conditions:

- Bending of any Hendrickson manufactured axle.
- System problems or parts failures that result from improper installation are the responsibility of the installer of the suspension.
- Accident, fire, flood or other casualty.
- Misuse or negligence including, but not limited to, overloading.
- Lack of reasonable and proper maintenance.
- Installation and repairs improperly performed or replacements improperly installed.
- Modification to a specific component part, not performed by Hendrickson, to function not as the part number was intended or in an alternate application for the specific part number.
- Modifications not recommended or approved by Hendrickson (in writing).
- Welding of the axle assembly or axle components except where approved (in writing) by Hendrickson.
- Welding of any of the suspension components, except where approved (in writing) by Hendrickson.
- Use of component parts, replacement or otherwise, that are not manufactured or distributed by Hendrickson.
- Uses other than those intended by Hendrickson and the trailer OEM.
- Normal wear and deterioration occasioned by the use of the suspension system.
- Any damage or failure caused by or otherwise attributed to any vehicle or trailer components, systems or equipment that are not manufactured or distributed by Hendrickson.
- Addition of an external suspension travel limit device, such as: fixed stop, bumper, chain, cable, etc. not recommended or approved by Hendrickson (in writing).

The liability of Hendrickson under this warranty is limited solely to the repair or replacement of defective material or workmanship by an authorized party.

If an item or subject is not listed within this Comprehensive Warranty Statement publication, then it is not covered by Trailer Commercial Vehicle Systems (Hendrickson) warranty coverage.



Hendrickson shall not be liable for repairs performed by any unauthorized parties. This warranty does not include any expense of or related to transportation of the parts to or from the place where the repair is to be performed or compensation for inconvenience or loss of use while the suspension system is being repaired. Hendrickson shall not be liable for any expense, loss or damage (direct, incidental, consequential or exemplary — including, but not limited to, towing expenses, trailer rental, downtime expenses, cargo damage, incidental charges or any other losses arising in connection with the sale, use or inability to use the suspension system) resulting from the warranty-covered part found to be defective. No expressed warranty is given by Hendrickson with respect to its suspension systems and products except as specifically set forth herein.

Any warranty implied by law, including any warranty of merchantability or fitness for a particular purpose, is limited to the expressed warranty term provided in the warranty COVERAGE TABLES on page 5 through page 11.

IDENTIFICATION (ID) TAGS

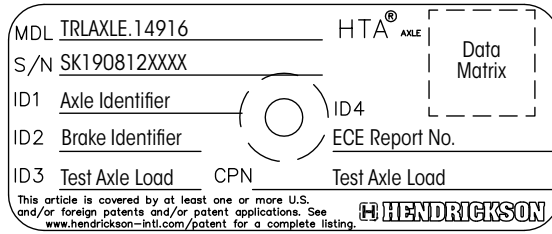
Each Hendrickson suspension and TRLAXLE® non-integrated includes an attached ID tag (Figure 1 and Figure 2). For more details and identification tag locations, refer to Hendrickson literature number L977 *Identification Guide* at

www.Hendrickson-intl.com/TrailerLit.



For sliders, located roadside front, on slider rail above frame bracket or on frame bracket. For HT™ Series Suspensions and INTRAAX® Integrated Air Suspension Systems, located inward side of either curbside or roadside suspension beam.

Figure 1: Sample suspension identification tag



Located on leg of (air) brake chamber bracket, either on outboard or inboard side.

Figure 2: Sample TRLAXLE® Non-integrated Trailer Axle identification tag

SUBMITTING A CLAIM

A Hendrickson warranty claim can be submitted using one of these methods:

ONLINE

The Hendrickson WCS (Warranty Claim System) is located at:

<https://extranet1.hendrickson-intl.com>

Enter your Login ID and password. If you do not have an ID and password, CONTACT HENDRICKSON.

Claims filed prior to 3 p.m. Eastern time will be reviewed and acknowledged the same day.

EMAIL

For warranty, email Hendrickson Trailer Technical Services at:

HTTS@hendrickson-intl.com

Include digital photographs via email.

PHONE

866.RIDEAIR (743.3247)

From the audio menu, select "Technical Services / Warranty".

FAX

800-696-4416

Please add "**Attention: Warranty**" at the top of your fax. Be sure to include contact information with the FAX.



REQUIRED CLAIM INFORMATION¹

Details required to file a warranty claim include:

- **Hendrickson suspension** information, (see IDENTIFICATION (ID) TAGS on page 4) –
 - Suspension model number
 - Suspension serial number
 - Approximate number of suspension miles
- **Trailer information** (located on VIN plate) -
 - Type (van, reefer, flat bed, etc...)
 - Manufacturer
 - VIN (vehicle identification number)
 - In-service date ²
 - Fleet/owner name
 - Unit #
- **Failure information**
 - Description of the system problem, the part number and/or the part description of the reported non-functioning part.
 - **Date of failure.**
 - Where applicable, **location of problem** on suspension / trailer (e.g., road side, front axle, rear axle, curb side rear, etc.).
- **Digital photos** of suspension and damaged areas.
- **Special application** approval documentation (if applicable).
- **Labor description**, cost and time (if applicable according to COVERAGE TABLES on page 5 through page 11 and LABOR ALLOWANCES on page 15 through page 22).

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The coverage periods in the following table apply when the suspension has been properly assembled and installed by a trailer original equipment manufacturer (OEM), properly maintained (as described in all applicable Hendrickson publications) and used in the recommended application and within the rated capacities (as described in Hendrickson literature number L707 Hendrickson Application Guide). Coverage may differ on some items used in applications for which special written approval from Hendrickson has been granted. For more warranty coverage information, refer to CONTACT HENDRICKSON on page 2. If you need warranty information for Mexico, contact Hendrickson Mexicana at +52 (442) 296-3600 or refer to Hendrickson publication L826SP *Póliza de Garantía - México* for warranty information.

NOTE: The COVERAGE TABLES include a column for “SUSPENSION DESC” (descriptions) which are in the form of acronyms. A list of these acronyms are defined in HENDRICKSON SUSPENSION/AXLE TYPES on page 23.

MILEAGE TERMS

The parts and labor warranty coverage periods in the following table are based on a typical annual average usage of 100,000 miles. However, some high-mileage applications can easily reach 250,000 miles per year and above. Hendrickson, at its sole discretion, may adjust warranty coverage on a case-by-case basis for applications exceeding 100,000 miles per year during the respective warranty period. For intermodal chassis trailer applications, refer to page 15.

¹ The information details listed apply to Hendrickson Trailer Suspension Systems and related components. Trailer information is required to understand suspension application and coordination with trailer manufacturers.

² If the in-service date is unknown or not available, the vehicle date of manufacture will be substituted.



COVERAGE TABLES*

| ITEM DESCRIPTION | SUSPENSION TYPE ** | PARTS | LABOR | COMMENTS (RESTRICTIONS ETC.) |
|---|-------------------------------------|----------|---------|---|
| SLIDER SUSPENSION SYSTEMS | | | | |
| ULTRAA-K® SLIDER SUSPENSION SYSTEMS | | | | |
| Slider Box Assembly | UTK 40K | 5 years | 5 years | |
| ZMD® Air Spring | UTK 40K | 3 years | 3 years | Includes patented ZMD® down stops. |
| Pivoting Mud Flap Bracket Assembly | UTK 40K | 3 years | 1 year | |
| ULTRAA-K SLIDER STRUCTURAL WARRANTY ²⁰ | | | | |
| Slider Box Weldment | UTK 40K | 10 years | 5 years | Includes slider box weldments equipped with Hendrickson-applied hot dip wax coating only. |
| ALL SLIDER SUSPENSION SYSTEMS | | | | |
| Slider Box Assembly | All, except UTK | 5 years | 1 year | |
| ZMD® Air Spring | UTK | 3 years | 3 years | Includes patented ZMD® down stops. Includes HKANT when ZMD equipped. |
| Air Spring (non-ZMD) | AAZ, HKANT, HKAT | 2 years | 1 year | |
| Slider Wear Pad | All | 1 year | 1 year | |
| Slider Pins, Pin Return Springs and Related Hardware. | AAZ, HKANT, HKAT | 1 year | 1 year | |
| SLIDER SUSPENSION AND AXLE ¹ COMPONENTS - ALL | | | | |
| Integrated Trailing Arm-to-Axle Connection | AA, AAZ, HKA, UTK | 10 years | 5 years | |
| Integrated Axle/Trailing Arm Assembly ² | HKANT 40K, HKANT 46K, UTK 40K | 10 years | 5 years | 49" Closed-Space van applications ⁶ |
| Integrated Axle/Trailing Arm Assembly ² | AAZ, HKA | 5 years | 1 year | |
| Frame Bracket (Hanger) | All | 5 years | 1 year | |
| Trailing Arm (Beam) | HT,ST | 5 years | 1 year | |
| Shock Absorber (non-ZMD equipped) | All | 2 years | 2 years | |
| QUIK-ALIGN® Pivot Assembly | All | 1 year | 1 year | For non pre-aligned systems, proper trailer OEM installation is required. ⁴ |
| QUIK-DRAW® Air Actuator | HK, HKA, UTK, AAZ | 3 years | 3 years | |
| NARROW PIVOT BUSHINGS AND BUSHING TUBE SPACERS | | | | |
| Van 49" Closed-Space Tandem Applications ⁶ | HKANT 40K, HKANT 46K, UTK 40K | 7 years | 7 years | Refer to BUSHINGS for other bushing types and coverage. |
| Wide-Spread Van and Liffable Axle ⁷ | AAZL, AAZNT, HK, HKANT, HKANL, HKAT | 5 years | 3 years | |
| WIDE PIVOT BUSHINGS AND BUSHING TUBE SPACERS | | | | |
| Van 49" Closed-Spaced Tandem Applications ⁶ | HKAL, HKARL, HKAT | 7 years | 5 years | |

* Some text reference numerical COVERAGE TABLE ENDNOTES on page 12.
 ** Refer to APPENDIX A: HENDRICKSON SUSPENSION/AXLE TYPES on page 23.

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COVERAGE TABLES * (CONTINUED)

| ITEM DESCRIPTION | SUSPENSION TYPE ** | PARTS | LABOR | COMMENTS (RESTRICTIONS ETC.) |
|--|--------------------------------------|----------|---------|--|
| PRIMARY FIXED AND LIFTABLE SUSPENSIONS | | | | |
| SUSPENSION AND AXLE ¹ COMPONENTS | | | | |
| Integrated Axle/Trailing Arm Assembly ² | AA | 5 years | 1 year | For OFF-HIGHWAY applications ³: Parts - 3 years, Labor - 1 year For intermodal chassis applications, refer to page 15. |
| | AAEDL, AAEDT | 5 years | 1 year | |
| Integrated Trailing Arm-to-Axle Connection | AA | 10 years | 5 years | For OFF-HIGHWAY applications ³: Parts - 3 years, Labor - 1 year For intermodal chassis applications, refer to page 15. |
| | AAEDL, AAEDT | 10 years | 5 years | |
| Trailing-Arm-to-Axle Connection | CXU, CXY | 5 years | 1 year | |
| Trailing Arm (Beam) | B2AHT, CXSL, CXU, CXY, HT, T | 5 years | 1 year | For OFF-HIGHWAY applications ³: Parts - 3 years, Labor - 1 year |
| Frame Brackets (Hangers) | All Except AAEDL, AAEDT | 5 years | 1 year | For OFF-HIGHWAY applications ³: Parts - 3 years, Labor - 1 year |
| | AAEDL, AAEDT | 5 years | 1 year | |
| ZMD [®] Air Spring | AANT & AAT when equipped | 3 years | 3 years | Includes patented ZMD [®] down stops. |
| Air Spring (non-ZMD) | All | 2 years | 1 year | |
| Shock Absorber (non-ZMD equipped) | All | 2 years | 2 years | |
| QUIK-ALIGN Pivot Assembly | All | 1 year | 1 year | Proper trailer OEM installation is required ⁴ |
| CONNEX[®] ST STEERABLE SUSPENSION SYSTEMS (For common components, refer to applicable warranty coverage) | | | | |
| Trailing-Arm-to-Axle Connection | CXSL | 5 years | 1 year | |
| Steer Axle Knuckle Assembly | CXSL | 3 years | 1 year | |
| Kingpin, Kingpin Bushings, Tie Rod, Center Lock Assembly | CXSL | 1 year | 1 year | Includes centering actuator and chamber |
| BUSHINGS | | | | |
| WIDE PIVOT BUSHINGS AND BUSHING TUBE SPACERS | | | | |
| Vocational, Wide-Spread Van and/or Lifiable Axle ¹ | AAL, AAT, B2AHT, CXSL, CXU, CXY, HT, | 5 years | 3 years | For OFF-HIGHWAY applications ³: Parts - 3 years, Labor - 1 year |
| | AAEDL, AAEDT | 5 years | 3 years | |
| NARROW PIVOT BUSHINGS AND BUSHING TUBE SPACERS | | | | |
| Vocational, Wide-Spread Van and Lifiable Axle ¹ | AANL, AANLS, AANT, AAZNT | 5 years | 3 years | |
| AXLES ¹ (TRLAXLE[®]) | | | | |
| Axle, Trailer (non-integrated, includes brackets) | Axle only | 5 years | 1 year | Includes intermodal chassis. Warranty void when brake camshaft rotation is opposite of wheel rotation. |
| For integrated axles, see SLIDER SUSPENSION SYSTEMS or PRIMARY FIXED AND LIFTABLE SUSPENSIONS | | | | |

* Some text reference numerical COVERAGE TABLE ENDNOTES on page 12.
 ** Refer to APPENDIX A: HENDRICKSON SUSPENSION/AXLE TYPES on page 23.

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COVERAGE TABLES* (CONTINUED)

| ITEM DESCRIPTION | SUSPENSION TYPE ** | PARTS | LABOR | COMMENTS (RESTRICTIONS ETC.) |
|--|--------------------|---------------------|---------|--|
| AFTERMARKET PARTS | | | | |
| Genuine Hendrickson Replacement Parts (not installed as part of a warranty repair) | All | 1 year | N/A | Requires original purchase or installation invoice. |
| MAXILOK® TRAILER SUPPORT SYSTEM | | | | |
| Mechanical Components | HT250U, HT200UM | 3 years | 1 year | |
| ALL OTHER SUSPENSION AND SLIDER COMPONENTS ⁵ | | | | |
| Suspension and Slider Components | All | 1 year | 1 year | Includes slider wear pads (upper) and all other mechanical pin release / activation components. |
| EXPORT (OUTSIDE USA AND CANADA) | | | | |
| Suspension and Axle Components | All | 1 year | N/A | |
| BRAKES ¹⁹ | | | | |
| ABS Sensor | All | 1 year ⁸ | 1 year | |
| Dust Shield | All | 1 year | 1 year | |
| DRUM BRAKE COMPONENTS - HENDRICKSON INSTALLED | | | | |
| Brake Linings and All Brake related Hardware | All | 1 year | 1 year | Excludes all normal wear. Warranty void when brake camshaft rotation is opposite of wheel rotation. |
| AAXTREME COAT® Brake Coating | All | 3 years | 3 years | |
| Brake Camshaft | All | 3 years | 1 year | Includes corrosion of shoe table. |
| Cam Tube (Off-Highway Applications) | All | 3 years | 1 year | Excludes brake camshaft wear. |
| Cam Tube (On-Highway Applications) | All | 3 years | 3 years | |
| Automatic Slack Adjuster | All | 1 year ⁸ | 1 year | For OFF-HIGHWAY applications ³: 1 year parts. Coverage limited to components sold and installed by Hendrickson, but not included in a wheel-end package (excludes normal wear on brake drums). |
| Hendrickson Branded Slack Adjusters | All | 5 years | 1 year | |
| Brake Chamber | All | 1 year ⁸ | 1 year | |
| Hendrickson Branded Brake Chambers | All | 5 years | 1 year | |
| Brake Drum (cast) — Not Overheated | All | 1 year | 1 year | |
| Brake Drums (Motor Wheel CentriFuse®) | All | 1 year | N/A | |

* Some text reference numerical COVERAGE TABLE ENDNOTES on page 12.
 ** Refer to APPENDIX A: HENDRICKSON SUSPENSION/AXLE TYPES on page 23.

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COVERAGE TABLES * (CONTINUED)

| ITEM DESCRIPTION | | SUSPENSION TYPE ** | PARTS | LABOR | COMMENTS (RESTRICTIONS ETC.) |
|--|---------------------|--------------------|-----------------------|---------|--|
| HENDRICKSON AIR DISC BRAKE (ADB) SYSTEMS | | | | | |
| Hendrickson MAXX22T™ | | All | 5 years ²¹ | 1 year | For ON-HIGHWAY applications ³: Includes all brake related hardware, caliper, rotor and brake chamber. Excludes corrosion and all normal wear. |
| | | | 1 year ²¹ | 1 year | For OFF-HIGHWAY applications ³: Includes all brake related hardware, caliper, rotor and brake chamber. Excludes corrosion and all normal wear. |
| OTHER AIR DISC BRAKE (ADB) SYSTEMS/COMPONENTS | | | | | |
| Brake Pads and All Brake Related Hardware | | All | 1 year ⁸ | 1 year | Coverage limited to components sold and installed by Hendrickson. |
| Caliper | | All | 1 year ⁸ | 1 year | Excludes corrosion and all normal wear. |
| Rotor | | All | 1 year ⁸ | 1 year | Bendix® ADB not approved in Dolly application. |
| Brake Chamber ²¹ | | All | 1 year ⁸ | 1 year | Includes all brake related hardware, caliper, rotor and brake chamber. |
| HENDRICKSON WHEEL-END PACKAGES ^{15, 22} | | | | | |
| Extended Service Hub Assembly | HXL3® ¹⁰ | All | 3 years | 3 years | Coverage is limited to components sold and installed by Hendrickson. |
| | HXL5® ¹¹ | All | 5 years | 5 years | Accessory-type hubcaps or wheel covers of any kind, such as the chrome "top hat" style hubcap, increase wheel-end temperatures during operation. Wheel guard separator plates do not allow proper torque to be reached on the fasteners. These items are not recommended for use on Hendrickson extended-service wheel-ends and could void the warranty. |
| | HXL7® ¹³ | All | 7 years | 7 years | |
| Standard Service Hub Assembly | | Trailer - All | 1 year | 1 year | |
| OTHER WHEEL-END PACKAGES | | | | | |
| ConMet PreSer® | | Trailer - All | 5 years | 5 years | Coverage limited to components sold and installed by Hendrickson. ConMet will administer their published warranty coverage direct with the customer. www.ConMet.com |
| OPTIONS | | | | | |
| SURELOK® TRAILER RIDE HEIGHT LOCK | | | | | |
| Mechanical Components (Factory Installed Only) | | AANT, HK, HKA, UTK | 3 years | 1 year | |
| Air Actuator (Factory Installed Only) | | AANT, HK, HKA, UTK | 1 year | 1 year | |
| Retrofit Kits (Not Factory Installed Components) | | AANT, HK, HKA, UTK | 1 year | 1 year | Requires verification of kit number and includes retrofit air control kit. |
| LIFT AXLE SYSTEMS (UBL™ Under Beam Lift™ and all others) | | | | | |
| All Components | | All applicable | 1 year | 1 year | Proper OEM installation required. |

* Some text reference numerical COVERAGE TABLE ENDNOTES on page 12.
 ** Refer to APPENDIX A: HENDRICKSON SUSPENSION/AXLE TYPES on page 23.

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COVERAGE TABLES * (CONTINUED)

| ITEM DESCRIPTION | SUSPENSION TYPE ** | PARTS | LABOR | COMMENTS (RESTRICTIONS ETC.) |
|---|---|---------|---------|---|
| CONTROLS | | | | |
| Air and Electronic Controls (Excluding TIREMAAX®) | All, including non-Hendrickson suspensions. | 1 year | 1 year | Coverage limited to new trailer installations. Excludes TIREMAAX controls. |
| | All, including non-Hendrickson suspensions. | 1 year | N/A | Coverage limited to used trailer installations. Excludes TIREMAAX controls. |
| Single Axle Dump Valve | All | 1 year | N/A | When installed together with competitor suspension or any used suspension, warranty applies to valve only. |
| TIREMAAX® PRO AND CP TIRE INFLATION SYSTEMS (Applies to systems with hubcap-mounted rotary union purchased after January 2012) 2, 14, 15, 16, 23 | | | | |
| TIREMAAX INTEGRATED WHEEL-END COMPONENTS: | | | | |
| Axle Hose and Hubcap Assembly | All, including non-Hendrickson wheel-ends | 5 years | 5 years | The Hubcap Assembly includes an integrated rotary union. For HXL7® hubcap and integrated rotary union warranty, refer to HXL7® ¹³ wheel-end warranty. |
| | HXL7® 13 22 | 7 years | 7 years | |
| TIREMAAX CONTROL COMPONENTS: | | | | |
| Controller Assembly (PRO and CP models) | All | 5 years | 5 years | |
| Wiring Harness | All | 5 years | 5 years | |
| TIREMAAX EXTERNAL WHEEL-END COMPONENTS: | | | | |
| Tire Hoses | All | 5 years | 5 years | |
| TIREMAAX AFTERMARKET RETROFIT KIT: ² | | | | |
| All Kit Components | All | 3 years | 3 years | If installed on Hendrickson suspension/axle equipped with HXL5® or HXL7, coverage of all internal axle components will match the wheel-end package coverage. 13 22 |
| | Non-Hendrickson suspensions and axles | 1 year | N/A | The responsibility of the installation is with the installer |

* Some text reference numerical COVERAGE TABLE ENDNOTES on page 12.
 ** Refer to APPENDIX A: HENDRICKSON SUSPENSION/AXLE TYPES on page 23.

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COVERAGE TABLES * (CONTINUED)

| ITEM DESCRIPTION | SUSPENSION TYPE ** | PARTS | LABOR | COMMENTS (RESTRICTIONS ETC.) |
|---|--------------------|---------|------------|---|
| TIREMAAX® EC AND CP TIRE INFLATION SYSTEMS | | | | |
| (Applies to systems with spindle-mounted rotary union purchased on or before January 2012) 2, 14, 15, 16, 23 | | | | |
| HENDRICKSON-INSTALLED TIREMAAX WITH HENDRICKSON INSTALLED READY-TO-ROLL® WHEEL-ENDS: 17 | | | | |
| Standard Service Hub Assembly | All | 3 years | 3 years | All internal TIREMAAX axle components installed and assembled by Hendrickson. The trailer OEM completes the installation of remaining purchased TIREMAAX components. Warranty terms do not include competitor tire inflation system components. |
| ConMet PreSer® Hub Assembly | All | 5 years | 3 years | |
| HLS® Hendrickson Long-Life System™ Hub Assembly 22 | All | 5 years | 3 years | |
| HXL7® Hub Assembly 22 | All | 7 years | 7 years | |
| HENDRICKSON-PREPARED TIREMAAX AXLES WITHOUT WHEEL-ENDS: 17 | | | | |
| Axle Hose, Rotary Union and Hubcap | All | 3 years | 3 years 18 | Some TIREMAAX axle components are installed by Hendrickson (including but not limited to axle vent line, axle hoses) — the trailer OEM completes the installation of remaining purchased TIREMAAX components; such as: rotary union, hubcap, etc. |
| TIREMAAX CONTROL COMPONENTS: | | | | |
| Controller Assembly (EC and CP models) | All | 3 years | 3 years | |
| Wiring Harness | All | 3 years | 1 year | |
| TIREMAAX EXTERNAL WHEEL-END COMPONENTS: | | | | |
| Tire Hoses and Tee Fitting | All | 1 year | 1 year | |
| TIREMAAX AFTERMARKET RETROFIT KIT: 2 | | | | |
| All Kit Components | All | 1 year | N/A | |
| COMPETITOR TIRE INFLATION SYSTEMS 2, 14, 15 | | | | |
| N/A | All | N/A | N/A | |

* Some text reference numerical COVERAGE TABLE ENDNOTES on page 12.
 ** Refer to APPENDIX A: HENDRICKSON SUSPENSION/AXLE TYPES on page 23.

Continued on next page



COVERAGE TABLE ENDNOTES

Some text within the COVERAGE TABLES include superscript numbers which correspond to these numbered paragraphs (refer to TRAILER APPLICATIONS for trailer application definitions):

1. Cambering an axle in the field voids the axle warranty.
2. Axles that are drilled for a tire inflation system (Hendrickson or otherwise) that do not follow Hendrickson's recommended drilling procedures (as described in Hendrickson literature numbers T51002 TIREMAAX® PRO & CP Installation, Service and Troubleshooting, L995 TIREMAAX® CP Tire Inflation System Installation, Service and Troubleshooting Procedures or L818, TIREMAAX® Tire Inflation System - Installation, Service and Troubleshooting Procedures) could void the axle warranty. Unrecommended drilling could cause damage to the axle or other suspension components. Refer to page 8 through page 11 for additional information.
3. Refers to APPENDIX B: TRAILER APPLICATIONS on page 24 for definitions. Allowed and recommended suspension trailer applications are listed in Hendrickson literature number L707 *Hendrickson Application Guide*.
4. For non pre-aligned suspension systems, the installation and final assembly of the suspension pivot connection is performed by the respective trailer OEM. Refer to page 14 for further information.
5. Includes suspension and slider components that are not specifically covered in this table and are manufactured and distributed by and for Hendrickson.
6. For highway use only in 49 inch closed-spaced tandem applications on van- and reefer-type trailers.
7. For all Vocational trailers, single-axle, wide-spread and tridem sliders, specialty and spread-axle vans, dry freight van or reefer-type trailers and trailers with liftable axle suspensions.
8. The suppliers of these non-Hendrickson components may offer warranty coverage beyond the terms listed here. Contact the appropriate supplier for complete details and continued warranty consideration.
9. Refer to page 14 for further information.
10. The three year parts and labor warranty terms apply to all On-Highway applications. To be eligible for warranty coverage in any Off-Highway application, HXL3® hub assemblies must be configured with HP spindles and Hendrickson dust shields. When properly configured, the warranty terms are one year parts and labor.
11. The five year parts and labor warranty terms apply to all On-Highway applications. To be eligible for warranty coverage in any Off-Highway application, HXL5® hub assemblies must be configured with HP spindles and Hendrickson dust shields. When properly configured, the warranty terms are three years parts and labor. When equipped, the TIREMAAX hubcap mounted rotary union and its hubcap carry the five year parts and labor warranty.
12. These warranty terms cover units purchased and serviced in the United States and Canada for line-haul, On-Highway service applications with a gross axle weight rating up to 23,000 pounds. These applications include auto haulers, vans, reefers, flatbeds and tank trailers. Coverage may differ in some applications where special written approval must be granted. Please contact your Hendrickson sales associate to determine if your application is warranted.
13. The seven year parts and labor warranty terms apply to all On-Highway applications, (except auto hauler application). The warranty coverage for HXL7® hub assemblies in Off-Highway application is three years parts and labor. The HXL7 is not approved for auto hauler applications. When equipped, the TIREMAAX integrated rotary union and its hubcap carry the seven year parts and labor warranty.
14. Competitor tire inflation systems are not covered by Hendrickson warranty terms. Contact the respective tire inflation system manufacturer for warranty coverage of competitor make and model.
15. Hendrickson does not provide warranty coverage for the installation, performance or components of a competitor brand tire inflation system installed on a Hendrickson suspension. Any consequential damages to the Hendrickson suspension resulting from a failure to the competitor brand tire inflation system or components, whether installed by the OEM, repair facility or end-user customer, should be directed to the respective tire inflation system manufacturer for warranty coverage. TIREMAAX is the only approved tire inflation system to be installed with a wheel-end installed by Hendrickson and compatible with the wheel-end applicable warranty coverage.
16. Installation must be per published technical procedures.
17. Includes all internal wheel-end / axle components, including rotary union and tubing.
18. Labor coverage applies only to Hendrickson installed components (including but not limited to axle vent line, axle hoses, spindle plugs, air control lines and beam grommets).
19. Brake wear is influenced by many factors; operators, tractor to trailer balance, application (city, flat, hilly or mountains), environmental contamination, use of hand operated trailer brakes, aerodynamics additions, engine size, vehicle and load weight, the use of engine brakes; to name a few. Due to these and other potential variables and the influence they may have on product performance, Hendrickson does not warrant the life cycle, or service life, of drum brake linings or disc brake pads.



20. ULTRAA-K® Ten Year Structural Warranty:
- Hendrickson warrants the ULTRAA-K slider box weldment against structural failures resulting from corrosion induced by typical On-Highway environmental conditions.
 - Use of high pressure wash, aggressive solvents or cleaners will void the structural corrosion warranty.
 - Does not include slider box weldment surface rust.
 - Structural corrosion warranty coverage is limited to the ULTRAA-K slider box weldment only. Does not apply to components or options attached to the slider box by Hendrickson, including but not limited to: locking pins, body clips, valve or air tank mounting, SURELOK®, mud flap attachment.
 - Valid only for hot dip wax coating applied by Hendrickson. Removal of Hendrickson-applied coating will void the structural corrosion warranty, refer to Hendrickson literature number T12004 *Surface Coat Maintenance*.
21. The vent plug for the Wabco TRISTOP™ D IBV (Internal Breathing Valve) brake chambers doubles as a check valve, operating with vent plug not properly installed will void the ADB warranty.
22. Wheel-end repairs performed prior to contacting Hendrickson Technical Services (page 2) voids the warranty.
23. Hendrickson does NOT recommend the use of any brand or type of tire sealant(s) when equipped with a tire inflation system.



ADDITIONAL WARRANTY COVERAGE INFORMATION

This section includes additional warranty information relative to the items listed below.

QUIK-ALIGN® PIVOT ASSEMBLY

Original equipment manufacturers (OEMs) have the option of ordering Hendrickson suspensions in one of two states: pre-aligned (available only on VANTRAAX® or ULTRAA-K® slider suspension systems) or standard (non pre-aligned - available on all Hendrickson suspension systems). In either state, the pivot connection is warranted for one year parts and labor. The difference is in application and is as follows:

Hendrickson’s pre-aligned pivot connection warranty applies to all QUIK-ALIGN® pivot assemblies since installation and final assembly of the pivot connection is performed by Hendrickson.

Hendrickson’s standard (non pre-aligned) pivot connection warranty coverage applies only to QUIK-ALIGN pivot assemblies where proper installation and final assembly were performed. The installation and final assembly of the suspension pivot connection is performed by the respective trailer OEM. Proper installation includes, but is not limited to, the use and removal of the Torx® head of the pivot bolt to ensure proper pivot assembly torque along with the proper mounting of the alignment washers/ collars (refer to Hendrickson literature numbers L577 HT/HS/HK Installation Procedures and L579 Alignment Procedures for additional assembly requirements). Pivot assembly components must be available for review for warranty consideration. Pivot assemblies that are missing the plastic band or other reuse indicator, on the pivot bolt hardware are not covered.

PRE-ALIGNED VANTRAAX® OR ULTRAA-K® WARRANTY STATEMENT

Pre-aligned slider systems are built on precision fixtures and feature axles that are perpendicular to the slider box and parallel to each other. Documented measurement data confirms alignment and is shipped with each slider suspension system built with this option.

The trailer OEM is responsible for the total trailer alignment and all facets of construction required to accommodate the slider suspension system, such as trailer frame construction, proper placement of the kingpin, proper body rail installation and proper body rail spacing. Hendrickson provides body rail installation and spacing recommendations in various installation drawings.

Hendrickson does not recommend additional alignment adjustments by the dealer or distributor prior to delivery to the final customer (i.e., fleet, owner operator) and will not reimburse for any related parts or labor expenses from such additional adjustments. Hendrickson warrants the perpendicularity and parallelism of the axles relative to the slider box itself, based on established Hendrickson specifications, only until delivery of the pre-aligned slider suspension system to the trailer OEM.

If a performance concern is expressed by the customer regarding a pre-aligned slider suspension system, the customer or trailer OEM dealer should CONTACT HENDRICKSON prior to performing any adjustments or repairs. Hendrickson will guide and provide assistance to the customer, dealer and/or repair facility through validation checks and will provide corrective actions as necessary.

AIR DISC BRAKE WARRANTY STATEMENT

Hendrickson MAXX22T™ trailer air disc brake systems installed by Hendrickson will carry a limited parts and labor warranty, excluding all normal wear (Refer to page 9). Other air disc brake packages installed by Hendrickson will carry a limited one-year parts and labor warranty, excluding all normal wear.

Hendrickson offers air disc brakes with our standard service and RTR® READY-TO-ROLL® HXL wheel-end packages. In order to maintain the integrity of the wheel-end warranty, customers must contact Hendrickson Technical Services prior to performing maintenance on any air disc brake components and/or the wheel-end assembly.

Component supplier additional warranty coverages related to either ADB components or hub assembly packages will be administered direct with the customer by the respective component supplier.

DISC VERSUS DRUM

Brake wear is influenced by many factors; owner or broker, tractor to trailer balance, application (intercity, flat hilly or mountains), contamination, use of hand brakes, aerodynamics additions, engine size, vehicle and load weight and the use of engine brakes to name a few. Due to these and other potential variables and the influence they may have on product performance, Hendrickson cannot predict the life cycle of linings, pads or comparison of pads vs linings in a general statement. Each fleet scenario or comparison needs to be reviewed individually based on its own factors.



INTERMODAL CHASSIS APPLICATIONS WARRANTY STATEMENT

The specified warranty for suspensions used in intermodal chassis applications per Hendrickson literature number L707 *Application Guide* is based on a typical annual average usage of less than 15,000 miles. However, some applications may exceed 15,000 miles per year. Hendrickson, at its sole discretion, may adjust warranty coverage on a case-by-case basis for applications exceeding 15,000 miles per year during the respective warranty period.

Hendrickson Trailer Commercial Vehicle Systems (Hendrickson) warrants that its axles, when equipped in intermodal chassis axle applications, shall be free of defects and workmanship for the time periods listed in the following table:

| ITEM DESCRIPTION | TYPE ¹ | PARTS | LABOR |
|--|----------------------|----------|---------|
| Axle | INTRAAX [®] | 7 years | 7 years |
| Rust Jacking ² | | 10 years | 1 year |
| All other axle related components | HCA ^{®3} | 1 year | 1 year |

¹ Refer to APPENDIX A: HENDRICKSON SUSPENSION/AXLE TYPES on page 23.
² Hendrickson E-coated shoes. Does not apply to all other brake issues.
³ HCA refer to L1026 *Intermodal Chassis Applications NAFTA Warranty*.

LABOR ALLOWANCES

- Air Controls 16
- Air Reservoir 16
- Air Springs..... 16
- Alignment 16
- Axle 16
- Beam (Non-integrated trailer axle)..... 17
- Brakes, ADB 17
- Brakes, Drum 18
- Bushings 19
- Center Lift 19
- CONNEX[®] ST 19
- Frame Brackets..... 19
- HTRAAX 19
- Pivot Bolts 20
- QUICK-DRAW[®] 20
- Shocks 20
- Slider Box..... 20
- SURELOK[®] 21
- Tire Inflation Systems 21
- UBL[™] UNDER BEAM LIFT[™] 22
- Wheel-end 22

The standard repair times (labor allowances) listed here include, but are not limited to, the parts in the itemized description. It may be necessary to remove and install additional parts not included in the basic descriptions in order to complete the warranty repair.

Detailed repair descriptions must be included with the submitted warranty claim.

If a warranty claim is submitted with a repair time in excess of the following labor allowances, a detailed description explaining the reason for the excess is required.

The following labor allowances have been based upon work conducted by various repair facilities utilizing approved Hendrickson procedures and include technician set-up time, diagnostic time and consideration of applicable supervisory/administration requirements. CONTACT HENDRICKSON to request approval for additional time, if necessary.

Refer to the HENDRICKSON SUSPENSION/AXLE TYPES on page 23 for an explanation of the abbreviations (HKA, UTK, AAZ, etc.) used in the following labor allowances.



| COMPONENT DESCRIPTION | HOURS | COMPONENT DESCRIPTION | HOURS |
|-----------------------------------|-------|---|-------|
| AIR CONTROLS | | ALIGNMENT | |
| Air control kit, with enclosure | 1.0 | Axle alignment | |
| Air gauge | 0.5 | Non-steer dual axles with QUIK-ALIGN® | 1.0 |
| Air pilot valve | 1.0 | Each additional axle | 0.5 |
| Axle vent | 0.7 | Includes: | |
| Back up alarm | 1.0 | • Removal and replacement of: | |
| Brake protection valve | 1.0 | – QUIK-ALIGN pivot connection hardware | |
| Dial-a-ride | 1.0 | Non-steer dual axles with welded collars) | 1.5 |
| Flipper valve | 1.0 | Each additional axle | 0.8 |
| Hand control valve | 1.0 | Includes: | |
| Height control valve | 1.0 | • Removal and replacement of: | |
| Includes: | | – Pivot connection hardware | |
| • Removal and installation of: | | CONNEX® ST (CXSL steer axle) | 1.5 |
| – Height control valve linkage | | Includes | |
| – Ride height adjustment | | • Toe adjustment | |
| Height control valve linkage | 0.5 | • Removal and replacement of: | |
| Lift control valve/kit | 1.0 | – Pivot connection hardware | |
| Load Scale/Kit | 1.0 | Toe adjustment only | 0.5 |
| Manual exhaust valve | 1.0 | AXLE | |
| Pressure protection valve | 1.0 | NON-INTEGRATED TRAILER AXLE | |
| Quick release valve | 1.0 | TRLAXLE®, HCA® axle only | |
| Solenoid valve | 1.0 | Welded attachment | |
| | | U-bolt attachment | |
| AIR RESERVOIR | | | |
| Air reservoir | 1.0 | Includes: | |
| | | • Removal and replacement of: | |
| AIR SPRINGS | | – Pivot connection hardware | |
| Air spring/piston | | – Axle from beam | |
| Each air spring (up to three) | 1.0 | • Redressing (grinding) axle seats | |
| Each additional air spring | 0.5 | • Axle alignment | |
| Air spring pedestal (bolt-on) | | • Removal and installation of: | |
| INTRAAX®, VANTRAAX®, ULTRAA-K® | 0.5 | – Tire/wheel assembly | |
| Includes: | | – Hubs and drums | |
| • Removal and installation of: | | – Springs, air or mechanical | |
| – Air spring lower mounting nut | | – Shocks and shock mounting hardware | |
| – Pedestal mounting hardware | | – Height control valve, if equipped | |
| – Tighten all fasteners to torque | | – ABS valves and sensor wiring | |
| Air spring pedestal (weld-on) | | – Brake chambers | |
| INTRAAX | 1.0 | – Slack adjusters | |
| Includes: | | – S-cams | |
| • Removal and installation of: | | – S-cam bearings | |
| – Air spring lower mounting nut | | – Brake shoes with linings and hardware, if required | |
| – Pedestal mounting welds | | U-bolts (per axle seat) | |
| | | One U-bolt | |
| | | Both | |
| | | | 0.8 |
| | | | 1.4 |



| COMPONENT DESCRIPTION | HOURS | COMPONENT DESCRIPTION | HOURS |
|--------------------------------------|-------|---|-------|
| INTEGRATED AXLE (HALFTRAAX) | | BEAM (NON-INTEGRATED TRAILER AXLE) | |
| INTRAAX®, CONNEX®, CONNEX® ST | | Beam and axle seat assembly for | |
| HTRAAX (axle/beam weldment) | 6.0 | HT (beam only) | 4.0 |
| Exception: | | Y-beam (beam only) 1 beam | 7.5 |
| Auto hauler | 12.5 | Y-beam (beam only) 2 beams | 14.0 |
| Lowboy / Double drop | 10.0 | T suspensions | 4.0 |
| With ADB | 8.0 | | |
| Includes: | | BRAKES, ADB | |
| • Removal and replacement of: | | Brake chamber | 0.5 |
| – Pivot connection hardware | | Brake dust shield, clamp (with wide base tires) | |
| • Axle alignment | | 1 wheel-end | 0.3 |
| • Removal and installation of: | | 2 wheel-ends | 0.5 |
| – Tire/wheel assembly | | 3 wheel-ends | 0.8 |
| – Hubs/Rotors for ADB | | 4 wheel-ends | 1.0 |
| – Air springs | | NOTE: Does not require wheel removal. | |
| – Shocks and shock mounting hardware | | Caliper | 2.1 |
| – Height control valve | | Includes: | |
| – ABS valves and sensor wiring | | • Removal and installation of: | |
| – Caliper for ADB | | – Tire/wheel assembly | |
| – Drum Brakes (all that apply) | | Pads (with linings, per axle) | |
| » Drums | | INTRAAX®, VANTRAAX®, ULTRAA-K® | 1.0 |
| » Brake chambers | | TRLAXLE®, B2AHT, CONNEX, CONNEX ST | 1.0 |
| » Slack adjusters | | Includes: | |
| » S-cams | | • Removal and installation of: | |
| » S-cam bearings | | – Tire/wheel assembly | |
| » Brake shoes/pads and hardware | | • Removal and replacement of: | |
| | | – ADB brake pad with lining | |
| | | • Brake adjustment | |
| | | NOTE: Does not require caliper, hub or rotor removal. | |
| | | Rotor | 3.0 |
| | | Includes: | |
| | | • Removal and installation of: | |
| | | – Tire/wheel assembly | |
| | | – Caliper assembly | |
| | | – Hub | |
| | | Tighten caliper mounting screws to specified torque (per trailer, 6 screws for ea. of 4 wheel-ends) | 0.8 |



COMPONENT DESCRIPTION HOURS

BRAKES, DRUM

Brake camshaft (requires hub removal)

| | |
|--|-----|
| CONNEX® ST (with Hendrickson cam tube) | 3.0 |
| INTRAAX® models "A", "B" (prior to 5/2001) | 3.0 |
| TRLAXLE® (no cam tube) | 3.5 |
| TRLAXLE (with Hendrickson cam tube) ¹ | 4.0 |

Includes:

- Removal and replacement of:
 - S-cam bushings replacement (no cam tube)
 - Cam tube (if equipped)
- Removal and installation of:
 - Tire/wheel assembly
 - Slack adjuster
 - Hub and drum
- Brake adjustment

Brake camshaft (does not require hub removal)

| | |
|---|-----|
| INTRAAX (with Hendrickson cam tube) | 1.6 |
| INTRAAX model "C" (No cam tube) (prior to 5/2001) | 1.6 |

Includes:

- Removal and replacement of:
 - S-cam bushings replacement (no cam tube)
 - Cam tube (if equipped)
- Removal and installation of:
 - Tire/wheel assembly
 - Brake drum
 - Slack adjuster
- Brake adjustment

Brake cam tube assembly
(Does not require tire/wheel, drum, hub or S-cam removal.)

| | |
|---------------------------------|-----|
| INTRAAX, ULTRAA-K® or VANTRAAX® | 0.8 |
| TRLAXLE | 1.0 |

Includes:

- Removal and installation of slack adjuster
- Brake adjustment

Additional labor time is required for:

| | |
|-------------------------------|-----|
| • Weld according to procedure | 0.3 |
|-------------------------------|-----|

COMPONENT DESCRIPTION HOURS

| | |
|--|------|
| Brake chamber | 0.8 |
| Brake Chamber Bracket (BCB) | |
| TRLAXLE (each) | 1.8 |
| Includes: | |
| • Remove and replace (weld attachment): | |
| – Weld prep | |
| – Position | |
| – Weld | |
| • Removal and installation of: | |
| – Brake chamber and hoses | |
| • Check slack adjuster stroke adjustment | |
| BCB Reinforcement (per BCB) | |
| AAL | 1.0 |
| AANT | 1.0 |
| TRLAXLE equipped with 12.25" brake | 1.0 |
| Includes: | |
| • Reinforcement plates added per BCB, per Hendrickson provided instruction | |
| Brake drum (outboard) | 0.5 |
| Includes: | |
| • Removal and installation of: | |
| – Tire/wheel assembly | |
| • Brake adjustment | |
| Brake dust shield (clamp and bolt-on) | |
| Each (up to two) | 0.5 |
| Each additional | 0.25 |
| Brake hose (relay valve to brake chamber) | 0.5 |
| Brake shoes with linings (per axle) | |
| INTRAAX, VANTRAAX, ULTRAA-K (Does not require hub removal.) | 2.5 |
| TRLAXLE | 2.5 |
| Includes: | |
| • Removal and installation of: | |
| – Tire/wheel assembly | |
| – Drum | |
| – Hub (Inboard mounted drum only) | |
| • Removal and replacement of: | |
| – Brake shoe with lining | |
| • Brake adjustment | |

¹ Includes CONNEX or B2AHT factory assembly.



| COMPONENT DESCRIPTION | HOURS | COMPONENT DESCRIPTION | HOURS |
|---|-------|---|-------|
| S-cam bushing kit (each) | 1.6 | CENTER LIFT | |
| Applies to Hendrickson axles without cam tube | | Center lift air spring | 0.5 |
| Includes: | | CONNEX® ST | |
| • Removal and installation of: | | Lock-straight assembly | |
| – Tire/wheel assembly | | Air actuator | 0.5 |
| – Drum | | Lock-straight air chamber | 0.5 |
| – Brake shoes with lining | | Arm assembly (each) | 0.5 |
| – Hub | | Steering knuckle or kingpin (each) | 8.0 |
| – S-cam | | Kingpin bushing kit - includes Kingpin R & R | 4.0 |
| • Brake adjustment | | Includes: | |
| Additional labor time is required for: | | • Removal and installation of: | |
| • Hub removal (refer to hub hours) | | – Tire / wheel assembly | |
| S-cam support bracket (each) | 3.0 | – Brake components | |
| Applies to Hendrickson axles without cam tube | | – Wheel-end components | |
| Includes | | – Wheel-cut stop bolts | |
| • Remove and replace (weld attachment): | | – Kingpin | |
| – Weld prep | | Tie rod | 1.5 |
| – Position | | Includes: | |
| – Weld | | • Removing and installation of: | |
| • Removal and replacement of: | | – Locking clamps | |
| – S-cam support bracket assembly | | – Tie rod bracket | |
| • Removal and installation of: | | • Align and tach weld tie rod washers (x2) | |
| – Tire/wheel assembly | | • Toe adjustment: | |
| – Hub and drum | | Tie rod end (each) | 0.8 |
| – Slack adjuster | | Tie rod end (both) | 1.5 |
| – Air chamber | | Includes: | |
| – S-cam | | • Removing and installation of: | |
| • Brake adjustment | | – Locking clamps | |
| Slack adjuster | 0.7 | – Tie rod end | |
| Includes: | | • Toe adjustment: | |
| • Troubleshooting | | FRAME BRACKETS | |
| BUSHINGS | | Frame bracket (bolt-on) | 3.0 |
| Bushing tube spacers (per axle) | 1.5 | Includes: | |
| Equipped with UBL™ | 2.0 | • Removal and replacement of: | |
| Equipped with UBL (Bolt-on front plate) | 2.5 | – Pivot connection hardware | |
| Includes: | | • Axle alignment | |
| • Removal and replacement of: | | Frame bracket (welded) | 4.0 |
| – Bushing tube spacers | | Includes: | |
| – Pivot connection hardware | | • Removal and replacement of | |
| • Axle alignment | | – Pivot connection hardware | |
| Pivot Bushings (per axle) | 4.0 | • Axle alignment | |
| Equipped with UBL | 4.5 | HTRAAX | |
| Includes: | | (See <u>INTEGRATED AXLE (HALFTRAAX)</u> on page 17) | |
| • Removal and replacement of: | | | |
| – Pivot Bushings | | | |
| – Bushing tube spacers | | | |
| – Pivot connection hardware | | | |
| • Axle alignment | | | |



| COMPONENT DESCRIPTION | HOURS |
|--|-------|
| PIVOT BOLTS | |
| Pivot connection hardware (per axle) | 1.0 |
| Includes: | |
| • Removal and replacement of: | |
| – Existing pivot connection hardware | |
| • Axle alignment | |
| QUIK-DRAW® | |
| QUIK-DRAW control valve | 1.0 |
| QUIK-DRAW control valve knob | 0.2 |
| QUIK-DRAW linear actuator (HK/HKA/UTK models): | |
| Front | 0.5 |
| Rear | 0.8 |
| QUIK-DRAW air chamber actuator (AAZ models) | 0.8 |
| QUIK-DRAW retrofit kit (HK/HKA/UTK models) | 2.0 |
| Includes: | |
| • Removal of original pin-pull mechanism | |
| SHOCKS | |
| Shock absorber | 0.5 |
| ZMD® Down stop (Chain or Bumper) | 0.5 |
| Shock bracket (upper) | |
| Weld-on | 1.5 |
| Bolt-on | 1.0 |
| Shock mount (lower) | |
| INTRAAX®, VANTRAAX®, ULTRAA-K®, HT250US | 1.3 |
| Includes: | |
| • Removal and replacement of | |
| – Nut within beam | |
| or | |
| – Modification / repair per L635 | |
| Shock strap | 0.5 |
| Options: | |
| Rear-mount shock bracket (lower) | |
| AAL, AAEDT and AAEDL | 1.0 |
| SLIDER BOX | |
| K-brace reinforcement plate installation | 3.0 |
| VANTRAAX HKAT 50K (HKA250) only; | |
| quantity of four per slider | |
| Slider box replacement | |
| (HK/HKA/UTK models) | |
| Single (HKA models only) | 8.0 |
| Tandem | 12.0 |
| Tridem (HKA models only) | 16.0 |
| Includes: | |
| • Removal and replacement of: | |
| – Pivot connection hardware | |

| COMPONENT DESCRIPTION | HOURS |
|--|-------|
| • Axle alignment | |
| • Removal and installation of: | |
| – Tire/wheel assembly | |
| – Air springs | |
| – Shocks and shock mounting hardware | |
| – Air lines | |
| – One air reservoir and mounting brackets | |
| – Air valves | |
| – Suspensions | |
| – Brake lines | |
| – Brake valves | |
| – ABS valves and sensor wiring | |
| – Height control valve | |
| – QUIK-DRAW slider pin-pull mechanism | |
| – SURELOK® trailer ride height locking system | |
| Does not include: | |
| (Additional labor time is required for these items.) | |
| • Additional air reservoirs and mounting brackets | |
| • Binkley Quick Release pin-pull mechanism | |
| • Tire inflation systems | |
| Slider box replacement (AAZ models) | |
| Single | 8.0 |
| Tandem | 12.0 |
| Includes: | |
| • Removal and replacement of: | |
| – Pivot connection hardware | |
| • Axle alignment | |
| • Removal and installation of: | |
| – Tire/wheel assembly | |
| – Air springs | |
| – Shocks and shock mounting hardware | |
| – Air lines | |
| – One air reservoir and mounting brackets | |
| – Air valves | |
| – Suspensions | |
| – Brake lines | |
| – Brake valves | |
| – ABS valves and sensor wiring | |
| – Height control valve | |
| – QUIK-DRAW slider pin-pull mechanism | |
| Does not include: | |
| (Additional labor time is required for these items.) | |
| • Additional air reservoirs and mounting brackets | |
| • Tire inflation systems | |
| Slider pin (up to four) | 1.5 |
| Slider pin springs (all four) | 1.5 |
| Slider box wear pad, upper (pair) | 3.0 |
| Slider box weld repair | |



| COMPONENT DESCRIPTION | HOURS | COMPONENT DESCRIPTION | HOURS |
|---|-------|--|-------|
| Cross member or K-brace to side rail; (up to four welds) | 1.0 | TIREMAAX rotary union ¹ | |
| Air spring top shim half plate to bottom of K-brace | 1.3 | Grease - lubricant | |
| Includes: | | Up to two (per trailer) | 0.5 |
| • Removal and installation of: | | Each additional (same trailer) | 0.25 |
| – Air spring | | Example: 1 tandem trailer - replace 4 hubcap rotary unions = 1.0 hour total. | |
| SURELOK® | | Includes: | |
| SURELOK return spring | 0.2 | • Removal and installation of: | |
| SURELOK actuator | 0.5 | – Hubcap | |
| SURELOK restraint bolt | 0.5 | – Hubcap gasket | |
| Includes: | | – Internal axle hose attachment | |
| • Adjustment and system check | | • For systems prior to April 2012: | |
| SURELOK ride height lock assembly | 1.0 | – Spindle end plug, if required | |
| Includes: | | – OETIKER® hose clamp | |
| • Adjustment and system check | | Oil - lubricant | |
| SURELOK retrofit kit (HK/HKA/UTK models) | | Each | 0.5 |
| Bolt-on beam extensions | 2.0 | Includes: | |
| Weld-on beam extensions | 3.0 | • Removal and installation of: | |
| | | – Hubcap | |
| | | – Hubcap gasket | |
| | | – Internal axle hose attachment | |
| TIRE INFLATION SYSTEMS | | TIREMAAX tee fitting ¹ | |
| TIREMAAX® | | Up to four (per trailer) | 0.5 |
| TIREMAAX kit complete installation | | Each additional (same trailer) | 0.2 |
| Tandem | | Includes: | |
| • TIREMAAX Prepped Hendrickson axle | 6.0 | • Removal and installation of: | |
| • Non-TIREMAAX prepped Hendrickson axle | 12.0 | – Tee fitting guard (if present) | |
| Each additional axle | | TIREMAAX tire hoses (All models) | |
| • TIREMAAX Prepped Hendrickson axle | 1.0 | First wheel-end (one or two hoses) | 0.3 |
| • Non-TIREMAAX prepped Hendrickson axle | 2.0 | Each additional wheel-end (per trailer) | 0.2 |
| TIREMAAX axle hose | 1.2 | Includes: | |
| Includes: | | • Removal and installation of: | |
| • Removal and Replacement | | – Tee fitting guard (if present) | |
| – Internal axle hose | | Tire inflation system wiring harness | |
| – Slack adjuster | | (HTIS and TIREMAAX EC and CP models) | |
| TIREMAAX axle vent | 0.7 | Premium, ABS-ready harness | 1.0 |
| TIREMAAX controller assembly (All models) | 1.0 | Standard, 3-wire adapter plug | 0.5 |
| TIREMAAX EC target pressure programming using the hand-held programming device (does not require controller assembly removal) | 0.2 | | |
| TIREMAAX PRO & CP adjust target pressure | 0.5 | | |
| TIREMAAX indicator lamp (All models) | 0.5 | | |
| TIREMAAX ABS junction harness (All models) | 1.0 | | |

¹ After March 2012, the rotary union was mounted in the hubcap and a tee fitting was not included.



| COMPONENT DESCRIPTION | HOURS | COMPONENT DESCRIPTION | HOURS |
|--|--------------|--|--------------|
| UBL™ UNDER BEAM LIFT™ | | | |
| UBL air spring (each) | 1.0 | – Each additional hubcap/gasket | 0.25 |
| UBL kit | | Inner wheel seal | |
| Complete installation (per axle) | 4.5 | Drum brake | 1.4 |
| UBL bracket removal and installation | | Exception: Auto hauler | 2.0 |
| Frame bracket attachment (each) | 1.0 | Air disc brake | 2.5 |
| Beam attachment - welded (each) | 1.7 | Exception: Auto hauler | 3.1 |
| WHEEL-END | | Includes: | |
| ABS wheel sensor (one) | 1.0 | • Removal and installation of: | |
| Includes: | | – Caliper Assembly | |
| • Removal and installation of: | | – Torque caliper to carrier bolts | |
| – Tire/wheel assembly | | Additional labor time is required for these items: | |
| – Brake drum | | • Bearing cone and cup (in hub) replacement | |
| ABS wheel sensor bracket (one) | 0.6 | (inner, outer or both) | 0.9 |
| Additional labor time may be required for these items: | | • ABS wheel sensor bracket | 0.6 |
| • Hub removal (refer to hub hours) | | • Lube saturated brake shoes | 0.5 |
| Adjust ABS wheel sensors | 0.5 | WEM (Wheel-end Monitor) replacement (each) | 0.2 |
| (without dust shields, up to four sensors) | | Wheel-end Play (each wheel-end) | 1.0 |
| Axle filter | 1.0 | Adjustment and lube (if necessary) | |
| (Tire/wheel removal not required) | | Includes: | |
| Includes: | | • Removal and installation of: | |
| • Removal and installation of: | | – Tire/wheel assembly | |
| – Hubcap - replace gasket | | – Hubcap | |
| – Spindle end plug - replace | | Wheel studs (up to three) | 1.7 |
| Axle vent | 0.7 | – More than three (one hub) | 2.2 |
| Hub, drum brake | | | |
| (Removal and Replacement) | 1.4 | | |
| Exception: Auto hauler | 2.0 | | |
| Includes: | | | |
| • Removal and installation of: | | | |
| – Tire / wheel assembly | | | |
| – Brake drum | | | |
| Additional labor time is required for these items: | | | |
| • Air disc brake, remove and install | 1.7 | | |
| • ABS wheel sensor bracket, replace | 0.6 | | |
| Hubcap/gasket | | | |
| (tire / wheel removal not required) | | | |
| – Up to a quantity of two | 0.5 | | |



APPENDIX A: HENDRICKSON SUSPENSION/AXLE TYPES

The suspension type abbreviations used in the COVERAGE TABLES on page 8 through page 11 are defined as follows:

SLIDER SUSPENSION SYSTEMS

- AAZ INTRAAX®-SP Integrated Air Slider Suspension System is a Hendrickson integrated axle/beam weldment mounted on a Hendrickson Z-rail platform slider. In cases where warranty coverage or components differ for a certain AAZ model, the specific model will be noted by one of the following descriptions: AAZNT, AAZL.
HK HT™ suspensions on K-2® slider box
HKA VANTRAAX® Integrated Air Slider Suspension Systems equipped with INTRAAX® axle/beam weldments on a K-2® slider box. In cases where warranty coverage or components differ for a certain VANTRAAX model, the specific model will be noted by one of the following descriptions: HKANT, HKAT, HKAL, HKARL.
HS HT suspensions on HS slider box
HTZ Any HT suspension on a Z-rail platform slider. In cases where warranty coverage or components differ for a certain HTZ model, the specific model will be noted by a similar description to the following: HTZUS.
RS Sliding trailing arm suspension, manufactured by the Dana Corporation prior to 2007. Last manufactured by Hendrickson 2008.
UTK All ULTRAA-K® Integrated Air Slider Suspension Systems equipped with INTRAAX axle/beam weldments on a G-rail slider box. In cases where warranty coverage or components differ for a certain ULTRAA-K model, the specific model will be noted by one of the following descriptions: UTKNT, UTKNU.

PRIMARY FIXED AND LIFTABLE SUSPENSIONS

- AA All INTRAAX primary suspensions. In cases where warranty coverage or components differ for a certain INTRAAX model, the specific model will be noted by one of the following descriptions: AANT, AAT, AAEDT, AANLS, AANL, AAL, AAEDL.
B2AHT Non-integrated beam-to-axle suspension system assembled by Hendrickson to include HT and TRLAXLE® components prior to 01/01/2017 production. See CXU.
CXSL CONNEX® ST Self-Steer Suspension System assembled by Hendrickson.
CXU CONNEX® Unitized Air Suspension System with Hendrickson HT suspension and TRLAXLE assembled by Hendrickson. Formally B2AHT.
CXY CONNEX® Unitized Air Suspension System with Hendrickson HT Y-beam suspension and TRLAXLE assembled by Hendrickson.
HT HT™ Series primary suspensions
RF Fixed trailing arm suspension, manufactured by the Dana Corporation prior to 2007. Last manufactured by Hendrickson 2008.
T T Series primary suspensions.

AXLES

- HCA® Hendrickson Chassis Axle.
INTRAAX Integrated trailer axle as a component of an INTRAAX suspension.
TRLAXLE® Non-integrated trailer axle only, includes brackets.

All Refers to all applicable Hendrickson suspension/axle descriptions listed above.

APPENDIX B: TRAILER APPLICATIONS

ON-HIGHWAY

(Dry freight or refrigerated van trailer moving different types of freight, include city delivery).

- Operation on road surfaces of good to excellent concrete or asphalt.
- Generally distances are more than 30 miles between starting and stopping. - LineHaul.
- Pick up and delivery service within cities and/or suburban areas. – city delivery.
- Three (3) miles between starts/stops (typical). – City Delivery.
- 100% load going /40% or more load return (typical).

VOCATIONAL

- Movement of material to and from a job site.
- Movement of production related products, supplies and tools between job sites.
- Movement of processing equipment and laboratories on job sites.
- Movement of petroleum or liquid product, gases, to processing, delivery or fueling sites.
- Movement of wood chips between mills or other facilities.
- Movement of rock, ore, gravel and minerals between mine sites and delivery sites.
- Movement of heavy equipment or materials at legal maximums or special permit loadings.
- Vehicles used for residential refuse / recycle pickup.

- Vehicles operated in commercial / industrial pickup.
- Vehicles used in transfer / relocation on a maximum grade of 8%, typically greater than 10 miles per trip.
- 90% of operation time on road surfaces of concrete or asphalt and up to (less than) 10% of operation time on maintained gravel, crushed rock, hard packed dirt, landfill or into sandy or muddy job sites. Vehicles operating less than 90%, refer to Off-Highway.
- 100% load going and typical empty return.
- Maximum grades of 12%.

OFF-HIGHWAY

- Movement of heavy equipment, rock, ore, gravel and minerals at and between mine sites and property development delivery sites.
- Movement of farm produce or feed on farm properties.
- Movement of raw petroleum products; i.e.: oil field applications.
- Movement of logs, wood chips and wood pulp between logging sites and / or mills.
- Vehicles operating in ice road environments.
- Vehicles used for refuse / recycle landfill operations.
- Operation exceeding 10% of the time on maintained gravel, crushed rock, hard packed dirt, landfill, ice roads, unimproved surfaces such as loose dirt, mud and sand.

For application requirements, refer to Hendrickson literature number *L707 Hendrickson Application Guide* online at www.hendrickson-intl.com/TrailerLit.

Actual product performance may vary depending upon vehicle configuration, operation, service and other factors.

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



www.hendrickson-intl.com

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