

# APPLICATION QUESTIONNAIRE TRAILER SUSPENSION SYSTEMS

LIT NO: L633  
DATE: April 2014

REVISION: D

**INSTRUCTIONS:** In order to assist you in selecting the suspension most appropriate for your specific application, please provide us with the information requested. Return the form via fax or mail, as indicated below. Contact Hendrickson Customer Service Department at **866-RIDEAIR (866-743-3247)** for assistance in completing this form.

COMPANY NAME: \_\_\_\_\_ STREET ADDRESS: \_\_\_\_\_  
CONTACT NAME: \_\_\_\_\_ CITY: \_\_\_\_\_  
PHONE NO.: \_\_\_\_\_ STATE: \_\_\_\_\_ POSTAL CODE: \_\_\_\_\_  
FAX NO.: \_\_\_\_\_ COUNTRY: \_\_\_\_\_  
DATE: \_\_\_\_\_ E-MAIL: \_\_\_\_\_

**SEND TO:** Hendrickson Commercial Vehicle Systems **OR FAX TO: (800) 696-4416**  
Customer Service Department  
2070 Industrial Place SE  
Canton OH USA 44707-2600

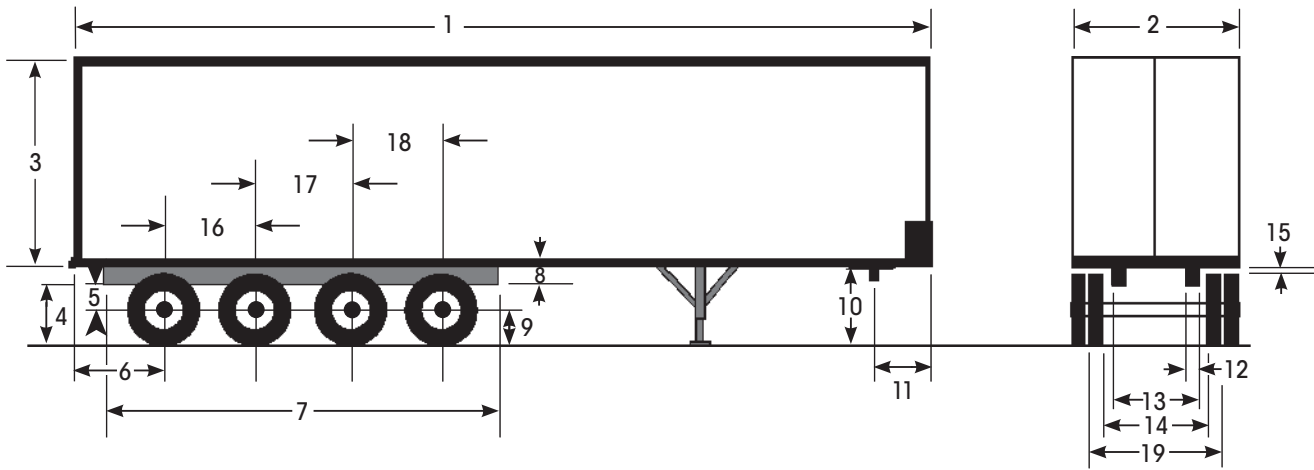
- Trailer type and manufacturer: \_\_\_\_\_
- Trailer frame material and construction (e.g. steel C-channel, aluminum I-beam): \_\_\_\_\_
- Type of installation:  New trailer  Conversion *(For conversions read page 4)*  Adding axle(s) to existing trailer
- Brake type, size and capacity: \_\_\_\_\_
- Number of suspensions required: \_\_\_\_\_ Date required: \_\_\_\_\_
- Suspension assembly required:  Unitized (Frame brackets assembled to the suspension)  
 Non-unitized (Frame brackets NOT assembled to the suspension)
- Air controls required:  
Height control valve  3/8" Fittings  1/4" Fittings  
Axle lift  Electric  Manual  
Suspension air exhaust (dump)  Automatic  Manual

**NOTE:** Single axle dump is ONLY approved if used with a 10 mph speed reset. *(Ref. FMCSR 393.207)*

Other special requirements (e.g. raise/lower kit, back-up alarm, boxed control): \_\_\_\_\_

## Operating Conditions

- Type of cargo carried and weight: \_\_\_\_\_
- Road Conditions:  Rough  Smooth
- Area of Operation: \_\_\_\_\_
- Duty Cycle:  24/7  8/5 \_\_\_\_\_



**DIRECTIONS:** Refer to the above graphic when providing the necessary information about your trailer and suspension needs. Please be sure to specify appropriate units of measure (pounds, kilograms, inches, millimeters, etc.).

**GENERAL TRAILER MEASUREMENTS:**

Overall Length (*Dim. 1*) \_\_\_\_\_

Overall Width (*Dim. 2*) \_\_\_\_\_

Body Height (*Dim. 3*) \_\_\_\_\_

Center of Rear Axle to Rear of Trailer (*Dim. 6*) \_\_\_\_\_

Sub-frame Length (*Dim. 7*) \_\_\_\_\_

King Pin Height When Coupled to Tractor (*Dim. 10*) \_\_\_\_\_

King Pin to Front of Trailer (*Dim. 11*) \_\_\_\_\_

Sub-frame Flange Width (*Dim. 12*) \_\_\_\_\_

Sub-frame Width (*Dim. 13*) \_\_\_\_\_

Inside to Inside of Tires (*Dim. 14*) \_\_\_\_\_

Distance Between Axles (*Dim. 16*) \_\_\_\_\_ (*Dim. 17*) \_\_\_\_\_ (*Dim. 18*) \_\_\_\_\_

**AXLE/SUSPENSION MEASUREMENTS:**

	AXLE A	AXLE B	AXLE C	AXLE D
Loaded Sub-frame to Ground ( <i>Dim. 4</i> )				
Ride Height ( <i>Dim. 5</i> ) <i>(Center of axle to bottom of frame)</i>				
Frame to Trailer Body ( <i>Dim. 8</i> )				
Tire Static Loaded Radius ( <i>Dim. 9</i> )				
Clearance Above the Tires ( <i>Dim. 15</i> )				
Axle Track ( <i>Dim. 19</i> )				



**AXLE/SUSPENSION REQUIREMENTS:**

		AXLE A	AXLE B	AXLE C	AXLE D
<b>Required Axle Capacity (GAWR)</b>					
<b>Suspension Type</b> (Check all that apply)		<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing
		<input type="checkbox"/> New	<input type="checkbox"/> New	<input type="checkbox"/> New	<input type="checkbox"/> New
		<input type="checkbox"/> Mechanical	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Mechanical
		<input type="checkbox"/> Air	<input type="checkbox"/> Air	<input type="checkbox"/> Air	<input type="checkbox"/> Air
		<input type="checkbox"/> Primary	<input type="checkbox"/> Primary	<input type="checkbox"/> Primary	<input type="checkbox"/> Primary
		<input type="checkbox"/> Liffable	<input type="checkbox"/> Liffable	<input type="checkbox"/> Liffable	<input type="checkbox"/> Liffable
		<input type="checkbox"/> Sliding Sub-frame	<input type="checkbox"/> Sliding Sub-frame	<input type="checkbox"/> Sliding Sub-frame	<input type="checkbox"/> Sliding Sub-frame
<b>Required Tire to Ground Clearance</b> (Lifted Suspension)					
<b>Axle Travel Required</b>	Up (Jounce)				
	Down (Rebound)				
<b>Axle Type</b>	Track				
	Outside Diameter				
	Wall Thickness				
<b>Tire Size</b>					

**NOTE:** Indicate any trailer specific items that should be considered, such as under-trailer discharge tubes, loading ramps, etc., and provide their dimensional information. \_\_\_\_\_

**PREFERRED SUSPENSION MODEL:** \_\_\_\_\_

Has this model been used on similar trailer designs / applications before?  YES  NO

**COMMENTS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*It is the responsibility of the suspension installer to ensure there is adequate structural strength in the area of the suspension attachment. In addition, the proper attachment of the suspension is solely the responsibility of the suspension installer.*

*The suspension assembly drawing and installation instructions should be reviewed before attempting any installation. It is the responsibility of the suspension purchaser to ensure that the suspension assembly drawings and installation instructions are provided to the suspension installer.*

**I agree to accept the installation and application responsibilities as they are described.**

APPLICANT'S SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_



## CONVERTING TO HENDRICKSON TRAILER AIR SUSPENSIONS

At times it is desired to “convert” or “remanufacture” a trailer originally produced with a spring suspension or another brand of air suspension to a Hendrickson Trailer Air Suspension. Some factors to consider:

### CONTACT THE OEM

The original manufacturer of the trailer should be contacted for recommendations and approval before making trailer modifications.

### SUSPENSION CHOICES

INTRAAAX® AAT/AAL or HT™ Series suspensions may be the most appropriate choice for “conversion” or “remanufacture” programs due to the greater experience that exists in the industry for installation of this product. Refer to Hendrickson publication L707, *Application Guide - Trailer Suspension Systems* (available at [www.hendrickson-intl.com](http://www.hendrickson-intl.com)), for suspension application guidance. INTRAAX AANT/AANL is not recommended for this use.

Contact Hendrickson for slider retrofit recommendations.

### SUSPENSION CROSSMEMBERS

Hendrickson suspensions require crossmembers in the trailer frame or subframe at specific locations. These crossmembers are shown on our installation drawings. **However, these installation drawings are guidance for OEM's and are not specific to any particular trailer design. They are not intended to provide information for a “conversion” or “remanufacture” program.** It is unlikely that an existing trailer equipped with another suspension has crossmembers in the correct location. **It is likely that existing crossmembers will have to be removed and correctly placed crossmembers subsequently installed.**

Hendrickson does not provide these crossmembers and related parts, nor can we provide recommendations for the modification of trailer frames or subframe. If the original trailer manufacturer is currently installing Hendrickson suspensions they may provide guidance and be a source for crossmembers and the other necessary parts.

### AXLES

Often it is assumed that existing axles from spring suspensions can be reused with HT suspensions. **The axle wall thickness used with spring suspensions is rarely adequate for use with trailing beam air suspensions that are welded to the axle. Likewise, these axles usually do not have the correct length of camshafts and brake chamber location for clearance of HT suspensions.**

### AIR CONTROLS

An air suspension must be operated at the correct ride height and must be provided with a reliable air supply. The simplest means to accomplish this is the use of a single HCV (Height Control Valve). To select the appropriate HCV refer to Hendrickson publication L1182, *Controls Parts Catalog* (available at [www.hendrickson-intl.com](http://www.hendrickson-intl.com)).

Call your trailer dealer or Hendrickson at **330.489.0045** or **866.RIDEAIR (743.3247)** for additional information.



[www.hendrickson-intl.com](http://www.hendrickson-intl.com)

#### TRAILER COMMERCIAL VEHICLE SYSTEMS

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