MEASURING RIDE HEIGHT

A suspension’s ride height is defined as the distance from the suspension mounting surface (the bottom of the trailer or slider box) to the center of the axle (Figure 1) with air in the air springs.

Suspension ride height should always be measured on the axle with the height control valve (Figure 1). There are two easy ways to measure suspension ride height:

1. Using a Hendrickson Ride Height Gauge (Figure 2).

2. Using a tape measure -

   A. Measure the distance from the top of the axle to the mounting surface of the suspension (Figure 4).

   B. Add half of the axle diameter to this measurement to determine the suspension’s ride height.

Example A: Measuring Ride Height:

On 5-inch axles add 2 1/2 inches to the measured distance.

On LDA add 2 7/8 inches to the measured distance.

OPERATING AN AIR SUSPENSION outside its specified ride height can reduce ride quality, damage cargo and increase suspension wear. To take full advantage of the benefits, each suspension on the trailer must be operated at its designed ride height.

For complete instructions, refer to Hendrickson literature number L459 Checking Trailer Ride Height procedures. This document should have been read before continuing with this version of the procedures.

PREPARATION

1. Place the trailer on a flat, level, debris-free surface.

2. Chock the trailer wheels and release the trailer parking brakes.

3. Check the air pressure in the trailer tires.

   The tires must be at the manufacturer’s recommended pressure when checking trailer ride height. If necessary, inflate or deflate the tires to match this recommended pressure.

4. Maintain air pressure in the trailer air-ride suspension system.

   Trailer ride height can be checked with the trailer coupled to or uncoupled from the tractor. If the trailer is uncoupled from the tractor, maintain pressure in the trailer air-ride suspension system by applying shop air to the trailer emergency glad hand. This ensures that the trailer parking brakes remain released.

Figure 1: Ride height defined

Figure 2: Hendrickson ride height gauges
**COMPARING MEASURED RIDE HEIGHT TO DESIGNED RIDE HEIGHT**

Once ride height has been measured, compare the value with the designed ride height listed on the suspension identification tag.

Suspension identification tag locations vary by suspension model and can be found in the following locations:

<table>
<thead>
<tr>
<th>Suspension System</th>
<th>Tag Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS slider with INTRAAX®</td>
<td>Front cross member on HS slider box.</td>
</tr>
<tr>
<td>HS slider with HT</td>
<td>Front cross member on HS slider box.</td>
</tr>
<tr>
<td>HT primary</td>
<td>Front of roadside frame bracket or inside of curbside beam.</td>
</tr>
<tr>
<td>INTRAAX primary fixed</td>
<td>Inside of curbside beam or possibly the roadside beam.</td>
</tr>
<tr>
<td>T primary</td>
<td>Front of roadside frame bracket.</td>
</tr>
<tr>
<td>ULTRA® slider</td>
<td>On roadside slider box side rail above front frame bracket.</td>
</tr>
<tr>
<td>K-2® slider with HT suspensions</td>
<td>On roadside slider box side rail above front frame bracket.</td>
</tr>
<tr>
<td>VANTRAAX® (K-2) slider</td>
<td>On roadside slider box side rail above front frame bracket.</td>
</tr>
</tbody>
</table>

The ID tag (Figure 5 and Figure 6) contains four lines of important information: model number, model description, serial number and, if applicable, customer part number. In 2002, a new model naming system was implemented. This new naming system provides most of the suspension identification information in a “smart” format on the description line, whereas the previous system provided most of the suspension identification information on the model line.

**Figure 5: Typical suspension ID tags**

If you cannot determine the ride height from the information on the identification tag, contact the Hendrickson Trailer Technical Service department in the United States and Canada at 866.RIDEAIR (743.3247) or email HTTS@hendrickson-intl.com. They will help you determine the designed ride height of your suspension.

**ADJUSTING SUSPENSION RIDE HEIGHT**

For optimal suspension performance, the actual ride height must equal the designed ride height. A ride height that measures lower than the designed ride height must be raised, while a ride height that measures higher than the designed ride height must be lowered. To adjust the suspension ride height:

1. **Disconnect** the height control valve linkage (Figure 1) at the lower bracket.
2. **Push** the height control valve arm up to raise the ride height (add air to the air springs) or down to lower the ride height (remove air from the air springs) until the distance between the suspension mounting surface and the center of the axle equals the designed ride height.

**NOTE:** Ensure reservoir pressure is at a minimum of 90 psi. This ensures adequate pressure to open the pressure protection valve (PPV).

**NOTE:** A delay of 5 to 10 seconds may occur before the height control valve allows air flow to or from the air springs.

3. With the suspension at the proper ride height, lock the control arm in the neutral position by inserting the wooden centering pin through the control arm and into the hole in the valve body.

4. **Reconnect** the height control valve linkage to the lower bracket.

5. Remove the wooden centering pin.

**Figure 1: Typical height control valve components**

**Figure 6: Typical suspension ID tags**

Read the designed ride height from the model line (HT and HS models) or the description line (early INTRAAX® models, pre “smart” description INTRAAX models and current INTRAAX models) according to the following examples. The BOLD number in the following examples indicates ride height:

- **HT model**
  - HT230-15-025

- **HS model**
  - HS190T14-4801A

- **INTRAAX description (early)**
  - AA230TB1.5A
  - 14AIAD1.5A

- **INTRAAX description (pre “smart” descriptions)**
  - AA230TCB1.5A
  - B15U71.5A

- **INTRAAX description (current)**
  - AA725K
  - 14RHS77N

- **ULTRA®**
  - UT40K 9
  - 16RL77

- **VANTRAAX®**
  - HKNT40K 9
  - 16RL77