

Volume 3

March 2004

THAT'S A SHOCK!

Not so many years ago, most suspensions had heavy steel-leaf springs with limited travel and a great deal of inherent friction. These suspensions quickly self-dampened and therefore limited the amount of work the shock needed to perform.

Low friction suspensions such as air and taper leaf have dramatically changed the shock's role. Shocks now play a critical role in dampening suspension oscillation.

Properly functioning shocks can help reduce the wear of more expensive suspension components such as air springs, while assisting in the reduction of tire wear and vibration damage to the cab and chassis. Worn shocks simply cannot assist in providing control over today's sophisticated suspension systems.

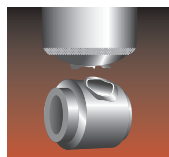
If ride deterioration is experienced and there is suspicion that a shock has failed internally, which is visually undetectable, perform the following:

Shock Heat Test

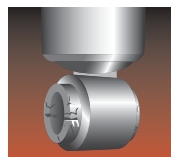
1. Drive the vehicle at moderate speeds for fifteen minutes.

Shock Visual Inspection

Look for these potential problems when doing a visual inspection. Inspect the shock absorbers fully extended. Replaced as necessary.



Damaged upper or lower mount



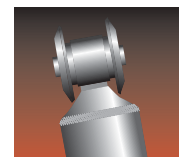
Damaged upper or lower bushing



Damaged dust cover and/or shock body



Bent or dented shock



Improper installation example: Washers installed backwards

DO NOT GRAB THE SHOCK AS IT COULD POSSIBLY CAUSE PERSONAL INJURY.

2. Lightly touch the shock body carefully below the dust cover.
3. Touch the frame to get an ambient reference. A warm shock absorber is acceptable, a cold shock absorber should be replaced.
4. To inspect for an internal failure, remove and shake the suspected shock. Listen for the sound of metal parts rattling inside. Rattling of metal parts can indicate that the shock has an internal failure.

Leaking vs. Misting Shocks

The inspection must not be conducted after driving in wet weather or a vehicle wash. Shocks need to be free from water. Many shocks are often mis-diagnosed as failures. Misting is the process whereby very small amounts of shock fluid evaporate at a high operating temperature through the upper seal of the shock. When the "mist" reaches the cooler outside air, it condenses and forms a film on the outside of the shock body. Misting is perfectly normal



and necessary function of the shock. The fluid which evaporates through the seal area helps to lubricate and prolong the life of the seal.

A true shock that is leaking and needs to be replaced will show signs of fluid leaking in streams from the upper seal. These streams can easily be seen when the shock is fully extended, underneath the main body (dustcover) of the shock.

Refer to the Hendrickson Technical Publication for your suspension.

Remember: No need to replace shock absorbers in pairs if one shock absorber requires replacement. THAT'S A SHOCK!

GET HEIGHT GAUGE SAVVY

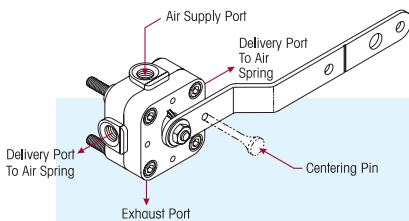
A frequently asked question is: "I have a Hendrickson 'Air' suspension. What ride height gauge should I be using and how do I get one?"

Below is a visual representation of each height gauge with a small description. Hendrickson height gauges are available by contacting Hendrickson Tech Services 630-910-2800 (email techservices@hendrickson-intl.com) or call our fulfillment center 800-973-0360.

Did you know that the COMFORT AIR (Tech. Pub. 17730-246), PARASTEER (17730-234) and the PRIMAAX (17730-238) suspensions reference the shock to measure ride height? Adjusting the ride height varies from suspension to suspension, therefore refer to the Hendrickson Technical Publication that pertains to your suspension system for complete ride height adjustment instructions.

Another frequently asked question is: "Exactly what does 'unloaded/unladed' mean?" An "unloaded/unladen" truck tractor is a vehicle not carrying cargo/payload.

Remember:
Use the right height gauge for the right suspension — GET HEIGHT GAUGE SAVVY!



Ride Height Adjustment Service Hints

Hint 1

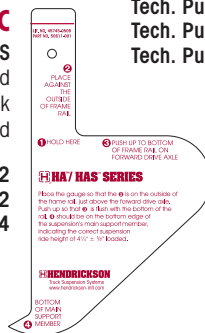
Use a 1/8" wooden dowel rod (golf tee) to set the neutral position for the height control valve by aligning hole in the leveling valve arm with the hole in the height control valve housing, as shown. This locates the approximate neutral position of the valve.

Hint 2

It is very important that the leveling valve be cycled completely before and after any ride height adjustments. Cycling of the leveling valve will help make the adjustment more accurate.

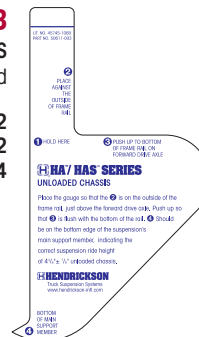
No. 45745-050C
HA/HAS
Loaded
and for Mack
vehicles unloaded

Tech. Pub. 17730-212
Tech. Pub. 17730-222
Tech. Pub. 17730-224

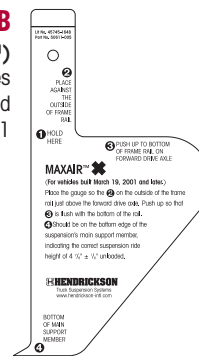


No. 45745-106B
HA/HAS
Unloaded

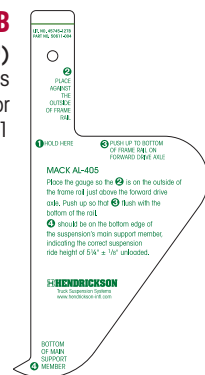
Tech. Pub. 17730-212
Tech. Pub. 17730-222
Tech. Pub. 17730-224



No. 45745-164B
AL-405 (MAXAIR™)
For Mack vehicles
manufactured
after 3/19/01



No. 45745-127B
AL-405 (MAXAIR™)
For Mack vehicles
manufactured prior
to 3/20/01



No. 45745-159

AIRTEK®

Freightliner, Western Star,
and Sterling Vehicles

Tech. Pub. 17730-243

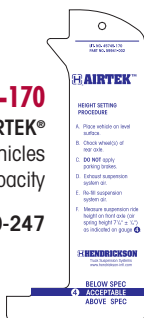


No. 45745-170

AIRTEK®

Volvo Vehicles
12.0K/12.5K Capacity

Tech. Pub. 17730-247



No. 45745-195

AIRTEK®

Volvo Vehicles
13.2K/14.6K Capacity

Tech. Pub. 17730-247



HENDRICKSON
Genuine Parts

There's only one way to ensure the suspension's original performance — ask for Hendrickson genuine parts by name.

Technical Publications

Technical publications are available by contacting Hendrickson Tech Service or visit our website at www.hendrickson-intl.com.

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Tech Tips

800 South Frontage Road
Woodridge, IL 60517-4904

Technical Assistance

630-910-2800

techservices@hendrickson-intl.com

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www.hendrickson-intl.com