



H HENDRICKSON
The World Rides On Us®

Pro Gear
AND TRANSMISSION

HAS™ Series / HAS™ 40LH Maintenance Manual

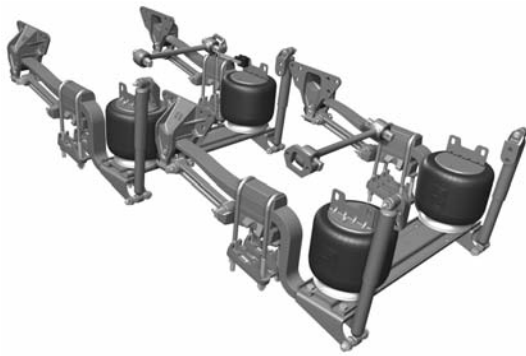
Pro Gear's Hendrickson HAS™ Series / HAS™ 40LH Maintenance Manual to assist in identifying your Hendrickson unit.

If you need any assistance identifying the correct transfer case unit for your truck and equipment, contact your Hendrickson replacement part specialists at Pro Gear and Transmission.

Pro Gear Transmission has same day shipping and 1000's of products in stock and ready to ship internationally for your next project.

For parts or service contact the Hendrickson specialists at Pro Gear & Transmission, Inc.

1 (877) 776-4600
(407) 872-1901
parts@eprogear.com



H TECHNICAL PROCEDURE

HAS™ Series

SUBJECT: Pre-delivery Inspection and
Preventive Maintenance Intervals

LIT NO: 17730-273

DATE: February 2011 **REVISION:** A

IMPORTANT

INTRODUCTION

Following the appropriate inspection procedures is important to help ensure the proper maintenance and operation of the HAS™ Series suspension system and component parts. Hendrickson recommends the HAS Series rear suspension be inspected at vehicle pre-delivery, the first 1,000 miles, and at the regular preventive maintenance intervals. Off-highway and severe service operating conditions require more frequent inspections than on-highway service operation.

Carefully inspect the vehicle, refer to Hendrickson's Technical Procedure publications 17730-212, and 17730-222 for complete HAS suspension inspection procedures, important safety notices and preventive maintenance details, available at www.hendrickson-intl.com.

NOTE

Torque values shown in this publication apply only if Hendrickson supplied fasteners are used. If non Hendrickson fasteners are used, follow the torque specification listed in the vehicle manufacturer's service manual.

The inspection must include the following components:

- U-bolt locknuts
- Air springs
- Main support member
- Air supply and fittings
- All fasteners
- Cross channel
- Frame hanger bracket
- Height control valve
- Rebound Roller
- Shock absorbers
- Slipper pad
- Suspension wear and damage
- Tire wear
- Torque rods – Longitudinal and Transverse

➤ Signifies performance critical components.

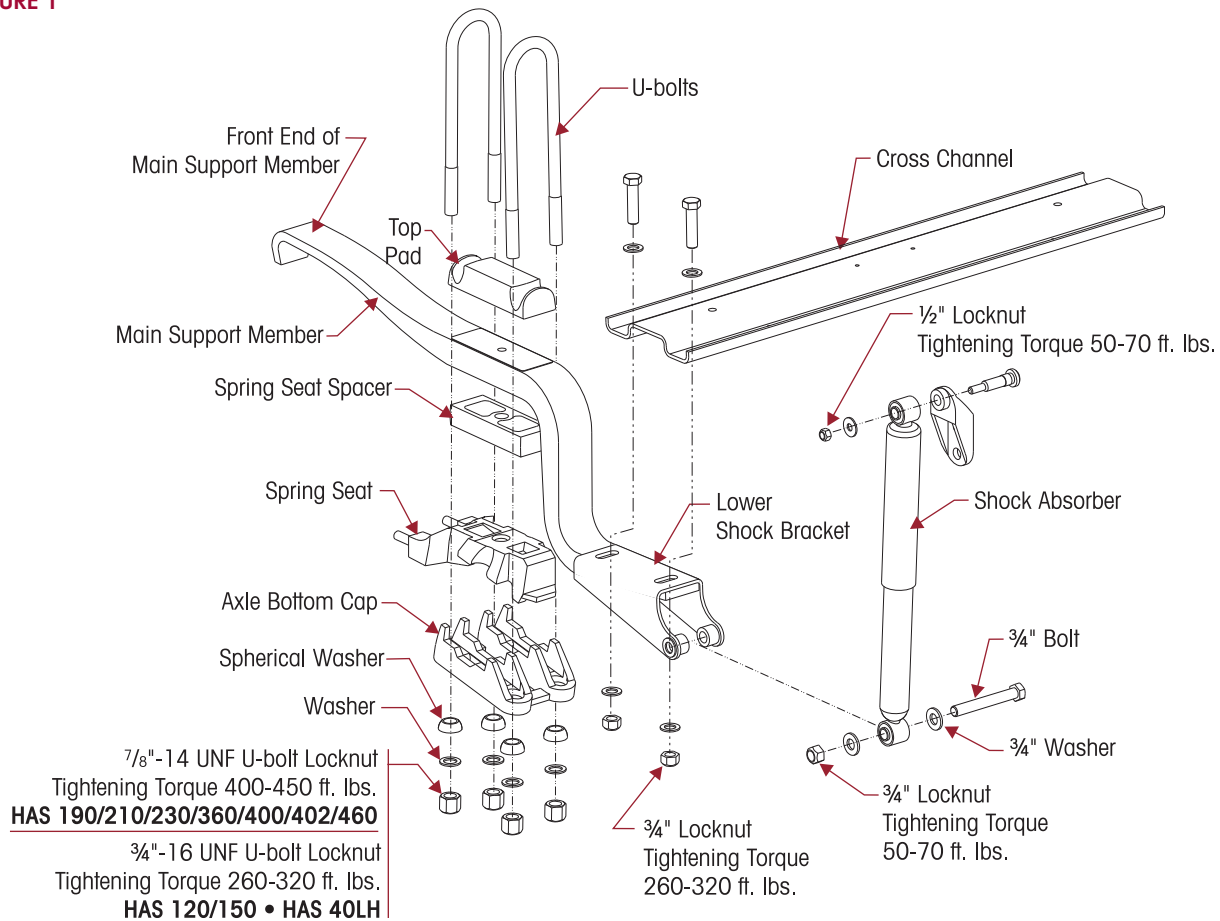
HENDRICKSON RECOMMENDED PREVENTIVE MAINTENANCE INTERVALS

PRE-DELIVERY INSPECTION

1. Visually inspect the suspension for proper assembly.
2. Verify the alignment of drive axles are within the vehicle manufacturer's tolerances, contact the vehicle manufacturer for the correct alignment tolerances and instructions.
3. Check all fasteners for proper torque with special attention to the following suspension connections, see Figure 1:
 - a. Clamp group (U-bolts)
 - b. Shock absorber mounting bolts
 - c. Cross channel to main support member bolts

4. Ensure the suspension is at the proper ride height specification. Ride height is measured vertically from the bottom of the vehicle frame to the centerline of the axle. Refer to Hendrickson Technical Publication 17730-212 for the correct ride height specification and other detailed information.
5. Verify the front end of the main support member (see Figure 1) is centered between the inside of the frame bracket legs.
6. Verify each transverse torque rod(s) is perpendicular to the closest vehicle frame rail ($0^\circ \pm 1.5^\circ$) and parallel to the ground ($+5^\circ / - 0^\circ$). If it is not within specification, contact the vehicle manufacturer.

FIGURE 1



INSPECTION AT THE FIRST 1,000 MILES

1. Visually inspect suspension components. Check for all of the following and replace components as necessary:
 - a. Proper suspension function
 - b. Any signs of unusual movement, loose or missing components
 - c. Any signs of abrasive or adverse contact with other components
 - d. Any damaged, bent or cracked parts
2. Check all fasteners for proper torque with special attention to the following suspension connections, see Figure 1.
 - a. Clamp group (U-bolts)
 - b. Shock absorber mounting bolts
 - c. Cross channel to main support member bolts

PREVENTIVE MAINTENANCE

1. **Clamp group fasteners (U-bolts)** – Check fasteners for proper torque at regular intervals as experience dictates, but not to exceed 20,000 miles intervals.

SERVICE HINT

Maintaining correct U-bolt torque is important to help ensure proper suspension component performance. Off highway and severe service applications require more frequent inspection of U-bolt torque. A fleet with such applications may determine its own torque inspection interval by inspecting U-bolt torque on a more frequent basis (for example at 5,000 miles after in-service date, or 10,000 miles, etc). If during the torque inspection U-bolt torque is found below torque specifications, correct the U-bolt torque and increase the frequency of the torque inspections. If U-bolt torque is found within torque specifications, inspection intervals may be lengthened. **DO NOT exceed 20,000 miles between U-bolt torque inspection intervals.**

2. Inspect other components at the following intervals:
 - **Off-highway and severe service applications:** Every 25,000 miles or six (6) months, whichever comes first
 - **100% On-Highway applications:** Every 50,000 miles or twelve (12) months, whichever comes first
3. Visually inspect suspension components. Check for all of the following and replace components as necessary:
 - a. Proper suspension function
 - b. Any signs of unusual movement, loose or missing components
 - c. Any signs of abrasive or adverse contact with other components
 - d. Any damaged, bent or cracked parts
4. Check all fasteners for proper torque with special attention to the following suspension connections, see Figure 1.
 - a. Clamp group (U-bolts)
 - b. Shock absorber mounting bolts
 - c. Cross channel to main support member bolts
5. Verify the alignment of the drive axles are within the vehicle manufacturer's tolerances, contact the vehicle manufacturer for the correct alignment tolerances and instructions.
6. Ensure the suspension is at the proper ride height specification. Ride height is measured vertically from the bottom of the vehicle frame to the centerline of the axle. Refer to Hendrickson Technical Publication 17730-212 for the correct ride height specification and other detailed information.

SAFETY REMINDER

All applicable warnings and cautions should be read carefully to help prevent personal injury and to assure that proper methods are used. Improper maintenance, service or repair may damage the vehicle, cause personal injury, render the vehicle unsafe in operation, or void manufacturer's warranty.

Failure to follow the applicable safety precautions can result in personal injury and/or property damage. Carefully read and understand all safety related information within the applicable Hendrickson publications, on all decals and those provided by the vehicle manufacturer before operating the vehicle, or conducting any maintenance, service or repair.

WARNING

OVERLOADED SUSPENSIONS CAN CAUSE COMPONENT FAILURE, LOSS OF VEHICLE CONTROL, SEVERE PERSONAL INJURY OR DEATH.

- DO NOT EXCEED SUSPENSION CAPACITY RATINGS.
- DO NOT OPERATE AUXILIARY LIFT AXLES OR OTHER LOAD TRANSFERRING DEVICES IN ANY WAY THAT CAN OVERLOAD THE SUSPENSION.



Refer to Hendrickson Technical Procedure publications 17730-212, 17730-222 for complete HAS Series suspensions inspection procedures, important safety notices and preventive maintenance details, available online at www.hendrickson-intl.com.

For technical questions, contact Hendrickson Tech Services at 1-866-755-5968. For more information on Hendrickson products, visit www.hendrickson-intl.com.

www.hendrickson-intl.com



Truck Suspension Systems
800 South Frontage Road
Woodridge, IL 60517-4904 USA

630.910.2800
Fax 630.910.2899