



SECTION 1

Introduction

This publication is to acquaint and assist maintenance personnel in preventive maintenance, service, repair, and rebuild for the following:

- **AIRTEK** — Integrated front air suspension and steer axle (STEERTEK).
- **STEERTEK** — A lightweight, formed and robotically welded steer axle assembly.

NOTE

Use only  Hendrickson Genuine Parts for servicing this suspension system.

It is important to read and understand the entire Technical Procedure publication prior to performing any maintenance, service, repair, or rebuild of this product. The information in this publication contains parts lists, safety information, product specifications, features, proper maintenance and rebuild instructions for the AIRTEK Suspension and the STEERTEK axle.

A Technical Procedure Quiz has been included at the back of this publication. Hendrickson will provide personalized AIRTEK Technical Procedure Quiz Achievement Certificate to candidates scoring 80% or higher on the quiz. Simply complete the quiz and fill in the enclosed answer sheet or on a separate sheet with the return address, name, phone number, and company name, as it will appear on the award to:

Hendrickson
ATTN: Truck Marketing
800 S. Frontage Road
Woodridge, Illinois 60517

Hendrickson reserves the right to make changes and improvements to its products and publications at any time. Contact Hendrickson Tech Services at 630-910-2800 or email techservices@hendrickson-intl.com for information on the latest version of this manual.

The latest revision of this publication is also available online on our literature page at www.hendrickson-intl.com.

**SECTION 2****Product Description**

AIRTEK® — Winner of the 2001 Automotive News and Cap Gemini Ernst & Young PACE Award for Product Innovation. AIRTEK is an integrated front air suspension and robotically welded steer axle that work together to form an integrated torsion system. This lightweight system provides driver comfort and is ideal for on-highway, line, and bulk haul operations. Utilizing a system approach, Hendrickson has engineered and optimized the following components to form a system – delivering ride, stability, and handling characteristics with reduced weight and maintenance.

Air Springs — Exclusive to Hendrickson, the lightweight air springs deliver an extremely soft ride. The air springs are engineered to support 80% of the vertical load while providing a very low spring rate. The quick “snap” design (12,000 and 12,500 pound capacity), bolt on design (13,200 & 14,600 pound capacity) and “push-to-connect” air supply design (all models) also provide fast and easy removal and installation.

Leaf Spring Assembly — With its innovative design, the leaf spring provides superior stability, performance and a soft ride. The patented leaf spring shares loads with the air spring. Durable rubber front and rear bushings are greaseless and only require periodic inspections.

Shock Absorbers — AIRTEK utilizes premium shocks that have been tested and tuned specifically for the AIRTEK system.

Shackle Brackets — Optimized design delivers weight reduction and proven durability.

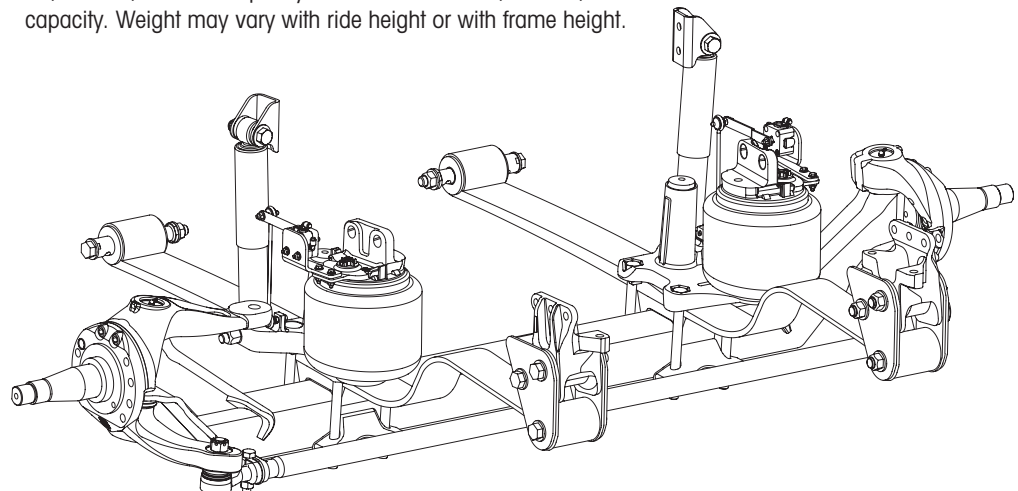
Axle Beam — The box-shaped design provides a stiffer axle and resists torsional, longitudinal, and vertical loads more effectively than traditional axle beams. Together with the front limbs of the leaf springs, the robotically welded axle beam forms a torsion system, enhancing roll stability characteristics and improving handling.

Figure 2-1

AIRTEK SUSPENSION

Capacity: 12,000, 12,500, 13,200, and 14,600 lbs.

Suspension Weight: 268 lbs. (not including the axle) for 12,000/12,500 lbs. capacity and 280 lbs. for 13,200/14,600 lbs. capacity. Weight may vary with ride height or with frame height.

**STEERTEK**

Axle Weight: 286 lbs. for 12,000/12,500 lbs. capacity and 307 lbs. for 13,200/14,600 lbs. capacity. Weight may vary with ride height.

Axle Rating: 12,000, 12,500, 13,200, and 14,600 lbs.

Axle Drop: 4.25"

Axle Clamp Group — The patented clamp group provides four-sided clamping pressure. The Clamp Group consists of the following:

- Top Axle Wrap ■ Bottom Axle Wrap ■ Top Spring Pad
- Top Axle Wrap Liner ■ Bottom Axle Wrap Liner ■ M20 Bolts, Washers and Locknuts

Adjustable Tie Rod — To help maximize tire life, the tie rod easily adjusts toe-in/out.

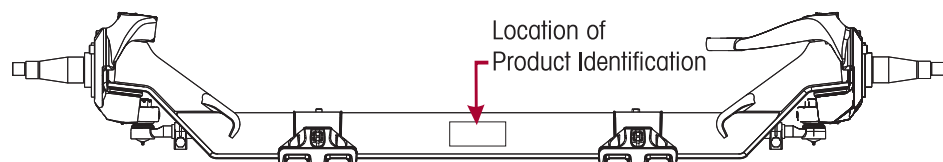
Knuckles — The steering and tie rod arms are integrated for increased strength and reduced weight. The unique steering knuckle packaging delivers a maximum of 50° wheel cut. The two piece knuckle design makes servicing the king pin bushings easier.

TECHNICAL NOTES

1. AIRTEK is approved for 100% on-highway uses; other applications must be pre-approved by Hendrickson Sales Engineering. This system has 12,000, 12,500, 13,200, and 14,600 pound capacities. System capacity represents maximum loads on tires at ground level.
2. The STEERTEK axle is available with 70.87" King Pin Intersections (KPI).
3. The STEERTEK axle offers 4.25" axle beam drop height. Axle beam drop is measured from the kingpin intersection to the top of the axle beam.
4. AIRTEK suspension weight includes shackle bracket assemblies, main springs, bushings, air springs and air spring bracket, height control system, shocks, upper shock brackets and axle clamp group.
5. STEERTEK axle weight is based on a 4.25" drop height and a 70.87" KPI. Axle weight includes, the axle beam, knuckle/steering arm assemblies and tie rod assemblies.
6. AIRTEK is integral to and available exclusively with the STEERTEK axle. This system is anti-lock braking system (ABS) ready. STEERTEK is compatible with most industry standard wheel ends and brakes; contact OEM for more information.
7. Suspension capacity can be determined two different ways.
 - a. Suspension capacity is indicated by the third digit in the axle part number, which can be found on the product identification tag located on the center front side of the axle. The axle part number is an eight-digit number in the form of ABCDE-XYZ. If the third digit (position C) is a "2", the suspension is rated at 12,000 or 12,500 lbs. A "4" indicates a rating of 13,200 or 14,600 lbs. See Figure 2-2.
 - b. Suspension capacity can also be determined by the air spring part number, which is molded into the flexible rubber member of the air spring. 60750-002 indicates a 12,000 or 12,500 lb. rating, and 60716-002 indicates a 13,200 or 14,600 lb. rating.

Figure 2-2

Front view of STEERTEK Axle showing location of Product Identification.



8. **Frame Rail Height** — The AIRTEK suspension is available with two different frame rail heights, 266mm and 300mm. To determine the vehicle frame rail height, measure the bottom to the top of the frame rail flange.