

# **H** APPLICATION GUIDE

## WABCO PAN17 AIR DISC BRAKE

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REVISION: -



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## INTRODUCTION

Hendrickson presents this publication to aid in understanding Hendrickson's Air Disc Brake (ADB) product offering and application requirements. Hendrickson offers WABCO PAN17 for 17.5" wheels, and this document is specific to this system.

## PURPOSE

The purpose of this document is to provide original equipment manufacturers (OEMs) of medium and heavy-duty vehicles with application guidelines for the WABCO PAN17 air disc brake system offered by Hendrickson.

The descriptions and specifications contained in this publication are current at the time of printing.

Hendrickson reserves the right to discontinue or modify its models and / or procedures and to change specifications at any time without notice.

Any references to brand names in this publication are made as an example of the types of tools and materials recommended for use and should not be considered an endorsement. Equivalents may be used.

## IMPORTANT NOTICE

Hazard signal words (such as Warning or Caution) appear in various locations throughout this publication. Information accented by one of these signal words must be observed at all times.

Additional notes are utilized to emphasize areas of procedural importance and provide suggestions for ease of repair. The following definitions indicate the use of these signal words as they appear throughout the publication.

**⚠ WARNING:** INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

**⚠ CAUTION:** Indicates hazards or unsafe practices which could result in damage to equipment or minor personal injury.

**☑ NOTE:** Additional service information not covered in the service procedures.

## QUESTIONS

For answers to questions concerning these guidelines, for information not covered in these guidelines or to request a Hendrickson Trailer Ordering Guide, contact:

Hendrickson Trailer Commercial Vehicle Systems  
2070 Industrial Place SE  
Canton, OH 44707-2641  
Telephone: 866-743-3247 (866-RIDE-AIR)  
Website: [www.hendrickson-intl.com](http://www.hendrickson-intl.com)

## CHANGES TO GUIDELINES

These guidelines are subject to change at any time without prior notice at the discretion of Hendrickson. To get the most up-to-date version of these guidelines visit [www.hendrickson-intl.com](http://www.hendrickson-intl.com).



### AIR DISC BRAKE OPTION

For 17.5" wheels, Hendrickson offers:

1. WABCO PAN17

This system uses a 325mm diameter rotor that is compatible with 17.5" wheels and will fit dual- or zero-offset wide base tires on HN spindles only.

### BRAKE RATINGS

WABCO PAN17 uses a specific brake pad lining and brake chamber tuned for the ADB package to achieve the desired brake rating.

For a complete list of all ADB brake rating certifications for FMVSS-121 (USA), CMVSS-121 (Canada) and ECE R13 (Europe), please reference Hendrickson literature number *L809 – Brake Certifications*. This document is available on Hendrickson’s website at: [www.hendrickson-intl.com](http://www.hendrickson-intl.com).

### AIR DISC BRAKE ORDERING GUIDE / APPLICATION RELEASE FORM

To order ADB packages from Hendrickson, customers are required to complete and submit an ordering guide. For PAN17, an application approval is required:

- A. Application form (Found on the last page of the product ordering guide)

This application approval is required by Hendrickson to fully understand the trailer application as well as the brake balancing characteristics between the tractor and trailer.

## SUSPENSION AND AXLE AVAILABILITY

The table below provides a summary of the suspension systems and axle models available with PAN17 air disc brakes.

HENDRICKSON SUSPENSIONS AND AXLES AVAILABLE WITH PAN17	
SUSPENSION / AXLE MODELS	AVAILABILITY
<b>INTRAAX®</b> Integrated Air Suspension System	Not Available
<b>VANTRAAX®</b> Integrated Air Slider Suspension System	Not Available
<b>B2AHT</b> Integrated Beam to Axle	Available on limited axle tracks only
<b>CONNEX™-ST</b> Trailer Self-Steer Suspension System	Not Available



## SUSPENSION AND AXLE SPECIFICATION REQUIREMENTS

The chart below outlines the limited axle tracks available when equipped with PAN17.

MODELS	AXLE TRACK
B2AHT	71.5" and 77.5"

Suspension beam and frame bracket centers are two inches narrower than conventional installations.

Example: 41" center will become 39" center

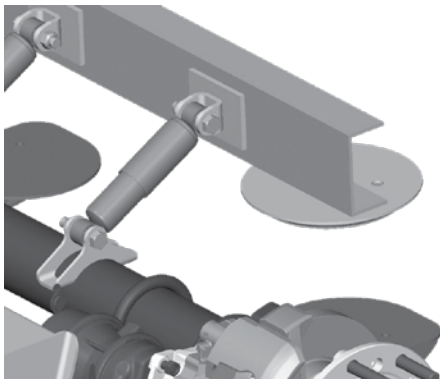
The narrower suspension centers allow for proper clearance between caliper and suspension components as the brake pads and rotors wear.

- NOTE:** The brake calipers and air chambers will move inboard approximately one inch as brake pads and rotors wear.

Ensure the air chambers have adequate clearance with the trailer structure through the full suspension travel when the caliper is at full wear out position.

- NOTE:** Since the ADB air chambers occupy the same space as front-mounted shocks, rear-mounted shocks are required.

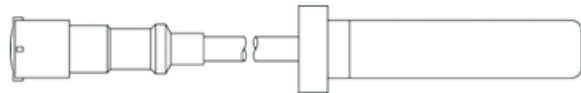
Rear-mounted shocks require rear cross members to support upper shock brackets.



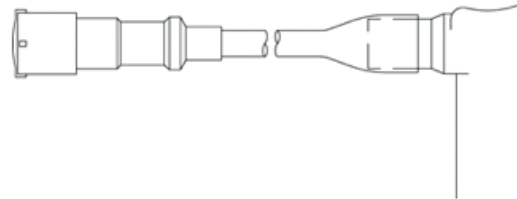
## ADDITIONAL COMPONENT REQUIREMENTS

Hendrickson requires ADB-equipped suspensions and axles to be fitted with dust shields and ABS sensors. Whereas ABS sensors for drum brakes are "right angle" 90-degree shaped, sensors for ADB are "straight" shaped. PAN17 ABS sensing is done by rotor-mounted tone rings.

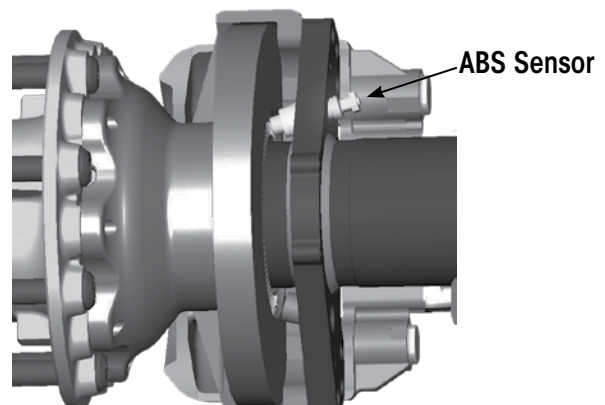
### "Straight" ABS Sensor for ADB



### 90-Degree ABS Sensor for Drum Brakes



### Rotor-Mounted Tone Ring

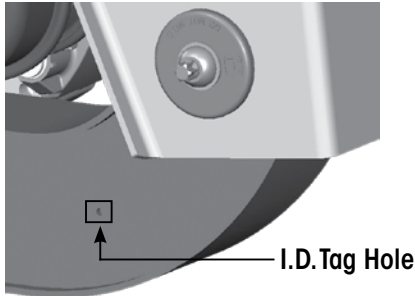




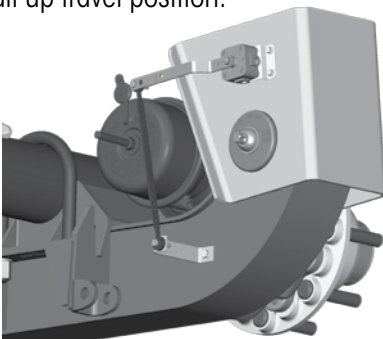
## HEIGHT CONTROL VALVE (HCV) REQUIREMENTS

PAN17 systems use a unique height control valve (HCV) mounting kit. Refer to L1182 Controls Parts Catalog for the appropriate HCV part number.

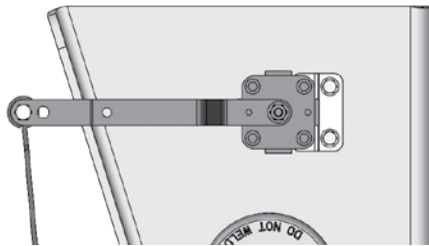
Before installing the lower HCV bracket on the roadside of the suspension beam with a self-tapping screw, drill the existing empty ID Tag hole out with a letter "M" drill bit (0.295 diameter).



After installing the HCV Kit, verify clearance exists between any trailer structure above the frame bracket and the HCV arm when the suspension is in the full up travel position.

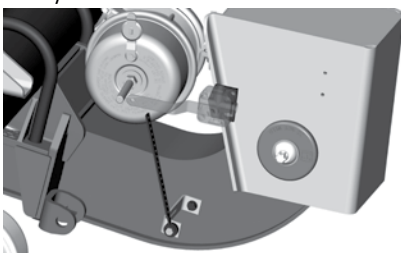


Current HCV Mounting



HCV Full Up Travel Position

If interference exists, an alternative HCV location is necessary.



Alternative HCV Mounting

## WHEEL AND VALVE STEM CLEARANCE

**⚠ WARNING:** Great care must be taken in selecting combinations of wheel and valve stem products that are compatible with ADB. Improper wheel or valve stems can interfere with air disc brakes and cause rapid tire deflation, component damage, a loss of vehicle control, **PROPERTY DAMAGE OR SEVERE PERSONAL INJURY**. Use only wheel and valve stems that provide proper running clearance with air disc brakes equipped on the suspension. If a wheel and valve stem combination is not available, please contact the brake manufacturer for approval. You may also contact the vehicle or brake manufacturer to determine replacement wheel and valve stems approved for the application.

## TRAILER BRAKE AIR LINE ROUTING

**⚠ WARNING:** Great care must be taken when installing brake chamber air lines. Brake air lines must be installed to **ENSURE FREE MOVEMENT** of the caliper over its entire stroke. Attach the brake hose to the brake chamber according to the chamber manufacturer's specifications.

**☑ NOTE:** The brake calipers and air chambers will move inboard approximately one inch as brake pads and rotors wear.



## AIR DISC BRAKE WHEEL-END SYSTEM OPTIONS

Hendrickson offers PAN17 ADB packages in combination with the RTR® READY-TO-ROLL® wheel-end package, HXL5® Hendrickson Extended-Life 5-Year System™.

**HXL5® Hendrickson Extended-Life 5-Year System™** is an industry exclusive system that combines Hendrickson’s engineering and manufacturing expertise with high-performance wheel-end components to create a system that delivers reliability and performance mile after mile.

HXL5 wheel-ends offer the convenience of a single supplier for support and peace of mind from a recognized leader in the trailer industry.

HENDRICKSON ADB OPTIONS MATRIX	
WABCO PAN17	
Wheel-End Package	HXL5®
On-Highway	5 Year
Off-Road	3 Year
Rotor Type	U-Shape Cast Iron
Hub Material	Ductile Iron
Spindle Type	HN
Lube Type	Semi-Fluid Grease
Spindle Nut	PRECISION240®
Options	TIREMAAX® PRO

NOTE: All long-life packages do not include wearable items such as rotors and brake pads. If service to these items is necessary within the warranty period and would require removal of the hub cap (e.g. rotor replacement), Hendrickson must be notified prior to initiation of the service. If service is performed to Hendrickson's specifications, Hendrickson will continue to warrant the system for the remainder of the original warranty period.

## AIR DISC BRAKE WARRANTY

PAN17 air disc brake packages installed by Hendrickson will carry a limited one-year parts and labor warranty, excluding all normal wear.

The wheel-end warranties for ADB cover the hub seal, bearings and hubcaps.

For complete information on Hendrickson warranty policies, refer to literature number, L583 – Hendrickson Comprehensive Warranty Statement available online at [www.hendrickson-intl.com](http://www.hendrickson-intl.com).

**NOTE:** Warranty coverage from our air disc brake suppliers is subject to change without notice. Always contact the air disc brake supplier for the most current warranty information and specific details regarding coverage of air disc brake parts.

## CLOSING

ADB is an evolving technology for the NAFTA market and changes are occurring rapidly. As new developments arise, Hendrickson will continue to provide updated information.

For questions regarding air disc brake packages at Hendrickson, please notify your trailer account manager or call 1-866-RIDE-AIR (866-743-3247) and ask to speak with a customer or technical service representative.



NOTES:

A series of 21 horizontal lines for taking notes.

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



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

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