



Self-Weighing Truck and Trailer Scales™



***Models AW5800, LoadMaxx and
QuickLoad
On-Board Truck Scales***

DRIVE AXLE DUAL DEFLECTION SENSOR BRACKET INSTALLATION GUIDE

For Use on Vehicles with Steel Spring Drive Axles

901-0092-000 R3

Please Read Before Installing

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For product failures due to material or manufacturing defects, Air-Weigh will replace or repair all components for up to 3 years from shipment date to the end-user Air-Weigh customer. These three-year components include: Displays, ComLinks, Sensors, Power Cables, Air Sensor Assemblies, Sensor Harnesses, and all other associated external components. Air-Weigh assumes no responsibility for administering warranty claims directly with any third party end users. The responsibility of Air-Weigh under this warranty is limited to the repair, replacement, or credit of the defective part or assembly.

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1. In the event Air-Weigh requests to examine product prior to disposition, OR for repairs or replacements, Air-Weigh requires a Return Material Authorization (RMA) number to be issued before the item is returned. Contact Customer Support Department at (888) 459-3247 for an RMA number. Please reference this RMA number in all correspondence.
2. Claimed items shall be shipped freight pre-paid to: Air-Weigh, Customer Support Department, 1730 Willow Creek Circle, Eugene, Oregon 97402, USA. The Air-Weigh RMA number shall appear on the outside of the return packaging.
3. Air-Weigh shall examine returned material within 30 days after receipt, or sooner if mutually agreed upon. If Air-Weigh determines that the part or assembly was defective in material or workmanship and within the warranty period, Air-Weigh will repair or replace the part or assembly and return freight pre-paid. In the event Air-Weigh determines that the part or assembly cannot be repaired or replaced and is within the warranty period, a credit not to exceed the purchase price will be issued to the Air-Weigh customer.
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INTRODUCTION

This book applies to the installation of deflection sensors on the HN 462, RT 463 and HAULMAXX suspensions for 5814 and 5818 configurations and kits.

These kits are different from other Air-Weigh kits in that they employ welded j-brackets to hold the deflection sensors for mounting. This document explains the process of attaching the brackets to the equalizing beam of the drive suspension assembly.

All welding and mounting should be done with an empty truck.

Upon receipt of your kit inspect all parts and compare w/ BOM. See sample on page 7.

For the most accurate weighing, follow the installation procedures in this guide exactly.

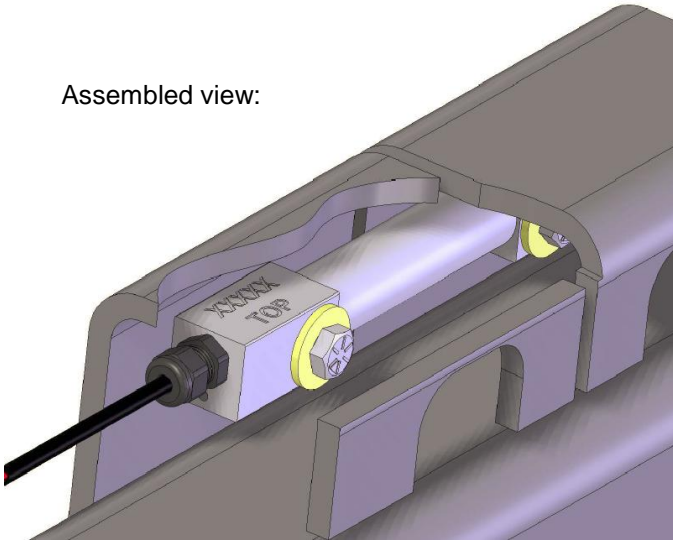
See the user manual included with your kit for complete scale installation, calibration and operation.

⚠ Do not move the vehicle until after brackets have been welded in place and cooled.

⚠ Do not calibrate for weighing operations until after the vehicle has been operated for a week following sensor installation, to allow the sensor to seat.

⚠ The heavy calibration must be done using a maximum vehicle load.

Assembled view:



Parts and Bill Of Materials Referenced In This Guide

As example, Kit 0A5814HAHAG4A0A:

PART NUMBER	QTY	DESCRIPTION
131-4020-001	2.00 EACH	Screw, #10x3/4,PHSMS,Phil, Bla
139-0005-000	2.00 EACH	CON, Ring, .25 Eye, 18-22AWG,
139-0006-000	2.00 EACH	CON, Bullet, .180, 18-22AWG, M
139-0007-000	2.00 EACH	Conn, Terminal, Blade, Push-on
139-4055-002	2.00 EACH	CONN, Lug, .375" Eye, Solder N
145-3032-001	2.00 EACH	Solder N Seal Butt Connector,1
145-4552-001	25.00 EACH	NYLON TIE, 7", T-50, NYLON, BL
146-0004-000	2.00 EACH	Grommet,5/16IDx3/16GWx7/16THx1
350-0035-000	1.00 EACH	IPA, PREP PADS
010-9093-00x	3.00 EACH	Deflection Sensor, Internal PG ECO 2050
014-1500-028	1.00 EACH	Cable, AW5801, Sensor Extension, 15'
014-4500-028	2.00 EACH	Cable, AW5801, Sensor Extension, 45'
016-0500-036	1.00 EACH	Cable,AW5901,Truck Interface
050-5800-000	1.00 EACH	Truck Scale Display, AW5800
050-5801-100	1.00 EACH	Truck Scale ComLink, AW5801A
901-0096-000	1.00 EACH	Manual, AW5800 Truck Scale System
901-0039-000	1.00 EACH	Card,Sensor Config,AW5800
164-2001-001	2.00 EACH	Decal,Cab,"Air-Weigh on board
901-0092-000	1.00 EACH	Manual, Defl Sensor, J Bracket – refer to this manual for install procedure of Steer DS
010-0069-000	1.00 EACH	BRKT KIT,DEFL SENSOR, BONDED

Items below are used to mount the deflection sensor on the drive suspension:

110-0091-000	2.00 EACH	Hendrickson 462/HaulMaxx Axle DS "J" Bracket - left
110-0092-000	2.00 EACH	Hendrickson 462/HaulMaxx Axle DS "J" Bracket - right
131-0037-001	4.00 EACH	SCR-MACH, .375-24 X 2.25 HEX H
132-0014-000	4.00 EACH	NUT-HEX, .375-24, GRD 8, Y ZN
133-0009-000	8.00 EACH	WASHER-FLT, .375 ID, PFC 9, TH

Additional items below needed for welding, not part of the kit, which can be reused:

**HENDRICKSON HN 462/HAULMAXX DRIVE AXLE "J" BRACKET ASSEMBLY JIG
PN 111-0004-000**

PART NUMBER	QTY	DESCRIPTION
110-0095-000	1.00 EACH	Hendrickson 462/HaulMaxx Drive Axle "J" Bracket Assembly Jig
132-0014-000	2.00 EACH	NUT-HEX, .375-24, GRD 8 Y ZN
131-0047-000	2.00 EACH	SCR-3/8-24 X 1.5, GRADE 8, ZN
133-0009-000	4.00 EACH	WASHER -FLT, .375 ID, FC 9, TH
120-0079-000	1.00 EACH	INSTALLATION JIG, HAULMAXX, J BRKT
120-0080-000	1.00 EACH	INSTALLATION JIG, HN462, J BRKT

Optional items:

PART NUMBER	QTY	DESCRIPTION
1000	1.00 EACH	DEFLECTION SENSOR TEST DEVICE

TOOLS REQUIRED

- Sander/grinder with 40-grit medium
- Chalk or permanent marker
- Flat blade screwdriver
- 9/16" wrench
- Torque wrench, 20-80 ft-lb range
- 9/16" socket
- Welder, wire feed or ARC
- C-clamps
- Tape measure
- E7018 welding electrodes for Arc Welding Machines
- E70S-3 or E71T-1 Welding Wire for Wire Welding Machines

INSTALLATION OVERVIEW

Air-Weigh recommends the following install procedure:

- Mount brackets to re-useable jig PN 111-0004-000.
- Position bracket assembly on axle and mark area to clean prior to welding.
- Clean and grind area for mounting to bare metal.
- Reposition bracket assembly and clamp into place.
- Plug weld assembly to equalizing beam.
- Do not weld anywhere else on the brackets except for the round holes.
- Do not remove clamps until unit has cooled.
- Install deflection sensors per instructions and drawing.
- Mount in-cab components per user manual instructions.

BRACKET INSTALLATION INSTRUCTIONS

“J” brackets and re-usable jig:



Mount the “J” brackets to the re-usable jig as pictured in Figs. 1-3:

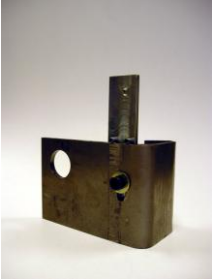


Fig. 1



Fig. 2



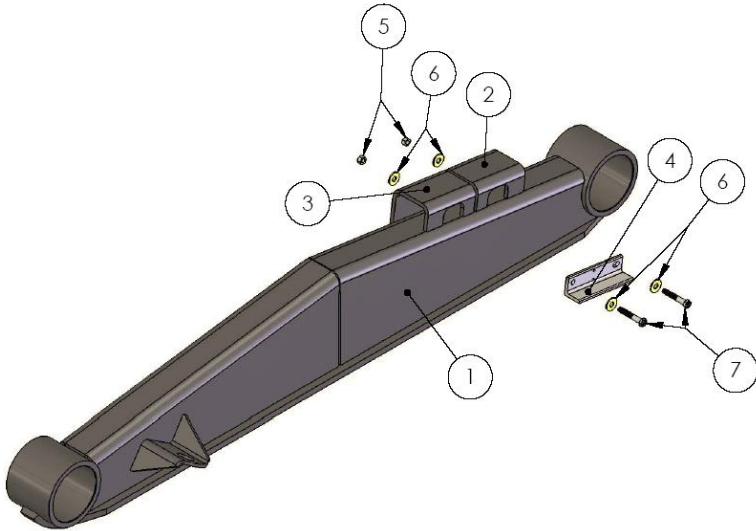
Fig. 3

Place washer on bolt, insert bolt through j-bracket, and then jig. Add another washer, and then nut, to end of bolt. Ascertain both set screws are touching the edges of the bracket. Tighten assembly.

Repeat process with second bracket, making sure all edges are parallel and at the same height.

Position the bracket assemblies onto the equalizing beam –for positioning dimensions see example drawings next two pages – and mark the area to be cleaned for mounting.

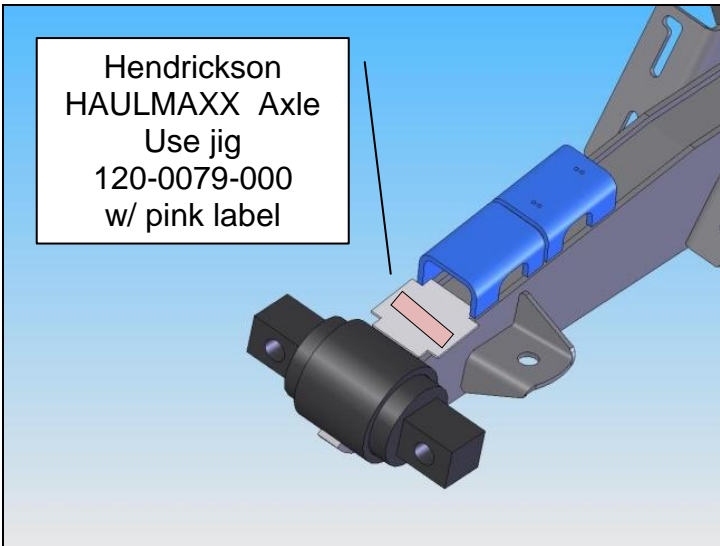
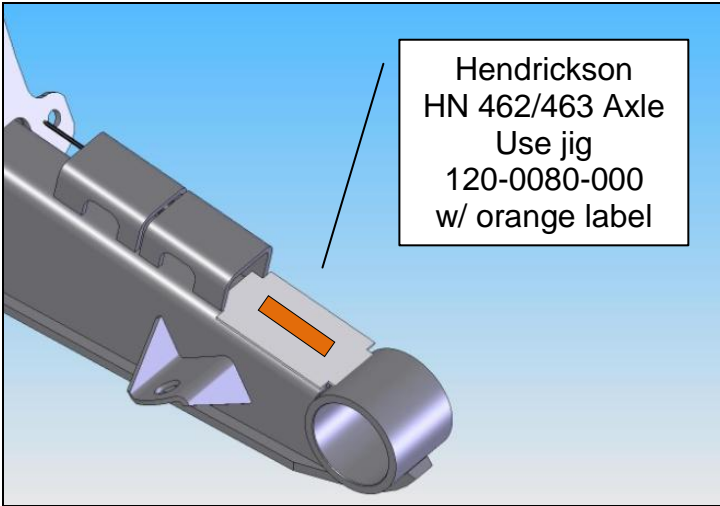
Example of jig mounting assembly:



Parts per drawing of jig mounting assembly:

Item No.	Part Number	Description	QTY
1	462/463	462/463 HENDRICKSON DRIVE AXLE	1
2	110-0091-000	HENDRICKSON 462/463 AXLE "J" BRACKET - LEFT	1
3	110-0092-000	HENDRICKSON 462/463 AXLE "J" BRACKET - RIGHT	1
4	111-0004-000	HENDRICKSON 462/463 DRIVE AXLE "J" BRACKET ASSEMBLY JIG	1
5	132-0014-000	NUT-HEX, .375-24, GRD 8 Y ZN	2
6	133-0009-000	WASHER -FLT, .375 ID, FC 9, TH	4
7	131-0047-000	SCR-3/8-24 X 1.5, GRADE 8, ZN	2

Examples of installation spacing jig placement:



Next, mark the area to be cleaned for mounting.



Mark this area for both openings.

Clean and grind to bare metal the area marked.

Clean this area and grind to bare metal.



Reposition the bracket assembly per positioning dimensions and clamp into place. (Fig. 5)



Plug weld the diameter of these 2 openings.

Fig. 5

Plug weld the diameter of the two large openings on the brackets only. Allow to cool naturally before removing clamps.

Note: The tractor scale display and comlink must be installed, with sensor connected, and powered in the truck dash to check AD readings for these next steps. Refer to the installation manual included in scale kit for the installation of the display and comlink. Then continue with sensor installation.

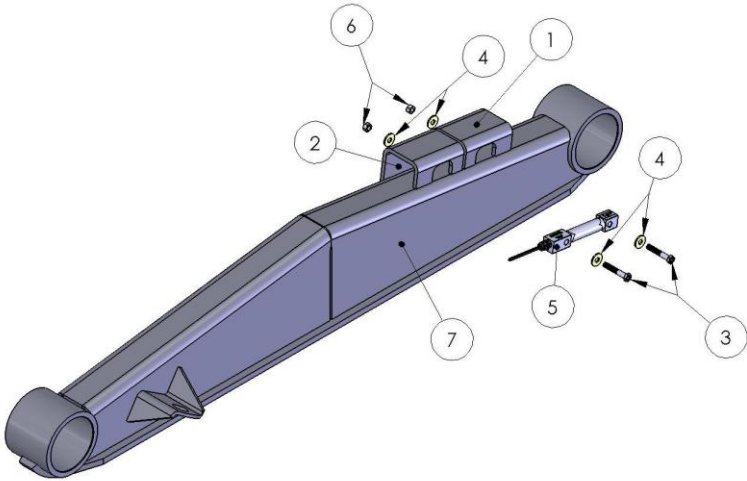
The “J” brackets are now ready for deflection sensor installation:

1. Clean the mounting surface of the sensor and bracket with Brakleen®. Make sure no paint is between the surfaces to be mated.
2. Attach the sensor to the beam with the cable exiting towards the center mount. TOP should be facing up.
3. Place the hardened washers on the 3/8 grade 8 bolts and place the bolts through the sensor, then through the slot in the bracket.
4. Hand-tighten nuts on bolts.
5. Torque the non-cable end of sensor nut (closest to the end hub) to 25 ft-lbs.
6. Torque the cable-end nut (closest to the center mount) to 25 ft-lbs.

Check AD readings using Air-Weigh Deflection Sensor Test Device - PN 1000, or view from an installed truck scale, with the sensor connected. Refer to manual 901-0096-000 for how to check AD readings from the truck scale. The sensor reading should be in the range of 750 to 1250. If not within range, loosen the non-cable end bolt and gently wedge sensor up until acceptable AD readings are reached. Retighten nut to 25 ft-lbs.

7. Torque the non-cable end nut to 50 ft-lbs.
8. Torque the cable-end nut to 50 ft-lbs.
9. Run 45 foot sensor cable from under dash to deflection sensor and connect.

Example of mounted deflection sensor assembly:



Parts per drawing of mounted deflection sensor assembly:

Item No.	Part Number	Description	QTY
1	110-0091-000	HENDRICKSON 462/463 AXLE "J" BRACKET - LEFT	1
2	110-0092-000	HENDRICKSON 462/463 AXLE "J" BRACKET - RIGHT	1
3	131-0047-000	SCR-3/8-24 X 1.5, GRADE 8, ZN	2
4	133-0009-000	WASHER -FLT, .375 ID, FC 9, TH	4
5	010-9093-00X	DEFLECTION SENSOR	1
6	132-0014-000	NUT-HEX, .375-24, GRD 8 Y ZN	2
7	462/463	462/463 HENDRICKSON DRIVE AXLE	1

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