Important Notices

Product Options

The Haldex Modular Trailer System (HMTS) with Brake Monitoring System (BMS) was designed to be used on Straight Rail or Drop Deck Single Axle Trailers.

Safety First

This manual describes the correct installation process for the Haldex Modular Trailer System (HMTS) with Brake Monitoring System (BMS). Care must be taken during each phase of the installation in order to ensure the system is installed and working properly.

Please follow your company’s safety procedures at all times when installing this equipment. Be sure that you understand all instructions before you begin.

Remove all air pressure and electrical power from the brake system before beginning work.

Handling Requirements

The Haldex Modular Trailer System (HMTS) with Brake Monitoring System (BMS) requires proper handling prior to and during installation. The HMTS should NEVER be lifted by way of tubing, electrical cables or any components. Lifting MUST only be done by way of the panel itself or the two attached I-beam brackets. Failure to do so may result in loose components and subsequent leakage, leading to panel function degradation or failure.

Questions?

If you have any questions on this product or any of the innovative products offered by Haldex, contact your local distributor for complete details. Technical Service or Troubleshooting help can be obtained by calling Haldex Technical Services Department at 800-643-2374, Press 2.

The products described within this literature, including without limitation, product features, specifications, designs, availability and pricing are subject to change by Haldex and its subsidiaries at any time without notice. This document and other information from Haldex, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system, in the current literature or catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through their own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements are met.
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**Additional Information**

Installation and Troubleshooting Guides available on the Haldex website.

- **Anti-Lock Braking Systems (ABS)**
  Installation/Service Manual (L30041)

- **Intelligent Trailer Control Module (ITCM)**
  Installation/Service Manual (L31286W)

- **Brake Monitoring System (BMS-1)**
  Installation/Service Manual (L31250W)

- **Brake Monitoring System (BMS)**
  Installation/Service Manual (L31290W)

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Haldex Modular Trailer System (HTMS) Specifications - Drop Deck

Drop Deck Trailer

The Haldex Modular Trailer System (HMTS) must be located behind the Air Reservoir with protective shield in front. Center Haldex Modular Trailer System (HMTS).

Curb Side View

OC = On Center
Haldex Modular Trailer System (HTMS) Specifications - Drop Deck (cont’d)

Technical Information

Haldex Modular Trailer System (HMTS) Drop Deck Trailer

Service/Control Air Line Diameter (O.D.): Front Gladhand to Module - 3/8” Tubing (Blue)
Emergency/Supply Air Line Diameter (O.D.): Front Gladhand to Module - 1/2” Tubing (Red)

Service/Control Air Line Diameter (O.D.): Module to Rear Gladhand - 1/2” Tubing (Blue)
Emergency/Supply Air Line Diameter (O.D.): Module to Rear Gladhand - 1/2” Tubing (Red)

Protective Metal Shield is required in front of reservoir: Min. Height 10 1/2”

I-Beam Requirements:
- Height: 3 1/2” - 4”
- Width: 2 1/4”
- Thickness: 1/8”
- I-Beams on 16” Center +/- 1/4”

Note: This side faces Curb Side and this edge will be facing toward the ground.
Haldex Modular Trailer System (HTMS) Specifications - Straight Rail

Straight Rail Trailer

The Haldex Modular Trailer System (HMTS) must be located behind the Air Reservoir. Center Haldex Modular Trailer System (HMTS).

Curb Side View

Trailer Floor Deck

6” 12” OC 12” OC 12” OC 12” OC

Suspension Box

Haldex Modular Trailer System (HMTS)

Air Reservoir

27”

OC = On Center
Haldex Modular Trailer System (HTMS) Specifications - Straight Rail (cont’d)

Technical Information

Haldex Modular Trailer System (HMTS) Straight Rail Trailer

Service/Control Air Line Diameter (O.D.): Front Gladhand to Module - 3/8” Tubing (Blue)
Emergency/Supply Air Line Diameter (O.D.): Front Gladhand to Module - 1/2” Tubing (Red)

Service/Control Air Line Diameter (O.D.): Module to Rear Gladhand - 1/2” Tubing (Blue)
Emergency/Supply Air Line Diameter (O.D.): Module to Rear Gladhand - 1/2” Tubing (Red)

Protective Metal Shield is required in front of reservoir:

Min. Height 10 1/2”

I-Beam Requirements:

Height: 3 1/2” - 4”
Width: 2 1/4”
Thickness: 1/8”
I-Beams on 12” Center +/- 1/4”

Note: This side faces Curb Side and this edge will be facing toward the ground.
Haldex Modular Trailer System (HTMS) - I-Beam Mounting

**Step 1**  Chock wheels.

**Step 2**  Drain tank.

**Step 3**  Remove existing panel.

**Step 4**  Place inner mounting brackets onto I-Beam.

**Step 5**  Attach outer brackets to panel and loosely install 3/8”bolts and lock washers.

**Step 6**  Position Haldex Modular Trailer System (HTMS) unit between I-Beams
Haldex Modular Trailer System (HTMS) - I-Beam Mounting (cont’d)

**Step 7** Slide outer brackets together around I-Beams.

**Step 8** Insert 3/8” bolts, flat washers, lock washers and nuts. Torque (4) places 28-32 ft. lb.

**Step 9** Center Haldex Modular Trailer System (HTMS) between I-Beams and torque (4) places 28-32 ft. lb.

Tighten these bolts last.

**Step 10** Attach hoses to appropriate brake chambers. Do Not Use teflon tape on fittings. Use liquid thread sealant sparingly on all fittings. (Loctite PST565 or equivalent.)

**Step 11** For plastic ports, hand tighten fittings then rotate 1 to 1 1/2 additional turns. The maximum torque allowed is 210 in. lb.
Haldex Modular Trailer System (HTMS) Components - Curb Side

Technical Information

Trailer Module System (TMS)

Height: ........................................ 14”
Length: ....................................... 20”
Weight: ....................................... 28 lbs.

Configuration

FFABS Valve: ......................... ITCM
Mounting: .............................. I-Beam (2 1/4” Wide - 16” On Centers)
Fittings: ................................. PTC (Push-To-Connect) Valves and Components
Panel Fasteners: ....................... Threaded Nuts 1/4-20 UNC and 5/16-18 UNC
Mounting Bracket Fasteners: .... 3/8-16 X 1-1/4 UNC
Haldex Modular Trailer System (HTMS) Components - Road Side

Technical Information

Trailer Module System (TMS)

Height: 14"
Length: 20"
Weight: 28 lbs.

Configuration

FFABS Valve: ITCM
Mounting: I-Beam (2 1/4" Wide - 16" On Centers)
Fittings: PTC (Push-To-Connect) Valves and Components
Panel Fasteners: Threaded Nuts 1/4-20 UNC and 5/16-18 UNC
Mounting Bracket Fasteners: 3/8-16 X 1-1/4 UNC
Haldex Modular Trailer System (HTMS)
Plumbing and Wiring - Curb Side

NOTE: To avoid damage to power connector, use provided zip tie in this location to secure power connection to ITCM ECU.

NOTE: This connection MUST be from the BOTTOM of the reservoir.

Front of Trailer
Curb Side View

Supply Tee Required (Not Included)

Service/Delivery
Parking

Spring Brake Chambers

Trailer Wiring Harness

Air Reservoir (1488 cu.in. min.)

3/8” Tubing
To RPV

1/2” Tubing

To Rear Trailer Supply Red (OUT)

From Front of Trailer (Nose) Supply Red (IN)

All 3/8” Hoses

NOTE: To avoid damage to power connector, use provided zip tie in this location to secure power connection to ITCM ECU.

NOTE: This connection MUST be from the BOTTOM of the reservoir.
Haldex Modular Trailer System (HTMS) Plumbing - Road Side

**WARNING:** External connections, either tubing or electrical, MUST be made CORRECTLY for proper function of the Haldex Modular Trailer System (HTMS). Failure to do so could result in injury or death.

- **Air Reservoir** (1488 cu.in. min.)
- **Front of Trailer**
- **Road Side View**
- **Trailer Front Service**
  - Blue (IN)
  - 3/8” Tubing
- **Trailer Rear Service**
  - Blue (OUT)
  - 1/2” Tubing
- **Leveling Valve**
  - 3/8” Tubing
  - Supply Port
- This connection MUST be from the TOP or SIDE of the reservoir.
Step 1 Verify Trailer Air System is Functioning Correctly

- Charge Emergency (IN) Gladhand (110 - 120 PSI)
  - Spring brake chambers should release
  - Air reservoir tank should fill
  - Air bags should inflate after approximately 20 seconds

- Check for and correct any Emergency Supply air leaks

- Charge Service (IN) Gladhand (110 - 120 PSI)
  - Service brake chambers should apply

- Check for and correct any Service air leaks

- Release Service (IN) Gladhand Pressure
  - Service brakes should release

- Release Emergency Supply (IN) Gladhand Pressure
  - Spring brake chambers should apply (park)

Step 2 Verify Trailer ABS Power

- Apply 12 Volts DC to the Blue ABS Pin #7 on the 7-Way Connector and verify the external mounted Trailer ABS Lamp goes (ON - OFF). The ABS System is okay.

- If the Trailer ABS Lamp stays (ON) solid, an ABS fault is present. Refer to Intelligent Trailer Control Module (ITCM) Installation/Service Manual (L31286W) for fault code details.

  Turn (OFF) Blue ABS Power.

Step 3 Verify Trailer Stoplight Power

- Apply 12 Volts DC to the Stoplight Pin #4 on the 7-Way Connector and verify the external mounted Trailer ABS Lamp goes (ON - OFF). The ABS System is okay.

- If the Trailer ABS Lamp stays (ON) solid, an ABS fault is present. Refer to Intelligent Trailer Control Module (ITCM) Installation/Service Manual (L31286W) for fault code details.
Haldex Modular Trailer System (HTMS) - End of Line and PM Test

Functional Test for Brake Monitoring System (BMS)

All electrical power and air pressure must be removed prior to start of this test.

Step 1  Apply 12 Volts DC to the Blue ABS Pin #7 on the 7-Way Connector

The Brake Monitoring System (BMS) alarm will sound after 15 seconds.

Step 2  Charge the Red (IN) Emergency Gladhand to (110-120 PSI)

The Brake Monitoring System (BMS) alarm will shut off.

NOTE: If the Brake Monitoring System (BMS) alarm continues to sound after completing Step 2, refer to Brake Monitoring System (BMS) Installation/Service Manual (L31290W).

Step 3  Apply 12 Volts DC to the Red Stoplight Pin #4 on the 7-Way Connector

The Brake Monitoring System (BMS) alarm will sound after 60 seconds.

Step 4  Charge the Blue (IN) Service Gladhand to (110-120 PSI)

The Brake Monitoring System (BMS) alarm will shut off.

NOTE: If the Brake Monitoring System (BMS) alarm continues to sound after completing Step 4, refer to Brake Monitoring System (BMS) Installation/Service Manual (L31290W).
Haldex Modular Trailer System (HTMS) - End of Line and PM Test

Functional Test for Reservoir Purge Valve (RPV)

Step 1  Install Panel System with Reservoir Purge Valve (RPV).

Step 2  Start engine or use shop air to build system pressure in reservoir air tank to 110 - 120 PSI.

Step 3  Check for any air leaks.

Step 4  Set parking brakes or remove emergency airline from the trailer. There will be a blast of air coming from the exhaust tube that will last for about eight seconds. Check for any moisture/contaminates during purge.

Step 5  Repeat Steps 1 through Step 4 for three to five cycles.
Notes:
Haldex develops and provides reliable and innovative solutions with focus on brake and air suspension products to the global commercial vehicle industry.

Listed on the Stockholm Stock Exchange, Haldex has annual sales of approximately 3.9 billion SEK and employs about 2,200 people.

haldex.com

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