

*NEXIQ Brake-Link™  
Haldex Trailer ABS  
Application Operator's  
Manual*



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NEXIQ Brake-Link™ Haldex Trailer ABS Application Operator's Manual

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# Table of Contents

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Getting Started .....	1
Getting Started .....	2
Safety Warnings & Cautions .....	3
Using this Manual .....	4
Specialized Text .....	4
Navigation Icons .....	5
General Icons .....	5
Connecting Components .....	6
Navigating Brake-Link™ .....	8
Home Button .....	8
Enter Button .....	8
Menu Buttons .....	9
Direct Access Buttons .....	10
Light-Emitting Diodes (LEDs) .....	12

---

Using Haldex Trailer ABS Application .....	13
Registering ECU & Selecting Navigation Method .....	14
Using the Haldex Trailer ABS Application Features .....	16
ECU Information .....	16
Faults .....	20
Viewing Active Faults .....	21
Viewing Stored Faults .....	25
Clearing Stored Faults .....	29
Data List .....	33
Tests .....	36
Testing Valves .....	37
Testing Sensors .....	40
Modify .....	43
Edit Parameters .....	43
Tire Scale Factor .....	43
Distance to Service .....	48
Reset Trip Distance .....	51
Clear Configuration .....	53

---

Haldex Trailer ABS Data List Parameters .....	57
Data List Parameters - 2S/1M .....	58
Data List Parameters - 2S/2M .....	59
Data List Parameters - 4S/2M .....	60
Haldex Trailer ABS Fault Codes.....	61
Haldex Trailer ABS Fault Codes.....	62

# Chapter 1

## Getting Started



- ▼ *Getting Started, page 2*
- ▼ *Safety Warnings & Cautions, page 3*
- ▼ *Using this Manual, page 4*
- ▼ *Connecting Components, page 6*
- ▼ *Navigating Brake-Link™, page 8*

**B**rake-Link™ is a hand-held diagnostic tool primarily designed to troubleshoot heavy-duty vehicle Anti-lock Braking Systems (ABS). This tool also provides a variety of utilities and configuration options. The end-user documentation is therefore divided into a set of task-oriented operator's manuals. This manual details the **Haldex Trailer ABS Application**.

## Getting Started

Brake-Link™ is a multi-faceted, hand-held, ABS diagnostic tool that offers a variety of utilities, diagnostic applications, and configuration options.



Figure 1.1 Brake-Link™

Component connection procedures and navigation vary depending on the utility or application you're using. The connection and navigation sections in this manual are specific to the **Haldex Trailer ABS Application**.



Refer to the ***NEXIQ Brake-Link™ Operator's Manual*** for:

- a list of safety warnings and cautions
- an overview of the documentation
- a formal introduction to Brake-Link™
- *general* Brake-Link™ connection instructions
- *general* navigation information
- ***GENERIC PLC TEST*** and ***RP1210A PC LINK*** option details



Refer to the manufacturer-specific application Brake-Link™ manual for the controller you're testing.



## Safety Warnings & Cautions

To protect yourself from injury and the test vehicle from damage:

- ✓ Always wear approved eye protection.
- ✓ Always refer to and follow the vehicle manufacturer's WARNINGS, CAUTIONS and service procedures.
- ✓ Exhaust gas contains deadly poison. Always test outdoors *or* use properly vented exhaust hose.
- ✓ Keep yourself and your test equipment clear of all moving or hot engine parts.
- ✓ Unless otherwise noted, set the parking brake and place the gear selector in the NEUTRAL or PARK position. If the vehicle has an automatic parking brake release, temporarily disconnect the release mechanism. Also, block the drive wheels before performing a test with the engine running.
- ✓ Unless otherwise directed, turn the ignition switch OFF before disconnecting or connecting any electrical components.
- ✓ Read and understand this manual before operating your Brake-Link™.
- ✓ NEXIQ Technologies recommends having an assistant drive the vehicle while you use the Brake-Link™ to perform vehicle road testing.
- ✓ Never leave the vehicle unattended while testing.



*Certain Electro-Static Discharge (ESD) and/or Electrical Fast Transient (EFT) events may lock up the Brake-Link™. Disconnect the Brake-Link™ from the power source and re-connect to regain full operation.*

## Using this Manual

This manual contains comprehensive information to teach you how to use the **Haldex Trailer ABS Application**. It also provides the following features to support quick reference once you're familiar with the application.

- A detailed *Table of Contents* to help you find exactly what you're looking for quickly and easily
- *All-inclusive discussions* to minimize referencing other sections
- *Comprehensive illustrations* to help you visualize concepts
- *Troubleshooting Tips* to help you solve or avoid common issues

Additionally, each chapter begins with an “at-a-glance” list of the chapter's contents, along with corresponding page numbers.

## Specialized Text

This manual features the following specially formatted text to help you differentiate software elements presented by the Brake-Link™.

- **Menu items:** Whenever the manual instructs you to select from a list of menu items, it presents the desired choice with this format.
- **Screen titles:** Once you select a menu item, Brake-Link™ presents the selected item's screen. The screen title appears in bolded type.
- **Field/Line:** The manual presents a field or line of text from a display with this formatting.
- **Emphasis:** This format draws your attention to particularly important information.

## Navigation Icons

Brake-Link™ offers two methods of navigation: **menu** and **direct access buttons**. See “Navigating Brake-Link™”, on page 8. If a task can be performed with both methods, the manual provides separate instructions for each method. Topic introductions indicate when there are two sets of instructions and the following icons help you to easily locate the desired set.

For example:

 Clear Faults **via menu navigation**.

 Clear Faults **via buttons navigation**.

## General Icons

This manual also presents icons that denote specific types of peripheral information.



*Troubleshooting Tips help you diagnose or anticipate potential issues.*



*Caution Tips help you avoid injury or prevent damage to Brake-Link™.*



*Frequently asked questions, industry definitions and other relevant background information.*

## Connecting Components

Brake-Link™ interfaces with the vehicle's ECU(s) via:

- the 6-pin or 9-pin Deutsch connector, *typically* located under the dash, beside the driver's seat or near the trailer's brake ECU;

*or*

- the J560 power line connector on the outside of the tractor or trailer.

The brake controllers *supported by this application* transmit information over the vehicle's power lines. If the trailer is connected to the tractor, attach Brake-Link™ to the tractor's Deutsch connector; otherwise, attach to the trailer's power line with the J560 PLC Cable Set.

Figure 1.2 shows how to connect Brake-Link™ components for ABS diagnostics.



Figure 1.2 Connectivity diagram for ABS diagnostics.

Use the J560 PLC Cable Set in place of the Deutsch adapter if you're connecting to the trailer's Power Line.



Figure 1.3 J560 PLC Cable Set

To connect Brake-Link™ components and power-up:

- 1 Attach the Power/Data Cable DB15 Connector to the data port (labeled **To Vehicle**) on the Brake-Link™; tighten the thumbscrews.
- 2 Plug the Data Cable Atari End into the Atari End on the vehicle interface cable (i.e. Deutsch adapter or J560 PLC Cable Set).
- 3 Attach the vehicle interface cable to the vehicle.

— If you're using the J560 PLC Cable Set, plug into the power line connector on the outside of the trailer.

— If you're using the Deutsch Adapter, plug into the Deutsch connector typically located under the dash on the driver's side, beside the driver's seat.

---

**Note:** If the trailer is connected to the tractor, you can attach Brake-Link™ to the tractor or trailer Deutsch connectors.

- 4 If you're using the J560 PLC Cable Set, connect the alligator clips to an external power supply; otherwise, turn the tractor's key to the "on" position.

## Navigating Brake-Link™

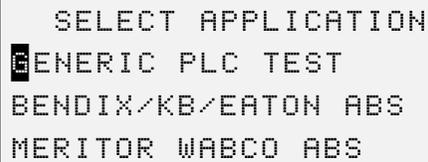
Brake-Link™ offers the following navigation options:

- Menu navigation: use the arrow buttons to scroll through the menu screens and select the menu options.
- Button navigation: use the direct access buttons to access specific Brake-Link™ options directly.

This section provides an *overview* of button functionality. The procedure discussions specify which buttons to push and when.

### Home Button

Press the **HOME** button to return to the **Select Application** screen.



```
SELECT APPLICATION
GENERIC PLC TEST
BENDIX/KB/EATON ABS
MERITOR WABCO ABS
```

### Enter Button

Press the **ENTER** button to select a menu item, confirm a response, or instruct Brake-Link™ to proceed to the next step.

## Menu Buttons

If you choose *MENU NAVIGATION*, use the menu buttons (located below the tool's LCD) to navigate through the menu screens.

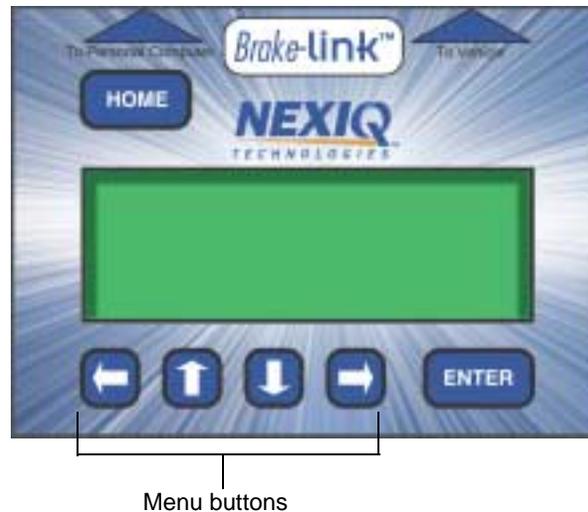


Figure 1.4 Menu buttons

When the LCD displays a list of options,

- press the  or  key to scroll through the available options;

**Note:** A dashed line displays after the last option indicating the end of the menu or list.

- press  to select the option the blinking cursor is on;
- press  to exit your selection and return to the previous menu or screen.

## Direct Access Buttons

The direct access buttons reside on the lower portion of the Brake-Link™, and are grouped by functionality. These buttons operate differently depending on the application you're using and/or controller you're diagnosing. This section provides an overview for how the direct access buttons are used within the **Haldex Trailer ABS Application**.

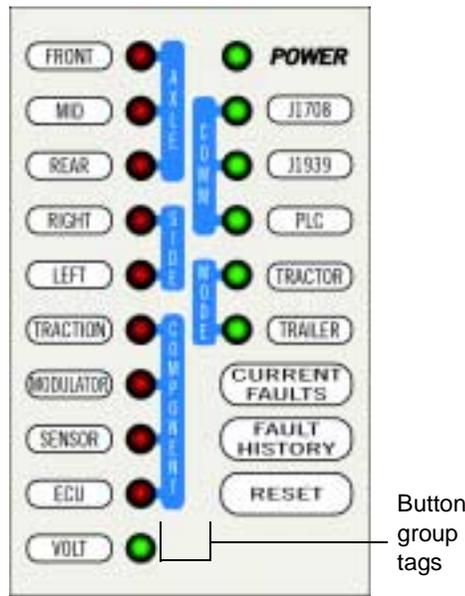


Figure 1.5 Direct Access Buttons

**Note:** If you are not currently using the **Haldex Trailer ABS Application**, refer to the manual specific to the application you are using to find out how these buttons function within that application.

The following table lists the direct access buttons that are supported by the **Haldex Trailer ABS Application**.

**Note:** Buttons *not* included on this list are not enabled and do not function when using this application.

Direct Access Button	Menu Feature	Use
CURRENT FAULTS	<i>View Active Faults</i>	To view stored faults
FAULT HISTORY	<i>View Stored Faults</i>	To view existing faults
RESET	<i>Clear Faults</i>	Clear active/stored faults from the ECU
SENSOR	<i>View Data List</i>	To view Data List parameters
VOLT	<i>View Data List</i>	To view Data List parameters
ECU	<i>View ECU Information</i>	To view ECU information

## Light-Emitting Diodes (LEDs)

Once the Brake-Link™ establishes power, the **POWER** LED illuminates. Then, once the **Haldex Trailer ABS Application** is loaded, the **PLC** and **TRAILER** LEDs illuminate, and remain lit while the application is being used.

---

**Note:** No other LEDs illuminate for this application.

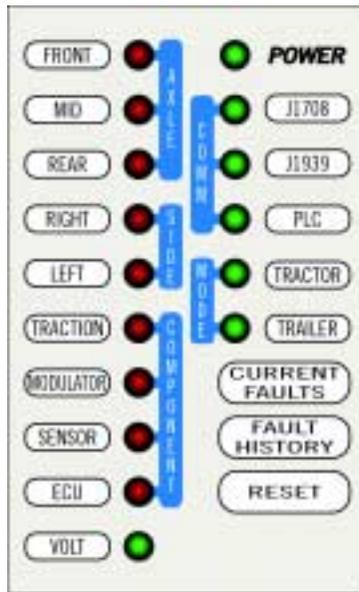


Figure 1.6 Light-Emitting Diodes

## Chapter 2

# Using Haldex Trailer ABS Application



- ▼ *Registering ECU & Selecting Navigation Method, page 14*
- ▼ *Using the Haldex Trailer ABS Application Features, page 16*

**B**rake-Link™ features the **Haldex Trailer ABS Application** for diagnosing Haldex Trailer Anti-lock Brake System issues.

This chapter provides instructions for using the **Haldex Trailer ABS Application**.

This application supports two methods of navigation (see pg. 8). Most discussions in this chapter provide a separate set of instructions for each method. Instructions for completing a task via a certain navigation method are indicated with an icon, as follows:

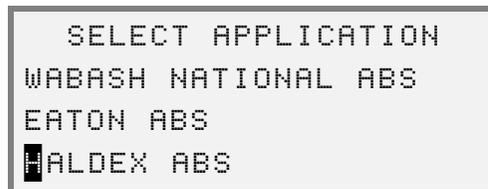
- **menu navigation** is indicated by this icon ;
- **button navigation** is indicated by this icon .

## Registering ECU & Selecting Navigation Method

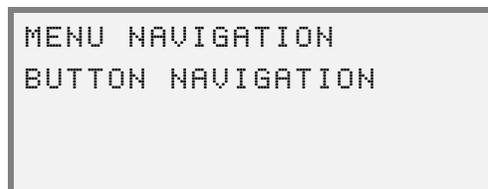
After powering up Brake-Link™ and selecting a diagnostic application, Brake-Link™ attempts to establish communication with the applicable ECU. This process is called *registration*. The following procedure provides step-by-step instructions for registering the ECU, as well as details on selecting a navigation method.

To register the ECU & select a navigation method:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.



- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays the navigation options.




---

**Note:** The **Test** and **Modify** application features do *not* support **BUTTON NAVIGATION**. Please select the **MENU NAVIGATION** when using these features.

- 3 Press the  or  key to select the desired navigation method, then press .

Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU ID and indicates whether there are current and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE

```

4 Press **ENTER** to continue.



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

— If you select menu navigation, Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```

ECU INFORMATION
FAULTS
DATA LIST
TESTS

```

— If you select button navigation, Brake-Link™ displays the **CONTINUE BY PRESSING BUTTONS** prompt.

You have successfully registered the ECU and selected a navigation method, and are now ready to use the **Haldex Trailer ABS Application**. Refer to the next section for detailed instructions.

## Using the Haldex Trailer ABS Application Features

The following table shows the **Haldex Trailer ABS Application** main menu options and indicates the number of items offered by each option, e.g., the **TESTS** menu offers 2 tests.

<b>HALDEX ABS Options</b>	<b># of Items</b>
<b>ECU INFORMATION</b> (see pg. 16)	1
<b>FAULTS</b> (see pg. 20)	3
<b>DATA LIST</b> (see pg. 33)	1
<b>TESTS</b> (see pg. 36)	2
<b>MODIFY</b> (see pg. 43)	4

The rest of this section details each **Haldex Trailer ABS Application** option.

### ECU Information

Use this option to retrieve the following ECU information:

- ECU Type
- Configuration
- Auxiliary Codes
- Catalog Number
- Build Date (Julian)
- Serial Number
- Software Version

The rest of this section describes retrieving ECU information using each navigation method.

  View ECU Information via *menu navigation*:

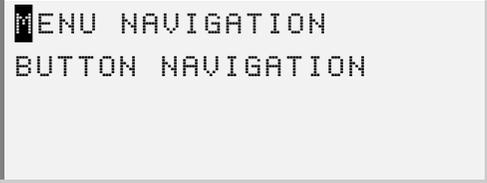
- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.



```
SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS
```

- 2 Press the  or  key to select **HALDEX ABS**, then press .

Brake-Link™ displays navigation options.



```
MENU NAVIGATION
BUTTON NAVIGATION
```

- 3 Press the  or  key to select **MENU NAVIGATION** then press .

Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```
PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE
```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press **[ENTER]** to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```
ECU INFORMATION
FAULT
DATA LIST
TESTS
```

- 5 Press the **[↑]** or **[↓]** key to scroll to **ECU INFORMATION**, then press **[ENTER]**. Brake-Link™ displays the ECU's information. Below is a sample screen, showing information for an ECU with the **2S/1M** configuration.

```
ECU TYPE
PLC SELECT
CONFIGURATION
2S/1M
```

- 6 Press the **[↑]** or **[↓]** key to scroll through the display. A dashed line appears once you have reached the end of the list.
- 7 Press **[↑]** to return to the main menu or **[HOME]** to return to the **Select Application** screen.

Direct  
AccessView ECU Information via *button navigation*:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS

```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION

```

- 3 Press the  or  key to select **BUTTON NAVIGATION**, then press .

Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE

```

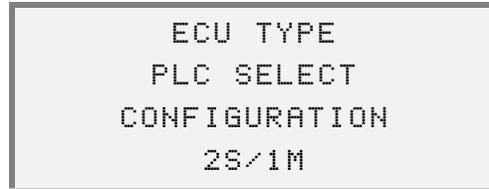


If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press  to continue. Brake-Link™ instructs you to **CONTINUE BY PRESSING BUTTONS**.

- 5 Press the **ECU** button. Brake-Link™ displays the ECU's information. Below is a sample screen, showing information for an ECU with the **2S/1M** configuration.



- 6 Press the **▲** or **▼** key to scroll through the display. A dashed line appears once you have reached the end of the list.
- 7 Press **▲** to return to the **CONTINUE BY PRESSING BUTTONS** screen or **HOME** to return to the **Select Application** screen.

## Faults

Brake-Link™ offers the following fault code options:

- **VIEW ACTIVE FAULTS** (pg. 21)
- **VIEW STORED FAULTS** (pg. 25)
- **CLEAR FAULTS** (pg. 29)

Active fault codes appear in the active fault code list. Once you repair a problem, the ECU moves the associated fault code to the stored list for future reference. Then, once the necessary repairs are made, you can clear the stored fault codes before cycling power or performing a road test.

---

**Note:** A code that appears in the stored list, but isn't in the active list after cycling power or road testing the vehicle, typically indicates an intermittent problem.

This section explains how to use each option provided on the **FAULTS** menu.

## Viewing Active Faults

This section explains how to view active fault codes, using each navigation method.

  View active fault codes via *menu navigation*:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS
  
```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION
  
```

- 3 Press the  or  key to select **MENU NAVIGATION** then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE
  
```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press **ENTER** to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```
ECU INFORMATION
FAULTS
DATA LIST
TESTS
```

- 5 Press the **↑** or **↓** key to select **FAULTS**, then press **ENTER**. Brake-Link™ displays the **Faults Menu**.

```
VIEW ACTIVE FAULTS
VIEW STORED FAULTS
CLEAR FAULTS
```

- 6 Press **ENTER** to select **VIEW ACTIVE FAULTS**. Brake-Link™ shows the active fault code(s).

```
SPEED SENSOR RED S1B
OPEN/SHORT CIRCUIT
SID:001(01h) FC:02
FMI:005(05h) x:002
```

- Line 1 shows the System ID (SID) description.
- Line 2 shows the Failure Mode Indicator (FMI) description.
- Line 3 shows the SID value in decimal and hexadecimal, as well as the Haldex fault code number, in hexadecimal only.
- Line 4 shows the FMI value in decimal and hexadecimal, and an occurrence count (in decimal only)

**Note:** If more than one active fault is detected, **↑** and/or **↓** arrows will be displayed beside Line 4, indicating that additional fault(s) may be viewed by pressing the **↑** or **↓** key.

**Note:** Refer to *Appendix B* for a complete listing of all Haldex Trailer ABS fault codes.

- 7 Press  to return to the main menu or  to return to the **Select Application** screen.

Direct  
Access

View active fault codes via *button navigation*:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS

```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION

```

- 3 Press the  or  key to select **BUTTON NAVIGATION**, then press .

Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE

```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

4 Press **ENTER** to continue. Brake-Link™ prompts you to **CONTINUE BY PRESSING BUTTONS.**

5 Press the **CURRENT FAULTS** button. The active fault code(s) display.

```
SPEED SENSOR RED S1B
OPEN/SHORT CIRCUIT
SID:001(01h) FC:02
FMI:005(05h) x:002
```

— Line 1 shows the System ID (SID) description.

— Line 2 shows the Failure Mode Indicator (FMI) description.

— Line 3 shows the SID value in decimal and hexadecimal, as well as the Haldex fault code number, in hexadecimal only.

— Line 4 shows the FMI value in decimal and hexadecimal, and an occurrence count, in decimal only.

---

**Note:** If more than one active fault is detected, ↑ and/or ↓ arrows will be displayed beside Line 4, indicating that additional fault(s) may be viewed by pressing the **▲** or **▼** key.

---

**Note:** Refer to *Appendix B* for a complete listing of all Haldex Trailer ABS fault codes.

6 Press **▲** to return to the **CONTINUE BY PRESSING BUTTONS** prompt or **HOME** to return to the **Select Application** screen.

## Viewing Stored Faults

Once you repair a problem, the ECU moves the associated fault code to the stored list for future reference.

The rest of this section explains how to view stored faults with each method of navigation.

  View stored fault codes via *menu navigation*:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS
  
```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION
  
```

- 3 Press the  or  key to select **MENU NAVIGATION** then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE
  
```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press **ENTER** to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```
ECU INFORMATION
FAULTS
DATA LIST
TESTS
```

- 5 Press the **↑** or **↓** key to scroll to **FAULTS**, then press **ENTER**. Brake-Link™ displays the **Faults Menu**.

```
VIEW ACTIVE FAULTS
VIEW STORED FAULTS
CLEAR FAULTS
```

- 6 Press the **↑** or **↓** key to select **VIEW STORED FAULTS**, then press **ENTER**. Brake-Link™ shows the stored fault codes.

```
SPEED SENSOR 1A
OPEN/SHORT CIRCUIT
SID:002(02h) FC:01
FMI:005(05h) x:004 ↓
```

— Line 1 shows the System ID (SID) description.

— Line 2 shows the Failure Mode Indicator (FMI) description.

— Line 3 shows the SID value in decimal and hexadecimal, as well as the Haldex fault code number, in hexadecimal only.

— Line 4 shows the FMI value in decimal and hexadecimal, and an occurrence count, in decimal only.

---

**Note:** If more than one stored fault is detected, **↑** and/or **↓** arrows will be displayed beside Line 4, indicating that additional fault(s) may be viewed by pressing the **↑** or **↓** key.

---

**Note:** Refer to *Appendix B* for a complete listing of all Haldex Trailer ABS fault codes.

- 7 Press  to return to the main menu or  to return to the **Select Application** screen.

Direct  
Access

View stored fault codes via *button navigation*:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS

```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION

```

- 3 Press the  or  key to select **BUTTON NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE

```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press  to continue. Brake-Link™ prompts you to **CONTINUE BY PRESSING BUTTONS**.

- 5 Press the **FAULT HISTORY** button. Brake-Link™ shows the stored fault codes.

```
SPEED SENSOR 1A
OPEN/SHORT CIRCUIT
SID:002(02h) FC:01
FMI:005(05h) x:004 ↓
```

- 6 Press the  or  key to scroll through the display.
- Line 1 shows the System ID (SID) description.
  - Line 2 shows the Failure Mode Indicator (FMI) description.
  - Line 3 shows the SID value in decimal and hexadecimal, as well as the Haldex fault code number, in hexadecimal only.
  - Line 4 shows the FMI value in decimal and hexadecimal, and an occurrence count, in decimal only.

---

**Note:** If more than one stored fault is detected, ↑ and/or ↓ arrows will be displayed beside Line 4, indicating that additional fault(s) may be viewed by pressing the  or  key.

---

**Note:** Refer to *Appendix B* for a complete listing of all Haldex Trailer ABS fault codes.

- 7 Press  to return to the **CONTINUE BY PRESSING BUTTONS** prompt or **HOME** to return to the **Select Application** screen.

## Clearing Stored Faults

Once you repair a problem, the ECU moves the associated fault code to the stored list for future reference. The **CLEAR FAULTS** feature allows you to clear stored fault codes from the ECU.

This section explains how to clear stored faults with each method of navigation.

  Clear stored fault codes via *menu navigation*.

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS
  
```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION
  
```

- 3 Press the  or  key to select **MENU NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE
  
```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press **ENTER** to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```
ECU INFORMATION
FAULTS
DATA LIST
TESTS
```

- 5 Press the **↑** or **↓** key to scroll to **FAULTS**, then press **ENTER**. Brake-Link™ displays the **Faults Menu**.

```
VIEW ACTIVE FAULTS
VIEW STORED FAULTS
CLEAR FAULTS
```

- 6 Press the **↑** or **↓** key select **CLEAR FAULTS**, then press **ENTER**. Brake-Link™ requests confirmation.

```
CLEAR FAULTS
ARE YOU SURE?

YES    [NO]
```

- 7 Press the **↑** or **↓** key to select **YES**, then press **ENTER**. Brake-Link™ displays a **Faults Cleared** message.
- 8 Press **ENTER** to return to the **Faults Menu**.
- 9 Press **↑** to return to the main menu or **HOME** to return to the **Select Application** screen.

Direct  
AccessClear stored fault codes via *button navigation*:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS

```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION

```

- 3 Press the  or  key to select **BUTTON NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE

```

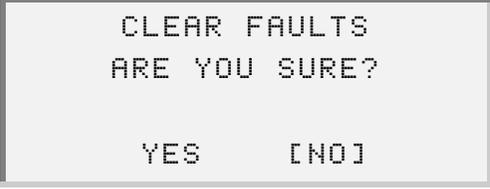


If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press  to continue. Brake-Link™ prompts you to **CONTINUE BY PRESSING BUTTONS.**

- 5 Press the **RESET** button. Brake-Link™ requests confirmation.



```
CLEAR FAULTS
ARE YOU SURE?

YES [NO]
```

- 6 Press the **←** or **→** key to select **YES**, then press **ENTER**.  
Brake-Link™ displays a **Faults Cleared** message.
- 7 Press **ENTER** to return to the **CONTINUE BY PRESSING BUTTONS** prompt.
- 8 Press **←** to return to the **Navigation Selection** screen or **HOME** to return to the **Select Application** screen.

## Data List

The **DATA LIST** option displays information gathered by the ECU. Refer to the following procedure for instructions on viewing the data list with each method of navigation.

**Note:** *Appendix A* provides a complete listing of data list parameters for each ECU configuration.

  Access the Data List via *menu navigation*:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS
  
```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION
  
```

- 3 Press the  or  key to select **MENU NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE
  
```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press **ENTER** to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```
ECU INFORMATION
FAULTS
DATA LIST
TESTS
```

- 5 Press the  or  key to scroll to **DATA LIST**, then press **ENTER**. Brake-Link™ displays the data list.

```
SPEED R1A      35.8 mph
SPEED R1B      35.7 mph
ABS LIGHT      OFF
SOLENOID       13.8 v
```

**Note:** Brake-Link™ displays data values in either English or metric units, depending on the ECU configuration.

- 6 Press the  or  key to scroll through the list. A dashed line appears once you have reached the end of the list.
- 7 Press  to return to the main menu or **HOME** to return to the **Select Application** screen.

Direct  
AccessAccess the Data List via *button navigation*.

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS

```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION

```

- 3 Press the  or  key to select **BUTTON NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE

```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press  to continue. Brake-Link™ instructs you to **CONTINUE BY PRESSING BUTTONS**.

- 5 Press the **SENSOR** or **VOLT** button. Brake-Link™ displays the data list.

SPEED R1A	35.8 mph
SPEED R1B	35.7 mph
ABS LIGHT	OFF
SOLENOID	13.8 v

---

**Note:** Brake-Link™ displays data values in either US or metric units, depending on the ECU configuration.

- 6 Press the **←** or **→** key to scroll through the list. A dashed line appears once you have reached the end of the list.
- 7 Press **←** to return to the **CONTINUE BY PRESSING BUTTONS** prompt or **HOME** to return to the **Select Application** screen.

## Tests

Brake-Link™ offers the following tests:

- **TEST VALVES** to ensure the modulator valves are working properly (pg. 37).
- **SENSOR SEQUENCE TEST** to ensure that the wheel sensors are assigned to the appropriate wheels (pg. 40).

---

**Note:** The **direct access navigation** method is *not* available for the **TESTS** feature. Please use **menu navigation** only.

## Testing Valves

The **TEST VALVES** feature allows you to actuate the selected modulator valve.

The following table lists the available modulator valves for each ECU configuration.

ECU Configuration	Modulator Valve
2S/1M	• Red Valve Channel
2S/2M	• Yellow Valve Channel • Blue Valve Channel
4S/2M	• Yellow Valve Channel • Blue Valve Channel

**Figure 2.1** Modulator Valves

**Note:** If the ECU is a PLC PLUS and the software version is Version 1, valve tests are not available.

  Test selected modulator valve via *menu navigation*:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS
  
```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays the navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION
  
```

- 3 Press the  or  key to select **MENU NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```
PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE
```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press  to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```
ECU INFORMATION
FAULTS
DATA LIST
TESTS
```

- 5 Press the  or  key to scroll to **TESTS**, then press . Brake-Link™ displays the **Tests Menu**.

```
TEST VALUES
SENSOR SEQUENCE TEST
```

- 6 Press the  or  key to select **TEST VALVES**, then press . The **Valve Selection** screen displays.

```
YELLOW VALVE CHANNEL
BLUE VALVE CHANNEL
```

- 7 Press the  or  key to position the cursor on the desired valve then press .

---

**Note:** The list of available valves differs depending on the ECU configuration. See Figure 2.1, on page 37 for a complete listing.

Brake-Link™ begins testing the selected valve. A series of X's will display at the bottom of the screen, indicating the test's progress status.

```

PERFORMING TEST
YELLOW VALVE CHANNEL

XXXXXXXXXX

```

Brake-Link™ prompts you to remove power, then reapply power to the ECU in order to re-establish normal lamp flash.

```

FOR NORMAL LAMP
FLASH, TURN OFF THEN
REAPPLY POWER TO ECU
[ENTER] TO CONTINUE

```

---

**Note:** Remove power from the ECU, not the Brake-Link™.

- 8 Press  to continue.
- Following confirmation, Brake-Link™ displays **TEST IS COMPLETE**.
- 9 Press  to return to the **Valve Selection** screen.
- 10 Press  to return to the **Tests Menu** menu or  to return to the **Select Application** screen.

## Testing Sensors

**Note:** This test is based on ECU configuration. Therefore, if the ECU you're testing has not been identified (is "UNKNOWN"), this test cannot be used.

The **SENSOR SEQUENCE TEST** allows you to ensure the wheel sensors are functioning properly and are attached to the correct wheels. As each sensor obtains a speed greater than 1 mph (or kph), a sequence number is recorded next to the maximum speed value, identifying which sensor achieves that speed. Therefore, the first sensor measuring > 1 mph will have a "1" displayed next to it, the next sensor will have a "2" displayed, and so on.

For example, the screen below shows the expected sequence if you're testing a vehicle with the **4S/2M** configuration and you spin the right front wheel first, working your way around the trailer clockwise.

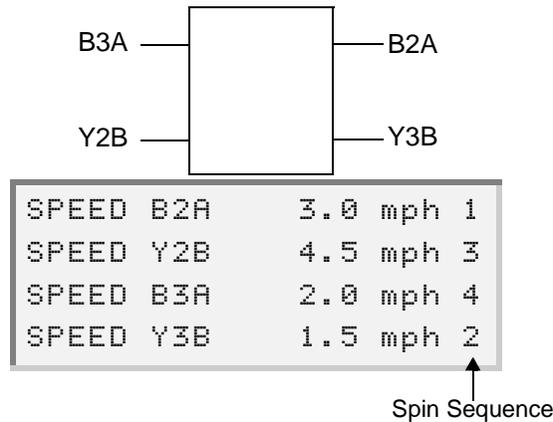


Figure 2.2 Sensor Sequence Test - Sample Screen

The following table lists the available speed sensors for each Haldex ECU.

ECU Configuration	Speed Sensors
2S/1M	R1A, R1B
2S/2M	B2A, Y2B
4S/2M	B2A, Y2B, B3A, Y3B

Figure 2.3 Speed Sensors for Haldex ECUs

 Test sensor valve via *menu navigation*:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS

```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION

```

- 3 Press the  or  key to select **MENU NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE

```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press **ENTER** to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```
ECU INFORMATION
FAULTS
DATA LIST
TESTS
```

- 5 Press the **↑** or **↓** key to scroll to **TESTS**, then press **ENTER**. Brake-Link™ displays the **Tests Menu**.

```
TEST VALVES
SENSOR SEQUENCE TEST
```

- 6 Press the **↑** or **↓** key to select **TEST VALVES**, then press **ENTER**.

Brake-Link™ displays all available wheel sensors with speed values of <1.

```
SPEED R1A      <1 mph
SPEED R1B      <1 mph
```

- 7 Spin the wheels corresponding to the sensors you're testing. The display updates to reflect the greatest wheel speed detected for each wheel, and indicates the sequence in which the wheels were spun (see *Figure 2.2*, on page 40).

---

**Note:** Wheel sensor configurations vary depending on the ECU configuration. Refer to *Figure 2.3*, on page 40 for a listing of all ECU configurations and corresponding sensors.

- 8 Press **↑** to return to the **Tests Menu** or **HOME** to return to the **Select Application** screen.

## Modify

The **MODIFY** feature allows you to make the following modifications:

- edit the *Tire Scale Factor* parameter
- edit the *Distance To Service* parameter
- reset *Trip Distance*
- clear the current ECU Configuration

---

**Note:** This feature is accessible only through *menu navigation*.

## Edit Parameters

The following section provides instructions on editing the *Tire Scale Factor* parameter, followed by instructions for editing the *Distance to Service* parameter.

### Tire Scale Factor

---

**Note:** Changing the unit will cause the units to change for other parameters as well.

To modify the Tire Scale Factor parameter:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6).

Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS
  
```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays the navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION
  
```

- Press the or key to select **MENU NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE
    
```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- Press to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```

FAULTS
DATA LIST
TESTS
MODIFY
    
```

- Press the or key to select **MODIFY**, then press . Brake-Link™ displays the **Modify Selection** screen.

```

TIRE SCALE FACTOR
DISTANCE TO SERVICE
RESET TRIP DISTANCE
CLEAR CONFIGURATION
    
```

- Press the or key to select **Tire Scale Factor**, then press . Brake-Link™ displays the current tire scale factor.

```

TIRE SCALE FACTOR
TIRE SF      502 rev/mi
[ENTER] TO CONTINUE
    
```

- 7 Press **ENTER** to continue. Brake-Link™ prompts you to indicate whether you want to enter the new value in Miles or Kilometers.

```

ENTER NEW
VALUE AS
[MILES]  KILOMETERS

```

- 8 Press the **▲** or **▼** key to make your selection, then press **ENTER**.

— If the unit you select is different than the unit currently in place, Brake-Link™ displays the following message.

```

CHANGING UNITS WILL
AFFECT OTHER VALUES
ARE YOU SURE?
YES                [NO]

```

- 9 Press the **▲** or **▼** key to select **YES**, then press **ENTER**. The screen displays the required range and shows the current value (displayed at the bottom), which can now be edited.

```

TIRE SCALE FACTOR
RANGE: 200-700
          502

```

By default, the cursor is placed over the first digit of the current value.

- 10 Press the **▲** or **▼** key to position the cursor on the digit(s) that you wish to edit.
- 11 Press the **▲** and **▼** keys to set the value of the digit(s).

---

**Note:** Pressing the **▲** button increases the number; pressing the **▼** button decreases the number.

- 12 Press **ENTER**.

- If the value you entered is not within the specified range, the screen will briefly display a message indicating that the value is out of range.

```
TIRE SCALE FACTOR
RANGE: 200-700

OUT OF RANGE
```

The screen then returns to the previous screen, allowing you to re-enter a value.

```
TIRE SCALE FACTOR
RANGE: 200-700

02
```

Once you have entered a valid value, the screen prompts you to confirm the new value.

```
TIRE SCALE FACTOR
510 rev/mi
ARE YOU SURE?
YES [NO]
```

- 13 Press the  or  key to select **YES**, then press . The screen displays the following warning message.

```
TRIP DIST & SERV
DIST WILL BE RESET
ARE YOU SURE?
YES [NO]
```

- 14 Press the  or  key to select **YES**, then press .
- Brake-Link™ returns to the **Modify Selection** screen.

```
TIRE SCALE FACTOR
DISTANCE TO SERVICE
RESET TRIP DISTANCE
CLEAR CONFIGURATION
```

- 15 Press  to return to the main menu or press  to return to the **Select Application** screen.

## Distance to Service

To modify the Distance to Service parameter:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```
SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS
```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays the navigation options.

```
MENU NAVIGATION
BUTTON NAVIGATION
```

- 3 Press the  or  key to select **MENU NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```
PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE
```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press **ENTER** to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```

FAULTS
DATA LIST
TESTS
MODIFY

```

- 5 Press the **↑** or **↓** key to select **MODIFY**, then press **ENTER**. Brake-Link™ displays the **Modify Selection** screen.

```

TIRE SCALE FACTOR
DISTANCE TO SERVICE
RESET TRIP DISTANCE
CLEAR CONFIGURATION

```

- 6 Press the **↑** or **↓** key to select **DISTANCE TO SERVICE**, then press **ENTER**. Brake-Link™ displays the current distance to service value.

```

ODO          52000.2 mi
SERV DIST    999.8 mi

[ENTER] TO CONTINUE

```

- 7 Press **ENTER** to continue. The screen displays the required range and shows the current value, which can now be edited.

```

SERV DIST
RANGE: 0.0-999000.0

|2135.0

```

By default, the cursor is placed over the first digit of the existing value (displayed at the bottom).

- 8 Press the **↑** or **↓** key to position the cursor on the digit(s) that you wish to edit.

- 9 Press the  and  keys to set the value of the digit(s), then press .

**Note:** Pressing the  button increases the number; pressing the  button decreases the number.

Brake-Link™ prompts you to confirm the new value.

```
SERV DIST 3000.0 mi
ARE YOU SURE?

YES      [NO]
```

— If the value you entered is out of the valid range, the following message displays.

```
DISTANCE TO SERVICE
RANGE: 0.0-999000.0

OUT OF RANGE
```

In this instance, the display returns to the previous screen, where you can re-enter the value.

- 10 Press the  or  key to select **YES**, then press . Brake-Link™ returns to the **Modify Selection** screen.

```
TIRE SCALE FACTOR
[ ]DISTANCE TO SERVICE
RESET TRIP DISTANCE
CLEAR CONFIGURATION
```

- 11 Press  to return to the main menu or press  to return to the **Select Application** screen.

## Reset Trip Distance

The **RESET TRIP DISTANCE** feature allows you to set the current trip distance back to “0”.

To reset Trip Distance:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```

SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS
  
```

- 2 Press the  or  key to select **HALDEX ABS**, then press . Brake-Link™ displays the navigation options.

```

MENU NAVIGATION
BUTTON NAVIGATION
  
```

- 3 Press the  or  key to select **MENU NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```

PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE
  
```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press **[ENTER]** to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```
FAULTS
DATA LIST
TESTS
MODIFY
```

- 5 Press the **[↑]** or **[↓]** key to select **MODIFY**, then press **[ENTER]**. Brake-Link™ displays the **Modify Selection** screen.

```
TIRE SCALE FACTOR
DISTANCE TO SERVICE
RESET TRIP DISTANCE
CLEAR CONFIGURATION
```

- 6 Press the **[↑]** or **[↓]** key to select **RESET TRIP DISTANCE**, then press **[ENTER]**. Brake-Link™ prompts you to confirm that you want to set the trip distance to 0.

```
RESET TRIP DISTANCE
TO ZERO
ARE YOU SURE?
YES      [NO]
```

- 7 Press the **[↑]** or **[↓]** key to select **YES**, then press **[ENTER]**. Brake-Link™ displays a message, indicating that the trip distance has been reset.

```
TRIP DISTANCE
HAS BEEN RESET

[ENTER] TO CONTINUE
```



If the message, **ERROR RESETTING TRIP DISTANCE** appears:

- there may be a communications problem.
- the ECU may not be working properly.
- connections may not be properly in-place.

- 8 Press **ENTER** to continue. Brake-Link™ returns to the **Modify Selection** screen.

```
TIRE SCALE FACTOR
DISTANCE TO SERVICE
RESET TRIP DISTANCE
CLEAR CONFIGURATION
```

- 9 Press **←** to return to the main menu or press **HOME** to return to the **Select Application** screen.

## Clear Configuration

The **CLEAR CONFIGURATION** feature clears the current ECU configuration, allowing the configuration to be changed.

To clear configuration:

- 1 Connect Brake-Link™ to the tractor or trailer and power-up (see “Connecting Components”, on page 6). Brake-Link™ boots up and presents the **Select Application** screen.

```
SELECT APPLICATION
WABASH NATIONAL ABS
EATON ABS
HALDEX ABS
```

- 2 Press the **←** or **→** key to select **HALDEX ABS**, then press **ENTER**. Brake-Link™ displays the navigation options.

```
MENU NAVIGATION
BUTTON NAVIGATION
```

- 3 Press the  or  key to select **MENU NAVIGATION**, then press . Brake-Link™ auto-detects the Haldex Trailer ABS ECU, then presents the ECU sensor/modulator configuration and indicates whether there are active and/or stored faults.

```
PLC SELECT 2S/1M
ACTIVE FAULTS      YES
STORED FAULTS     NO
[ENTER] TO CONTINUE
```



If you see the message, **ECU NOT RESPONDING:**

- the ECU is not an appropriate Haldex Trailer ECU.
- the ECU or Data Bus is not working properly.

- 4 Press  to continue. Brake-Link™ presents the **Haldex Trailer ABS Application** main menu.

```
FAULTS
DATA LIST
TESTS
MODIFY
```

- 5 Press the  or  key to select **MODIFY**, then press . Brake-Link™ displays the **Modify Selection** screen.

```
TIRE SCALE FACTOR
DISTANCE TO SERVICE
RESET TRIP DISTANCE
CLEAR CONFIGURATION
```

- 6 Press the  or  key to select **CLEAR CONFIGURATION**, then press . Brake-Link™ prompts you to confirm that you want to reset the ECU configuration.

```
CLEAR CONFIGURATION
4S/2M
ARE YOU SURE?
YES      [NO]
```

- 7 Press the  or  key to select **YES**, then press .
- Brake-Link™ prompts you to power the ECU off then on.

```
FOR NEW CONFIG,  
TURN OFF THEN  
REAPPLY POWER TO ECU  
[ENTER] TO CONTINUE
```

**Note:** Remove power from the ECU, not the Brake-Link™.

- 8 Press  to continue. Brake-Link™ displays the new configuration.

```
ECU CONFIGURATION  
2S/2M  
  
[ENTER] TO CONTINUE
```

- 9 Press  to continue. Brake-Link™ returns to the **Modify Selection** screen.

```
TIRE SCALE FACTOR  
DISTANCE TO SERVICE  
RESET TRIP DISTANCE  
 CLEAR CONFIGURATION
```

- 10 Press  to return to the main menu or press  to return to the **Select Application** screen.

# Appendix A

## Haldex Trailer ABS Data List Parameters



- ▼ *Data List Parameters - 2S/1M, page 58*
- ▼ *Data List Parameters - 2S/2M, page 59*
- ▼ *Data List Parameters - 4S/2M, page 60*

This appendix provides listings for all data list parameters for each Haldex ECU configuration.

## Data List Parameters - 2S/1M

The following table lists all data list parameters for ECUs with the **2S/1M** configuration

Parameter	Displayed Text	Range	Units
Wheel Speed 1A Red Channel	SPEED R1A	0.0 - 90.0 0.0 -144.8	mph kph
Wheel Speed 1B Red Channel	SPEED R1B	0.0 - 90.0 0.0 -144.8	mph kph
ABS Light	ABS LIGHT	ON/OFF	-
Solenoid Voltage	SOLENOID	0.0 - 31.9	v
Tire Scale Factor	TIRE SF	200 - 700	rev/ mi or rev/ km
Odometer	ODO	0.0 - 10737418.2	mi or km
Trip Distance	TRIP DIST	0.0 - 21474836.5	mi or km
Distance to Service	SERV DIST	-10737418.2 - 21474836.5	mi or km

## Data List Parameters - 2S/2M

The following table lists all data list parameters for ECUs with the **2S/2M** configuration.

Parameter	Displayed Text	Range	Units
Wheel Speed 2A Blue Channel	SPEED B2A	0.0 - 90.0 0.0 - 144.8	mph kph
Wheel Speed 2B Yellow Channel	SPEED Y2B	0.0 - 90.0 0.0 - 144.8	mph kph
ABS Light	ABS LIGHT	ON/OFF	-
Solenoid Voltage	SOLENOID	0.0 - 31.9	v
Tire Scale Factor	TIRE SF	200 - 700	rev/ mi or rev/ km
Odometer	ODO	0.0 - 10737418.2	mi or km
Trip Distance	TRIP DIST	0.0 - 21474836.5	mi or km
Distance to Service	SERV DIST	-10737418.2 - 21474836.5	mi or km

## Data List Parameters - 4S/2M

The following table lists all data list parameters for ECUs with the **4S/2M** configuration.

Parameter	Displayed Text	Range	Units
Wheel Speed 2A Blue Channel	SPEED B2A	0.0 - 90.0 0.0 - 144.8	mph kph
Wheel Speed 2B Yellow Channel	SPEED Y2B	0.0 - 90.0 0.0 - 144.8	mph kph
Wheel Speed 3A Blue Channel	SPEED B3A	0.0 - 90.0 0.0 - 144.8	mph kph
Wheel Speed 3B Yellow Channel	SPEED Y3B	0.0 - 90.0 0.0 - 144.8	mph kph
ABS Light	ABS LIGHT	ON/OFF	-
Solenoid Voltage	SOLENOID	0.0 - 31.9	v
Tire Scale Factor	TIRE SF	200 - 700	rev/ mi or rev/ km
Odometer	ODO	0.0 - 10737418.2	mi or km
Trip Distance	TRIP DIST	0.0 - 21474836.5	mi or km
Distance to Service	SERV DIST	-10737418.2 - 21474836.5	mi or km

# Appendix B

## Haldex Trailer ABS Fault Codes



▼ *Haldex Trailer ABS Fault Codes, page 62*

This appendix provides a table containing the current Sub-system ID and Failure Mode Indicator (SID/FMI) descriptions for Haldex ABS fault codes, for each ECU configuration.

## Haldex Trailer ABS Fault Codes

The following tables list all Sub-system IDs (SIDs) and Failure Mode IDs (FMIs), along with complete descriptions.

Refer to “Viewing Active Faults” on page 21 for instructions on viewing these fault codes.

Haldex Fault	Brake-Link Description	SID	FMI	Configuration
1	SPEED SENSOR RED S1A OPEN/SHORT CIRCUIT	2	5	2S/1M
2	SPEED SENSOR RED S1B OPEN/SHORT CIRCUIT	1	5	2S/1M
3	SPEED SENSOR BLU S2A OPEN/SHORT CIRCUIT	2	5	2S/2M, 4S/2M
4	SPEED SENSOR YEL S2B OPEN/SHORT CIRCUIT	1	5	2S/2M
4	SPEED SENSOR YEL S2B OPEN/SHORT CIRCUIT	4	5	4S/2M
5	SPEED SENSOR BLU S3A OPEN/SHORT CIRCUIT	1	5	4S/2M
6	SPEED SENSOR YEL S3B OPEN/SHORT CIRCUIT	3	5	4S/2M
11	SPEED SENSOR RED S1A SENSOR GAP TO LARGE	2	13	2S/1M
12	SPEED SENSOR RED S1B SENSOR GAP TO LARGE	1	13	2S/1M
13	SPEED SENSOR BLU S2A SENSOR GAP TO LARGE	2	13	2S/2M, 4S/2M
14	SPEED SENSOR YEL S2B SENSOR GAP TO LARGE	1	13	2S/2M, 4S/2M
15	SPEED SENSOR BLU S3A SENSOR GAP TO LARGE	1	13	4S/2M
16	SPEED SENSOR YEL S3B SENSOR GAP TO LARGE	3	13	4S/2M
20	INCORRECT EXCITER RING TOOTH COUNT	22	8	ALL

Haldex Fault	Brake-Link Description	SID	FMI	Configuration
21	SPEED SENSOR RED S1A INTERMITTENT INPUT	2	2	2S/1M
22	SPEED SENSOR RED S1B INTERMITTENT INPUT	1	2	2S/1M
23	SPEED SENSOR BLU S2A INTERMITTENT INPUT	2	2	2S/2M, 4S/2M
25	SPEED SENSOR BLU S3A INTERMITTENT INPUT	1	2	4S/2M
26	SPEED SENSOR YEL S3B INTERMITTENT INPUT	3	2	4S/2M
30	AUX DIGITAL CH 0 OPEN/SHORT CIRCUIT	252	5	ALL
31	AUX DIGITAL CH 1 OPEN/SHORT CIRCUIT	252	5	ALL
32	AUX DIGITAL CH 2 OPEN/SHORT CIRCUIT	252	5	ALL
33	AUX DIGITAL CH 3 OPEN/SHORT CIRCUIT	252	5	ALL
34	AUX ANALOG CH 1 OPEN/SHORT CIRCUIT	252	5	ALL
35	AUX ANALOG CH 2 OPEN/SHORT CIRCUIT	252	5	ALL
37	WARNING LAMP SIGNAL FROM OTHER DEVICE	23	14	ALL
40	SENSOR WIRING CROSSED OVER AXLE	22	7	ALL
41	RED VALVE CHANNEL SLOW WHEEL RECOVERY	7	7	2S/1M
42	BLU VALVE CHANNEL SLOW WHEEL RECOVERY	8	7	2S/2M
42	BLU VALVE CHANNEL SLOW WHEEL RECOVERY	7	7	4S/2M

Haldex Fault	Brake-Link Description	SID	FMI	Configuration
43	YEL VALVE CHANNEL SLOW WHEEL RECOVERY	7	7	2S/2M
43	YEL VALVE CHANNEL SLOW WHEEL RECOVERY	9	7	4S/2M
61	RED VALVE CHANNEL HOLD OPEN CIRCUIT	42	5	2S/1M
62	BLU VALVE CHANNEL HOLD OPEN CIRCUIT	43	5	2S/2M
62	BLU VALVE CHANNEL HOLD OPEN CIRCUIT	42	5	4S/2M
63	YEL VALVE CHANNEL HOLD OPEN CIRCUIT	42	5	2S/2M
63	YEL VALVE CHANNEL HOLD OPEN CIRCUIT	44	5	4S/2M
67	RED VALVE CHANNEL DUMP OPEN CIRCUIT	48	5	2S/1M
68	BLU VALVE CHANNEL DUMP OPEN CIRCUIT	49	5	2S/2M
68	BLU VALVE CHANNEL DUMP OPEN CIRCUIT	48	5	4S/2M
69	YEL VALVE CHANNEL DUMP OPEN CIRCUIT	48	5	2S/2M
69	YEL VALVE CHANNEL DUMP OPEN CIRCUIT	50	5	4S/2M
71	RED VALVE CHANNEL HOLD SHORT CIRCUIT	42	4	2S/1M
72	BLU VALVE CHANNEL HOLD SHORT CIRCUIT	43	4	2S/2M
72	BLU VALVE CHANNEL HOLD SHORT CIRCUIT	42	4	4S/2M
73	YEL VALVE CHANNEL HOLD SHORT CIRCUIT	42	4	2S/2M

Haldex Fault	Brake-Link Description	SID	FMI	Configuration
73	YEL VALVE CHANNEL HOLD SHORT CIRCUIT	44	4	4S/2M
77	RED VALVE CHANNEL DUMP SHORT CIRCUIT	48	4	2S/1M
78	BLU VALVE CHANNEL DUMP SHORT CIRCUIT	49	4	2S/2M
78	BLU VALVE CHANNEL DUMP SHORT CIRCUIT	48	4	4S/2M
79	YEL VALVE CHANNEL DUMP SHORT CIRCUIT	48	4	2S/2M
79	YEL VALVE CHANNEL DUMP SHORT CIRCUIT	50	4	4S/2M
80	ANY VALVE CHANNEL LEAKAGE CURRENT	254	12	ALL
81	RED VALVE CHANNEL HOLD SHORT TO B+	42	3	2S/1M
82	BLU VALVE CHANNEL HOLD SHORT TO B+	43	3	2S/2M
82	BLU VALVE CHANNEL HOLD SHORT TO B+	42	3	4S/2M
83	YEL VALVE CHANNEL HOLD SHORT TO B+	42	3	2S/2M
83	YEL VALVE CHANNEL HOLD SHORT TO B+	44	3	4S/2M
87	RED VALVE CHANNEL HOLD SHORT TO B+	48	3	2S/1M
88	BLU VALVE CHANNEL HOLD SHORT TO B+	49	3	2S/2M
88	BLU VALVE CHANNEL HOLD SHORT TO B+	48	3	4S/2M
89	YEL VALVE CHANNEL HOLD SHORT TO B+	48	3	2S/2M
89	YEL VALVE CHANNEL HOLD SHORT TO B+	50	3	4S/2M

Haldex Fault	Brake-Link Description	SID	FMI	Configuration
90	LOW POWER SUPPLY VOLTAGE TO ABS ECU	251	4	ALL
91	NO SOLENOID VOLTAGE DEFECTIVE ABS ECU	254	12	ALL
92	HIGH POWER SUPPLY VOLTAGE TO ABS ECU	251	3	ALL
93	ABS SHORT CIRCUIT DEFECTIVE ABS ECU	254	12	ALL
99	ABS CHECKSUM ERROR DEFECTIVE ABS ECU	254	12	ALL
9A	AUXILIARY FUNCTION LINE 2 CONFIGURATION ERROR	254	13	ALL
C0	SENSOR/VALVE CONFIGURATION ERROR	240	13	ALL
C1	SENSOR/VALVE CONFIGURATION ERROR	240	13	ALL
C2	SENSOR/VALVE CONFIGURATION ERROR	240	13	ALL
E0	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
E1	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
E2	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
E3	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
E4	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
E5	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
E6	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL

<b>Haldex Fault</b>	<b>Brake-Link Description</b>	<b>SID</b>	<b>FMI</b>	<b>Configuration</b>
E7	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
E8	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
E9	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
EA	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
EB	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
EC	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
ED	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
EE	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL
EF	DEFECTIVE ABS ECU REPLACE AS REQUIRED	254	12	ALL

