Haldex

Operations Manual

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ABS DIAGNOSTICS
PLC Trailer PC Program

ABS DIAGNOSTICS - PLC TRAILER PC PROGRAM

Introduction

The Haldex Power Line Carrier (PLC) Trailer Anti-Lock Brake System (ABS) PC Diagnostics software application provides diagnostic support for the trailer ABS in-cab warning light communications that are used with PLC4TRUCKS/Multiplexing technology. The application supports Recommended Practice (RP) 1210A Application Program Interface (API) for the Haldex PLC Adapter.

Capabilities

The Haldex PLC Trailer ABS Diagnostics software includes the following capabilities:

Supports Recommended Practice (RP) 1210A Application Program Interface (API)
- Provides diagnostic test results with file print and/or save capability
- Provides active and stored fault code(s) with repair instructions
- Reads and writes to the internal memory of ABS ECU
- Provides various odometer functions
- Mimics the trailer ABS warning light

User Characteristics

This application is designed for persons with knowledge of standard ABS terminology and a functional understanding of troubleshooting techniques for repairing a commercial trailer equipped with a Haldex ABS. The User Interface assumes that the user has experience with personal computers that includes:

- Pointing device (mouse) control skills
- Basic knowledge of the Microsoft Windows operating systems
- Common Microsoft Windows navigation skills such as a menus, icons and scroll bars

System Requirements

PC Hardware Requirements:
Pentium II 233 MHz or higher with 32 MB or more of RAM, and a CD-ROM
drive for installation
A minimum screen resolution of 800x600 and 256 colors

Operating Systems Supported:
Windows XP
Windows 2000 (Service Pack 1 or higher is suggested)
Windows NT 4.0 (Service Pack 3 or 4 is recommended)
Windows Millennium Edition (ME)
Windows 98 Second Edition (preferred but not required)
Windows 95 (B or higher)

Toolbar Buttons

The following tables include the icons that appear on various toolbars, the command represented and the function of each.

Icon	Command	Function
Common Commands – All Screens		
	Exit or Return to Main	Main Screen: Exit the application and return to Windows. All other screens: Return to the Main Screen.
	Add Comment	Displays the Add Comment screen to allow the user to enter a comment for inclusion in the report.
	Help	Displays the application help file contents.
Main Screen		
	Save Results	Prompts user to save the results of the diagnostics test to a file.
	Print Results	Prints the results of the diagnostics test.
	Connect Disconnect	Opens and closes the communications port on the PC.
	Configure	Displays the Configuration screen, which allows the user to configure application and communications settings. Select Protocol: PLC or J1708 Select Device: Which adapter and Comport
	Diagnostics	Displays the Extended Diagnostics screen.
	Odometer	Displays the Odometer screen.
	ScratchPad	Displays the ScratchPad screen.
Test Trailer ABS Lamp	Test Trailer ABS Lamp	Test the Trailer ABS Warning Lamp for 10 Seconds
Test In-Cab Trailer ABS Lamp	Test In-Cab Trailer ABS Lamp	Test the In-Cab Trailer ABS Warning Lamp for 10 seconds

NOTE: Buttons on screens can also be accessed by the keyboard by pressing ALT key and corresponding underlined letter in button at the same time.

Toolbar Buttons (continued)

Icon	Command	Function
Odometer Screen		
MI KM	Miles or Kilometers	Toggles between display of miles/kilometers.
025	Read Odometer	Read all odometer values from the ABS ECU.
TRIP	Reset Trip	Sets the trip odometer to zero (0).
	Set Distance to Service	Sets the distance to the next service.
	Set Tire Scale Factor	Sets the Tire Scale Factor.
Extended Diagnostics Screen		
	Red Solenoid Test	Begins the red solenoid test.
	Blue Solenoid Test	Begins the blue solenoid test.
	Yellow Solenoid Test	Begins the yellow solenoid test.
	Reset Sensor Test	Resets the sensor test display.
	Get Solenoid Output Voltage	Reads and displays the solenoid output voltage.
ScratchPad Screen		
	Write to ScratchPad	Writes all Scratchpad fields to the ABS ECU memory.
	Read ScratchPad	Retrieves all Scratchpad data fields from the ABS ECU memory.

NOTE: Buttons on screens can also be accessed by the keyboard by pressing ALT key and corresponding underlined letter in button at the same time.
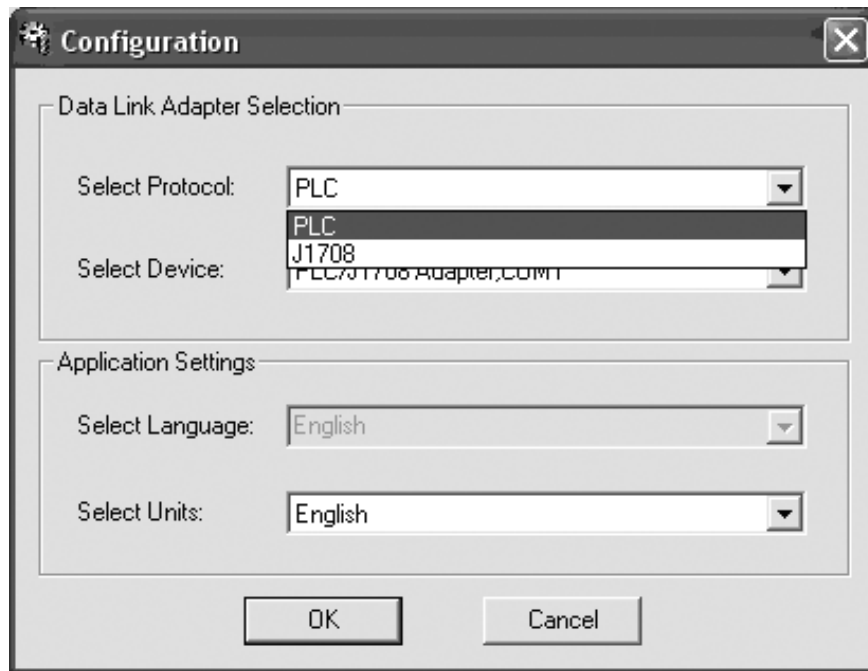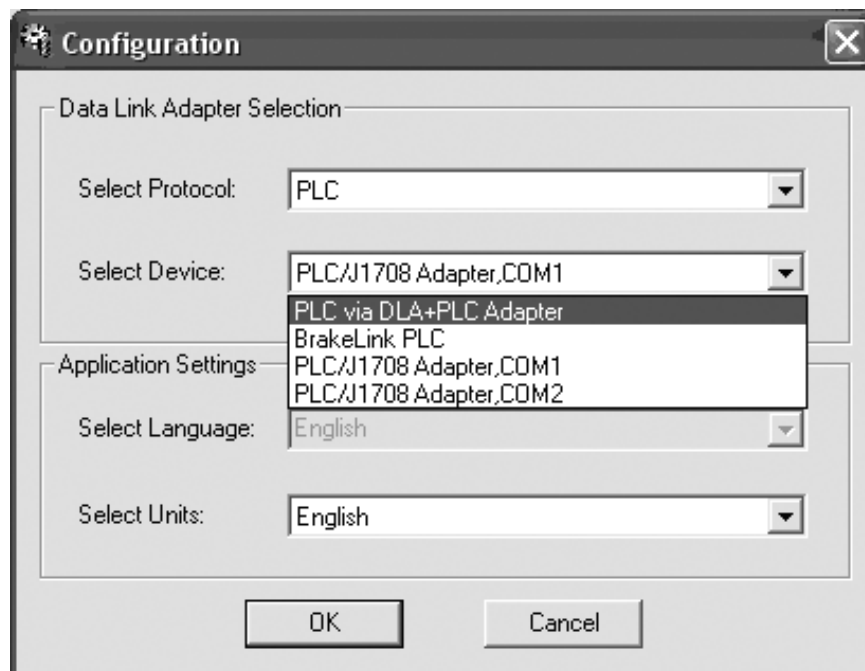
Press the Configuration Icon or the F7 key

Select Protocol: Choose PLC or J1708.

Select Device: Choose what adapter you are using.

Then Press OK

Main Screen

Haldex Trailer ABS Diagnostics Ver 2.0

ECU Information

Field	Value
ECU Type:	PLC SELECT 2M
ABS ECU Configuration:	C2 (4S/2M)
Stored ECU Configuration:	C2 (4S/2M)
ECU Serial Number:	D127159
Haldex Catalog Number:	201193DE
A Codes:	A4 A7

Trailer ABS Warning Lamp

Test Trailer ABS Lamp

Test In-Cab Trailer ABS Lamp

ECU Fault Information:

○ Active Faults   ○ Stored Faults

Code	Count
05	1
03	1

Blue channel wheel speed sensor. 3A has an open or short circuit. Check connections then replace cable or sensor as required. Resistance reading of sensor is between 980 and 2350 ohms. If sensor checks out to be good, may be a defective ECU. Replace ECU as required.

Active Faults: Yes   Stored Faults: Yes   Restart   Clear Faults

Field/Button	Purpose
ECU Information:	
ECU Type	Displays description of the ECU model
ABS ECU Configuration	Displays current sensor/valve configuration code
Stored ECU Configuration	Displays stored sensor/valve configuration code
ECU Serial number	Displays ECU Serial number
ABS ECU Part Number	Displays Haldex ECU Part number
Auxiliary Codes	Displays up to four auxiliary codes
Trailer ABS Warning Lamp	Mimics the in-cab trailer ABS warning lamp
ECU Fault Information:	
Active Faults	When selected, displays active fault codes in the grid
Stored Faults	When selected, displays stored fault codes in the grid
Active Faults (display field)	Displays "Yes" or "No" depending on whether active faults exist
Stored Faults (display field)	Displays "Yes" or "No" depending on whether stored faults exist
Restart	Begins new diagnostic test
Clear Faults	Clears stored faults - Only enabled if stored faults exist and are currently being viewed

Extended Diagnostics Screen
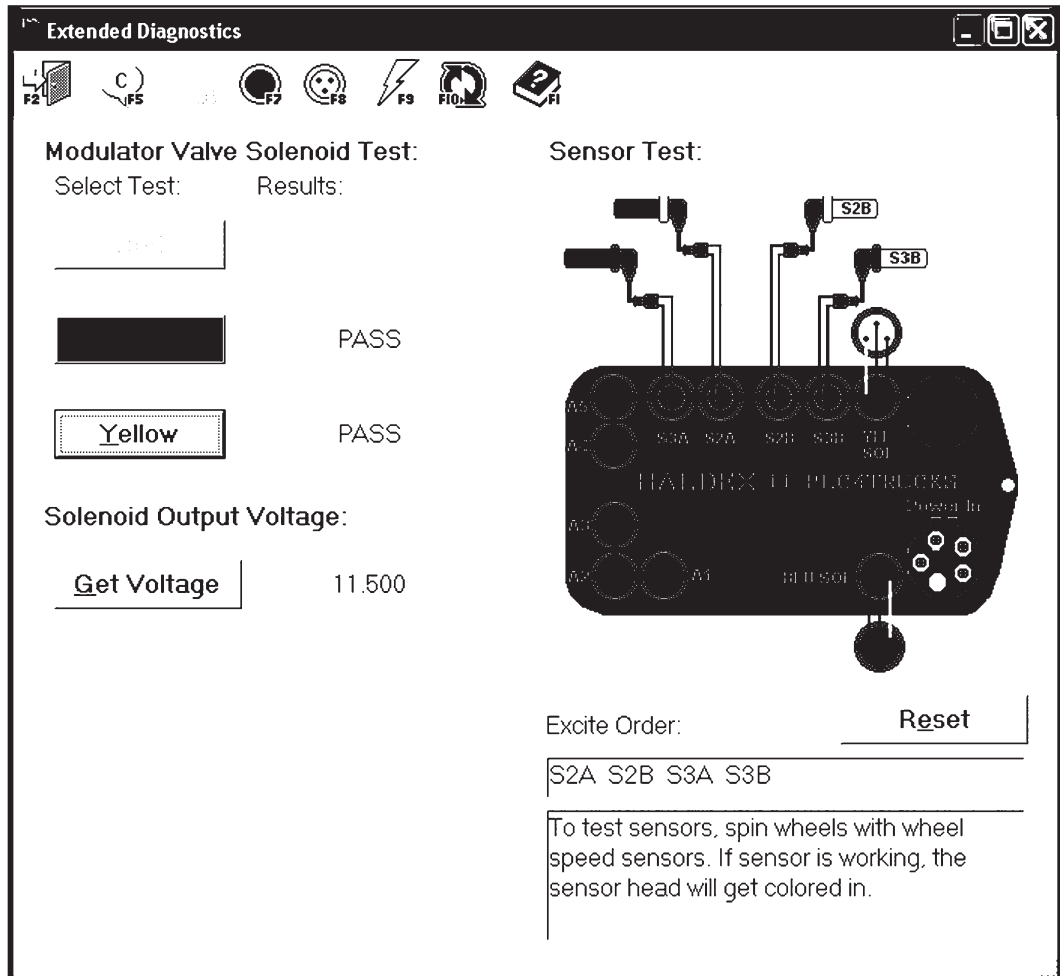
Button	Purpose
Modulator Valve Solenoid test:	
Red	Begins red solenoid test
Blue	Begins blue solenoid test
Yellow	Begins yellow solenoid test
Solenoid Output Voltage:	
Get Voltage	Displays the current solenoid output voltage
Sensor Test:	
Reset	Resets wheel speed sensor test
Excite Order	Displays the order in which the sensors were "excited"

Simply spinning the wheels tests the Wheel Speed Sensors. If the test is successful, the sensor ends are shown on the diagram and are colored as appropriate (Red, Blue or Yellow). As the sensors are colored, the order in which they are "excited" is displayed. Solenoid Output Voltage is read upon request by clicking the appropriate button on the screen or toolbar.

The user can test the solenoids ("blow downs") by clicking the button for the solenoid that they want to test. Only one solenoid can be tested at a time.

Odometer Screen

Field/Button	Purpose
ECU Odometer	Displays the ECU odometer reading. (Read only)
Read Odometer	Retrieves the odometer values: *ECU Odometer, Trip Distance, Tire Scale Factor* and *Distance to Service*
Trip Distance	Displays the trip distance - (Read only)
Reset Trip Distance	Sets the trip distance to zero
Tire Scale Factor	Displays current tire scale factor - (Read/Write)
Set Tire Scale Factor	Sets the tire scale factor for calibrating odometer
Distance to Service	Displays the current distance to service - If the distance to service has been exceeded, the Odometer screen indicates it by a negative value - Upon power up, the ABS warning light will flash three times if distance to service is exceeded - In this case, the field is highlighted in yellow and a message box is displayed - (Read/Write)
Set Distance to Service	Sets the distance for the next service check

Extended Diagnostics Screen

Field	Purpose
Read Only:	
Build Date	Displays the ECU build date
Haldex Catalog Number	Displays the ECU's Haldex Catalog Number
Read/Write Only:	
OEM	Allows user input
Inspector	Allows user input
Plant Location	Allows user input
Model	Allows user input
Production Date	Allows user input
Fleet Trailer Number	Allows user input
Suspension Type	Allows user input
VIN Number	Allows user input
Service Information	Allows user input

Haldex periodically issues program updates and bulletins that deal with your ABS Diagnostics - PLC Trailer PC Program. Please check the Haldex website www.haldex.com (Product Information/Software Updates) for the most recent information.

Notes:

Haldex

Haldex offers proprietary vehicle technology solutions to the global vehicle industry within specific niches. We focus on products to improve safety, the environment and vehicle dynamics.

We are enhancing our competitive capabilities and building long-term customer relationships through high performance, low total costs to the customer through the product's service life, ethical business practices and commitment to long-term partnerships. Haldex operations are divided into three business areas: Commercial Vehicle Systems, Hydraulic Systems and Traction Systems.

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