11/2003

L31204

M939

INFOCENTER

Instruction Manual

Hand Held

ABS Diagnostic Tool

Haldex

INTRODUCTION

INFO CENTER is a diagnostic tool used for readout of fault codes as well as other information available in the ABS Electronic Control Unit (ECU).

The INFO CENTER is connected to the ABS diagnostic connector. While the ABS is powered, information is transferred to the Infocenter.

Functions:

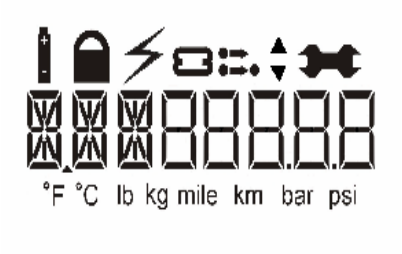
Diagnostics:
- OK 07 if No Fault Codes
- Current Fault Code
- Stored Fault Codes
- Sensor Check – Wheel Speed Bars and Sensor Location

ABS ECU Information:
- Serial Number
- Product Code (80 19 01)
- System Configuration (2S2C C1)

INSTRUCTIONS

Press the functions buttons once only. Some functions require a 2 sec. button hold when a COMFAIL message appears, check ABS diagnostic connection and press either button again.

DISPLAY



LEGENDS

Flashing = ABS Communications

Flashing = Current ABS Fault

PRODUCT IDENTIFICATION and CONFIGURATION

ABS Product Type: 24V ABS M939 2S/2M System.

Configuration Code:

Code	Function	Sensors Used	Modulators Used
2S2C C1	2S/2M	2A, 2B	Blue, Yellow

Table of Contents

Power Up Information

The first screen displays an all Segment Display Test

Next screen displays ABS Sensor/Valve Configuration 2S2C C1= (2Sensors/2 Valves)

Powers up to an 07 code, Vehicle is Stationary. ABS is fully operational. If vehicle ABS Lamp is still On, check stored faults. (see page 2).

(See pages 5-7 for a complete fault code list).

or Powers up to a Fault Code, the display will power up to the Active Fault Code.

(see pages 5-7 for complete fault code list).

If COMFAIL is displayed, communication failure between ECU and the INFOCENTER. Check connection at diagnostic plug for damage

Diagnostic Mode: View/Clear Stored Faults

From the Active Fault screen, "OK 07", Vehicle is Stationary ABS is Fully Operational

Hold Right Button 2 sec. until "BUSY" is Displayed

The First Stored Fault is Displayed. Example: "Yedu 69" Fault

Repeat Right Button Hold for next Stored Fault. Example: "Yehd 63" Fault

Repeat Right Button Hold for next Stored Fault. Example: "S2A 03" Fault

Repeat Right Button Hold until "CLR CA" is Displayed. If more than 5 faults are stored, wait for the 6th fault, repeat right button holds to view next 5.

Repeat Right Button Hold to Clear Stored fault Codes. otherwise wait to return to the Active Fault Screen.

After Clearing Stored Faults, the Display Returns to the Active Fault Screen.

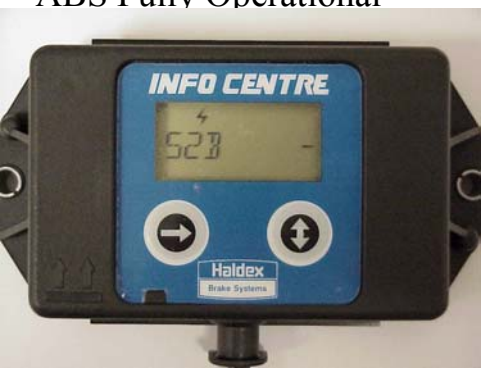
If display is other than 07, reference pages 5-7. Repair, re-power and clear stored faults again.

Wheel Speed Sensor Output Test

From the Active Fault screen, Code 07, Vehicle is Stationary ABS Fully Operational

Press the Right Button to Display “WHL”

Rotate the Wheel with Sensor 2A (1 rev/ 2 sec) 4 sec min. S2A will remain Displayed



Rotate the Wheel with Sensor 2B (1 rev/ 2 sec) 4 sec min. 2B will remain Displayed

Note :
Upon Rotation of a wheel, the sensor location is displayed. The display will remain on until rotation of another wheel. If **NO** Sensor is displayed, verify sensor connection and sensor to exciter alignment.

ABS Configuration	**Sensor Location**
2 Sensors / 2 Modulator Valves (2S2C)	2A 2B

Sensor Locations :

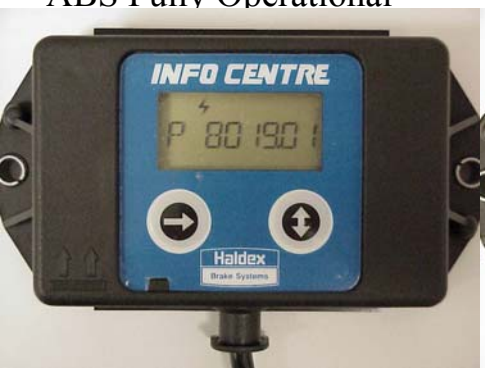
Drivers Side of Vehicle :	Sensor 2A
Passenger side of Vehicle :	Sensor 2B

View ABS Information

From the Active Fault screen, Code 07, Vehicle is Stationary. ABS Fully Operational →

Press the Right Button to Display “WHL”. →

Press the Right Button again to Display the ECU Serial Number Example:11715360 →



Press the Left Button To view Product Type. (80 19 01) 19 references M939

Press the Left Button Again to view Sensor/Valve ABS Config. 2S2C C1 (2 Sensors/2 Valves)

Press the Left Button Again to View InfoCenter Software Version

Press the Left Button Again To View Segment Display Test

Press Left Button Again to return to ECU Serial Number

Diagnostic Fault Code List

BLANK DISPLAY No power to ABS and/or Infocenter

Possible causes: Fuse blown. InfoCenter or cable fault. Open Circuit B-. Poor connection at diagnostic plug.

SENSOR BAR Bar displayed =Sensor output O.K.

Bar not displayed =Sensor output too low. Check sensor gap.

OK 00 System is O.K.vehicle is moving.

OK 07 System is O.K.vehicle is stationary

OPEN OR SHORT SENSOR OUTPUT GROUP

S2A 03 2A Sensor/wiring open or short circuit.

S2B 04 2B Sensor/wiring open or short circuit.

Possible causes: Sensor failure, sensor wiring open or short circuit. Sensor resistance should be 980 – 2350 ohms Verify Wire Ties on sensor cables connected to air hose are not too tight. Excessive grease may prevent secure sensor connections.

LOW SENSOR OUTPUT GROUP

S2A 13 2A Sensor system fault.

S2B 14 2B Sensor system fault.

Possible causes: Sensor worn, maladjusted sensor, wiring open or short circuit. Wheel bearing failure or adjustment Verify Wire Ties on sensor cables connected to air hoses are not too tight. Excessive grease may prevent secure sensor connections.

EXC 20 Incorrect exciter type **Possible causes:** Unequal Exciter tooth count on hubs

(These faults can only be created when the vehicle speed is greater than 6 MPH).

INTERMITTENT LOW SENSOR OUTPUT GROUP

S2A 23 2A Sensor system fault.

S2B 24 2B Sensor system fault.

Possible causes:

Loose sensor,connection,bracket or exciter. Damaged exciter. Maladjusted sensor or worn sensor cable insulation. Wheel bearing failure or adjustment. Verify Wire Ties on sensor cables connected to airlines are not too tight. Excessive grease may prevent secure sensor connections. Inspect exciter ring for damage

(These faults can only be created when the vehicle speed is greater than 6 MPH).

ONE WHEEL WITH SLOW RECOVERY GROUP

Possible causes:

XSEN 40 Sensor wiring crossed across an axle.

SLW 42 Slow recovery, blue channel.

SLW 43 Slow recovery, yellow channel.

Slow brake release,foundation brake mechanical faults, dry bearings, broken spring, restricted piping. Modulator fault. Check for kinks and blockages ect. etc. Incorrect piping, wiring. Inspect exciter ring for damage Failed Primary Reservoir.

MODULATOR SOLENOID WIRING OR SOLENOID OPEN CIRCUIT GROUP

BUHd 62 Hold solenoid, blue channel.

YEHd 63 Hold solenoid, yellow channel.

BUDU 68 Dump solenoid, blue channel.

YEDU 69 Dump solenoid, yellow channel.

Possible causes: Modulator Valve solenoid failure, solenoid connection, or valve cable damage.
Verify Cable Continuity between Valve to ECU connections.
Verify Valve Solenoid resistance is 16 Ohms.

MODULATOR SOLENOID WIRING OR SOLENOID SHORT TO B- GROUP

BUHd 72 Hold solenoid, blue channel.

YEHd 73 Hold solenoid, yellow channel.

BUDU 78 Dump solenoid, blue channel.

YEDU 79 Dump solenoid, yellow channel.

Possible causes: Modulator Valve solenoid failure or valve cable damage
Verify Cable Continuity between Valve and ECU connections.
Verify Valve Solenoid resistance is 16 Ohms.

MODULATOR SOLENOID WIRING OR SOLENOID SHORT TO B+ GROUP

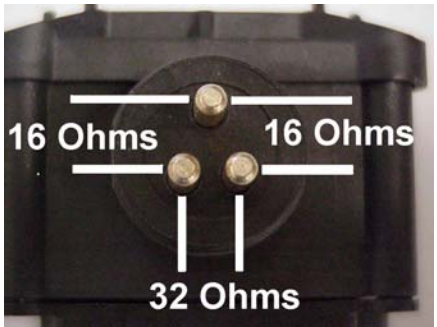
SOL 80 Poor insulation in the modulator solenoid or wiring fault.

BUHd 82 Hold solenoid, blue channel.

YEHd 83 Hold solenoid, yellow channel.

BUDU 88 Dump solenoid, blue channel.

Possible causes: Modulator Valve solenoid failure or valve cable damage.
Verify Cable Continuity between Valve and ECU connections.
Verify Valve Solenoid Resistance is 16 Ohms.



SUPPLY VOLTAGE GROUP

Possible causes: Verify +24V dc power source. Do not use battery charger as power supply.

If a 90 or 92 fault is active, correct the power problem and re-power the ABS before addressing other faults.

B+LO 90 Supply voltage at ECU less than 21V when a solenoid is energized.

ISO1 91 Faulty supply or 15Amp fuse blown (Incorrect power switch sequence).

B+HI 92 Supply voltage at the ECU greater than 33V.

CF Sensors and Solenoid not connected Alternating with code 90 (incomplete solenoid function) Check ECU supply voltage.

VARIOUS CODES

LAMP 0E ABS Warning Lamp

Possible causes: ABS Warning Lamp Relay Open or short circuit.

2S2C C1 ABS Configuration (2 Sensors and 2 Modulator Valves)

ECU 93 Internal ECU fault.

Possible causes: ECU failure.

ECU 99 Internal ECU fault.

E (0-F) Internal ECU fault.

CLR CA Erase stored faults.

CLR CC Clear Configuration.

COM FAIL Communication failure between ECU and INFOCENTER (Press either button to re-establish communications).

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