



Simplified Troubleshooting Procedures 2S/1M Anti-Lock System

After completion of a PLC FFABS or Modular installation, the following troubleshooting test procedures should be performed to ensure the ABS System is functioning properly. If any portion of these tests fail, consult with the Haldex Technical Department at 800-643-2374.

Test Equipment

- 12VDC/30 AMP Power Supply (**DO NOT** use a Battery Charger).
- Jumper Cable from Power Supply to the 7-Way Receptacle.
- Shop Air.

Step One

Charge the trailer brake system with supply and service air. Connect power supply to the 7-way receptacle and follow the checklist below to ensure the ABS System is functioning properly.

- **Modulator Blow-Down:** The ABS modulator should exhaust a brief shot of air, **do not rotate wheels during this test.**
- **ABS Light Sequence:** The ABS light should come on for 2.5 seconds, then go off, if no faults are detected. If faults are detected, the light will remain on.

Step Two

Lift the ABS equipped axle on the trailer, release the service brakes and follow the checklist below.

- **Connect** constant power to the stop light circuit. (#4 conductor at 7-way receptacle)
- **Cycle** power to the trailer auxiliary circuit (#7 conductor at 7-way receptacle) ON, OFF, then ON to activate the system's simple diagnostic mode. (See chart for code interpretation.)
- **Rotate** the "curb" side wheel; the ABS lamp should flash 1 time. The lamp will remain on after the wheel is stopped, until the next wheel is rotated.
- **Rotate** the "road" side wheel; the ABS lamp should flash 2 times.

Blink Code Diagnostics

Mode 1 - Simple Mode Diagnostic Fault Table (ON,OFF,ON)

Item	Flash Count	Actual Fault
System OK	Lamp Stays On	07
Sensor 1A	1 Flash	01, 11, 21
Sensor 1B	2 Flashes	02, 12, 22
Sensor 2A	3 Flashes	03, 13, 23
Sensor 2B	4 Flashes	04, 14, 24
Sensor 3A	5 Flashes	05, 15, 25
Sensor 3B	6 Flashes	06, 16, 26
Red Valve	7 Flashes	41, 61, 67, 71, 77, 81, 87
Blue Valve	8 Flashes	42, 62, 68, 72, 78, 82, 88
Yellow Valve	9 Flashes	43, 63, 69, 73, 79, 83, 89
Low Voltage	10 Flashes	90
ECU Failure	11 Flashes	93, 99, E-Codes

Wheel Speed Mode

Wheel Speed Mode is accessible only when in Simple Mode. This mode is not activated until the ECU has received a signal from the wheel speed sensor of a spinning wheel. The hold solenoid of the modulator associated with the particular sensed spinning wheel will be cycled. The blink codes for the sensed wheels are:

- | | | |
|-----------------------|-----------------------|-----------------------|
| S1A: 1 Flash | S1B: 2 Flashes | S2A: 3 Flashes |
| S2B: 4 Flashes | S3A: 5 Flashes | S3B: 6 Flashes |

Troubleshooting Notes

- **1** - Spin only one wheel at a time.
- **2** - Once a wheel is rotated, the ABS lamp will remain on after the wheel is stopped, until the next wheel is rotated.

Haldex Commercial Vehicle Systems

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