ABS MOD I DIAGNOSTIC TROUBLESHOOTING GUIDE

For trailers built after 2/28/98. No special diagnostic tools needed.

Tools Needed:
- Volt/Ohm Meter
- Battery Charger
- Service Air
- Supply Air
- 105 - 120 PSI
- Power

Diagnostics requires:
- Check Wiring
- Check for these possible problems:
- Bent pins, spread terminal, bad splices, corrosion, wire break abrasion or wires incorrectly located in connectors.

Repairs requires:
- Disconnect Gladhands
- No Power

What these symbols mean:
- = Check Wiring
- This symbol refers to wiring detail on the back of this guide.
- DO NOT pierce wires when probing.

ABS System Power Up Check
- Stationary
- Ignition ON
- ABS Light ON
- Blow Down
- OFF

ABS System Power Up Check
- Greater than 6 MPH
- Ignition ON
- OR
- Depress Brake Pedal
- OFF
- No Blow Down
- OK

ABS Problem No.1
- Never ON or DIM
- No ABS Light
- Power System

Step 1
- Pin #1
- 12-14 Volt
- Check tractor or coil cable power wiring
- Repair or Replace then retest

Step 2
- Wire Harness Section
- Disconnect Power Cord
- If No Power
- Check trailer harness power wiring
- Repair or Replace then retest

Step 3
- Check Bulb
- Repair or Replace then retest
- ABS Light Section
- Volt/Ohm Meter
- Check trailer harness light power wiring

Step 4
- Check ABS Harness
- Check harness light circuit wiring
- Repair or Replace then retest

Step 5
- Check ECU pins
- Repair or Replace then retest

ABS Problem No.2
- Light Stays ON
- Note: Some faults require vehicle to move above 6 mph for light to go off.

Step 1
- 12V Ground or Pin "C" 0 volts
- Check trailer harness light power wiring
- Repair or Replace then retest

Step 2
- Pin #1
- 7-Way Connector
- Power System
- Check Blow Down
- Check solenoid circuit wiring

Step 3
- Exciter Ring
- Sensor
- Push firmly against the exciter ring
- Rotate wheel at ~ 1 rev/2 sec.

Step 4
- Check ABS Harness
- Check sensor circuit wiring
- Repair or Replace then retest

Step 5
- Check ECU pins
- Repair or Replace then retest

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**MOD 1 DIAGNOSTIC TROUBLESHOOTING GUIDE**

**ABS Problem No.3**
ABS light comes on sometimes.

- Light ON
  - Step 1
    - Exciter Ring
    - Remove Power
    - Sensor: Volt/Ohm Meter
    - Volts/Ohms
    - 960 - 2250 Ohm
    - Repair or Replace then retest
  - Step 2
    - Check for loose sensor and excess wheel end play.
      If sensor feels loose, replace clip.
      Check for damaged exciter or different tire sizes on sensed axle.

**ABS Problem No.4**
The ABS light is functioning as expected, but the wheels lock up.

- Step 1
  - Mod 1 is a 2 sensor, 1 Modulator system (25/1M). On a trailer the ABS can't see what the non-sensed axles are doing (axles with no speed sensors). Because of this, the non-sensed axles may lock during braking. This is NOT an ABS malfunction.
  - Step 2
    - Draging Brakes
    - Kinked/Plowed Delivery Hoses
    - Step 3
      - Look for excessive Gap on both wheels
      - Look for missing Exciter Rings
      - Push sensor firmly against exciter ring
      - Repair or Replace then retest
      - Too many delivery fittings
      - Repair or Replace then retest

**POWER CONNECTOR**

- FRONT VIEW
  - A: (-12V stop light)
  - B: (-12V ign perm)
  - C: (cab lamp)
  - D: (trailer lamp)
  - E: (-12V ground)

**SOLENOID CONNECTOR**

- 1: (Solenoid ground)
- 2: (Dump Solenoid)
- 3: (Hold Solenoid)

**ECU CONNECTOR**

- Hold Solenoid
- Trailer Lamp
- -12V ground
- Cab Lamp
- Dump Solenoid
- Solenoid ground
- Open
- Open
- Open
- Diagnostic B
- Diagnostic Input
- Sensor 1B L0
- Diagnostic out
- Sensor 1B Hi
- Sensor 1A Hi
- Sensor 1A L0

** Legend**

- Sensor
- DDU Cable
- Power Cable
- Relay Valve Cable

**ABS Light**
(Note: Light is mounted on side of Trailer)