

**MGM Brakes**

A Division of Indian Head Industries, Inc.

# TECHNICAL BULLETIN

**SUBJECT: EB 14-003: Air Disc Brake and Caliper Troubleshooting with e-Stroke**

## -- Double Check Before You Replace --

1. **Use** an MGM Diagnostic Tool for Inspection and Troubleshooting.
2. **Always** confirm the correct wheel is being inspected by unplugging the e-Stroke sensor at the suspect wheel end and verify a sensor fault (after 60 seconds) with an MGM Diagnostic Tool. This confirms if the harness is installed correctly.
3. **Call** MGM Brakes Technical Support for Troubleshooting Assistance. **(877) 437-8765**
4. **Actuator Re-Installation** allowed if Actuator Boot and ESP Sensor Seal Height is greater than  $\geq$  3mm (0.118 in). Measure seal height with feeler gage, depth micrometer or caliper before re-installation.
5. Similar faults on *Right and Left Sides of the Same Axle* are typically caused by a *Control System Issue* rather than an issue with the Actuator or Caliper, i.e. Valve, Interlock, Contaminated Airline.
6. Faults reported on a *Single Wheel Only* are likely to be from a *Mechanical or Electrical Issue* with the caliper or actuator assembly.

### 7. **Non-Function AND Over-Stroke Faults on One Wheel Only**

- **Note** that a combination of multiple Non-Function, Over-Stroke, and Drag faults from the e-Stroke system accumulating on a single wheel end may be indicating a **Low Caliper Lining Running Clearance Condition**.
- **Note** that Caliper Lining Running Clearance may be Over-Adjusted.
- **Check** that Caliper Lining Running Clearance meets manufacture's specification.
- **Inspect** Caliper for signs of High Temperature Operation or Moisture Contamination.

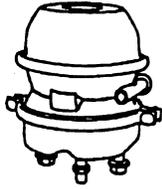
### 8. **Dragging Brake Fault Only**

- **Note** that e-Stroke will only display an Active Dragging Brake Fault when the vehicle is moving greater than  $\geq$  5mph for 30 seconds.
- **Check** for Ice or Moisture in Air Lines, Valve Issues - *Cold Weather Conditions*.
- **Check** Caliper Function, Presence of Rust or Moisture (Single Wheel Fault).
- **Check** Sensor Ground – Black Wire to CCM (Single Wheel Fault).

### 9. **Check Sensor Voltage** at CCM Connector while system is powered and wheels chocked:

<b>Test</b>	<b>Wires: Green (Signal +) to Black (Ground -) Voltage</b>
<b>Brakes Released</b>	0.10 – 1.99V DC
<b>Brakes Applied</b>	>2.00V DC
<b>Sensor Fault</b>	< 0.10V DC after 60 seconds
<b>Sensor Power: Red (Power +) to Black (Ground -) Voltage – More Than <math>&gt;</math>4.8V DC</b>	

**Contact MGM Brakes for e-Stroke Technical Support - 1-877-4-e-STROKE**



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