EB 13-003 rev. 03 e-Stroke GEN 3 Disc System Trouble Shooting Guide

e-Stroke Fault Indication

Item #	Type	ECU Fault Indication	Likely Fault Source	Solution Key Item # Reference Page 2	Service Brake Condition	Parking Brake Condition	Vehicle Speed	Time Delay	SAE J1939 Connection
1	Power Source	Warning Light Bulb CHECK does Not Occur. e-Stroke System Not Responding.	Electrical	1, 3 ,4	NA	NA	NA	NA	NA
2		Warning Light Stays ON *and/or* Unable to Access ECU with Diagnostic Tool Using J1939 based Connection (i.e. Grid Connect PCAN or MGM Brakes e-DT)	Electrical	1, 2, 3, 4					
3	Dragging Brake	ECU Indicates Dragging Brake: Left and Right Side of Same Axle. Fault counts are similar for both Wheel Ends (i.e. Axle 1 Left: 5 Counts / Axle 1 Right 5 Counts)	Air Control	5, 6, 8	Service Brake Pedal is NOT applied	Parking Brake Valve is Released	> 5 MPH	> 45 SEC	Yes
4		ECU Indicates Dragging Brake on (1) Wheel End Only	Foundation Brake	6, 7, 10, 11, 12					
5	Non-Functioning	ECU Indicates Non-Functioning Brake: Left and Right Side of Same Axle. Fault counts are similar for both Wheel Ends (i.e. Axle 1 Left: 5 Counts / Axle 1 Right 5 Counts)	Air Control	8	Service Brake Pedal IS applied (i.e. Driver's foot is on the brake pedal)	Parking Brake Valve is Released	NA	Brake Pedal Applied > 6 SEC Minimum 3 Applications	NA
6		ECU Indicates Non-Functioning Condition (1) Wheel End Only	Foundation Brake	6, 7, 9, 10, 11, 12					
7	Over-Stroke	ECU Indicates Out of Adjustment Condition. Excess Actuator Stroke with Pressure Between 12 - 50 PSI	Foundation Brake	6, 7	Service Brake Pedal IS applied (12 - 50 psi) then Released	Parking Brake Valve is Released	NA	Brake Pedal Applied > 3 SEC	NA
8	Low Caliper Running Clearance	Low Caliper Running Clearance Fault Detected (Non-Function / Over-Stroke Faults May Be Recorded for Wheel End as well)	Foundation Brake	7, 10, 11	Requires Lining Running Clearance Below Caliper Manufacturers Operating Range. Multiple Brake Applications Required to Produce Fault (More than Approx. 100 Brake Applications)				
9	Sensor	ECU Indicates Active Sensor Fault or Erratic Fault Conditions on same wheel.	Electrical	10, 11	Sensor Signal Voltage < 0.1V DC (Voltage Measured with Volt Meter at ECU Connector)			> 60 SEC	NA
11	Pressure Transducer	Pressure Transducer Fault or Non-Functioning Fault Reported for Multiple Axles	Electrical	11	Sensor Signal Voltage < 0.1V DC			> 60 SEC	NA

NOTE: **Always check Sensor Harness connection to ECU to verify proper Wheel Input connection.**

Reference Documents

EB 13-001 - e-Stroke Disc Actuator and Harness Install Guide

EB 13-002 - e-Stroke Users Guide for Disc and Drum Brakes

EB 13-004 - e-Stroke Disc System Install Guide

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

e-Stroke GEN 3 System Schematic (DWG Number 9230103)

EB 13-006 - Disc Actuator Service Manual

Contact MGM Brakes e-Stroke Technical Support for Troubleshooting and Diagnostic Tool Software Assistance
1-877-4-e-STROKE
www.mgmbrakes.com

EB 13-003 rev. 03 e-Stroke GEN 3 Disc System Trouble Shooting Guide		
Key #	***Recommended Action Key***	**Page 2 of 3**
1	**Verify System Input Power:** **1) Verify Ignition Switch Power is turned ON.** **2) Verify Input Power turns OFF when Ignition Switch is Off.** **3) Verify System is NOT connected to Battery Power.** **4) Verify e-Stroke ECU Power Source Fuse or Breaker is completing circuit and properly functioning.** **5) Check ECU Power Cable for Electrical Shorts, Cut Wires, or Damaged Connectors.** **6) Test Vehicle System Voltage. e-Stroke System Input Voltage must be between 10-30 volts DC.**	
2	**Verify SAE J1939 Connection:** **1) Check ECU SAE J1939 connection.** **2) Verify CCM is correctly configured for SAE J1939 data network speed (250kbs vs. 500kbs).** **Note: J1939 is required for Vehicle Speed Message. Drag indication when vehicle is parked may be due to loss of J1939 connection.**	
3	**Verify Warning Light Operation:** **1) Check for Faulty Warning Lamp by applying signal voltage to test. Consult vehicle manufacturer specifications for test method.** **2) Verify Vehicle I/O is working properly per manufacturer recommendations.** **Note: ECU will "Blink" a voltage signal from the Alarm Output during start up.**	
4	**Possible ECU Malfunction:** **1) ECU Alarm Output constant voltage, Warning Light remains ON after Start Up indicates ECU is not operating properly.** **2) Lack of Warning Light bulb check after System Power (Key #1) and Warning Light (Key #3) are verified indicates ECU is not operating properly.**	
5	**Possible Vehicle Operator Error:** **1) Parking Brakes applied while vehicle is moving.**	
6	**Inspect Foundation Brake / Caliper for Mechanical or Operational Issue:** **1) Verify that caliper lever arm fully returns back to starting position and does not remain applied.** **2) Inspect Foundation Brake and Caliper for seized components (i.e. caliper slide pins).** **3) Inspect Caliper and Actuator Boots / Seals for damage or tears.** **4) Inspect Brake Pad Linings for irregularities or damage (i.e. foreign material stuck in pads, excessive pad wear or part of pad missing).**	
7	**Inspect Caliper Running Clearance Adjustment:** **1) Verify Caliper Adjustment per caliper manufactures inspection recommendations.** **2) Verify Caliper Lining Clearance Adjustment Mechanism operation. Adjust Caliper Running Clearance to increase clearance then use brake applications (15-20) to verify Adjustment Mechanism automatically adjusts to proper Running Clearance.** **3) Running Clearance below (0.030") may reduce actuator stroke resulting in Non-Function Faults reported.** **Note Potential Causes: 1) Caliper Adjuster Malfunctioning 2) Incorrect clearance set at pad service 3) New lining expansion during initial heat cycle.**	
8	**Possible Service Brake Air Control Issue:** **1) Check for Dirt, Moisture, or Ice in Air System (Air Line or Valve Blockage).** **2) Confirm Proper Operation of Interlocks Function (Apply / Release).** **3) Confirm Proper QR Valve Operation (Apply / Release).** **4) Confirm Valve Control Wiring per Vehicle Manufacture information.**	
9	**Brake Actuator Inspection:** **1) Check Brake Actuator for Service Diaphragm leak.** **2) Check Parking Brake Spring Chamber for Leak (Diaphragm or Piston).** **Note: Reference EB 13-006 for detailed Brake Actuator Inspection Instructions.**	
10	**Inspect Sensor Harness and Connectors:** **1) Check Cable and Wires for Loss of Connection, Damage, Cuts, Pinch's, Corrosion, Shorts.** **2) Check Exterior Wheel End Connectors for Damaged / Bent / Loose Terminals, Corrosion, Tight or Bent Connector Installation.** **3) Check ECU Connectors for Damaged / Bent / Loose Terminals, Corrosion. Ensure Connector is fully installed into ECU.** **4) Check Multi Harness Connectors near Artic Joints.** **5) Drag Fault could be from Broken Ground Wire.**	
11	**Verify Sensor Condition and Operation:** **1) Confirm correct Wheel End Location by unplugging Exterior Sensor Connector (> 60sec) and confirm Sensor Fault at correct wheel w/ Diagnostic Tool (i.e. Front Left Wheel End should show Sensor Fault on Axle 1 Left).** **2) Inspect Sensor for Damage or signs of Corrosion.** **3) Verify Sensor Voltage Function. Reference Electrical Test Instruction on Page 3 and EB 14-003.** **4) Pressure Transducer: Inspect e-Stroke Pressure Transducer and wiring. Use Diagnostic Tool to verify Pressure Transducer reads < 0.3 psi with NO brake application.**	
12	**Inspect e-Stroke Brake Actuator Piston Rod Reflective Target:** **1) Remove Brake Actuator and inspect Piston Rod Ball End Reflective Target Material for Grease, Dirt or Damage.** **2) Clean Grease from Piston Rod Reflective Targets with clean / dry rag. Do not use solvents.** **Note: Grease on the Black or Red targets can cause a Drag fault indication.**	

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1) System and Sensor Voltage can be checked at the e-Stroke ECU before Wheel End Disassembly.

2) All testing to be conducted with Parking Brake and Interlocks Released and Wheels Chocked to Prevent Vehicle Roll Away.

3) Use an Electrical Multi-Meter to "Back Pin" the ECU connectors to measure Voltages.

What's Being Checked?	(+) Positive Multi-Meter Probe	(-) Negative Multi-Meter Probe	ECU Connector Location	Service Brake Pedal (psi)	Normal Values (V DC)	Abnormal Measured Values (V DC)	Solution Key Item # Reference Page 2
Voltage supplied to e-Stroke ECU	Red Wire	Black Wire	P1	N/A	~ 12 / 24 V DC	Reference Vehicle Manufacturer Recommendation	1
Voltage supplied to e-Stroke Sensor at specific Wheel End	Red Wire	Black Wire	P4 - P12	N/A	~4.80 to 5.10 V DC	< 4.80 V DC	1, 10
Signal Voltage from the e-Stroke Air Disc Sensor	Green Wire	Black Wire	P4-P12	> 12 psi (Applied)	2.00 to 4.75 V DC (Brakes Applied)	< 1.99 V DC	10, 11, 12
				< 2psi (Released)	0.10 to 1.99 V DC (Brakes Released)	> 2.00 V DC	10, 11, 12
				Voltage constantly drifting and changing (unstable)			10, 11, 12

EB 08-016 rev. 02 e-Stroke GEN 3 Drum System Trouble Shooting Guide

e-Stroke Fault Indication

Item #	Fault Type	CCM Active Fault Indication	Brake Application Condition	Parking Brake Condition	Vehicle Speed: +5 MPH or Stopped	Connected to: SAE J1708 / J1939	Solution Key # on Page 2
1	Power Source	Warning Light Bulb check does not occur, No Active Communications on J1708 or J 1939	No Brake Pedal Application	All Conditions	All Conditions	NA	1,2,3,4,5,22
2	Power Source	CCM warning light is dim or stays lit, and Fault Codes are Inconsistent.	No Brake Pedal Application	All Conditions	All Conditions	NA	4,23
3	Power Source	CCM Fault Condition changes without changing brake condition, seems to be erratic.	No Brake Pedal Application	All Conditions	All Conditions	NA	3,4,23
4	Dragging Brake	CCM fault indicates Dragging Brake. (one or more wheels)	No Brake Pedal Application	Not applied	All Conditions	no	15,8,11,16,12,19,20
5	Dragging Brake	CCM fault indicates Dragging Brake. (one or more wheels)	No Brake Pedal Application	Not applied	Above +5 MPH	Yes	15,8,11,16,12,19,20,21
6	Dragging Brake	CCM fault indicates Dragging Brake .	No Brake Pedal Application	applied	Stopped	Yes	30
7	Dragging Brake	CCM Fault (all wheels with tandem parking brakes only) indicating Dragging Brake.	No Brake Pedal Application	Released	All Conditions	No	15
8	Dragging Brake	CCM Fault (all wheels with tandem parking brakes only) indicating Dragging Brake.	No Brake Pedal Application	Released	Above +5 MPH	Yes	15
9	Non Functioning	CCM indicated a Non- Functioning Brake on one or more wheels.	Brake Applied with a Light brake pressure	Released	All Conditions	Yes	6
10	Non Functioning	CCM indicating Non-Functioning Condition	Brake Application over 15 psi	Released	All Conditions	All Conditions	14,7
11	Over Stroke	CCM indicating Over-Stroke Condition.	No Brake Pedal Application	Released	All Conditions	All Conditions	17
12	Over stroke	CCM indicating Over-Stroke Condition.	Apply Service Brake to 95-100 psi	Released	All Conditions	All Conditions	13,19,21
13	Failed wheel Sensor/Cable	CCM Fault indicating a Faulty Sensor / Cable Condition.	All Conditions	All Conditions	All Conditions	All Conditions	6,9,10,17,18,24
14 *	Failed wheel Sensor/Cable	CCM indicates a Dragging Brake Fault, One or more wheels	No Brake Pedal Application	Released	Above +5 MPH	Yes	25
		CCM indicates No Fault	With Brake Pedal Application		All Conditions	All Conditions	
15 *	Faulty Sensor wheel Cable	CCM indicates a Dragging Brake Fault, One or more wheels	No Brake Pedal Application	Released	Above +5 MPH	Yes	27
		Over Stroke Fault, One or more wheels	With Brake Pedal Application	Released	All Conditions	All Conditions	
16 *	Faulty Pressure Transducer	CCM Fault Code indicates a Non- Functioning Brake on all wheels	No Brake Pedal Application	Released			7,14
		CCM Fault Code indicates No Faults.	With Brake Pedal Application		All Conditions	All Conditions	
17	Lining Wear Sensor Short	CCM Fault Code Indicates a Lining Wear Warning (Lining is OK)	With Brake Pedal Application	Released	All Conditions	All Conditions	28
18	Lining Wear Sensor Short	CCM Fault Code Indicates a Lining Wear Warning (Lining is OK)	No Brake Pedal Application	Released	All Conditions	All Conditions	28
19	Lining Wear Sensor Open Circuit	CCM Fault Code Indicates a Lining Wear Failure (Lining is OK)	With Brake Pedal Application	Released	All Conditions	All Conditions	29
20	Lining Wear Sensor Open Circuit	CCM Fault Code Indicates a Lining Wear Failure (Lining is OK)	No Brake Pedal Application	Released	All Conditions	All Conditions	29
21	Faulty -J1708/J1939	CCM Fault Code Indicates a Communications Problem	All Conditions	All Conditions	All Conditions	Yes	30
22	Faulty -J1708/J1939	CCM e-Stroke Warning Light comes on for no apparent reason.	All Conditions	All Conditions	All Conditions	Yes	30

*= Both lines must be true.

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Key #	*Recommended Test to Perform or Action to Take*	Page 2 of 2
1	Make sure Ignition Switch is turned on.	
2	Test for open circuit at fuse located at the Power Source connection in the CCM Power Supply Cable. Replace fuse as needed.	
3	Check CCM Power Cable for electrical shorts, cut wires, or damaged connectors. Replace damaged cable with approved MGM CCM Power Cable.	
4	Test Vehicle System Voltage. Voltage must be between 10-30 volts DC.	
5	Make certain all connectors are properly plugged in so the connector body tabs are locked	
6	Inspect Brake Actuator Sensor to ensure it is completely inserted into the Stone Shield all the way to the sensor stop tabs.	
7	Service brake Air Pressure Transducer may be faulty.	
8	Brake Actuator push-rod must be perpendicular to the bottom of the non-pressure housing within ±3°. If greater than 3°, check to be sure Actuator mounting bolts are in correct bracket holes (or if centered in bracket holes). Install Actuator into correct position.	
9	Inspect Brake Actuator Sensor and connector for physical damage. Replace sensor as needed.	
10	Measure continuity of Brake Actuator Sensor with digital meter: RED (positive) to BLACK (negative) wires. Resistance should be 12 K to 16 K ohms. This test may not be conclusive. Replace Sensor if damaged.	
11	Inspect Brake Actuator for improperly cut push-rod (too short). When yoke pin removed, push-rod should not retract.	
12	Make sure there is no pressure in the Service Brake System. Check for faulty system Air Valve or for air leaking past push-rod air seal in at least one of the vehicle's Parking Brakes.	
13	Measure stroke of the Actuator to validate Over-Stroke condition.	
14	Inspect Brake Actuator for movement when service brake is applied. If no movement detected, check for ruptured diaphragm, system air leak, or faulty ABS Valve.	
15	Make sure Parking Brake System air pressure is at least 95 psi.	
16	Check for rusted or worn foundation brake components.	
17	Unplug Brake Actuator Sensor assembly at wheel and plug in new sensor. If LED stops flashing ORANGE, install new sensor.	
18	Unplug Brake Actuator Sensor harness and connect new sensor harness. If LED stops flashing ORANGE, install new sensor harness.	
19	Check brakes for damage to Sleeve on Push-rod. Damaged or loose sleeve will inadvertently affect unit Calibration. Replace with new brake if either is detected.	
20	With Parking Brakes released and no air pressure applied to service brakes, inspect Plastic Sleeve on Push-rod. If Push-rod angle is greater than ±3°, the plastic sleeve may hang up on the plastic stone shield inside the unit. This can prevent the push rod from returning to zero.	
21	Automatic slack adjuster may need to be adjusted or replaced. Be sure service brake is not applied and parking brake is released and push-rod is fully retracted to zero stroke.	
22	Faulty Dashboard Warning light - LED is completely burned out.	
23	Faulty CCM - Internal Power supply.	
24	Faulty connection to Wheel Sensor, red wire open circuit connection. (broken wire near sensor connector) Replace or repair.	
25	Faulty connection to Wheel Sensor, black wire open circuit connection. (broken wire near sensor connector) Replace or repair.	
26	Faulty connection to Wheel Sensor, green wire open circuit connection. (broken wire near sensor connector) Replace or repair.	
27	Fault due to partial short or corrosion path in wire connections to Wheel Sensor, green wire to black wire circuit path.	
28	Check for a grounded Lining Wear Sensor at the lining, or lining wear cable is damaged causing a ground.	
29	Check for a open circuit in the Lining Wear Sensor or lining wear cable, or disconnected lining wear connector some where.	
30	Check for CCM failed J1708 or J 1939 communications connection.	

EB 08-018 rev. 02 e-Stroke GEN 2 Drum System Trouble Shooting Guide Software

e-Stroke Fault Indication

Item #	CCM Active Fault Indication	Brake Application Condition	Parking Brake Condition	Vehicle Speed	SAE J1708 Connected	Solution Key # on Page 2
1	System Status LED does not come on	All Conditions	All Conditions	All Conditions	All Conditions	1,4,2,3,5
2	System Status LED does not come on and wheel LED's are solid ORANGE.	All Conditions	All Conditions	All Conditions	All Conditions	4,24
3	System Status LED repeatedly flashes RED then GREEN, or is not a constant GREEN.	All Conditions	All Conditions	All Conditions	All Conditions	3,4
4	System Status LED flashes Orange. (Software Version 12 & Higher Only)	All Conditions	All Conditions	All Conditions	All Conditions	7,30
5	Dash Warning Light comes ON without an apparent Fault.	No Brake Application	Released	All Conditions	Yes	29
6	Dash Warning Light comes ON with Parking Brakes Applied. (Software Version 9 & Higher Only)	No Service Brake Application	Applied	0 mph	Yes	29
7	CCM Wheel LED flashes slow RED blink indicating Dragging Brake.	No Brake Application	Released	All Conditions	All Conditions	15,8,11,16,12,19,20
8	All CCM Wheel LEDs flash slow RED blink indicating Dragging Brake.	No Brake Application	Released	All Conditions	Yes	12,7
9	All CCM Wheel LEDs (for wheels with tandem parking brakes only) flash slow RED blink indicating Dragging Brake.	No Brake Application	Released	All Conditions	Yes	15
10	CCM wheel LED flashes rapid RED blink indicating Over-Stroke condition.	Apply Service Brake to 95-100 psi	Released	0 mph	Yes	13,19,21
11	CCM wheel LED flashes rapid RED blink indicating Over-Stroke condition.	No Brake Application	Released	0 mph	Yes	9
12	CCM Wheel LED flashes alternating RED/GREEN blink indicating Non-Functioning Brake.	Apply Service Brake over 15 psi	Released	All Conditions	Yes	14,7
13	CCM wheel LED flashes ORANGE blink indicating a faulty Sensor condition.	All Conditions	All Conditions	All Conditions	Yes	6,9,10,17,18,25
14	One or more, but not all, CCM Wheel LEDs display a slow GREEN blink.	All Conditions	All Conditions	All Conditions	Yes	22
15	One or more, but not all, CCM Wheel LEDs do not light.	All Conditions	All Conditions	All Conditions	Yes	23
16	Dragging Brake Fault, One or more LED's	No Brake Application	Released	All Conditions	Yes	26
	No Fault , All LED's GREEN	With Brake Application	Released	All Conditions	Yes	
17	Dragging Brake Fault, One or more LED's	No Brake Application	Released	0 mph	Yes	28
	Over-Stroke Fault, One or more LED's	With Brake Application	Released	0 mph	Yes	
18	All LED's indicate a Non- Functioning Fault code (RED and GREEN)	No Brake Application	Released	All Conditions	Yes	7,14
	No Fault, ALL LED's are GREEN.	With Brake Application	Released	All Conditions	Yes	

** = Both lines must be tested to be true.*

EB 08-018 rev. 02 e-Stroke GEN 2 Drum System Trouble Shooting Guide Software

Key #	*Recommended Test to Perform or Action to Take*	Page 2 of 2
1	Make sure ignition switch is turned on.	
2	Test for open circuit at fuse located at the power source connection in the CCM Power Supply Cable. Replace fuse as needed.	
3	Check CCM Power Cable for electrical shorts, cut wires, or damaged connectors. Replace damaged Cable with approved MGM CCM Power Cable or Power lead.	
4	Test vehicle system voltage. Voltage must be between 10-30 volts DC.	
5	Make certain all connectors are properly plugged in so the connector body tabs are locked	
6	Inspect Brake Actuator Sensor to ensure it is completely inserted into the stone shield all the way to the sensor stop tabs.	
7	Service Brake Pressure Transducer may be faulty. Replace Pressure Transducer. If Status LED stops flashing ORANGE, install new Pressure Transducer.	
8	Brake Actuator Push-Rod must be perpendicular to the bottom of the Non-Pressure Housing within ±3°. If greater than 3°, check to be sure Actuator mounting bolts are in correct bracket holes (or if centered in bracket holes).	
9	Inspect Brake Actuator Sensor and connector for physical damage. Replace Sensor as needed.	
10	Measure continuity of Brake Actuator Sensor with digital meter: RED (positive) to BLACK (negative) wires. Resistance should be 12k to 16k ohms. Replace Sensor if out of range or damaged.	
11	Inspect Brake Actuator for improperly cut Push-Rod (too short). With yoke pin removed, Push-Rod should not retract.	
12	Make sure there is no pressure in the Service Brake System. Check for Faulty System Air Valve or for air leaking past Push-Rod air seal in at least one of the Vehicle's Parking Brake Actuators.	
13	Measure stroke of the Actuator to validate Over-Stroke condition.	
14	Inspect Brake Actuator for movement when Service Brake is applied. If no movement detected, check for ruptured diaphragm, system air leak, or faulty ABS Valve.	
15	Make sure Parking Brake System air pressure is at least 95 psi.	
16	Check for rusted or worn Foundation Brake Components.	
17	Unplug Brake Actuator Sensor Assembly at wheel and plug in new Sensor. If LED stops flashing ORANGE, install new Sensor.	
18	Unplug Brake Actuator Sensor Harness and connect new Sensor Harness. If LED stops flashing ORANGE, install new Sensor Harness.	
19	Check Brakes for damage to Sleeve on Push-Rod. Damaged or loose Sleeve will inadvertently affect unit Calibration. Replace with new Brake Actuator if either is defective.	
20	With Parking Brakes released and no air pressure applied to Service Brakes, inspect Plastic Sleeve on Push-Rod. If Push-Rod angle is greater than ±3°, the Plastic Sleeve may hang up on the Plastic Stone Shield inside the unit. This can prevent the Push-Rod from retracting completely	
21	Automatic Slack Adjuster may need to be adjusted or replaced. Be sure Service Brake is not applied and Parking Brake is released and Push-Rod is fully retracted to zero stroke.	
22	Faulty CCM- RED only wheel LED burned out	
23	Faulty CCM- wheel LED is completely burned out.	
24	Faulty CCM - Internal Power Supply.	
25	Faulty connection to Wheel Sensor, RED wire open circuit connection. (broken wire near sensor connector) Replace or repair.	
26	Faulty connection to Wheel Sensor, BLACK wire open circuit connection. (broken wire near sensor connector) Replace or repair.	
27	Faulty connection to Wheel Sensor, GREEN wire open circuit connection. (broken wire near sensor connector) Replace or repair.	
28	Fault due to partial short or corrosion path in wire connections to Wheel Sensor, GREEN wire to BLACK wire circuit path.	
29	Faulty connection to J-1708 Communications Bus.	
30	Unplug Pressure Transducer Harness and connect new Pressure Transducer Harness. If Status LED stops flashing ORANGE, install new Pressure Transducer Harness.	