

e-Stroke GEN 2 Truck / Bus System Trouble Shooting Guide Software

e-Stroke Fault Indication

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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 <u>ORANGE</u> .	All Conditions	All Conditions	All Conditions	All Conditions	4,24
3	System Status LED repeatedly flashes <u>RED</u> then <u>GREEN</u> , or is not a constant <u>GREEN</u> .	All Conditions	All Conditions	All Conditions	All Conditions	3,4
4	System Status LED flashes <u>Orange</u> . (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 <u>RED</u> 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 <u>RED</u> 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 <u>RED</u> blink indicating Dragging Brake.	No Brake Application	Released	All Conditions	Yes	15
10	CCM wheel LED flashes rapid <u>RED</u> 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 <u>RED</u> blink indicating Over-Stroke condition.	No Brake Application	Released	0 mph	Yes	9
12	CCM Wheel LED flashes alternating <u>RED/GREEN</u> blink indicating Non-Functioning Brake.	Apply Service Brake over 15 psi	Released	All Conditions	Yes	14,7
13	CCM wheel LED flashes <u>ORANGE</u> 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 <u>GREEN</u> 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 <u>GREEN</u>	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 (<u>RED</u> and <u>GREEN</u>)	No Brake Application	Released	All Conditions	Yes	7,14
	No Fault, ALL LED's are <u>GREEN</u> .	With Brake Application	Released	All Conditions	Yes	

* = Both lines must be tested to be true.

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Key #	<i>Recommended Test to Perform or Action to Take</i>	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 $\pm 3^\circ$. 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: <u>RED</u> (positive) to <u>BLACK</u> (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 <u>Sensor Assembly</u> at wheel and plug in new <u>Sensor</u> . If LED stops flashing <u>ORANGE</u> , install new <u>Sensor</u> .	
18	Unplug Brake Actuator <u>Sensor Harness</u> and connect new <u>Sensor Harness</u> . If LED stops flashing <u>ORANGE</u> , install new <u>Sensor Harness</u> .	
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 $\pm 3^\circ$, 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 <u>not</u> applied and Parking Brake is <u>released</u> and Push-Rod is fully retracted to zero stroke.	
22	Faulty CCM- <u>RED</u> 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, <u>RED</u> wire open circuit connection. (broken wire near sensor connector) Replace or repair.	
26	Faulty connection to Wheel Sensor, <u>BLACK</u> wire open circuit connection. (broken wire near sensor connector) Replace or repair.	
27	Faulty connection to Wheel Sensor, <u>GREEN</u> 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, <u>GREEN</u> wire to <u>BLACK</u> 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.	