

# Case MX/TG Fault codes

## ENGINE

- 111 Engine Controller Failure - Hardware Failure
- 115 Engine Speed Sensor signal is failed (no signal at engine controller pin A17)
- 121 Engine Position Sensor signal is failed (no signal at engine controller pin A9)
- 122 Boost Pressure Sensor voltage is too high (engine controller pin A45)
- 123 Boost Pressure Sensor voltage is too low (engine controller pin A45)
- 124 Boost Pressure level has exceeded the warning limit.
- 131 Foot Throttle Position potentiometer voltage is too high (engine controller pin B30)
- 132 Foot Throttle Position potentiometer voltage is too low (engine controller pin B30)
- 135 Oil Pressure Sensor voltage is too high (engine controller pin A33)
- 141 Oil Pressure Sensor voltage is too low (engine controller pin A33)
- 143 Oil Pressure level has fallen below the warning limit.
- 144 Coolant Temperature Sensor voltage is too high (engine controller pin A23)
- 145 Coolant Temperature Sensor voltage is too low (engine controller pin A23)
- 146 Coolant Temperature level has exceeded the warning limit.
- 151 Coolant Temperature level has exceeded the warning limit.
- 153 Intake Manifold Temperature Sensor voltage is too high (engine controller pin A34)
- 154 Intake Manifold Temperature Sensor voltage is too low (engine controller pin A34)
- 155 Intake Manifold Temperature level has exceeded the warning limit.
- 211 Communications problem with Armrest, Instrumentation, or Transmission Controllers
- 234 Engine Speed has exceed the overspeed warning limit.
- 235 Engine Coolant Level is low. Add coolant fluid.
- 263 Fuel Temperature Sensor voltage is too high (engine controller pin A35)
- 265 Fuel Temperature Sensor voltage is too low (engine controller pin A35)
- 268 Fuel Pressure in pump is not changing with operating conditions.
- 271 Front Pumping Control Valve current is low during "click test" (pin A21)(open circuit)
- 272 Front Pumping Control Valve current is high (pin A21)(short circuit)
- 273 Rear Pumping Control Valve current is low during "click test" (pin A15)(open circuit)
- 274 Rear Pumping Control Valve current is high (pin A15)(short circuit)
- 275 Front Pumping element is failed
- 276 Injection Control Valve current is out of range (engine controller pin A7)(open or short)
- 277 Injection Control Valve is failed (engine controller pin A7)(open or short)
- 278 Fuel Lift Pump is failed (engine controller pin 11)
- 279 Injection Control Valve current is out of range (engine controller pin A7)(open or short)
- 281 Front Pumping element is failed
- 282 Rear Pumping element is failed
- 283 Engine Speed/Position Sensor supply voltage is too high (controller pin A8)
- 284 Engine Speed/Position Sensor supply voltage is too low (controller pin A8)
- 319 Real Time Clock in controller has lost power
- 328 Rear Pumping element is failed
- 329 CAPS Pump has an overpumping failure
- 352 5 Volt Sensor Supply voltage is too low (engine controller pin A10)
- 386 5 Volt Sensor Supply voltage is too high (engine controller pin A10)
- 387 Foot Throttle 5 Volt Supply voltage is too high (engine controller pin B29)
- 415 Oil Pressure level has fallen below the very low warning limit.

418 Water in Fuel sensor (optional) indicates the water in the fuel filter needs to be drained.  
422 Engine Coolant Level Sensor (optional) is failed or the jumper plug is missing  
429 Water in Fuel Sensor (optional) voltage is too low. (engine controller pin B40)  
431 Foot Throttle Idle Validation Switches are both closed (engine controller pins B25, B26)  
432 Foot Throttle position potentiometer and switches disagree.  
433 Boost Pressure level disagrees with engine operation conditions (speed & power)  
434 Unswitched 12 volt supply voltage disconnected without normal key off sequence.  
441 Battery Voltage is too Low (less than 6 volts)  
442 Battery Voltage is too High  
443 Foot Throttle 5 Volt Supply voltage is too low (engine controller pin B29)  
449 Fuel Pressure level has exceeded the warning limit.  
451 Fuel Pressure Sensor voltage is too high (engine controller pin A46)  
452 Fuel Pressure Sensor voltage is too low (engine controller pin A46)  
456 Fuel Pressure in pump is not changing with operating conditions.  
488 Intake Manifold Temperature level has exceeded the warning limit.  
493 The Injection Control Identifier Circuit in the harness has failed.  
539 The Injection Control Valve Transorb in the harness has failed. (open circuit)  
551 Foot Throttle Idle Validation Switches are both open (engine controller pins B25, B26)  
611 ECM detected engine initiated protection shutdown or keyed-off while above specific load limit

## **TRANS**

11 Master Clutch Potentiometer Open Circuit or short to ground  
12 Master Clutch Potentiometer Short to +12 Volts or short to 5 Vreff  
24 None of the transmission clutches are calibrated  
37 BOC switch open circuit or Neutral relay stuck open  
38 Shuttled to reverse when no wheel speed signal was available  
47 Clutch pedal bottom of clutch switch misadjusted  
48 BOC switch or Neutral relay short circuit  
50 Park Brake is powered off when in park  
51 FNRP pod indicates Forward or Reverse is on, when Park is on  
52 Park Brake is stuck on when commanded off  
53 5 volt reference voltage too high  
54 5 volt reference voltage too low  
59 FNRP pod in illogical state (two positions on at same time)  
60 FNRP pod in illogical state (in no position)  
66 FNRP Pod Forward switch is shorted to ground or open circuit  
67 FNRP Pod Forward switch is shorted to power  
68 FNRP Pod Reverse switch is shorted to ground or open circuit  
69 FNRP Pod Reverse switch is shorted to power  
70 Battery voltage is too low for clutch solenoid operation  
72 Transmission Oil Temperature is above 122 deg. C  
76 Transmission Over Speed Warning  
77 No signal from wheel speed sensor  
78 Transmission regulated pressure accumulator is discharged  
79 Engine RPM from the alternator is measured too high  
80 Wheel speed sensor is measured too high  
81 Transmission clutches are slipping  
103 Odd clutch solenoid or its wiring failed open or shorted to ground  
104 Even clutch solenoid or its wiring failed open or shorted to ground

- 105 C1-2 clutch solenoid or its wiring failed open or shorted to ground
- 106 C3-4 clutch solenoid or its wiring failed open or shorted to ground
- 107 C5-6 clutch solenoid or its wiring failed open or shorted to ground
- 108 Master clutch solenoid or its wiring failed open or shorted to ground
- 109 Low range clutch solenoid or its wiring failed open or shorted to ground
- 110 Mid range clutch solenoid or its wiring failed open or shorted to ground
- 111 High range clutch solenoid or its wiring failed open or shorted to ground
- 112 Reverse clutch solenoid or its wiring failed open or shorted to ground
- 113 Creeper clutch solenoid or its wiring failed open or shorted to ground
- 114 Even clutch solenoid coil or its wiring shorted to power
- 115 Odd clutch solenoid coil or its wiring shorted to power
- 116 C1-2 clutch solenoid coil or its wiring shorted to power
- 117 C3-4 clutch solenoid coil or its wiring shorted to power
- 118 C5-6 clutch solenoid coil or its wiring shorted to power
- 119 Master clutch solenoid coil or its wiring shorted to power
- 120 Low range clutch solenoid coil or its wiring shorted to power
- 121 Mid range clutch solenoid coil or its wiring shorted to power
- 122 High range clutch solenoid coil or its wiring shorted to power
- 123 Reverse clutch solenoid coil or its wiring shorted to power
- 124 Creeper clutch solenoid coil or its wiring shorted to power
- 125 Odd clutch is not calibrated 126 Even clutch is not calibrated
- 127 C1-2 clutch is not calibrated
- 128 C3-4 clutch is not calibrated
- 129 C5-6 clutch is not calibrated
- 130 Low range clutch is not calibrated
- 131 Mid range clutch is not calibrated
- 132 High range clutch is not calibrated
- 133 Reverse clutch is not calibrated
- 134 Master clutch is not calibrated
- 135 Communication lost with the armrest controller
- 136 Communication lost with the instrumentation controller
- 137 Front Suspension raise lock solenoid circuit shorted or open circuit
- 138 Front Suspension raise solenoid circuit shorted or open circuit
- 139 Front Suspension lower lock solenoid circuit shorted or open circuit
- 140 Front suspension position is above the expected absolute limit
- 141 Front suspension position is below the expected absolute limit
- 142 Front suspension travel range has not been calibrated
- 143 Front suspension position is above the upper suspension range
- 144 Front suspension position is below the lower suspension range
- 145 Front Suspension lower lock solenoid circuit shorted or open circuit
- 147 Regulated system pressure below 290 PSI
- 148 Backup alarm circuit shorted or open

## **ARM**

- 19 Hand THROTTLE potentiometer is failed
- 29 Aux 1st remote valve LEVER potentiometer is failed
- 39 Aux 2nd remote valve LEVER potentiometer is failed
- 49 Aux 3rd remote valve LEVER potentiometer is failed
- 59 Aux 4th remote valve LEVER potentiometer is failed
- 69 HITCH POSITION command potentiometer is failed
- 79 HITCH LOAD command potentiometer is failed
- 89 Aux 1st remote valve FLOW potentiometer is failed
- 99 Aux 2nd remote valve FLOW potentiometer is failed

109 Aux 3rd remote valve FLOW potentiometer is failed  
119 Aux 4th remote valve FLOW potentiometer is failed  
129 Aux 5th remote valve FLOW potentiometer is failed  
139 Aux remote valve TIMER potentiometer is failed  
149 Hitch UPPER LIMIT potentiometer is failed  
159 Hitch DROP RATE potentiometer is failed  
169 Hitch TRAVEL potentiometer is failed  
1019 Trans GEAR SELECTION switch is failed  
1029 Aux 5th remote valve control switch is failed  
1039 PTO switch is failed  
1049 Hitch UP/DOWN switch is failed  
1059 Hitch SLIP switch is failed  
1069 MFD switch is failed  
1079 DIFF LOCK switch is failed  
1089 Programmable UP/DOWN switch is failed.  
1099 Aux remote valve LIMIT SET switch is failed  
1109 Hand Throttle IDLE VALIDATION switch is failed  
1119 RECORD/PLAY switch is failed  
8011 Battery Voltage is too Low  
9011 Controller Memory Error - Loss of Hitch Position Command Calibration  
9012 Controller Memory Error - Loss of Aux Remote Lever Calibrations  
9013 Controller Memory Error - Loss of Throttle Calibrations  
9014 Controller Memory Error - Loss of MFD switch Configuration  
9015 Controller Memory Error - Loss of Trans switches Configuration  
9021 Hitch position command potentiometer calibration results not acceptable  
9031 Hand throttle potentiometer calibration results not acceptable  
10091 Armrest Controller failure - 5 V regulator failure  
12013 Communications Lost with Data Bus and ALL other controllers  
12081 Loss of/unavailable Performance Monitor Display - RECORD/PLAY functionality disabled  
65535 NO ERROR. Errors have not been cleared from factory.

## **PTO**

1010 PTO ON/OFF switch is failed in the Armrest Controller  
1016 PTO ON switch wire connection from Armrest to PTO failed Open Circuit  
1017 PTO ON switch wire connection from Armrest to PTO failed Short Circuit  
1030 Differential Lock Switch is failed in the Armrest Controller  
1040 MFD Switch is failed in the Armrest Controller  
1050 MFD Switch is failed in the Armrest Controller  
1060 Differential Lock Switch is failed in the Armrest Controller  
1110 Differential Lock Switch is failed in the Armrest Controller  
1120 MFD Switch is failed in the Armrest Controller  
3020 Engine Speed Sensor is failed in the Instrumentation Controller  
6013 PTO Solenoid is failed open circuit or shorted to ground.  
6019 PTO Solenoid Coil is failed short circuit or shorted to +12 volts  
6084 Differential Lock Solenoid is failed Open or Short Circuit  
6094 MFD Solenoid is failed Open or Short Circuit  
7014 Brake Lamp Relay Solenoid is failed Open or Short Circuit  
9061 The PTO Shaft Speed Sensor and the PTO Shaft Size Sensor connections are swapped.  
9071 The PTO is receiving no frequency from the Shaft Size Sensor on a two speed PTO configuration.

9081 The PTO is receiving signals from the Shaft Size Sensor on a single speed PTO configuration.  
10031 Controller Memory Error - Loss of PTO & Brake Lamp Configurations  
10033 Battery Voltage is too Low  
10035 PTO Controller Failure - ADC locked up  
10061 PTO Solenoid Shorted to 12V or Internal Controller Relay failed closed.  
54040 Hitch Raised Signal is failed in the Hitch Controller  
54050 Wheel Slip Signal is failed in the Instrumentation Controller  
54060 Ground Speed Signal is failed in the Instrumentation Controller  
54070 Engine Hours Signal is failed in the Instrumentation Controller  
54080 Transmission Oil Temperature Sensor is failed in the Instrumentation Controller  
54090 Trailed Implement Raised Signal is failed in the Performance Controller.  
54120 Communications Lost with Armrest Controller  
54130 Communications Lost with Instrumentation Controller  
54150 Communications Lost with Hitch Controller  
54170 Communications Lost with Performance Controller  
54211 PTO Clutch is Slipping Too Much  
54221 PTO Shaft rotation is NOT detected when PTO engagement is attempted.  
54241 PTO Shaft rotation is detected when the Engine is OFF.  
54251 PTO Shaft rotation is detected when the PTO clutch is OFF.  
54261 Engine Stalled when the PTO was running.  
54272 PTO Shaft Overspeed Detected  
54282 PTO Clutch has not reached lock up speed within 6 seconds of being turned ON  
65535 NO ERROR. Errors have not been cleared from factory

## **ICU**

1015 Seat Switch may be stuck closed.  
3010 PTO Shaft Speed sensor is failed in PTO Controller  
3020 Engine Speed sensor is failed in the Engine Controller  
3022 Engine Overspeed Error  
5010 Engine Oil Pressure sensor is failed in the Engine Controller  
5011 Engine Oil Pressure sensor voltage is too low (open circuit, short to ground)  
10031 Controller Memory Error - Loss of Engine Hours information  
10032 Controller Memory Error - Loss of Vehicle Configuration information  
10033 Controller Memory Error - Loss of Customer Configuration information  
10034 Controller Memory Error: Loss of valid fuel table information.  
10035 Controller Memory Error - Loss of Service information  
10036 Controller Memory Error - Loss of Displayed Performance information  
10037 Controller Memory Error - Loss of Implement Width information  
10038 Controller Memory Error - Loss of Valid Remote Timer information.  
11011 Fuel Level Sensor voltage is too low (open circuit, short to ground)  
12011 Communications Lost with Armrest Controller  
12021 Communications Lost with Auxiliary Controller  
12031 Communications Lost with Hitch Controller  
12043 Communications Lost with Data Bus and ALL other controllers  
12051 Communications Lost with PTO Controller  
12071 Communications Lost with Transmission Controller  
12081 Communications Lost with Performance Controller  
12091 Communications Lost with Engine Controller  
12101 Communications Lost with Tractor ECU (Gateway) Controller  
13010 Engine Coolant Temperature sensor is failed in the Engine Controller  
13011 Engine Coolant Temperature sensor voltage is too low (short to ground)

13012 Engine Coolant Temperature sensor voltage is too high (open circuit, short to +V)  
13021 Transmission Oil Temperature sensor voltage is too low (short to ground)  
13022 Transmission Oil Temperature sensor voltage is too high (open circuit, short to +V)  
13031 Hydraulic Oil Temperature sensor voltage is too low (short to ground)  
13032 Hydraulic Oil Temperature sensor voltage is too high (open circuit, short to +V)  
13040 Air to Air Intake Temperature sensor is failed in the Engine Controller  
13044 When fuel shut off relay is latched, short is detected (mechanical engine tractors only)  
13051 Air to Air Intake Temperature sensor voltage is too low (short to ground)  
13052 Air to Air Intake Temperature sensor voltage is too high (open circuit, short to +V)  
53001 Instrumentation Controller Configuration is Incorrect  
53002 Air to Air Intake sensor does not match Tractor Model Configuration  
53005 Engine Shutdown activated by Instrument Controller  
65535 NO ERROR. Errors have not been cleared from factory.

## **AUX**

1010 Aux remote valve EXTEND LIMIT SET switch is failed in the Armrest Controller  
1020 Aux remote valve RETRACT LIMIT SET switch is failed in the Armrest Controller  
1030 Aux 1st remote valve Timer Switch not available from Armrest due to bad Configuration  
1040 Aux 2nd remote valve Timer Switch not available from Armrest due to bad Configuration  
1050 Aux 3rd remote valve Timer Switch not available from Armrest due to bad Configuration  
1060 Aux 4th remote valve Timer Switch not available from Armrest due to bad Configuration  
1090 Aux 5th remote valve control switch (Extend) is failed in the Armrest Controller  
1100 Aux 5th remote valve control switch (Retract) is failed in the Armrest Controller  
8011 Battery Voltage is too Low  
8012 Battery Voltage is too High  
9009 Controller error -- Driver calibrated offsets either out of range or checksum faulted.  
9019 Controller memory or configuration error  
9029 Controller memory or configuration error  
11010 Aux 1st remote valve LEVER potentiometer is failed in the Armrest Controller  
11020 Aux 2nd remote valve LEVER potentiometer is failed in the Armrest Controller  
11030 Aux 3rd remote valve LEVER potentiometer is failed in the Armrest Controller  
11040 Aux 4th remote valve LEVER potentiometer is failed in the Armrest Controller  
11060 Aux 1st remote valve FLOW potentiometer is failed in the Armrest Controller  
11070 Aux 2nd remote valve FLOW potentiometer is failed in the Armrest Controller  
11080 Aux 3rd remote valve FLOW potentiometer is failed in the Armrest Controller  
11090 Aux 4th remote valve FLOW potentiometer is failed in the Armrest Controller  
11100 Aux 5th remote valve FLOW potentiometer is failed in the Armrest Controller  
11110 Aux remote valve TIMER potentiometer is failed in the Armrest Controller  
12011 Communications Lost with Armrest Controller  
12041 Communications Lost with Instrumentation Controller  
12081 Communications Lost with Performance Monitor Unit  
51011 Aux Remote Controller failure - Valve Supply Relay Open  
51012 Aux Remote Controller failure - Valve Supply Relay Voltage High  
51029 Valve supply Voltage high before interlock relay is closed.  
51031 Aux Remote Controller failure - Valve Current Enable Protection Low

51032 Aux Remote Controller failure - Valve Current Enable Protection High  
51039 Aux Remote Controller failure - Valve Current Enable Protection Failed  
51041 Aux Remote Controller failure - Valve Current Limit Protection Low  
51042 Aux Remote Controller failure - Valve Current Limit Protection High  
51049 Aux Remote Controller failure - Valve Current Limit Protection Failed  
51053 Aux 1st Lower Coil solenoid shorted to 12 volts.  
51054 Aux 1st Raise Coil solenoid shorted to 12 volts.  
51055 Aux 1st Lower solenoid failed open or short circuit.  
51056 Aux 1st Raise solenoid failed open or short circuit.  
51063 Aux 2nd Lower Coil solenoid shorted to 12 volts.  
51064 Aux 2nd Raise Coil solenoid shorted to 12 volts.  
51065 Aux 2nd Lower solenoid failed open or short circuit.  
51066 Aux 2nd Raise solenoid failed open or short circuit.  
51073 Aux 3rd Lower Coil solenoid shorted to 12 volts.  
51074 Aux 3rd Raise Coil solenoid shorted to 12 volts.  
51075 Aux 3rd Lower solenoid failed open or short circuit.  
51076 Aux 3rd Raise solenoid failed open or short circuit.  
51083 Aux 4th Lower Coil solenoid shorted to 12 volts.  
51084 Aux 4th Raise Coil solenoid shorted to 12 volts.  
51085 Aux 4th Lower solenoid failed open or short circuit.