

## Section 3 E-Codes

### Controller E-Codes

**NOTE:** For any Displayed Alarm in the Field Pro app, use the Action Step as a starting point.

Displayed Alarm	Alarm/Warning	E-Code	Condition Description	Action Step
Missing Config - Parameter Group	ALARM	502	Generator Model not selected, finish setup.	Call Technical support.
Missing Config - Fuel Type	ALARM	504	Generator fuel not selected, finish setup.	
Invalid Serial Number	ALARM	505	Invalid serial number in controller.	
Controller Fault	ALARM	1000	Controller memory failure.	
Controller Fault	ALARM	1005	Controller timer failure.	
Controller Fault	ALARM	1006	Internal Controller alarm.	
Overcrank	ALARM	1100	Engine cranks but will not start.	<a href="#">Fuel Supply and Pressure Test page 76</a>
Overspeed	ALARM	1200	Prolonged, Over 72 Hz for 3 seconds	<a href="#">Engine Speed Test page 70</a>
Overspeed	ALARM	1205	Prolonged, Over 75 Hz for 0.1 seconds (100 milliseconds)	
Overspeed	ALARM	1208	System overspeed from DPE sensing wires.	Call Technical support
RPM Sensor	ALARM	1522	Crankshaft Position Sensor RPM and DPE Frequency are both measured at 0 after crank command.	<a href="#">Battery and Cables Test page 63</a>
Underspeed	ALARM	1600	Unit is Overloaded	<a href="#">Overload Condition Test page 45</a>
Overvoltage	ALARM	1800	Prolonged Overvoltage	<a href="#">AC Output Voltage Test page 42</a>
Overvoltage	ALARM	1801	Instantaneous Overvoltage	
Undervoltage	ALARM	1900	Prolonged Undervoltage, Undervoltage due to loss of voltage for some time (10+ seconds).	<a href="#">Preliminary Output Voltage Test page 46</a>
Undervoltage	ALARM	1901	Instantaneous Undervoltage, Sudden loss of voltage (Less than 15V after 2 seconds past start-up).	
Undervoltage	ALARM	1902	Both Zero Crosses Missing. No voltage for over 1.5 seconds.	
Undervoltage	ALARM	1906	Single Zero Cross Missing. Zero cross missing for more 1.5 seconds.	
Undervoltage	ALARM	1907	After attempting to shed load, the generator remains overloaded.	<a href="#">Overload Condition Test page 45</a>
Keypad Missing	ALARM	2070	Controller does not recognize keypad presence.	Power cycle unit, if error reoccurs call Technical support.
Quadclips Missing	WARNING	2075	Controller does not recognize external LED indicators.	
Model ID Sync Failed	WARNING	2090	Communication failure between controller/radio/ECM.	Call Technical support.
Wiring Error	ALARM	2094	DC Wires 395A/B sees AC power.	Verify customer wiring to ATS/Generator.
Fuel Type Sync Failed	WARNING	2095	Communication failure between controller/radio/ECM for fuel type.	Call Technical support.
Wiring Error	ALARM	2098	Wiring error, low voltage on 194, look for short or overload condition.	<a href="#">Transfer Control Wires Test page 92</a>

Displayed Alarm	Alarm/ Warning	E-Code	Condition Description	Action Step
Wiring Error	ALARM	2099	DC Wires 194/23 sees AC power.	Verify customer wiring to ATS/ Generator.
Overload Remove Load	ALARM	2100	Controller is detecting an overload condition. Hold off time is dependent on how far field current is above normal operation.	<a href="#">Overload Condition Test page 45</a>
AVR PWM Overload	ALARM	2115	AVR sensed overload.	
Serial Num Sync Failed	WARNING	2120	Communication failure between controller/radio/ECM for Serial number.	Call Technical support.
Run Hours Sync Failed	WARNING	2125	Communication failure between controller/radio/ECM for run hours.	
CANBus Error	ALARM	2670	Communication lost between ECM and Controller.	<a href="#">CAN bus Test page 65</a>
No Transfer Detected	WARNING	2738	The command to transfer has been issued by the controller, but no transfer has been detected.	<a href="#">Transfer Control Wires Test page 92</a>
Low Battery	WARNING	2750	Battery is less than 12.1 Volts for 60 seconds.	<a href="#">Battery and Cables Test page 63</a>
Very Low Battery	ALARM	2751	Battery voltage level less than 9.0 Volts for 60 seconds.	
Battery Problem	WARNING	2760	More than 16 Volts of battery voltage or 600 milliamperes of charge current at the end of an 18 hour charge cycle.	<a href="#">AC Battery Charger Test page 61</a>
Charger Warning	WARNING	2770	Battery voltage is less than 12.5 Volts after 18 hour charge cycle.	
Charger Missing AC	WARNING	2780	During charging, AC input to battery charger missing for greater than 3 minutes.	
SEEPROM Abuse	WARNING	2790	Internal Controller alarm	Power cycle unit, if error reoccurs call Technical support.
Emergency Shutdown Pressed	ALARM	2800	Emergency Shutdown active.	With unit off. Press and hold the OFF button on the control for 3 seconds to reset or contact Technical support.
Auxiliary Shutdown	ALARM	2801	Remote Emergency Shutdown active.	Verify remote E-Stop switch is not active, Verify wiring. Once remote E- Stop verified clear E-Stop on generator. With unit off. Press and hold the OFF button on the control for 3 seconds to reset or contact Technical support.
ECU Faulted	WARNING	3000	ECU faulted	Power cycle unit, if error reoccurs call Technical support.
Engine Throttle Valve 1 Position 1	ALARM	3100	The engine throttle valve data received is valid but above normal operating range; high severe level.	<a href="#">Throttle Position Sensor Test page 91</a>
Engine Throttle Valve 1 Position 1	ALARM	3101	The engine throttle valve data received is valid but below normal operating range; high severe level.	
Engine Throttle Valve 1 Position 1	ALARM	3103	The engine throttle valve data received is valid but above normal operating range. Throttle Position signal voltage read above 4900 mV.	
Engine Throttle Valve 1 Position 1	ALARM	3104	The engine throttle valve data received is valid but below normal operating range. Throttle Position signal voltage read below 250 mV	
Engine Throttle Valve 1 Position 1	ALARM	3107	The engine throttle valve mechanical system does not respond as commanded.	<a href="#">Electronic Throttle Control Power Test page 68</a>
Engine Throttle Valve 1 Position 1	WARNING	3115	The engine throttle valve is receiving voltage but the voltage is above range.	<a href="#">Throttle Position Sensor Test page 91</a>
Engine Throttle Valve 1 Position 1	WARNING	3117	The engine throttle valve is receiving voltage but the voltage is below range.	

Displayed Alarm	Alarm/ Warning	E-Code	Condition Description	Action Step
Engine Fuel Delivery Pressure	ALARM	3200	The fuel pressure is reading above normal range - high severe level.	<a href="#">Fuel Pressure Sensor Test page 73</a>
Engine Fuel Delivery Pressure	ALARM	3201	The fuel pressure is reading below normal range - high severe level.	
Engine Fuel Delivery Pressure	ALARM	3203	The fuel pressure signal is reading above normal range. Signal is reading above 4900 mV.	
Engine Fuel Delivery Pressure	ALARM	3204	The fuel pressure signal is reading below normal range. Signal is reading below 120 mV	
Engine Fuel Delivery Pressure	WARNING	3215	The fuel pressure is reading above normal range - least severe level.	
Engine Fuel Delivery Pressure	WARNING	3217	The fuel pressure is reading below normal range - least severe level.	
Engine Oil Pressure	ALARM	3301	The engine oil pressure signal is below normal range - high severe level.	<a href="#">Oil Pressure Switch Test page 84</a>
Engine Oil Pressure	ALARM	3304	The engine oil pressure signal is reading above normal range.	
Engine Intake Manifold #1 Pressure	ALARM	3400	The engine intake manifold pressure signal is above normal range - high severe level.	<a href="#">Intake Manifold Pressure Sensor Test page 78</a>
Engine Intake Manifold #1 Pressure	ALARM	3401	The engine intake manifold pressure signal is below normal range - high severe level.	
Engine Intake Manifold #1 Pressure	ALARM	3403	The engine intake manifold pressure signal is reading above normal range. Signal voltage is above 4900 mV.	
Engine Intake Manifold #1 Pressure	ALARM	3404	The engine intake manifold pressure signal is reading below normal range. Signal voltage is below 250 mV.	
Engine Intake Manifold #1 Pressure	WARNING	3415	The engine intake manifold pressure signal is reading above normal range - least severe level.	
Engine Intake Manifold #1 Pressure	WARNING	3417	The engine intake manifold pressure signal is reading below normal range - least severe level.	
Engine Intake Manifold 1 Temperature	ALARM	3500	The engine intake manifold temperature reading is valid but above normal operating range; high severe level.	<a href="#">Intake Manifold Temperature Sensor Test page 79</a>
Engine Intake Manifold 1 Temperature	ALARM	3501	The engine intake manifold temperature reading is valid but below normal operating range; high severe level.	
Engine Intake Manifold 1 Temperature	ALARM	3503	The engine intake manifold temperature is reading below normal range. Resistance on signal is reading below 100 Ohms.	
Engine Intake Manifold 1 Temperature	ALARM	3504	The engine intake manifold temperature is reading above normal range. Resistance on signal is reading OL or above 65 kOhms.	
Engine Intake Manifold 1 Temperature	WARNING	3515	The engine intake manifold temperature reading is valid but above normal operating range; least severe level.	
Engine Intake Manifold 1 Temperature	WARNING	3517	The engine intake manifold temperature reading is valid but below normal operating range; least severe level.	

Displayed Alarm	Alarm/ Warning	E-Code	Condition Description	Action Step
Battery Potential / Power Input 1	ALARM	3803	The battery voltage received is above the normal range, high severe level. Battery is reading voltage above 16 volts.	<a href="#">Battery Potential/Power Output 1 Test page 64</a>
Battery Potential / Power Input 1	ALARM	3804	The battery voltage received is below the normal range, high severe level. Battery is reading voltage below 8.5 volts.	
Battery Potential / Power Input 1	WARNING	3815	The battery voltage received is above the normal range, least severe level. Battery is reading voltage above 15 volts.	
Battery Potential / Power Input 1	WARNING	3817	The battery voltage received is below the normal range, least severe level. Battery is reading voltage below 10 volts.	
Engine Position Sensor	ALARM	4101	The crankshaft sensor signal is reading below the normal range, high severe level.	<a href="#">Crank Position Sensor Test page 66</a>
Secondary Sync	ALARM	4201	The engine timing sensor signal is reading below the normal range, high severe level.	<a href="#">Engine Timing Sensor Test page 71</a>
O2 Sensor	ALARM	4300	The O2 sensor data received is valid but above normal operating range; high severe level.	<a href="#">Oxygen Sensor Test page 85</a>
O2 Sensor	ALARM	4301	The O2 sensor data received is valid but below normal operating range; high severe level.	
O2 Sensor	ALARM	4303	The O2 sensor is reading voltage above normal range, may be shorted to high voltage source.	
O2 Sensor	ALARM	4304	The O2 sensor is reading voltage below normal range.	
O2 Sensor	ALARM	4307	ECU faulted, exhaust / O2 alarm	Call Technical support
O2 Sensor	WARNING	4315	The O2 sensor data received is valid but above normal operating range; least severe level.	<a href="#">Oxygen Sensor Test page 85</a>
O2 Sensor	WARNING	4317	The O2 sensor data received is valid but below normal operating range; least severe level.	
Engine Ignition Coil #1	ALARM	4503	The engine ignition coil 1 voltage data received is valid but above normal range.	<a href="#">Ignition Coil Test page 77</a>
Engine Ignition Coil #1	ALARM	4504	The engine ignition coil 1 voltage data received is valid but below normal range.	
Engine Ignition Coil #1	ALARM	4507	The engine ignition coil 1 mechanical system is not responding correctly.	
Engine Ignition Coil #2	ALARM	4603	The engine ignition coil 2 voltage data received is valid but above normal range.	
Engine Ignition Coil #2	ALARM	4604	The engine ignition coil 2 voltage data received is valid but below normal range.	
Engine Ignition Coil #2	ALARM	4607	The engine ignition coil 2 mechanical system is not responding correctly.	
Engine Fuel Valve 1 Position	ALARM	4900	The fuel mixer position data received is valid but above normal operating range; high severe level.	<a href="#">Fuel Mixer Valve Test page 72</a>
Engine Fuel Valve 1 Position	ALARM	4901	The fuel mixer position data received is valid but below normal operating range; high severe level.	
Engine Fuel Valve 1 Position	ALARM	4903	The fuel mixer position is reading voltage above normal range. Fuel mixer position signal is reading above 4900 mV.	
Engine Fuel Valve 1 Position	ALARM	4904	The fuel mixer position is reading voltage below normal range. Fuel mixer position signal is reading below 120 mV.	
Engine Fuel Valve 1 Position	ALARM	4907	The fuel mixer mechanical system is not responding as commanded.	<a href="#">Mixer Valve Power Test page 82</a>

Displayed Alarm	Alarm/ Warning	E-Code	Condition Description	Action Step
Engine Fuel Valve 1 Position	WARNING	4915	The fuel mixer position data received is valid but above normal operating range; least severe level.	<a href="#">Fuel Mixer Valve Test page 72</a>
Engine Fuel Valve 1 Position	WARNING	4917	The fuel mixer position data received is valid but below normal operating range; least severe level.	
Engine Speed	ALARM	5100	The engine speed data received is valid but above normal operating range; high severe level.	<a href="#">Engine Speed Test page 70</a>
Engine Speed	ALARM	5101	The engine speed data received is valid but below normal operating range; high severe level.	
Engine Speed	WARNING	5115	The engine speed data received is valid but above normal operating range; least severe level.	
Engine Speed	WARNING	5117	The engine speed data received is valid but below normal operating range; least severe level.	
Cylinder Head Temperature 1	ALARM	5200	The cylinder head temperature reading is valid but above normal operating range; high severe level.	<a href="#">Cylinder Head Temperature Sensor Test page 67</a>
Cylinder Head Temperature 1	ALARM	5201	The cylinder head temperature reading is valid but below normal operating range; high severe level.	
Cylinder Head Temperature 1	ALARM	5203	The cylinder head temperature is reading resistance above normal range. Resistance on signal is reading above 1.8 M ohms.	
Cylinder Head Temperature 1	ALARM	5204	The cylinder head temperature is reading resistance below normal range. Resistance on signal is reading below 15 Ohms.	
Cylinder Head Temperature 1	WARNING	5215	The cylinder head temperature reading is valid but above normal operating range; least severe level.	
Cylinder Head Temperature 1	WARNING	5217	The cylinder head temperature reading is valid but below normal operating range; least severe level.	
Engine Fuel Shutoff 2 Control	ALARM	5303	The voltage for fuel shutoff signal is above nominal.	<a href="#">Fuel Shutoff 2 (SOV2) Control Test page 75</a>
Engine Fuel Shutoff 2 Control	ALARM	5304	The fuel shutoff signal is below nominal voltage. Short reading is detected for over 10 seconds or in 6 occurrences.	
Engine Oil Level	WARNING	5415	Oil level sensor signal is reading high.	<a href="#">Oil Level Sensor Test page 83</a>
Engine Oil Level	WARNING	5417	Oil level sensor signal is reading below nominal.	
Overload Cooldown	WARNING	7000	Unit running in cool down mode due to overload.	Allow unit to finish cooldown, verify load on unit (overload test).