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Generac Evolution 1.0/2.0 Error Code Fault List (Also applies to Honeywell Sync 2.0/3.0)

The following is a list of the current Generac Fault Codes, otherwise known as eCodes. **These pertain to Generac Evolution models only. See the image below to determine if you have a Generac Evolution generator.**



Shown is a Generac Evolution Control Panel & Generac 22kW Model 7043. This is Evolution 1.0, the same as Honeywell Sync 2.0. The newest version is now Evolution 2.0 which includes WiFi and Honeywell Sync 3.0 (also WiFi). The error codes in this document pertain to both panels unless otherwise noted...

If you have a control panel that looks different than this picture, please visit our site [View the Gentek Power Help Forums](#) for more information and help. Other control panels such as Generac Nexus, Pre-Nexus (2008-2009 models) and earlier LED-only type panels are covered there in other documents.

This is a complete list of Generac Air-Cooled Error Codes as of November 2018

This list can also be found here: [Gentek Power Forums Generac Error Code List](#)

Color legend for this list:

Displayed Alarm message/Warning message

e-Code error number

Description and possible causes/fixes



Depending on the error code displayed on the LCD screen, the small LED 'tri-clops' (shown above) on the side of the generator will also have a corresponding color LED lit, or possibly 2. Many of the error codes mentioned here may require professional help to resolve. There are 4 possibilities: Green (normal operation) Green/Yellow (normal operation with a maintenance reminder) Red (active alarm fault, unit won't run) and Red/Yellow (active alarm unit won't run, and active maintenance reminder) **There are directions near the bottom of this document that explain how to reset an alarm or maintenance reminder.**

Controller Fault

ALARM

The controller has an internal problem and should be replaced. No error code number is given for this fault.

Overcrank 1100

ALARM

This is a more common error code. Basically this means that the controller is telling the engine to start, but it cannot start for some reason. The controller has verified that the engine is actually cranking, but not starting. This is most likely fuel or maintenance related... Check to make sure that the fuel supply is on and if on LP gas, the tank is not empty.

Overcrank 1101 (This ONLY pertains to 8 & 9kW units)

ALARM

The controller has limited the number of starts at 10 to prevent damage to the starter. Fuel and maintenance related items should be checked. Valves are normally a culprit of overcrank alarms...

Overspeed 1200

ALARM

This overspeed e-code is for prolonged overspeed (Hz is over set threshold). This means that for 3 seconds, the frequency (engine speed) was 72Hz or above on a 60Hz unit or 60Hz or above on a 50Hz unit (not a US unit). Most likely cause is a stepper motor or mixer assembly issue. Could have come unplugged, become jammed or anything else that may increase engine speed.

Overspeed 1205

ALARM

This overspeed e-code is for instantaneous overspeed (Hz is over set threshold). This means that the frequency (engine speed) was very high. 75Hz or above on a 60Hz generator, or 62Hz or above on a 50Hz model (again, not a US generator). The same causes as the above overspeed code. Stepper/mixer problems.

Overspeed 1207

ALARM

This is an uncommon overspeed alarm and is a backup to the normal overspeed monitors. This monitors the zero cross timing of the voltage regulator (AVR) to determine the alternator frequency. It's set for 150 Milliseconds of 4500 RPM or higher. It's only used if the normal ignition pulses are not seen by the controller from the 18 wire.

Low Oil Pressure 1300

ALARM

This is the normal shutdown alarm for low oil or low oil pressure and may be caused by a couple of things: 1. The oil level is low and should be checked and filled as needed (most common during extended outages). 2. The low oil pressure (LOP) switch is faulty and the oil pressure should be checked and the switch replaced. 3. Some internal problem with the engine not building oil pressure. This would require an oil pressure test to verify.

High Temperature 1400

ALARM

The high engine temperature switch has closed and shut the unit down for exceeding the engine temp high limit. The unit should be checked for debris blocking the vents that might be restricting airflow. If nothing is found, the high temp switch and its wiring should be checked.

RPM Sensor Loss 1501

ALARM

This RPM alarm is set when a 2 cylinder unit was already running and stalled or lost the RPM signal from the ignition coils. Possible causes could be a fuel issue, the LP tank is empty, 1 or both ignition coils are damaged, or the unit was overloaded quick enough that the engine stalled and set the alarm.

RPM Sensor Loss 1505

ALARM

This RPM alarm is set when a 2 cylinder unit is cranking. It's caused when the controller told the engine to crank, but did not get a signal back that the engine was actually turning. Possible causes are a dead or bad battery, bad starter or wiring to the starter, or ignition coil problems.

RPM Sensor Loss 1511

ALARM

This RPM alarm is set when a single (1) cylinder unit was already running and stalled or lost the RPM signal from the ignition coil. Possible causes could be a fuel issue, the LP tank is empty, ignition coil is damaged, or the unit was overloaded quick enough that the engine stalled and set the alarm.

RPM Sensor Loss 1515

ALARM

This RPM alarm is set when a single (1) cylinder unit is cranking. It's caused when the controller told the engine to crank, but did not get a signal back that the engine was actually turning. Possible causes are a dead or bad battery, bad starter or wiring to the starter, or ignition coil problems.

Underspeed 1600

ALARM

An e-code that's triggered when the engine speed is slowed to 55Hz for a 60Hz unit for 30 seconds (or 40Hz for a 50Hz unit). Most likely problem is that the unit is overloaded or something has tried to turn on that overloaded the unit. Could also be fuel related or a stepper motor throttle control problem.

Underspeed 1603

ALARM

This alarm is triggered when the engine never came up to its rated 3600 RPM speed during startup. Stepper motor and the fuel system should be checked for problems. Make sure the orange fuel selector knob is set to the correct fuel.

Overvoltage 1800

ALARM

The alarm is set when the unit's rated voltage output is exceeded for a prolonged period of time. A voltage test should be done to determine the problem. Most likely a bad AVR (automatic voltage regulator) which is internal to the Evolution control board.

Undervoltage 1900

ALARM

e-Code is displayed when the output voltage is below 80% of the unit's rated output for 10 or more seconds. Please note that if the installed firmware is below version 1.12 you should update the firmware before going further. Frost or debris on the slip rings can cause a bad connection to the brushes where version 1.11 and below would shut the unit down before attempting to 'clean' the slip rings during running. Version 1.12 and above will run the unit with excitation voltage for 4 minutes before shutting down for undervoltage.

Undervoltage 1901

ALARM

A sudden drop in voltage will set this alarm. This can also occur during a stall condition which may be fuel related and can throw troubleshooting in the wrong direction. All engine functions should be checked as well as voltage. Causes could also be a stator or rotor problem, brush problem, unit being overloaded, or wiring problems. Firmware v1.12 or higher should also be installed before going further.

Undervoltage 1902

ALARM

Fault is displayed when both zero crosses are missing from the controller's input for 1.5 seconds or more. Could be a faulty excitation winding, zero cross circuit, loose wiring, or field boost hardware problem. Same applies here, v1.12 or later firmware should be installed.

Undervoltage 1906

ALARM

Same basic alarm as above, however only 1 zero cross is missing for 1.5 sec instead of both. See Undervoltage 1902 above for causes and troubleshooting.

Wiring Error 2099

ALARM

The controller's wiring on the customer side is most likely miswired. This is normally caused when the high and low voltage wiring connections (194, 23, N1, N1 and T1) are confused during the installation. Normally this alarm won't appear after the initial install since that wiring doesn't normally change after the installation.

Overload Remove Load 2100

ALARM

Alarm is triggered when the unit is overloaded and the internal CT (current transformers) detected an overload condition. This should be 1 or both CT's that detected the problem. The loadshed modules (if in use) should be checked, load should be removed, or load shedding should be installed to prevent the overload from happening.

Overload Remove Load 2102 (This ONLY pertains to 8 & 9kW units)

ALARM

The unit re-cranks 5 times, when load is applied the engine stalls (0 RPM) and has low output voltage (< 180VAC) The unit is most likely overloaded and load should be removed to prevent damage. Inspect the stepper motor and linkage to make sure it's not binding or stuck. Also check for fuel problems such as pinched fuel lines.

Overload Remove Load 2103 (This ONLY pertains to 8 & 9kW units)

ALARM

The unit has attempted to run and accept load 10 times and could not due to an overload condition. Check connected loads for overloading. See above overload alarms for other troubleshooting...

Undervoltage Overload 2299

ALARM

The unit was overloaded and attempted to start with a large load still connected to the generator. The generator cannot ramp up the generator output to normal with a large load connected. The main breaker inside the generator or in the gray door on the side should be turned off while the unit is started and then once up to speed and steady, the breaker can be turned back on to re-connect load. If the engine struggles to accept the load, items should be turned off to decrease the load on the generator. This would only be something that would occur during an ongoing outage where the transfer switch was still connecting the load to the generator.

Stepper Overcurrent 2399

ALARM

The current flow measured in the stepper motor circuit was above spec. Check the stepper motor for operation and check resistances of the stepper coils.

Fuse Problem 2400

ALARM

Missing, blown, or damaged 7.5A ATO type fuse in the controller (located under the rubber USB port flap on the top of the Evolution Controller). This alarm was flashed out of the programming on versions 1.12 and above. If you see this alarm, upgrade the firmware in the controller to a current version (1.20 as of writing this)

Aux Shutdown 2800

ALARM

This only pertains to units with an external Auxiliary Shutdown switch or switches installed. New WiFi units come standard with these switches, some (15kW and above) with 2. One located on the back side of the unit and one inside on the firewall. They must be on for the unit to run. If they are both on, check the wiring and connections for problems.

Low Battery

WARNING

The warning is triggered when the battery voltage drops below 12.1 volts for 60 seconds or more. Charger output should be checked as well as the battery should be load tested once charged. Battery could be bad or charger could be faulty.

Battery Problem

WARNING

This warning is triggered when the battery voltage is more than 16 volts or more than 600mA of charge current is detected at the end of an 18 hour charge cycle. Battery should be removed and tested. If bad, replace. Note that as of writing this, the only way I know how to clear this alarm is by removing a battery terminal from the battery, and then unplugging the T1 2-wire white colored connector under the controller. This will power cycle the controller and reset the alarm. If it returns, further investigation into the controller may be needed.

Charger Warning

WARNING

Warning is displayed when the battery voltage is below 12.5 volts at the end of an 18 hour charge cycle. Battery should be tested as well as the charger. Note that as of writing this, the only way I know how to clear this alarm is by removing a battery terminal from the battery, and then unplugging the T1 2-wire white colored connector under the controller. This will power cycle the controller and reset the alarm. If it returns, further investigation into the controller may be needed.

Charger Missing AC

WARNING

This is a very common alarm to see during install if the battery was installed before the charger was powered on, or during a power outage where the unit isn't running for some reason. It's displayed when the T1 wire (120V power to the battery charger circuit in the Evolution controller isn't live) If power is out and the unit isn't running this alarm will be triggered since the battery charger is now not getting power from the house. Eventually the battery will die if left for several hours without a charger input. If this is a new installation, all of the control wiring should be checked to make sure that one or more of the wires isn't loose, transposed, or missing completely... The T1 fuse should also be tested. Another issue could be if the unit had a cold weather breather heater (model 7103) installed which is powered by the T1 wire. If the heater had a problem or is shorted and blew the T1 fuse, you will see this alarm.

Service Schedule A

MAINTENANCE REMINDER

Triggered at the 2 year mark (date from which the unit was powered on) or 200 hours, whichever came first. Proper maintenance should be performed. Valves should be checked at this point and will usually require adjustment.

Service Schedule B

MAINTENANCE REMINDER

Triggered at the 4 year mark (date from which the unit was powered on) or 400 hours, whichever came first. Proper maintenance should be performed. At 400 hours the valves almost certainly need to be adjusted, probably before this!

Directions for resetting an alarm or maintenance reminder light.

Please note that many of the alarms mentioned here should **NOT** be reset without consulting a Generac dealer. They can cause damage to the generator and possibly the connected loads as well. Use extreme caution when clearing an alarm and running the generator again.

To clear a maintenance reminder alarm (Yellow light)

1. Press the gray colored 'ENTER' key once to confirm the maintenance has been performed.
2. Press the gray colored 'ENTER' key a second time to confirm the action, or press 'ESCAPE' to cancel and leave the maintenance reminder active on the screen.

To clear an active alarm (Red light)

1. Confirm that the problem has been repaired and no longer exists.
2. Put the unit into 'OFF' by pressing the **RED** button under the 'OFF' red LED
3. Push the 'ENTER' key to confirm that the alarm has been repaired
4. Put the unit back into either 'AUTO' or 'MANUAL' depending on which is desired. ('MANUAL' will cause the unit to start and run, 'AUTO' will resume automatic standby functions and wait for the next outage or exercise date)



Some of the tests mentioned in this document require special equipment and involve VERY dangerous voltages which could harm or kill! If you need assistance with locating a local Generac dealer, visit the Gentek Power Forums and ask for help locating your nearest dealer there.

[Visit the Gentek Power Generac Help Forum](#)

Please keep in mind that this document is for educational purposes only and isn't intended to diagnose any problem(s). You should always consult with a dealer who is qualified to work on and service Generac products. Gentek Power LLC will not be held responsible for any damages or otherwise implied liability by anyone using this guide. Furthermore, Gentek Power does not guarantee the accuracy of this document and may make changes (without notice) at any time.