



Generator Fault code reference sheets



Current Generac Evolution Air Cooled generators through units made starting around 2001. Briggs and Stratton units. Powerpact generators are not covered in this booklet as their controllers are completely different.



Evolution controller



Made from 2013-2016



Made from 2016- current

- Digital display shows fault codes in plain English. Faults will alternate between E-codes and fault in English.
- Unit has rounded corners and powder coat paint (paint has a texture to it – not smooth like car paint)
- Unit has locks on both sides – if cover is locked homeowner must get key before proceeding

- Has three status lights on outside of generator



- Units made after 2016 do not have the little door on the side, the circuit breaker has been moved under the main cover (see the pictures above).

- The **GREEN** light indicates that the generator is functioning properly
- The **RED** light indicates that the unit is in fault mode and WILL NOT RUN
- The **YELLOW** light indicates that maintenance is needed, unit WILL STILL RUN as programmed.
- The **YELLOW** light can also now indicate the battery charger has lost power
- Depending on firmware, The **GREEN** light may blink to indicate the unit is running due to a utility power loss.

- **This is by far the most complex air cooled controller that Generac has made to date. The maintenance reset is buried in the dealer access menu and is not available to the consumer. There is a dealer passcode that is common to all AIR COOLED evolution units. Caution is advised being in the dealer menu as damage to the generator or the customers connected equipment can result from improper settings.**
- **This model generator has updatable software. There will be additional functionality and additional E-codes added to the controller as time passes. This booklet will be updated accordingly. WiFi capabilities will be coming and ARE NOT covered in this booklet.**
- **Please note... This section was written when 1.18 firmware was just released. There will be engine stop switches added at a later date that will have fault codes not known yet.**
- **There is an Evolution 2 controller that is not covered by this booklet (not in production yet)**

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- ❖ Resetting the maintenance reminder is a commonly asked question. The procedure to get into the dealer access is a little tricky and you only have **10 seconds** to complete the key presses.
 - ❖ The key presses **MUST** be entered with the controller displaying [switched to off].
 - ✓ Note... the buttons above and below the “ENTER” button are considered the “up” and “down” buttons – they are not marked as such.
1. The status lights on the generator will be **green/yellow** -proceed with maint reset.
 2. If the customer sees **red/yellow** maintenance is needed and there is a fault. At some point the generator went into fault mode. A service call will be required.
 3. Press off button ... the screen will need to say [Switched to off] to proceed
 4. Press the following buttons in this sequence...
{up, up, ESC, down, up, ESC, up, ENTER}
 - ✓ the display will now read [History, Edit, Maint, Dealer]
 5. Navigate using the up button to the word [Dealer] and press enter.
 - ✓ Note... without entering the pass code the dealer menu cannot be selected, if the pass code is entered incorrectly the [Dealer] menu will not be available to select.
 6. If done correctly the screen will now read... [Display, Dealer Edit, Test]
 7. Using the up and down buttons navigate to “Dealer Edit” and press ENTER.
 - ✓ *The following should be done with extreme caution, damage to the connected loads can result from incorrect settings in the following [Dealer Edit] menu. The customer should be warned! Only select the settings listed below. If the customer plays around in the dealer menu we cannot be held responsible for damage.*
 8. Using the “up” button, press until [Reset Maintenance] is displayed on the screen.
 9. Press enter.
 10. Press the up button and [Reset Maintenance YES] should be displayed.
 11. Press ENTER.
 12. Display should read [Maintenance RESET, Maintenance RESET].
 13. (The maintenance counter has been reset for another 365 days)
 14. Press the “ESC” button a few times until [System] is blinking.
 15. Press ENTER.
 16. The screen should now read [Switched to Off].
 17. Press the “**AUTO**” to return the generator unit to the automatic mode.
 18. Resetting the maintenance is finished. [Ready to Run] in displayed
 19. The status light on the generator will be green now.



Steps to change the clock time (current time)

1. Press the off button
2. Press ESC
3. [System Date/Time Batterty Sub Menus] is displayed
4. Press the up button until [sub menus] is blinking
5. Press ENTER
6. [History Maint Edit Dealer] is displayed
7. Press the up button until [Edit] is blinking
8. Press ENTER
9. Press the UP button until [CURRENT DATE/TIME] is displayed
10. Press ENTER
11. Select the [Hour] (this is military time so "13" is 1:00pm, "14" is 2:00pm)
12. Press ENTER
13. Select the [Minutes]
14. Press ENTER
15. Select the [Month]
16. Press ENTER
17. Select the [Date]
18. Press ENTER
19. Select the [Year]
20. Press ENTER
21. Press ESC until [System]
22. Press ENTER


23. Press The AUTO Button, The light on the side of the Generator should be **GREEN**



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Steps to change the Weekly Exercise Time

1. Press the off button
2. Press ESC
3. [System Date/Time Battery Sub Menus] is displayed
4. Press the up button until [sub menus] is blinking
5. Press ENTER
6. [History Maint Edit Dealer] is displayed
7. Press the up button until [Edit] is blinking
8. Press ENTER
9. Press the UP button until [Exercise Time] is displayed
10. Press ENTER
11. Some Models ask Weekly, BiWeekly or Monthly testing– we suggest Weekly- press ENTER
12. [Quiet test mode] is displayed – make sure it says NO and Press ENTER***
13. Select the [Hour] (this is military time so “13” is 1:00pm, “14” is 2:00pm)
14. Press ENTER
15. Select the [Minutes]
16. Press ENTER
17. Select the [Day]
18. Press ENTER
19. Press ESC until [System]
20. Press ENTER
21. Press The AUTO Button, The light on the side of the Generator should be **GREEN** 

***** Being a Northern climate, the generator will not get warm enough running in the quiet test mode during the winter. This is why we suggest quiet test mode NO (turns option off).**

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Evolution controller error codes (referred to as E-codes)...

Overcrank... (error code 1100) the engine tried multiple times to start and was unsuccessful. Resetting the controller and restarting may work. If the unit does not start after 2 automatic attempts, the engine is not going to start – there is an issue.

1. Customer should make sure that the gas is turned onto the generator unit, the valve can be found along the gas pipe supply to the generator. The gas valve(s) can be exposed outside with the pipe or possibly in the basement. The handle lined up with the pipe indicates the gas is on. The handle lined across the pipe indicates the gas is turned off.
2. If the gas is on then a service call will need to be placed... there is no other troubleshooting that the customer can do. Repeated start attempts will just wear the battery down and serve no purpose.

overspeed... (error codes 1200, 1205) service call is needed.

Low Oil Pressure... (error code 1400). Customer should check the engine oil. Use only SAE 5W30 full synthetic engine oil. Mobil One is a very good brand and is widely available. If oil is needed the customer can add 4 ounces at a time, check the oil on the dipstick, and add additional ounces if needed. Most oil bottles provide a handy sight guage on the side of the bottle to see how much is in the bottle. There are increments of 4 ounces marked on the side of the bottle (example 20, 24, 28, 32). Do not over fill the engine.

Fuse problem... (code 2400) This code was eliminated due to conflicts within the controller. The customer should have the firmware updated on their controller. Service call is needed.

(continued)

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Undervoltage... (codes 1900, 1901, 1902, 1906) service call is needed.

High Temp... (code 1400) check the large vents on the generator enclosure for blockages. Note... if the engine just shut down for high temp when the customer called then the generator engine could be VERY HOT, this is a rare condition as Generac is very good with airflow cooling. If the issue persists, and the vents are clear then this is a failed overtemp sensor. A service call is needed.

RPM sensor loss... (code 1501, 1505, 1511, 1515) service call is needed.

Underspeed... (code 1600) possibly caused by excessive loads. Customer should turn off large loads such as air conditioning, electric clothes dryers or electric oven/burners. If the customer reports that the unit keeps going into fault even with minimal loads connected then a service call is needed.

Overvoltage... (code 1800, 1802) service call is needed.

Wiring error... (code 2099) did Oak Electric install this unit, if not then this could be an installation issue. Service call is needed, possible charge to the customer if installed by others.

Overload Remove Load... (code 2100) possible overload condition by too many devices running at the same time. Possible malfunction with the current sensing devices. If installed by others there MAY be a charge if the generator is being forced to run too many loads. This could also be a warranty call. Possible service call is needed. Have customer remove loads and reset the unit before dispatching a technician, if problem persists after removing load then continue with the service call.

Undervoltage Overload... (code 2299) *see "Overload remove load" above*

Stepper Overcurrent... (code 2399) service call is needed.

Exercise set error... (code 2730) service call is needed.

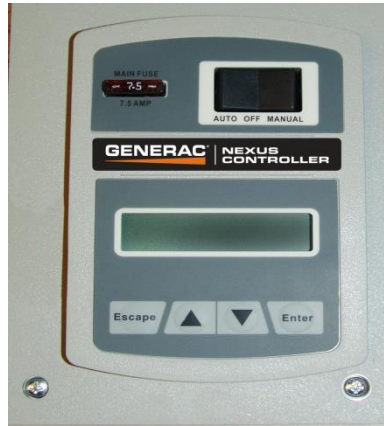
Low Battery, Very Low Battery, Battery Problem...
(codes 2750, 2751, 2760) service call is needed.

(continued)

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Charger missing AC... (code 2780) There will be a **YELLOW** light on the side of the generator also. This means that the battery charger in the generator is not getting power. The customer should check the circuit breaker at the generator, if the unit is running during an outage but is NOT powering the home (the circuit breaker could be behind the 6x10 inch cover on the side of the enclosure or under the main lid above the control board). If the generator is NOT running AND the customer says there is (yes DTE power is on) power in the home then a service call is needed. If in doubt a service call is the safe bet, our customer are not electricians and we do not want to see anyone get hurt. If the generator was installed by others this may be a chargeable service call.

USB plug under the flap... This jack can be found under the rubber flap on the generator controller. Customer should be advised that this is for technician tools only and is not for charging a cell phone. Yes it will work for this purpose, but we don't want a forgotten about cell phone vibrating and falling into the engine compartment where damage can result.



Made 2010 to early 2013



made 2008 to 2010

Generac Guardian Generator (manufactured from 2008 to early 2013)

- Digital display shows fault codes in plain English.
- Unit has rounded corners and powder coat paint (paint has a texture to it – not smooth like car paint)
- Unit has locks on both sides – if cover is locked homeowner must get key before proceeding

- Has three status lights on outside of generator (**inside of the little gray or black door, side of unit**)



- The **GREEN** light indicates that the generator is functioning properly
- The **RED** light indicates that the unit is in fault mode and WILL NOT RUN
- The **Yellow** light indicates that maintenance is needed, unit WILL STILL RUN as programmed

- Most Common Faults (appear as text on screen)...

- **Over Crank fault**.... Means generator failed to start after 3 attempts
- **Under voltage**... means generator did not product 240volts while running as expected (*under voltage has nothing to do with the 12 volt battery*)
- **Under speed**... engine was running to slow to product 60hz as required
- **Low oil pressure**... engine has run out of oil and sensor protected engine from failure (generator needs oil or a technician to come out –caution- DO NOT OVER FILL)
- **Over speed**... engine was running too fast and was over 60hz speed
- **No rpm sense**... a technician will need to be dispatched , too complicated to explain
- **Completely blank screen or blacked out screen** – technician needed on site

- **Faults require the “auto-off-manual” switch to be put into the OFF (middle) position ... THEN... push the “enter” button. Doing this will clear the fault code. Return the switch to the auto position. The display will now say “ready to run”.**

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Older Generac Guardian Generator (older than model year 2008)

- Note square corners
- Note smooth paint typically beige or light gray (like the paint on a car).
- Uses LED lights to show faults, lights can **only** be seen by lifting top cover.
- Latch on the right side contains the lock – home owner must get key if unit is locked before proceeding
- **Steady green light indicates that unit is “ready to run”, flashing green light indicates a loss of utility power.**
- **All red lights flashing together at the same time** indicate that **no** weekly exercise time is set. Follow the instructions on the generator to set the exercise time (typically this requires you to hold down the “set exercise time switch ” for about 20 seconds then release – it will pop back on its own)
- **A red light** indicates that generator has shut down and there is a problem or fault with unit.
- **All faults can be cleared** by moving “auto – off – manual” switch to the off position, waiting a moment, then returning switch to the auto position. (Typically a fault on this generator will need a technician to visit the site as a fault on this model will most likely return at the next exercise or outage).
- Dead batteries are a common problem on this unit simply due to age of battery if PM’s were not done.
- Batteries should be replaced every 4 years

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Generac Core Power

- Small unit with plastic sides
- Uses LED lights to show status (this unit does not have a display screen)
- Top cover is removed by turning top latches ¼ turn, nothing can be done to the unit without removing the top cover. Once the top is off the sides can easily be slid up to be removed to access motor or check oil.
- **Important note!** Top must go back on the same way it came off – there is a front and back to the top (typically there is a blue sticker on one side that says **BACK**)
- **Steady green light** indicates that unit is “ready to run”, **flashing green light** indicates a loss of utility power
- **All red lights flashing together at the same time** indicate that the weekly exercise time is not set. Follow the instructions on the generator to set the exercise time (typically this requires you to hold down the “set exercise switch” for about 20 seconds then release).
- **All faults can be cleared by moving “auto – off – manual “ switch to the off (middle) position, waiting a second, then returning the switch to the auto position.**

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Panel inside of generator

Briggs and Stratton / GE generator

- Note hinged doors and plastic pop in vents around generator
- Note 95% of the time doors on these units are locked - home owner will have to find key to proceed!!!
- **Display will normally show run hours** (if there is only a number then you are seeing the cumulative run hours – this IS NOT a fault code)
- Fault codes are as follows...
 - FC-1 low battery voltage
 - FC-2 low oil pressure
 - FC-3 low voltage (generator failed to produce the expected 240 volts)
 - FC-4 engine failed to start
 - FC-5 low output frequency
 - FC-6 engine over speed
 - FC-7 high engine temperature
 - FC-8 transfer switch problem
- **If there is an optional remote panel inside of the home with a single red or blue light it should be steady on all the time.** If there is a fault code it will directly correspond with the above FC fault codes *see examples below*
 - **(blink-blink-blink-blink... pause... blink-blink-blink-blink)** see fault code FC-4 “engine failed to start
 - **(blink-blink... pause... blink-blink)** see fault code FC-2 “low oil pressure”
- A fault on this unit will typically need a technician to come to the house as the problem will most likely return at an outage or the next exercise.

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Older Briggs and Stratton generator

- Note round silver locks requiring a round cylindrical key
- Note 100% of the time doors on these units are locked - home owner will have to find key to proceed!!!
- **Red light inside of generator is always on** this IS NOT a fault code)
- Fault codes (displayed as blinks of the light inside of generator are as follows...
 - (one blink).....low battery voltage
 - (two blinks)low oil pressure
 - (three blinks)low voltage (generator failed to produce the expected 240 volts)
 - (four blinks)engine failed to start
 - (five blinks).....low output frequency
 - (six blinks).....engine over speed
 - (seven blinks) ...high engine temperature
 - (eight blinks)....transfer switch problem
- **If there is an optional remote panel inside of the home with a single red light it should be steady on all the time.** If there is a fault code it will directly correspond with the fault light inside generator *see examples below*
 - **(blink-blink-blink-blink... pause... blink-blink-blink-blink)** see fault (4 blinks) above “engine failed to start
 - **(blink-blink... pause... blink-blink)** see fault (2 blinks) above “low oil pressure”
- A fault on this unit will typically need a technician to come to the house as the problem will most likely return at an outage or the next exercise.
- Dead batteries are a common problem on this unit simply due to age of battery if PM’s were not done.
- Batteries should be replaced every 3 years for lead acid batteries, 4 years for AGM batteries.

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Briggs and Stratton / GE generator

- Note... these units are fairly difficult to get access to. The top cover can only be removed by taking out four almost hidden Phillips head screws. The top cover must be taken off to check the oil level – something most homeowners are not willing to do or are afraid to do.
- This design has been used by Briggs and Stratton for a very long time, some of the newer models have a door that can be opened without removing the top, on older models the top must be removed to open the access cover.
- This unit may have a display screen inside of the generator, a blinking light, or no light at all on units older than 2006 (these units without a light will require a technician)
- Fault codes are as follows...
 - FC-1 (or 1 blink) low battery voltage
 - FC-2 (or 2 blinks) low oil pressure
 - FC-3 (or 3 blinks) low voltage (generator failed to produce the expected 240 volts)
 - FC-4 (or 4 blinks) engine failed to start
 - FC-5 (or 5 blinks) low output frequency
 - FC-6 (or 6 blinks) engine over speed
 - FC-7 (or seven blinks) high engine temperature
 - FC-8 (or 8 blinks) transfer switch problem
- **If there is an optional remote panel inside of the home with a single red light it should be steady on all the time.** If there is a fault code it will directly correspond with the fault light inside generator *see examples below*
 - (blink-blink-blink-blink... pause... blink-blink-blink-blink) see fault (4 blinks) above “engine failed to start”
 - (blink-blink... pause... blink-blink) see fault (2 blinks) above “low oil pressure”

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Briggs and Stratton / GE generator

- Note small door on the back of generator with a single lock
- Note, doors on these units are locked - home owner will have to find key to proceed!!!
- This design is very difficult to get access to. The top is very heavy and hard to unlatch for a homeowner.
- **Display will normally show run hours** (if there is only a number then you are seeing the cumulative run hours – this IS NOT a fault code)
- Fault codes are as follows...
 - FC-1 low battery voltage
 - FC-2 low oil pressure
 - FC-3 low voltage (generator failed to produce the expected 240 volts)
 - FC-4 engine failed to start
 - FC-5 low output frequency
 - FC-6 engine over speed
 - FC-7 high engine temperature
 - FC-8 transfer switch problem
- **If there is an optional remote panel inside of the home with a single red or blue light it should be steady on all the time.** If there is a fault code it will directly correspond with the above FC fault codes *see examples below*
 - (blink-blink-blink-blink... pause... blink-blink-blink-blink) see fault code FC-4 “engine failed to start
 - (blink-blink... pause... blink-blink) see fault code FC-2 “low oil pressure”

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Mike Birch, 7/2017. (248) 841-3300

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