



Manufacturer Error Codes

www.boilerguide.co.uk/trade





At Boiler Guide we've been producing heating guides and advice for customers for over 15 years. We're proud to say that we've become the trusted source for millions of customers who visit boilerguide.co.uk every year looking for solutions to their heating requirements.

We also work with 1000s of Gas Safe registered installers providing a pay-as-you-go lead generation service helping companies of all sizes to grow their business.

Over the years we've been able to gather a wealth of industry knowledge and we've gained an understanding of the vast array of things people search for when it comes to heating. Safe to say '**what does this error code on my boiler mean?**' tends to feature quite heavily.

With so many makes, models and manufacturers of gas boilers available in the UK, it's impossible for even the most experienced of installers to know the system behaviour relating to every error code.

With this in mind we decided to take on the unenviable task of collating error codes from five of the most popular boiler brands to provide installers and homeowners with a quick go-to source when a boiler fault occurs - hopefully making your life a little easier.

We hope you find this easy to read guide helpful.

Best,

David Holmes
Boiler Guide Founder

Vaillant Boiler Error Codes

- Turbomax plus 824/828E
- EcoMax Pro 18/28E
- Ecomax Pro 828E
- Vaillant EcoTEC 65kW Error Codes
- Vaillant EcoTEC Pro / EcoTEC Plus
- Vaillant EcoTEC Plus Error Codes
- Vaillant EcoTEC Plus Regular Gas Boiler
- Vaillant EcoTEC Plus Gas Boiler
- Vaillant EcoTEC Gas Boiler
- Vaillant F28 and F29

Vaillant Turbomax Plus 824/828E

Fault Code	Possible Cause	Meaning
F.00	NTC Faults	This means that your Flow NTC (Negative Temperature Coefficient Thermistor) cable is either defective or broken and needs to be replaced
F.01		The Flow NTC (Negative Temperature Coefficient Thermistor) cable is either defective or broken and needs to be replaced
F.10		—
F.11		
F.13		—
F.20	Boiler has exceeded the maximum temperature and needs to cool down	
F.22	Dry fire / Low water in system / Overheat	This means that there's either no water in your system, you have a defective pump or the pump lead is defective
F.24	Low water / Pump Failure / Blockage	Pump could be obstructed, running at low capacity, could be air trapped or the pressure might be too low.
F.28	Either insufficient gas in the system, a defective electrode, ignition lead or electronic ignitor	

F.29	Flame extinguished	Flame or pilot light has gone out – check flue duct or gas supply.
F.60	Gas valve control defective	Cable loom (connects gas valve) might have short circuited, gas valve assembly defective or electronic control system issue.
F.61	Gas valve control defective	Cable loom (connects gas valve) might have short circuited, gas valve assembly defective or electronic control system issue.
F.62	Defective gas valve closure mechanism	Boiler has exceeded the maximum temperature and needs to cool down
F.63	EEPROM (Electrically Erasable Programmable Read-Only Memory) error	Electronic fault.
F.64	Electronic system or sensor fault	Flow or back flow NTC has short circuited, or an electronic fault
F.65	Electronic system temperature too high	This can happen because of an external heat source or an electrical fault
F.67	Electronic fault in the flame system	—

Vaillant EcoMax Pro 18/28E

Fault Code	Possible Cause
F.1	Lack of gas, a fault with the ignition or flue – may need to adjust the gas valve or replace a defective electrode lead.
F.4	Ignition fault.
F.5	The system has suffered a fault due to overheating.
F.6	Your flow NTC has developed a fault.
F.17	Check the polarity of your system.
F.24	Pump-related faults – the pump could have failed, it may have over run or there could be an issue with the airlock

Vaillant Ecomax Pro 828E

Fault Code	Possible Cause
F.00, .04, .05, .10, .14, .15	All of these are NTC faults, and are best resolved by first changing all NTC to make diagnosis earlier.
F.21	The pilot flame has failed.
F.22	There is insufficient water in your system.
F.11	A blockage in the appliance is preventing the system from flowing as it should.
F.12	A blockage in the appliance is affecting the system's pressure.
F.13	The appliance is blocked because of a water deficiency.

Vaillant EcoTEC 65kW Error Codes

Fault Code	Possible Cause
S.0	Heating issue, no heat demand
S.1	Fan start-up error
S.2	Pump flow error
S.3	Heating mode error – ignition problem
S.4	Heat mode – burner on error
S.6	Heating mode – fan overrun error
S.7	Heating mode – pump overrun error
S.8	Heating remaining cut off for XX amount of time
S.31	No heat demand summer operating mode
S.34	Heating mode frost protection error
S.20	Hot water requirement error
S.22	Hot water handling pump flow error
S.24	Hot water operation burner is on
S.85	Service message quantity of circulation water

Vaillant EcoTEC Pro / EcoTEC Plus Error Codes

Fault Code	Possible Cause
F.00 / F.0	Flow temperature sensor interruption
F.01 / F.1	Return temperature sensor interruption
F.10	Flow NTC short circuit
F.11	Return NTC short circuit
F.20	Safety switch off temperature limiter
F.22	Safety switch off low water pressure
F.23	Safety switch off temperature difference too great
F.24	Safety switch off temperature is rising too fast
F.25	Safety switch off flue gas temperature too high
F.26	Error with gas valve – possible no function
F.27	Safety switch off flame simulation
F.28	Failure during start up – ignition unsuccessful to start
F.29	Failure during operation – re-ignition unsuccessful
F.32	Fan error
F.49	eBUS error – possible short circuit
F.61	Error with gas valve regulation
F.62	Error with gas valve – switch off delay
F.63	EEPROM error
F.64	Electronics / NTC error
F.65	Electronic temperature error could be overheating due to external influences
F.67	Electronics flame signal error
F.68	Unstable flame signal error air in gas
F.70	Invalid device specific number (DSN)
F.71	Flow NTC error – flow temperature sensor signal constant value
F.72	Flow return NTC error – temperature difference too great
F.73	Water pressure sensor signal in the wrong range, it is too low

F.74	Water pressure sensor signal outside correct range, the sensor signal is too high
F.75	Error with pressure – no pressure change detection when starting the pump
F.76	Overheating protection on – primary heat exchanger has responded
F.77	Flue non return flap condensate pump error
F.78	Interruption to DHW outlet sensor at external controller
F.83	Flow and or return temperature sensor error
F.84	Error with flow/return temperature sensor temperature changing error
F.85	Error with flow and return temperature, sensor incorrectly fitted
CONNECTION	No communication with the PCB

Vaillant EcoTEC Pro / EcoTEC Plus Error Codes

Fault Code	Possible Cause
S.00	Heating mode error – no heat demand
S.01	Heating mode fan start-up
S.02	Heating mode error – water pump running
S.03	Heating mode – ignition sequence error
S.04	Heating mode – burner ignited
S.06	Heating mode – fan overrun error
S.07	Heating mode – pump overrun error
S.08	Heating remaining cut off time xx minutes
S.10	Hot water demand via impeller sensor
S.11	DHW mode fan start up error
S.13	DHW mode ignition error
S.14	Hot water demand via fan sensor error
S.15	DHW mode pump and fan overrun
S.16	DHW mode – fan overrun error
S.17	DHW mode – pump overrun error
S.20	DHW mode – burner on error
S.21	DHW mode – fan start up error
S.22	DHW demand – error pump running
S.23	DHW ignition error
S.24	DHW mode – burner error
S.25	DHW mode – pump or fan overrun error
S.26	DHW mode – fan overrun
S.27	DHW mode – pump overrun
S.28	Hot water burner anti-cycling time
S.30	Room thermostat is blocking heating mode
S.31	No heat demand boiler in summer operating mode
S.32	Waiting period because of fan speed deviation
S.34	Heating mode frost protection error

S.39	Burner off contact has been triggered this could be because of contact thermostat or condensate pump
S.40	Comfort safety mode active
S.41	Water pressure > 2.8 bar
S.42	Flue non return flap return signal blocks burner operation
S.46	Comfort safety mode flame loss at minimum load
S.53	Boiler is in waiting period of modulation f block function due to water shortage
S.54	Boiler is in waiting period of operation, blocking function as a result
S.57	Waiting period comfort safety mode
S.58	Modulation limitation due to noise / wind error
S.61	Gas family check unsuccessful

Vaillant EcoTEC Plus Regular Gas Boiler Error Codes

Fault Code	Possible Cause
S.20	Warnstar demand
S.21	Fan running
S.22	Pump running
S.23	Ignition sequence
S.24	Burner ignited
S.25	Fan and water pump running
S.26	Fan overrun
S.27	Pump overrun
S.28	Anti-cycling mode
S.30	No heating demand from external controls
S.31	Central heating thermostat knob turned off
S.32	Heat exchanger antifreeze active as fan speed variation is too high
S.34	Anti-frost mode is active
S.36	Not heating demand form low voltage
S.41	Water pressure greater than 2.9 bar
S.42	Response from accessory module or defective condensate pump is blocking burner operation
S.53	Appliance is within the waiting period of the block operation function due to water shortage
S.54	Appliance is within the waiting period of the block operation due to water shortage
S.96	Return sensor error
S.98	Flow return sensor check is running demand is block
D.0	Heating part load error
D.1	Water pump overrun – time for heat mode
D.2	Max burner anti-cycling period at 20c flow temperature
D.3	Hot water flow temperature reading
D.4	Current temperature for warm stat sensor

D.7	Warm start temperature target value
D.8	External controls heat demand
D.9	Flow target temperature from external analogue regulator terminal
D.10	Status internal heating pump error
D.11	Status external heating pump error
D.12	Cylinder charging pump via accessory module
D.13	Hot water circulation pump
D.22	Hot water demand
D.23	Summer/Winter function
D.25	Hot water activation via ebus control
D.30	Control signal for both gas valves
D.33	Fan speed target value
D.34	Fan speed actual value
D.36	Hot water flow sensor
D.40	Flow temperature target value
D.41	Return temperature actual value
D.44	Digitised ionisation potential error
D.47	Outside temperature with weather compensator – Vaillant controller only
D.76	Remaining burner anti-cycling time in min
D.90	Digital regulator status
D.91	DCF status with connected external probe
D.97	Activation of the second diagnostic level
D.17	Heating glow return regulation
D.18	Pump mode return
D.19	Operating modes of the two speed heating pump
D.20	Maximum set value for target cylinder
D.27	Switching accessory relay 1
D.28	Switching accessory relay 2
D.50	Offset for minimum speed
D.51	Offset for maximum speed

D.58	Activation of solar reheating
D.60	Number of safety temperature cut off
D.61	Number of unsuccessful lockouts
D.64	Average ignition times
D.65	Maximum ignition time
D.68	Unsuccessful ignitions in the first attempt
D.69	Unsuccessful ignition for the second time
D.70	Set diverter valve position
D.71	Maximum setting of heater control knob
D.72	Pump overrun time after warm start
D.73	Off set for warm start target value
D.75	Maximum charging time for a storage without own controller
D.77	Limitation of cylinder charging in output in kW
D.78	Limitation of cylinder charging temperature in c
D.80	Operating hours heating
D.81	Operating hours hot water generation
D.82	Burner start up in heating mode
D.83	Burner start up in hot water mode
D.84	Maintenance indicator – number of hours until the next maintenance
D.93	DSN appliance variant setting
D.96	Factory setting

Vaillant EcoTEC Plus Gas Boiler Error Codes

Fault Code	Possible Cause
P.00	The heating circuit and hot water circuit are purged
P.01	Maximum load test program error
P.02	Minimum load test program
P.06	Filling mode test program

Vaillant EcoTEC Gas Boiler Error Codes

Fault Code	Possible Cause
D.0	Heating part load error
D.1	Water pump overrun – time for heat mode
D.2	Max burner anti-cycling period at 20c flow temperature
D.3	Hot water flow temperature reading
D.4	Current temperature for warm stat sensor
D.5	Set value of flow temperature or target value of return
D.7	Warm start temperature target value
D.8	External controls heat demand
D.9	Flow target temperature from external analogue regulator terminal
D.10	Status internal heating pump error
D.11	Status external heating pump error
D.12	Cylinder charging pump via accessory module
D.13	Hot water circulation pump
D.15	Pump speed actual value
D.22	Hot water demand
D.23	Summer/Winter function
D.24	Not relevant
D.25	Hot water activation via eBus control
D.30	Control signal for both gas valves
D.33	Fan speed target value
D.34	Fan speed actual value
D.35	Not relevant
D.40	Flow temperature target value
D.41	Return temperature actual value
D.44	Digitised ionisation – potential error
D.47	Outside temperature with weather compensator – Vaillant controller only
D.76	Remaining burner anti-cycling time in min

D.90	Digital regulator status
D.91	DCF status with connected external probe
D.97	Activation of the second diagnostic level
D.98	Telephone a heating engineer
D.14	Pump speed target value
D.17	Heating flow return regulation
D.18	Pump operating mode
D.20	Maximum set value for target cylinder
D.26	Additional relay control ecoTec
D.27	Switching accessory relay 1
D.28	Switching accessory relay 2
D.50	Offset for minimum speed
D.51	Offset for maximum speed
D.60	Number of safety temperature cut offs
D.61	Number of unsuccessful lockouts
D.64	Average ignition times
D.65	Maximum ignition time
D.67	Remaining burner anti-cycling time
D.68	Unsuccessful ignitions in the first attempt
D.69	Unsuccessful ignition for the second time
D.70	Set diverter valve position
D.71	Maximum setting of heater control knob
D.72	Pump overrun time after warm start
D.75	Maximum charging time for a storage without own controller
D.77	Limitation of cylinder charging in output in kW
D.78	Limitation of cylinder charging temperature in celsius
D.80	Operating hours heating
D.81	Operating hours hot water generation
D.82	Burner start up in heating mode
D.83	Burner start up in hot water mode

D.84	Maintenance indicator – number of hours until the next maintenance
D.93	DSN appliance variant setting
D.96	Factory setting



 **boilerguide**
Trade

Are you a Gas Safe Engineer?

Join the 1000s of Gas Safe, OFTEC and electric registered heating engineers already using Boiler Guide to connect with new customers.

- ✔ **Pay-as-you-go for the job opportunities you want**
- ✔ **Free to join. No contract, no membership fees, no hidden charges**
- ✔ **Take the hassle out of marketing your business**

[click here](#) or visit: www.boilerguide.co.uk/trade