



Ask a Technician Now



Tyler, Appliance Technician


★★★★★ 111,739 Satisfie

Pearl Wilson, Technician's Assistant




Welcome! How can I help with your appliance question?

Type your message...



Ask a Technician Now ⓘ
Tyler, Appliance Technician
111,739 Satisfied Customers



Pearl Wilson, Technician
Welcome! How can I help with question?

Type your message..

ezoic

report this ad

**Oven, Stove, Range
and Cooktop Repair**

Foreword

Table of Contents

CHAPTER 1
System Basics

CHAPTER 2
Troubleshooting
Tools & Safety Tips
& Tricks

CHAPTER 3
Parts Access

CHAPTER 4
Electric Cooktops
and Ovens

CHAPTER 5
Gas Cooktops

CHAPTER 6
Gas Oven Repairs

CHAPTER 7
Digital Controls
Fault Codes

Oven, Stove, Range and Cooktop Repair

[report this ad](#)

Chapter 7

DIGITAL OVEN CONTROL FAULT OR ERROR CODES

If your oven has digital controls and it is displaying a fault or error code, (F1, F2, E3, E8, etc) it usually boils down to one of two or three problem areas. Either the temperature sensor, or something in the control circuitry has gone bad. There may also be a problem with the door switch, or the door locking mechanism or switch in a self-cleaning oven.

Usually you will find the sensor inside the oven, at the top, near the back. The sensor may be removed through either the front or the back of the oven. Temperature sensors are usually fairly easy and inexpensive to identify and replace.

Not so with the solid state circuit components. You may be able to trace the problem to a defective keypad or EOC or ERC (Electronic Oven / Range Control; essentially the clock unit,) but often the diagnosis is ambiguous. (i.e., it's either the ERC or the keypad.)

Unfortunately, keypads and ERC's are electrical parts, and *expensive* ones at that. Electrical parts are almost always non-returnable at the parts store. So if you've misdiagnosed a problem and bought a keypad when the problem was a circuit board, you're now the not-so-proud owner of an expensive keypad that is of no use to you.

For this reason, I caution you: IF YOU ARE NOT SURE OF YOUR DIAGNOSIS, CALL A QUALIFIED, FACTORY-AUTHORIZED TECHNICIAN to diagnose and repair your oven. It may cost a little more now, but ultimately you will probably save yourself a LOT of hassle and money. The factory-authorized technician has an advantage in that he can diagnose by trial and error and reuse the part if he guesses wrong.

Please note also that manufacturers constantly change things, using different parts on different oven models. Though we do our level best to keep up on all the changes, we do not guarantee the accuracy of the error codes listed. Use them at your own risk.

And don't forget; you're dealing with electricity here. As always, disconnect power on any control you're disassembling or assembling. When you need to test a live circuit, always make sure all contacts are _____

7-1 DIAGNOSIS

THE FIRST STEP in diagnosing ANY oven error code is to attempt to reset the logic board. Press any "stop," "reset," "clear" or "off" button, wait for a few minutes and remove power from the unit, either by unplugging it or turning the breaker off for a few minutes. Remember that self-cleaning oven latches are slow-moving. Remember also that a self-cleaning oven latch will not unlock until the oven is back below some pre-set temperature, usually around 550-650 degrees, so in some cases, if the door lock is involved, you may have to wait for an hour or more for the oven to cool off and reset itself.


DIAGNOSTIC SHEETS

The error codes for your specific model may be listed on a diagnosis sheet contained within the oven itself. Oftentimes these sheets may be found behind the control panel, or beneath the broiler pan. (See Figure 3-G in Chapter 3)

If your oven does not contain a diagnostic sheet, the codes listed on the following few pages should point you in the right direction.

ERC'S AND KEYPADS

The logic board is called the ERC, which stands for Electronic Range Control. This board contains the digital clock. There is also a membrane keypad. In some models, the ERC is separate from the keypad and connected with a ribbon cable. This connection is often the source of problems; the contacts are quite sensitive to being loose or any little oxidation. Sometimes just simply wiggling a connector may clear up the error code.

**Ask a Technician**
Tyler, Appliance Technician
111,739 Satisfied Customers

Pearl Wilson is typing...

Type your message...

If you have an oven with a keypad separate from the ERC and you are showing a "stuck keypad" code, disconnect the keypad from the ERC (with power on the board) and wait two minutes. Then plug it back in and see if the code clears. If so, the problem is probably in the board. If not, the problem is probably in the keypad.

FUSES

~~Many oven temperature-sensing circuits have a fuse. If you are experiencing an "open oven temperature~~

In most ovens, F3 indicates an open sensing circuit, and F4 indicates a shorted sensing circuit.

OVEN ELEMENT RELAYS

Usually a "high oven temperature" code means the temperature sensor or ERC is bad. However, this symptom can be caused by relay contacts that have "welded" themselves shut.

DOUBLE OVENS

Most double ovens have two control boards. Where an error code tells you to check the ERC in a double oven, make sure you check both boards.

COOLING FANS

Some ovens have cooling fans to cool the control board and circuitry. Failure of this fan can cause all kinds of wacky and intermittent symptoms; usually overtemp codes, but others, too. If you have a cooling fan, be sure to check it for proper operation.

Identifying Sears / Kenmore Ranges and Ovens

In my never-to-be-humble opinion, Sears is a great company. They have a terrific marketing department; for most people, the name Kenmore evokes all kinds of emotion. However, I DO need to point out that Sears is a department store. They don't build ovens.

What they do is to take ovens that other companies build and put the Kenmore name on them. That's a fine strategy, but when the machine has a problem, it can make diagnosing and finding the correct replacement part something of a task.

Correctly diagnosing a fault code in a Sears / Kenmore oven starts with identifying who made the oven, using the first three digits of the model number. The following lists the manufacturers of these machines, though it should not be considered exhaustive:

103 Roper

106 Whirlpool

155 Roper

174 Caloric

198 Whirlpool

253 Gibson

362 GE

363 GE

417 Kelvinator

484 Fedders

562 Whirlpool

562 Toshiba

587 D & M

596 Amana

628 Kelvinator

629 Jenn Aire

647 Roper

651 Speed Queen

662 Kelvinator

665 Whirlpool

747 Litton

790 Westinghouse

911 Roper

925 Maycor

960 Caloric

ERROR CODES FOR SOME COMMON U.S. BRANDS

	See Note 1	See Note 2	See Note 3	See Note 4	See Note 5	See Note 6	See Note 7	See Note 8	See Note 10	See Note 11	See Note 12	See Note 13	See Note 14	See Note 15	See Note 16	See Note 17
ADMIRAL	F1	F1	F3,F4	F5	F6	F0,F7	F8	F9								
AMANA ERC III			F3,F4							F9	F0, F7	F1, F5, F6, F8				
AMANA DUAL CONVECTION WALL OVEN			F3,F4						F2	F7	F0	F1, F6				
CALORICERC III			F3,F4							F9	F0, F7	F1, F5, F6, F8				
FRIGIDAIRE		F5, F7	F3,F4		F6				F2	F8		F0, F1				
GENERALELECTRIC		F0,F1,F7	F3,F4					F5,FF	F2	F9,FC		F0,F1,F8,FFF		FD		
GIBSON			F3,F4						F2			F0,F1,F5,F6,F7				
HAMILTON			F3,F4			F0		FF		FC	F7	F1,F5	F2	FD		
HOTPOINT		F0,F1	F3,F4			F7			F2	F9		F8				
JENN-AIR	F7		F3,F4					F9	F2			F1,F,FC	F5,FF,FR	F8		
KITCHENAID 2 DIGIT	F7		F3,F4						F2	F2,F9		F0,F1,F5,F8			F6	
MAGIC CHEF	F1	F1	F3,F4	F5	F6	F0,F7	F8		F2	F9	F10					F2
MAYTAG 2-DIGIT	F7	F1	F3,F4				F8	F9				F5				
RCA		F0,F1	F3,F4			F7			F2	F9		F8				
ROPER 2 DIGIT	F7		F3,F4					F7	F2	F2,F9	F5	F6,F8				
ROPER BES. BEP MODELS			F3,F4		F6			F8				F5	F2			
TAPPAN			F3,F4						F2			F0,F1,F5,F6,F7				
WESTINGHOUSE			F3,F4						F2			F0,F1,F5,F6,F7				
WHIRLPOOL 2 DIGIT	F7		F3,F4						F2	F2,F9		F0,F1,F5,F8			F6	

ERROR CODES FOR SOME COMMON U.S. BRANDS (Continued)

	See Note 1	See Note 2	See Note 3	See Note 6	See Note 7	See Note 9	See Note 10	See Note 11	See Note 12	See Note 13	See Note 14	Additional Notes
4-DIGIT KITCHENAID, WHIRLPOOL, ROPER	F2-E0		F3-E0/E1		F0-E0			F5-E0/E1/E2		F1-E1	F3-E2/E3	
AMANA - CALORIC GlassLink ERC		F1	F3,F 4	F7		F0	F2	F9FF				Door Flashing #0,1,2,3 "Lock" Flashing See Note A
THERMADOR			E3,E4				E7	E9,E11,E12 E13E14		E1E5,E6 E8,E10E15	E2	
MAYTAG 4-DIGIT	F1-7/8		F1-L F3-1,2	F1-5,6			F1-1,2,3,4	F1-A,B,C,D, F9-1,2,3,4,5,6		F1-EH		
AMANA "BIG-OVEN" SIGMA TOUCHMATIC			F3-1					F1-H,J F9-1,2	F1-7	F1-5/8,9, F1-A,C,E,F	F1-1, F1-3	
Note 1	Defective Touch Pad or Membrane								Replace Touch Pad or ERC			
Note 2	Watchdog Circuit Fault								Replace Touch Pad or ERC			
Note 3	Open or Shorted Oven Temperature Sensor								Replace Oven Temperature Sensor			
Note 4	Hardware and Watchdog Circuits Disagree								Replace ERC			
Note 5	Missing AC Signal, Power Supply Problem								Check for Proper Voltage			
Note 6	Stuck or Shorted Touchpad Button								Replace Touch Pad or ERC, or unstick button			
Note 7	Analogue/Digital Trouble								Replace ERC			
Note 8	Door Latch/Lock Trouble								Check Door Lock Circuit or Replace ERC			
Note 9	Loss of Safety Signal								Replace Abator Board			
Note 10	Oven Too Hot during Bake or Self-Clean								Replace Oven Temperature Sensor			
Note 11	Door Switch or Door Lock Error								Check Door Switch, Latch Switch Wiring and Mechanism or Motor			
Note 12	Defective Touch Pad								Check Glass Alignment, Ribbon Connector, Replace Touch Pad if necessary			
Note 13	Defective ERC								Replace ERC			
Note 14	Oven Too Hot								Check Oven Temperature Sensor & ERC			
Note 15	Shorted Meat Probe								Check Probe Wiring, Resettable			
Note 16	Timekeeping Circuit Error								Reset time and/or cooking operation, check for proper ground			
Note 17	Oven Too Hot during Bake or Self-Clean								Usually a stuck Relay			

Thermador

First, try to reset the error code by turning power off to the oven, waiting 30 seconds, then turning power back on.

Error Code Notes Problem

E1 C,E Control board problem

E2 G,K Cook or clean mode runaway

E3 A,H Open sensor

E4 A,H Shorted sensor

E5 D,K Control Board too hot or too cold, or defective board

E6 C,J Control Board Problem

E7 A,I Illegal temp display (turn off and retry)

E8 A,D Control Board Problem

E9 A,E Latch Switch Problems

E10 B,D Control Board Problem

E11 A,F CT Oven; Latch Switch Problem

E12 A,E CT Oven; Latch Switch Problem

E13 A,C CT Oven; Latch Switch Frozen or no power to latch motor CMT Ovens; control board not converted

E14 A,E Latch Switch Problem

Notes

A Turns heat off on failed oven only; but the microwave is not affected

B Turns all heat off; but the microwave not affected

C Disables the clean mode in both ovens; cook mode and micro are not affected

D Error will remain in display until repaired and powered up. No error tones.

E Turning to "off" stops the error and flashing can tweak away the code.

F Tweaking turns to "---" for retry.

G Clears when oven temp drops below the runaway temp and the selector is off.

H Can be cancelled by tweaking if a good sensor is detected.

I Cleared with a mode change

K Turns all heat and microwave off.

L If two switches show locked door, then "E13" and "lock" are permanent in the display (all modes). If two switches show an open door, you can tweak away the "E13."

[**Top**](#)

Please share our .



report this ad