

Current Product Warranty Coverage Effective 1-2004

Ovens

PCS/PCD Wall Oven MCS/MCD Wall Oven ECS/ECD Wall Oven

Cooktops

CER Electric Glass ESG Cooktops ETT Electric Touch Top SGM/PGM Sealed Gas Metal MET Electric Glide Cooktop

Venting Systems

REMP3/REMP16 Remote Blower CABP3 Cabinet Blower ILB8/10 Inline Blower RV/ ERV Raised Vent EHD /EHDR Hood IVS1,2/IVSR1,2 Power Pack

Ranges

RSD/RSE PGR ERD30/36/48/60 ERDE36/48 MRES EGR 30

Warming Ovens

PWO Warming Oven EWO Warming Oven MWO Warming Oven IWO Warming Oven IOWO Warming Oven

Microwave

DMT Microwave Oven PMOR Microwave Hood DCM Convection Microwave PCOR Convection Microwave Hood

BBQ

EOG30/36/52

OGC BBQ Cart EOSB162

Dishwasher

EDW24/30

One year parts and labor One year parts and labor One year parts and labor

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One year parts and labor One year parts and labor One year parts and labor One year parts and labor

Full one year parts and labor Five year limited - rotisserie burner Lifetime warranty - all stainless components One year parts and labor One year parts and labor

One Year Parts and Labor 25 years rust through on Stainless Steel tank

Product	UL label location
CABP3	UL marking is on the serial number label attached to the housing cover next to the access plate.
DMO	UL marking is on the serial number label inside the oven against the left wall. To view, open the oven door.
EHD	UL marking is on the serial number label located in the rear panel. To view, remove the filters.
ERD30S06	UL marking is in the Rating Label located in the left side of the kick panel. To view, open the door. UL label is also in the serial number located inside the unit in the right hand side wall. To view, look through the intake grill slots.
ERSD30	UL marking is in the Rating Label located in the left side of the kick panel. To view, open the door. UL label is also in the serial number located inside the unit in the right hand side wall. To view, look through the intake grill slots.
ERSD36	UL marking is in the Rating Label and serial number label located in the wall behind the door latch. To view, open the oven door and look through the intake grill slots.
ERSD48	UL marking is in the Rating Label and serial number label located in the wall behind the door latch of the 36" oven. To view, open the 36" oven door and look through the intake grill slots.
ESG	UL marking is in the Rating Label located in the back of the unit right behind the left rear burner.
ETT/CER	UL marking is on the serial number label located on the bottom of the unit next to the electrical connection.
MODULES.	UL marking (if any), is on the serial number label located in the opposite side of the electrical connection (beneath the handle).
PGR	UL marking is on the front of the front case top. To view, open the oven door and look through the intake grill slots.
REMP3	UL marking is on the serial number label attached to the main housing wrap behind the protective rack left of the access plate.
RSD	UL marking is in the Rating Label and serial number label located inside the storage compartment at the left hand side wall.
RSE	UL marking is on the serial number label located inside the storage compartment at the left hand side wall.
RV	UL marking is on the serial number label located in the front plenum above the access panel.
SGM/SGMEM	UL marking is in the Rating Label underneath of unit next to gas connection. For SGM's <u>only</u> the UL marking is also on the serial number label located next to the rating label.
WALL OVENS. DOUBLE OVENS	UL marking is on the serial number label located inside the intake grill, at the left hand side of the door latch. To view open the upper door and look through the slots of the intake grill
SINGLE OVENS	UL marking is on the serial number label located inside the intake grill, at the left hand side of the door latch. To view, open the door and look through the slots of the intake grill.
WARMING OVENS	UL marking is on the serial number label located at the bottom of the cabinet at the left hand side. To view, the drawer must be pulled completely open or removed.

Technical Manual - Page 2

ERC Failure Codes

-F0- Shorted Or Jammed Input Device

This failure will appear if a shorted or jammed input device is defective. Possible causes include shorted wires or a defective membrane switch.

-F1- Alarm "System Watchdog Circuit"

The system will detect a failure in the internal watchdog element relay circuits and will activate a cancel feature. F1 will be displayed in the time digits and will beep until the cancel button or another function is selected. An F1 failure could be detected in cook or time of day mode. With an F1 failure the ERC is picking up a command to supply heat without receiving an input from the membrane. The watch dog circuit is designed to prevent this.

If the beep continues after pressing cancel check the main control (ERC)

-F2- Alarm Heating Mode High Temperature

Is activated when the ERC senses a runaway heat condition or when the temperature exceeds "runaway limits". The ERC will beep until the cancel or another function is selected. If the alarm repeats the F2 alarm check the oven sensor and wiring after first checking for a stuck relay. If alarm goes away verify the oven will complete a clean cycle without any type of failure.

-F3- Alarm Shorted Oven Sensor

Occurs when the ERC senses a short circuit in the oven temperature sensor for 16 temperature conver sions in a row. F-3 will appear in the digits and a beeping will be heard. If the alarm does not go away after pressing the cancel key check the sensor and wiring.

**Important Note:

This test will only be performed while a cooking operation is being attempted. The F3 alarm will not be displayed in the time of day mode.

-F4- Alarm Open Oven Sensor

"F4" will be displayed along with a beeping if the ERC determines an open oven temperature sensor circuit for 16 consecutive oven temperature conversions.

****Important note:** This test will only be performed while a cooking operation is being attempted. The F4 mesage will not be displayed in the time of day mode.

****Important note:** If the oven sensor is open the bake modes cannot be activated. The controls will be non-responsive. Look for this failure, as at first appearance you may suspect the ERC or selector instead of an open sensor. A strange number may also appear in this failure mode.

Failure Codes (Continued)

-F5- This Code Is Not Used

-F6- Alarm EEPROM Checksum Error

The brain of this oven (so to speak) operates a series of software commands. These commands control the various features and functions of the oven. A numerical value has been assigned to each function or operation. The numerical values can be added up - this is the check sum operation. Every time the system is powered up and after each clean cycle the system performs a check sum and compares the value to the value programmed into the software. (stored in memory.)

An EEPROM check sum error or F-6 alarm occurs when the values differ. Only the time of day and timer operation will operate. If you receive a F-6 alarm replace the ERC.

-F7- Alarm Door Lock Enabled Above Temperature

"F7" wil appear in the digits and a beeping will be heard if a failure in the clean lock/ phase circuitry is detected for 16 seconds in a row. Check the door lock switches and door adjustments.

-F8- Alarm Door Locking Switch

Occurs when operating the door lock motor if the motor runs for two minutes without seeing the phase switch change positions. This failure will normally occur only when a clean mode is started. If it occurs check the door switches and wiring.

Dacor Model Number Designations

CPS	Convection Plus – single oven, convection 127 – Single oven 27 inch 227 – Double 27 inch, top only convection
CPD PCS/D MCS/D ECS/D	Double convection ovens
DMO ECPS	Microwave Oven Epicure Series, single oven, convection 127 – Single oven 27 inch 227 – Double 27 inch, top only convection
ECPD CPTS CPTD	Epicure Series, Double Convection Touch Top, Double Convection Touch Top, Double Convection
RSD RSE ERSD	Range – All Gas Range – Dual Fuel (Electric Oven) Range – All Electric Range, 30" Epicure Dual Fuel (Electric Oven) 15,000 BTU's
ERSD RV REMP3 CABP3	Range, 36&48" Epicure Dual Fuel Range Gas IR Broiler Raised vent Remote Blower Cabinet Blower
SGM SGMEM SGG	Cooktop –Sealed Burner Gas Metal Top 30,36,46 inches Cooktop – Sealed Gas Metal plus Electric Module 36,46 inches Cooktop – Sealed Gas Glass Top
ESG ECC Modules:	6 Burner Cooktop, 15,000 BTU's Electric Convertible Cooktop
EM1 EM3 EM4 EM5	2 coll elements Wok/Canning Ceramic Glass Barbeque
CER	Electric Ceramic Cooktop (ceramic electric radiant) Electric Touchtop Cooktop
EWO MWO PWO	(electric touch top) Epicure Warming Oven Millennia Warming Oven Preference Warming Ovens
Accessories: AE13 AG13	Griddle for Electric Module Griddle for Gas Grate
A20A A30 ASP10 AG14	Rotisserie Wok Simmer Plate Griddle for Epicure Cooktops/Ranges
AG11 AWR	Griddle for 30" cooktop Wok Ring

SERIAL NUMBER FORMAT

2 LETTERS FOLLOWED BY 7 NUMBERS

ex: CA6520001 is an electric cooktop made in the last week of 1996

FIRST LETTER

- A Accessories
- B Blowers
- C Electric Cooktops
- D Displays
- E Electric Modules
- F Ranges
- H Hoods
- M Metal Cooktops/Gas & Dual Fuel
- R Raised Vents
- S Surface Vents
- T Electric Cooktops Ceran
- V Wall Ovens
- W Warmers

SECOND LETTER

Identifies the revision level of the model. New models start with an **A** and as product enhancements are made the revision level will change. Letters *I* and *O* will not be used.

FIRST NUMBER

Last digit of year in which the product was manufactured

- 1 2001
- 2 2002
- 3 2003
- 4 1994
- 5 1995 6 – 1996
- 7 1997
- 8 1998
- 9 1999
- 0 2000

2nd and 3rd NUMBERS

01 THROUGH 52 indicates the week of the year that the product was produced

01 – week 1

02 – week 2

03 – week 3

etc.

The last four numbers are the actual serial number of the product.



Serial Number Format

In 2002 Dacor changed the serial number format slightly to accommodate additional product line growth by adding two (2) characters each for product code and revision and two (2) digits for the year of manufacture.

Prior to the 38th week of 2002 the serial number format was:



A dash was added to separate the two codes - so that a serial number ABC representing product type AB at revision C could not be confused as a product type A at revision BC. There is also a dash added between the revision code and year of manufacture. The year code was increased so a unit manufactured in 1992 would not be confused for a unit manufactured in 2002.



The new serial number format for a PGR30 manufactured at revision F on 9/18/02 with the unique number of 1234 would read: K - F - 02381234.

The new format is being implemented on all product manufactured as of week number 38 of 2002.

TO THE AUTHORIZED SERVICE COMPANY

Our mission is to ensure that Dacor customers receive prompt, courteous and professional service. We are here to provide support to the servicer with technical information and replacement parts.

<u>SCOPE</u>

The customer warranty program provides home service on Dacor products, at no charge to the consumer. The warranty begins from the date of original purchase or the date of installation. The warranties on individual products vary, please see the actual warranty that accompanies each product. Some products carry an extended parts warranty.

Warranty service must be performed by an authorized service agency in accordance with a written service agreement provided by Dacor. See warranty matrix for a warranty description by product.

WHAT IS INCLUDED IN THE CUSTOMER WARRANTY PROGRAM

- 1. Travel time to consumer's residence.
- 2. Diagnosis of the problem and completion of the repairs.
- 3. Replacement of warranty parts.
- 4. Distributor/Dealer stock merchandise. This includes repairs to correct any defect in materiel or workmanship. A SPECIAL AUTHORIZATION must be obtained in advance for all Distributor or Dealer stock repairs (see section on Service Authorizations, page 4).
- 5. All repairs must be made in accordance with Dacor's recommended procedures and industry accepted repair techniques along with any governmental rules or guidelines. Only Genuine Dacor Replacement Parts shall be used.
- 6. Repairs to correct defects in materials and/or workmanship as outlined in the product warranty.

WHAT IS NOT COVERED IN THE CUSTOMER WARRANTY PROGRAM

- 1. Repairs made on any unit in which the model and/or serial number have been altered, defaced or removed.
- 2. Routine maintenance as outlined in the Use and Care booklet. Such maintenance is the owner's responsibility.
- 3. Delivery, installation or reinstallation of any product unless an Authorization Number is obtained **prior** to doing the work (see section on Service Authorizations).
- 4. Replacement of cooktop grates, burner caps, filters, knobs, grills or any other part removable for routine maintenance.
- 5. Repairs associated with normal use and wear are not considered to be defects in materials and workmanship.
- 6. Repairs to correct errors in installation or misuse by the consumer.
- 7. Customer education.
- 8. Damage to the product caused by shipping or other means.

POLICIES AND PROCEDURES

LABOR RATE STRUCTURE

A warranty claim shall be defined as charges allowed, based upon a previously approved labor rate, accepted by Dacor and the authorized service agency to make necessary repairs as specified under the terms of the product warranty. The negotiated rate is defined on the Contractors Rate Schedule. *All* deviations from this rate require a Special Authorization (see Special Authorizations page7)

It is the policy of Dacor to negotiate service labor rates on an individual basis. Our intention is to be reasonable and comparable for the market being serviced. The service labor rate, agreed to by the servicer, is factored to include travel time, diagnostic and repair time.

TECHNICAL SUPPORT

Dacor has full time technical advisors available to help with diagnostics and problem solving. When contacting an advisor you must have your authorized service agency number, the model and serial number of the product, and the purchase date. Our technical advisors can be reached at (800) 353-2267, Monday through Friday between the hours of 5:00 AM and 4:00 PM Pacific Standard Time.

CUSTOMER SUPPORT

The Customer Service Department provides support to Customers, Dealers, Product Distributors, Service Agencies and Parts Distributors. They are responsible for resolving customer complaints. When evaluating a complaint they consider the following:

AGE OF THE PRODUCT SERVICE HISTORY NATURE OF PROBLEM COST AND EXTENT OF THE REMEDY

Periodically we may contact you for copies of repair invoices to help evaluate a customer inquiry. Our Customer Service Department can be reached at (800) 793-0093 Monday through Friday between the hours of 7:00 AM and 4:00 PM Pacific Standard Time.

ADVERTISING PROGRAMS

Dacor does not offer an advertising or co-op program.

SERVICE LITERATURE

Upon acceptance as an authorized service agency or parts distributor, Dacor will provide one free set of service and parts manuals. Periodic updates will be provided at no charge. Additional sets are available for purchase. Service literature must be ordered directly from Dacor. It is the service agencies responsibility to keep current literature on Dacor products. Dacor will supply service updates (field service bulletins) on a regular basis, at no charge, only to authorized service agencies.

INSTRUCTIONS FOR SUBMITTING WARRANTY LABOR CLAIMS

Dacor warranty claims are processed and entered "online" at www.dacorservice.com. To begin processing your warranty claims online, contact warranty administration or your regional technical manager to get your login and password.

CONSUMER AUDIT PROGRAM

All claims are subject to an audit by direct contact with the consumer, a field service, sales representative or by other means. Any claim for service and/or parts the consumer denies receiving or conflicting consumer technicians statement of service performed will be charged back to the servicer. All complaints of fraud will be turned over to the appropriate

governmental agency. Submitting fraudulent claims is grounds for immediate termination of the service agreement.

The consumer audit program will also include a customer satisfaction survey. Consumer complaints, comments, suggestions will be forwarded to the service agency.

PROOF OF PURCHASE

Proof of Purchase to verify the status of any warranties shall include original bill of sale, closing papers of the new dwelling, cancelled check or occupancy papers in the case of a remodel. The model and serial numbers are required on the NARDA form along with the purchase date. The accuracy of this information is the responsibility of the service agency.

SPECIAL AUTHORIZATIONS

All Non Warranty, Dealer/Distributor stock, or extensive warranty repairs being charged to Dacor must have prior approval from a Dacor Customer Service Representative and a written Service Authorization. The Service Authorization number must be written on the NARDA invoice and submitted for payment in the same manner as a warranty claim. See exhibit C for a copy of the Service Authorization form being used. Claims submitted without this number may be delayed or declined.

RETURN AUTHORIZATIONS

For the return of a product or replacement part, Dacor requires and issues Return Authorizations (RA's) A completed authorization specifically describes the cost, product, or part being authorized for return. The return authorization number must be written or clearly identified on the shipping container or the package may be refused. No credits or payments other than specified on the authorization will be made unless Dacor amends that authorization.

Return Authorization for finished product is only considered when all service remedies are exhausted. Returned product may be examined to determine or verify the previous service work performed on the product. The service agency will be contacted about any errors or discrepancies.

PARTS DISTRIBUTION

Dacor sells parts to a network of independent parts distributors, who sell replacement parts to our network of independent service agencies. Authorized service agencies receive a 25% discount from the published retail price.

Parts Distributors provide warranty parts and issue credits for warranty repairs directly to the service agency. It is the responsibility of the service agency to establish an account or a business relationship with their local parts distributor.

Parts distributors are provided with a recommended stocking list. In addition, each parts distributors inventory is reviewed quarterly. Parts ordered in error or other parts requested for return may be subjected to a restocking fee. Dacor is committed to supporting its parts and service network and understands the importance of having replacement parts readily available. Dacor reviews all part return requests individually and will not penalize a distributor who attempts to maintain complete parts inventory.

PARTS SHIPPING POLICY

Replacement parts are shipped to parts distributors from Dacor, freight prepaid with the exception of air shipments (please see the authorized Parts Distributor Agreement for specific details). The parts distributor is responsible for freight costs on all warranty parts. Large parts such as oven cells should be drop shipped directly to the service agency.

EMERGENCY PART ORDERS

An order identified as an emergency and received prior to 12:00 PM (Pacific Standard Time) will ship that day. If an air shipment is requested the parts distributor will be billed for air freight. An emergency order received after 12:00 PM will be shipped the following day.

DROP SHIPMENT OF PARTS

If requested by a parts distributor, replacement parts can be drop shipped directly to the service agency. This practice is recommended for large parts, such as oven cells.

PARTS RETURN POLICY

Effective March 1, 2000 Dacor implemented a Factory Direct Parts Return Policy. Each part to be returned should be shipped back in the original container with the shipping label enclosed in the replacement box. A copy of the NARDA/USA claim form should be enclosed with the part being returned. This new policy will not affect Canada.

WARRANTY REPLACEMENT OF GAS COOKTOP GRATES AND CAPS

In recent years, manufacturers have developed new lighter colored gas cooktop grates and burner caps. Lighter components show signs of normal wear more quickly than the traditional black components. Warranty will cover defects in materials or workmanship but not normal wear. Due to the high cost of these parts, Dacor does not authorize parts Distributors or service agencies to replace these parts under warranty. If you have a customer requesting gas cooktop grates or caps (under warranty) please refer them to our customer service department.

Credit will not be issued on replacement caps and grates submitted as warranty without prior authorization.

PROCEDURE FOR SUBMITTING PARTS WARRANTY CLAIMS

Please see previous section "processing a labor claim" explaining the distribution of the NARDA claim form. The Parts Distributor would send the PINK copy of the NARDA to Dacor along with any summary or debit form preferred.

REPLACEMENT PART WARRANTY

Replacement parts are guaranteed for one year from the date of installation. A copy of the original service invoice must be included with the part when returning to the parts distributor for credit.

Telephone Numbers

626-799-1000 Main Office and Customer Service 800-353-2267 Technical Service (technicians only) Sales and Customer Service Fax 800-866-7147 626-934-9065 Parts Fax 909-612-1702 Technical Service Fax

DACOR CONTACTS

Main Office

Dacor 1440 Bridge Gate Drive Diamond Bar, CA 91765

City of Industry - Parts Shipments

Dacor 14425 Clark Street City of Industry, CA 91745 626-961-6406

Director, Technical Service – Kevin Leedom National Technical Manager - Thom Tompkins 800-793-0093 X3602 Director, Customer Satisfaction – Cheryl Crowe

Regional Technical Managers

West Central Regional Technical Manager - Darrell Kummerle 800-793-0093 X4606 Home Office 916-789-1094 Eastern Regional Technical Manager – Kurt Moses 800-793-0093 X3604 Home Office 860-482-1340 Fax 860-482-1342 Southern Regional Technical Manager - George Brands 800-793-0093 X3603 Home Office 678-334-3130 Fax 678-344-3126 Midwest Regional Technical Manager - Randy Renfro 800-793-0093 X4603 Home Office 972-412-8976 Fax 972-412-4315 Southwest Regional Technical Manager - Adrian Acosta 800-793-0093 X4675 Home Office and Fax 909-484-7906 Northwest Regional Technical Manager - Ron Hill 800-793-0093 X4602

SERIAL TAG LOCATION

CABP3	Serial Tag is attached to the housing cover next to the access plate.
DMO	Serial tag is inside the oven against the left wall. To view, open the oven door.
EHD	Serial tag is located in the rear panel. To view, remove the filters.
ERD30S06	Serial tag is located inside the unit in the right hand side wall. To view, look through the intake grill slots.
ERD36	Serial tag is located inside the unit on the right hand side wall. To view, look through the intake grill slots.
ERD48	Serial tag is located on the wall behind the door latch of the 36" oven. To view, open the 36"
ERG30	Serial tag is located inside the unit on the right hand side wall. To view, look through the intake grill alota
ERG36	Serial tag is located inside the unit on the right hand side wall. To view, look through the intake grill slots.
ESG	Serial tag is either located on the side wall or the back wall. The unit must be pulled to view tag.
ETT/CER ILB	Serial tag is located on the bottom of the unit next to the electrical connection. Serial tag is fixed to the flat surface wrap.
MODULES	Serial number label located in the opposite side of the electrical connection (beneath the handle).
PGR	Serial tag is the front case top. To view, open the oven door and look through the intake grill slots.
REMP3	Serial tag is attached to the main housing wrap behind the protective rack left of the access plate.
RSD	Serial tag is located inside the storage compartment at the left hand side wall.
RSE	Serial tag is located inside the storage compartment at the left hand side wall.
RV	Serial tag is located in the front plenum above the access panel.
SGM/SGMEM	Serial tag is located next to the rating label.
DOUBLE OVENS	Serial tag is located inside the intake grill, at the left hand side of the door latch. To view, open the upper door and look through the slots of the intake grill.
SINGLE OVENS	Serial tag is located inside the intake grill, at the left hand side of the door latch. To view, open the door and look through the slots of the intake grill.
WARMING OVENS	Serial tag is located at the bottom of the cabinet at the left hand side. To view, the drawer must be pulled completely open or removed.

Electrode Detection of a Gas Flame Theory of Operation

If you look closely at a finger of burner flame you will see that it is clearly made up of three separate elements:

(see figure 1)

- 1. Inner fuel rich cone
- 2. *Ionized blue outer cone with current carrying capabilities
- 3. Outer air rich mantle.

When gas combined with air; burned energy is released in the form of heat and light. When the gas / air mixture is controlled, the outer blue cone will actually carry electrical current similar to a wire.





If we place a metal probe into this "Ionized Plume" and apply a voltage between it and the burner, current will flow. An important characteristic of a burner/flame/electrode assembly is its ability to mainly pass current in one direction. It behaves as a one way valve or rectifier.

Flame Rectification systems make use of this directional characteristic when detecting a good flame to distinguish it from leakage currents that can arise due to moisture contamination, soiled igniter tip, poorly grounded burner spreader ring / burner head, cracked igniter insulation or poor house ground.

A voltage of alternating polarity (an AC voltage) is applied to the electrode from the spark module and the resultant current flow which is greater in one direction than the other, is electronically detected. This current is very small, about one microamp (one millionth of an amp).

The Dacor re-igniter has a specified minimum flame current that will be sensed as a flame of 0.5 microamps (1.3uA minimum sensitivity for C664 Series Gas Ignition Systems). The minimum recommended flame current measured under all likely conditions in an installation should be 1.0 microamps for re-igniters (2.0 microamps for C664 Series). When a burner flame is present the Ionized outer cone will be producing a small DC current. This current is known as (Flame Current). The flame current has to be at a certain level to allow voltage from the spark module to flow efficiently.

The accurate placing of the electrode in the flame is important. This igniter tip needs to be perfectly located in the ionized outer blue cone to effectively send and then detect current flow.



To break it down further, the spark module acts as a simple capacitor. It saves voltage like a sponge until it can hold no more. It will save and release this voltage

approximately 3 times per second. When the voltage is released it follows the spark wire until reaches the spark electrode tip. The built up voltage wants to leave the tip and move to the point of least resistance. In a healthy situation this will be the burner spreader ring. From the burner spreader ring the voltage flow will pass through the burner head, burner tube, chassis and to ground. An interruption of this current path will cause the spark system to misbehave.

The flame also plays a very important role in this process. Because the flame is conductive, it allows the voltage to pass through its body like a bridge to the burner spreader ring. This {bridge} allows the built up spark voltage to bleed off of the igniter tip and move to ground more easily. The resultant ionized flame bridge has now become the path of least resistance for the spark to take across the gap between the spark electrode and the burner body.

By bleeding off the buildup of voltage we stop the spark from occurring. The spark is, in effect, still there, you just can't see it.

- * lonized / To separate into lons or to become electrically charged. In order to successfully detect a flame we first need to;
- 1. Place the electrode in the correct position under all flame conditions.
- 2. Ensure the flame is stable and does not "lift off" the burner at the ports adjacent to the electrode and put the flame beyond the electrode. It is very important to have a stable flame especially around the igniter tip.
- 3. Ensure there is a secure ground path to earth from the burner spreader ring / burner head.
- 4. Confirm the appliance is properly connected to earth ground.

Current Path

The current path for detection is through the spark electrode, outer plume of flame, burner spreader ring, burner head, burner base, chassis and earth ground. If this path is broken, the current cannot flow and sparking will occur. A proper flame will keep this from happening. In other words, the current will always flow through the path of least resistance and it might not be on top of the cooktop, it might be below the top frame and out of sight. In this case, suspect a defective spark wire or a pinched spark wire.

Do you have a ground prior to the igniter tip?

If there is a current path (leak / ground) prior to spark electrode, there will likely not be a spark pulse between the electrode and the burner spreader ring. This phenomenon is what leads most servicers to believe they have a defective spark module.

The spark module can tolerate a relatively large leakage before going into fault condition and generating a spark. The tolerance to leakage decreases with an increasing amount of flame current therefore it is desirable to obtain a high flame current at the appliance design stage to provide some allowance for increasing leakage with age and use. The better the flame current / ground, the less likely there is to be reignition.

Possible Causes Of Continuous Sparking:

Defective spark wires.

Continuous high heat can cause spark wires to degrade. Use volt/ohm meter to determine continuity of spark wires. Look for obvious cuts/ abrasions or pinch points. A defective wire can allow spark voltage to transfer through insulation to ground prior to reaching spark electrode. Under normal circumstances all igniters fire together and if the burner in question has found an easier ground path the spark will go there. It will not, however, in most cases have found a CONTINUOUS ground path such as what the flame would provide under normal circumstances. This will cause the spark module to re-ignite.

Cracked Ceramic Spark Electrode

It's important to determine whether the spark electrode is faulty. Physical impacts and high heat can cause the ceramic post to fracture or crack. If this occurs the spark can shoot through the ceramic insulation and will normally go to ground on the burner head rather than through the flame /burner spreader ring.

Faulty Burner Grounding

From the spark electrode / burner spreader ring to earth ground it is important that you have a strong connection. This can be interrupted in many different ways.

- Soiled spark electrode
- Soiled burner spreader ring
- Soiled burner head
- Corrosion between the burner head and burner tube. Normally this will appear as a brownish stain and can be easily cleaned with a small wire brush.

Any of these conditions can interrupt current flow. We recommend frequent cleaning with a stiff plastic or soft wire bristle brush using pure alcohol or a window cleaning solution that contains

alcohol. It is commonly thought that simple igniter cleaning is enough, it is not. You have to clean all three conductive components to ensure good continuity. A small amount of grease or oil can act as an insulator and prevent the spark from flowing properly.

The burner head and burner tube connection has to be tight. The fastening ring that holds them together has to be seated properly in order for the two components to properly pass electrical current.



Burner Fastening Ring

Poor house ground

If you have thoroughly diagnosed the spark system and continue to have erratic sparking do not dismiss the home ground as the culprit. Many older homes that are being remodeled do not have adequate ground systems in place to handle today's demands. A quick diagnostic tool is a 20-foot piece of 16-gauge wire with alligator clips on each end. This can be used a temporary {jumper} to a known ground source. If the problem is eliminated when you connect the {jumper} you have to suspect the home ground as the culprit. When tested, the Neutral and ground should share less than 20 volts.

Erratic Sparking

It is common to find one or a series of burners that will only spark occasionally. As with the previously described scenarios check all possible ground faults. This is the number one cause of erratic sparking, not spark modules as is more commonly thought. If you have made certain that you have a strong flame current / flame placement / solid ground; replace spark module.

Excessive Failures:

Diagnosis on a spark system can be confusing. For some, diagnosing spark failure is difficult while for others it is pure luck to get it right. Often you can eliminate a problem by disassembling the cooktop and putting it back together. In the process most technicians will have installed a new spark module and assumed that's what repaired the unit. What they have likely done is improved a ground path in the reassemble process. Most gravitate to what they have heard {just change the spark module} Dacor monitors the return of spark modules and NARDA claim forms. The statistical data clearly shows that a vast majority of modules being replaced are not faulty since over **83%** of the spark modules returned to Dacor for credit are tested as "good" product.

The following "fault descriptions" have been taken directly from the NARDA claims submitted:

- Burner no light
- Rear burner making a "popping noise"
- When one burner is turned on others click
- · Sparking continues long after flame
- Constant sparking
- Burner intermittent sparking
- Clicks but will not light
- Takes too long to light

None of these reasons for service are accurate indicators of a faulty igniter module.

As with any Flame Rectification Reignition system, the Dacor flame reignition system does have some critical issues that may prevent its correct function.

These are:

- Partially open valve
 - 90% of the trials will not light the flame but will cause spark.
- Downdraft Ventilation Might affect the re-ignition of the small H-Burner in the simmer setting
- Clogged Valve

Not an adequate volume of gas. It will take longer to light the burner.

- Poor Grounding
- Might damage the module.
- Reversed Polarity
- Will cause constant sparking when unit is turned on.
- Faulty spark leads
 - A broken wire may allow for a spark but not for flame sensing.
- Leakage path to ground Condensation or moisture on the electrode or dirt build up will cause poor grounding.

One of more burners will not stop sparking unless a certain sequence of burners are turned on at the same time.

This indicates mismatched spark wires. Each individual burner wire has to go to a specific burner. The spark switch located on each gas valve is connected to the spark module input side. This connection determines which burner the module {listens} to. If the wiring sequence is incorrect the module does not know what to look for.

Consistent But Weak Spark

After giving close inspection to the spark wires, spark electrode, burner head /burner base and

OUTPUT VOLTAGE CHECK POINTS ON ERC/CLOCK CONTROL All Ranges And Wall Ovens

When programming the oven into a cooking cycle, you first select the desired mode on the touch membrane. Pressing this key sends a message to the ERC/Clock control, which in turn triggers 24 Volts DC to be sent to the main relay board through the connective harness. The desired relay (for example, Pure Convection) closes and distributes power to the desired components. In order to correctly diagnose this sequence you need a volt meter set on DC voltage. Drop the Bezel/Control panel down thus exposing the ERC/Clock and related wiring. Dropping the control panel down will expose the back side of the ERC/Clock control and main wiring harness. The connective harness will have 16 pins. Using a voltmeter take the test leads and insert into the backside of the main wiring harness

To take a voltage reading using the ERC connection chart below:

- 1. Set the voltage meter to DC voltage
- 2. Insert the test lead into the backside of the main harness (plugged into the backside of the ERC control.)

For example: if bake isn't working:

- a) Insert the test leads into connections (2-5)
- b) Program the unit into the bake cycle

The meter should read 22-24 Volts AC



ERC CONNECTOR

Between Pins	Relay	Should Read
1-3	DBL	24 VOLTS
2-5	BAKE	24 VOLTS
2-6	BROIL	24 VOLTS
2-7	CONVECTION ELEMENT	24 VOLTS
2-9	CONVECTION FAN	24 VOLTS
1-11	DOOR MOTOR (LATCH MOTOR)	24 VOLTS
1-13	COOLING FAN	24 VOLTS

Technical Manual - Page 17

NO CLOCK DISPLAY All Ranges And Wall Ovens

**Prior to going out on this call - make sure that the customer has re-set the circuit breaker.

- 1. Check incoming voltage. Appliances must have 240 volts with a neutral.
- 2. Check voltage at main relay board at L1 and N just in front of the low voltage transformer. Should read 120 volts. Refer to picture for voltage test points.



- 3. If you do not have the voltage at L1 and N check wires and connections at terminal block.
- If you have 120 volts at L1 and N then check voltage at main ERC harness connection coming off ERC clock control. Refer to picture for test points 14 and 15. Should have 22-24 volts AC input to ERC/clock control.



5. If you do not have 22-24 volts AC, suspect the main relay board or main harness.

Technical Manual - Page 18

NO BAKE All Ranges And Wall Ovens

- 1. Check the incoming voltage to the unit. There should be 240 volts with a neutral.
- 2. Check power at the Dbl (double line relay) from (Com) to neutral. There should be 120 volts incoming to the Dbl. Refer to picture for testpoints. If voltage is ok,movetostep3.



3. Program the unit into a bake cycle. Check voltage across Dbl (double line relay) (N.O. side) to BA relay for 240 volts. Refer to picture for test points. If no voltage replace relay board. If you have 240 volts go to step 4.



4. Check the HTC (high temp cutout) for open circuit. HTC is a NC switch. The HTC is located by the latch assembly and has a re-settable switch. (see picture)



NO BROIL All Ranges And Wall Ovens

- Check the incoming voltage to the unit. There should be 240 volts with a neutral.
- 2. Check power at the Dbl (double line relay) from (Com) to neutral. There should be 120 volts incoming to the Dbl. Refer to picture for testpoints. If voltage is ok, move to step 3.



3. Program the unit into a broil cycle. Check voltage across the DBL (double line relay) N.O. output side and BR relay (Broil relay) For 240 Volts. Refer to picture for test points. If you have voltage present go to step 4.

If you do not have voltage replace relay board.

1.



4. Check the HTC (high temp cutout) for open circuit. HTC is a NC switch. The HTC is located next to the latch assembly and has a re-settable switch. (see picture)



There is also a user programmable option to set the cooling fan off temperature to 200, 300, 400 or 450 degrees.

- To change the temperature:
- 1. Touch Broil pad enter temp as 500 degrees or higher.
- 2. Push and hold Broil pad for 5 seconds COOL will show in the ERC display
- 3. Adjust fan shut off temp with the +/- pad. (000 = 450 degrees, all other settings will display temp).

4. To exit the mode - press cancel. Recommended factory setting is 300 degrees This will only work on EC, MC and PC ovens

Technical Manual - Page 20

PURE CONVECTION - NO HEAT (MCS/MCD, ECS/ECD, ERD, RSD, RSE, CPS, CPTS, ECPS ERSD)

- 1. Check the incoming voltage to the unit. There should be 240 volts with a neutral.
- 2. Program the unit into pure convection. Check power at the Dbl (double line relay) from (Com) to neutral. There should be 120 volts incoming to the Dbl. Refer to picture for test points. If voltage is ok, move to step 3.



3. Check voltage across the Dbl (double line relay) NO output side and the CVL (convection element relay)

for 240 volts. Refer to picture for test points.) If you have voltage present move to step 4 If you do not have voltage replace relay board.

Double line relay



4. Check the HTC (high temp cutout) for open circuit. HTC is a NC switch. HTC is located by the latch assembly and has a re-settable switch. (see picture)



DOOR LATCH NOT RUNNING (All Models)

1. Check voltage at L2 just to the left of the DRLK relay. (door lock relay) you should have 120V present. See picture for test points.

If there is no voltage present, check wiring from L2 back to terminal block. If you have voltage at L2 go to step 3



- 2. Program oven into self-clean cycle.
- Check voltage from the DRLK (door lock relay) to neutral. See picture for test points. Should have 120 Volts. If no voltage is present replace relay board. If voltage is present check wiring to door latch assembly. If ok replace door latch assy.



4. If you do not have 120VAC, check for (+ or -) 24V DC at molex connector on the relay board. Pins 1 and 9 on relay board should read 24V DC (+or-); if not then replace the relay board.

OVEN LIGHT PCS, MCS, ECS

1. Check input voltage to the light transformer at the primary side across terminal 1 and 5. Should read 240 volts. (see picture) If you do not have 240 volts across 1 and 5, check wiring back to the terminal block. If there is 240 volts present at 1 and 5 go to step 2. (see picture)

1= 0V



5=240V

 Check voltage at the light transformer on the secondary side across terminal 6 and 8. Should read 12 volts. If you do not have 12 volts present at terminal 6 and 8 replace light transformer. If you do have voltage present go to step 3.



6 to 8 = 12 VAC 8 to 10 = 12 VAC 6 to 10 = 24 VAC

Step 2

 Check voltage from the main relay board at terminal N which is to the left of OL1 relay. Should have 12 volts present at N all the time. If you do not have 12 volts present re-check steps 1 and 2 or replace light transformer. If you do not have 12 volts present go to step 4. (see picture)



4. Check voltage at OL1 on main relay board. Should have 12 volts present after OL1 relay closes. If you do not have voltage present recheck steps 1-3 or replace relay board. If you do have voltage present Check wiring to light socket and light bulb.



OL1_

NO COOLING FAN All Ranges And Wall Ovens

1.

Program unit into a cooking cycle. The cooling fan should come on right away. ** If cooling fan doesn't come on, check voltage at CVF or CLF relay (cooling fan relay) side to neutral. Should read 120 VAC. If voltage is not present replace main relay board. If voltage is present check for open wires going to cooling fan. If wiring ok, replace cooling fan motor assembly.

**Note: On all models except for the PGR and RSG the cooling fan turns on at an oven temp of 180 to 230 degrees



NO CONVECTION FAN

(All Models)

- 1. Program the oven into convection bake.
- 2. Check voltage at L2 just to the left of the CV (convection relay), should have 120 volts. See picture. If no voltage check wiring back to the terminal block. If you have voltage present at L2. Go to step 3.
- 3. Check voltage out of the CV (convection relay) for 120 volts. See picture for test points. If no power out of CV relay replace relay board. If there is voltgage present check wiring, convection motor and connections.



NO BAKE/BROIL PGR

Here is a list of functional parts that should be working for the bake/broil to light..

Main Relay Board Cooling blower Air switch (sail switch) Dual gas valve Bake Igniter All of these elements must be working in order for the bake or broil burner to function.

NO BAKE

1. Check incoming line voltage to the DBL (double line relay) NO side and neutral. Should have 120 VAC. If no voltage present trace wiring back to terminal block. If voltage is present go to step 2.



2. Program the unit into Bake or Broil.

Check voltage at the DBL (double line relay) com side to neutral. Should read 120 VAC. If no voltage present replace main relay board. If voltage is present then check if cooling fan is running. If cooling fan is not running check wiring and cooling fan motor. If cooling fan is running then check the air switch/sail switch that is mounted to the cooling fan assy. You must remove cooling fan to gain access to air switch/sail switch.



**Note: The cooling fan should turn on immediately when any cooking cycle is programmed.

Here is a list of functional parts that should be working for the bake/broil to light

Main Relay Board Cooling blower Air switch (sail switch) Dual gas valve Bake Igniter

Note: ERG30's had a sail switch prior to SN KC1230128. On 6-7-01 the sail switch was replaced with an automatic reset switch.

PGR30's unit with a serial level KB0000000 and KA0000000 had a sail switch - those with a KC0000000 and above have an automatic limit switch.

All of these elements must be working in order for the bake or broil burner to function.

NO BAKE

2.

1. Check incoming line voltage to the DBL (double line relay) NO side and neutral. Should have 120 VAC. If no voltage present trace wiring back to terminal block. If voltage is present go to step 2.



Program the unit into Bake or Broil. Check voltage at the DBL (double line relay) com side to neutral. Should read 120 VAC. If no voltage present replace main relay board. If voltage is present then check if cooling fan is running. If cooling fan is not running check wiring and cooling fan motor. If cooling fan is running then check the air switch/sail switch that is mounted to the cooling fan assy. You must remove cooling fan to gain access to air switch/sail

3. The air switch/sail switch is a NO switch you should have 120 VAC to that switch. Take a voltage check from one side of the wire to neutral - it should read 120VAC.



Technical Manual - Page 26

LIGHT NOT WORKING (120V Light Circuit)

1. Check voltage for light circuit at main relay board at terminal N, just to the left of OL1 (oven light relay one) Should have a constant 120 volts. (see picture) If no voltage there check wiring back to terminal block. If you do have voltage present go to step 2.



- 2. Activate the light circuit by pressing the touch pad and listen for the OL1 relay to close then check for 120 volts at OL1. (see picture) if no voltage present replace relay board. If the OL1 (oven light relay 1) doesn't close or you don't hear relay close go to step 3.
- 3. If OL1 relay doesn't close you need to check the membrane touch pad (refer to membrane test points in this manual) You will also need to check the small ribbon connection that is coming off of the touch membrane to the main relay board for proper connection. Step 4 (see picture)
- 4. You can bypass the membrane touchpad to activate the light circuit. Remove the small ribbon connection that is coming off the touchpad to the main relay board. Take a jumper wire or a pocket screw driver and jump across pins one and two. (see picture) If OL1 relay closed the problem is in the touch pad. If OL1 relay doesn't close then the problem is in the main relay board.



Technical Manual - Page 27

NO BAKE/BROIL HEAT: ERG30

- Check for incoming voltage to the main relay board at the DBL (Double Line Relay) NO side to neutral. Should have 120 VAC present. If no voltage check wiring back to the power terminal block. If voltage is present go to step 2.
- After programming the unit into the bake cycle or any cooking cycle "cooling fan must be running" Check voltage from the com side of the DBL relay to the BA relay (Bake relay) and the BR (Broil Relay) should have 120 VAC present.
 Note: the BA relay and the BR relay are the neutral side to the glow bar igniters. If no voltage present replace main relay board. If voltage is present go to step 3.
- If cooling fan is not running check voltage at L2 next to the CLF relay (cooling fan) to neutral.
 Should read 120 VAC. If no voltage check wiring from L2 back to power terminal block. If voltage is present check wiring to the cooling fan blower, if wiring ok replace cooling fan assy.

ERD30, 36, 48 Large Oven, No Bake

- 1. Check incoming power to range should have 240 VAC with a neutral. Check voltage going into main relay board from L2 (red) to L1 (black) at main relay board. Should have 240 VAC.
- Program unit into bake cycle, the unit will go into a preheat bake. The bake element and broiler should activate during pre-heat.
 If the bake element doesn't activate check voltage at the main relay board. At the DBL (double line relay) NO side to the BA relay (Bake Relay) Check for voltage across these two relays. Should read 240 VAC.
 If no voltage is present the next check is the HTC (hi temp cutout) which is located just to the right of the latch assembly.
- 3. There are two HTC's. (High Temp Cutouts) one is for the bake element circuit. The second one is for the broil cycle circuit. You can tell the difference between them by the color of the wire going in to the HTC. The Bake HTC has a black wire going in to the HTC. Line voltage Hot (to bake element) The broil HTC is a white wire.

This is the neutral side to the broil igniter. If the bake HTC is open, push down on the re-set button located in the center of the HTC. If the re-set button will not depress, replace HTC. If the HTC is good, check for an open bake element and wiring to the element.

NO BROIL ERD30, 36, 48

1.

Program unit into the broil cycle.

Take an amp reading at the broiler igniter. You should have 3.1 to 3.3 amps. Or take a voltage reading at the main relay board. At the main relay board take a voltage check from the BR (broil relay) to neutral should read 120 volts AC. If no voltage out of the BR relay - replace relay board. If you have voltage out of the relay board check the HTC (High temp cutout) to see if the HTC has tripped.

(Remember the broil HTC has the white wire hook to it. You can do this by pushing down on the reset button located in the center of the HTC. If the HTC won't reset or is open, replace HTC. If the HTC is good, go to step 2.

2.

Dual Valve: The HTC (Hi temp cutout) feeds the neutral into the dual valve then the dual valve feeds the neutral to the broil igniter. If the dual valve is bad then the broil igniter won't be energized.

ERC Quick Test

The process requires two people. To access the program, one person should stand at the oven, while the other is located at the circuit breaker. The person at the circuit breaker turns off the breaker and then the person at the oven depresses and holds the cooktime keypad. The person at the circuit breaker then turns the breaker back on. The display will show the 4-character identification code of the ERC. Example (1180) You have 30 seconds between each test mode.

Note: if unit shows time of day start procedure over again.

Test 1

Push and hold convection bake Bake element and convection fan activate.

Test 2

Push and hold Standard Bake Bake element activate.

Test 3

Push and hold Pure Convection Convection fan and convection element activate.

Test 4

Push and hold broil Broil element activate. (on gas units - ignitor will activate.)

Test 5

Push and hold convection broil (select models) Broil element and convection fan activate.

Test 6

Momentary push timer 2 Audible tone will sound.

Test 7

Push and hold stop time Cooling fan activate.

Test 8

Momentary push clock All LEDs will light up. Push + or - key pad. LEDs wil display numbers Example: 1111, 2222, 3333, 4444 etc.

Test 9

Last test door open, push and hold cook time for 10 seconds Self clean latch motor activate. Door latch will complete one cycle. The test will end and ERC will display the time of day.

<u>NOTE:</u>

Complete all tests within 30 seconds - otherwise you will see a failure code (F-0: Stuck key pad) displayed on the ERC.

THEORY OF OPERATION

When keypad up/down button is pushed, contacts on the main PCB close between #12 and #13. Closing these contacts activates the triac for the sleeve motor which is connected to terminals L3 and N3 on the main PCB. The motor then raises the intake assembly until contact is made with the up stroke limit switch opening the circuit and reversing the electronic switch on the main PCB. When pressed again, the cycle reverses itself and stops in the retracted position.

VENT PCB DIAGNOSIS (ALL MODELS)

Warning – With the motor disconnected, and the vent in the down position, 120VAC will be present between terminals L2 and N2 on the main PCB. When testing for a load, the motor must be connected to these terminals.

Keypad - Circuit Board Molex Plug Wiring Order			
Terminal #	Old Style	New Style	New Style
1	brown	dark green	white
2	red	brown w/white	purple
3	orange	blue	orange
4	yellow	brown	blue
5	green	gray	bk w/stripe
6	blue	red	dk green
7	purple	purple	lite green
8	grn w/white	pink	gray
9	red w/white	white	pink
10	orange w/black	orange	red
11	yellow w/black	black w/white	brown
12	green w/black	black	orange w/stripe
13	blue w/black	black	black
14	purple w/white	lt green	yellow

Button Contacts		
Up/Down	12	13
High Speed	11	10
Medium Speed	5	10
Low Speed	12	10
Delay	14	5
Stop	12	14
Clean	11	14

CIRCUIT BOARD DIAGNOSTICS

To test the main control board,(located in the right front corner of the vent) remove the access panel and unplug the touch pad from the main control board. When the touch pad harness is pulled off it will reveal 14 pins coming from the main control board. Use the button contact chart and circuit board wiring order chart. Use a jumper wire to jump across the 14 pins for each function.

KEYPAD DIAGNOSIS

(All Models)

Of all the returned keypads the most common problem is poor electrical contact between the Touch Pad and the Contact Board. In the majority of these cases the Keypad Assembly is replaced unnecessarily. Before replacing the Keypad Assembly check for a foreign material between the Touch Pad and the Contact Board. Examples of foreign material include grease, cooking residue, moisture, or residue from cleaning agents. Circuit board cleaner or equivalent (available from electronic supply stores) should be used to clean the keypad assembly.

To diagnose the keypad:

- 1. Disconnect the Keypad Molex plug at the Main PCB and attach leads of an ohm meter to pins #12 and #13.
- 2. Push the UP/DOWN button. This must show a closed circuit.

If the above test does not show a closed circuit, perform the following.

- Check for grease or any foreign material between the Touch Buttons and the contact board. Clean with an electronic contact cleaner as described above.
- Repeat test above.
- If the contacts are clear, replace the keypad assembly.
- If the circuit is closed, check for 120VAC between contacts N3 and L3 on the main PCB. If voltage is not present, replace the main PCB.

Wires Are numbered 1 through 14 the molex plug should be numbered.

Voltage output for fan speed

Voltage output from the main PCB to the exhaust fan motor:

Measurements of voltage are average readings, as actual measurements will vary with incoming voltage into the home. Motor amperage draw 2.7-3.5 depending on the duct run.

Vent in Down Position	Expected Voltage Reading	
120 Volts AC	Across L2 and N2 with no load (wires disconnected from motor)	
Zero Volts AC	Voltage reading across L2 and N2 with motor connected (under load)	
120 Volts AC	Reading from L2 to ground with motor connected	
120 Volts AC	Reading from N2 to ground with motor connected	
120 Volts AC	Reading from L2 to ground with motor connected	
Vent in up position, under load with motor connected		
120 Volts AC	From L2 to Ground	
Zero Volts AC	From N2 to Ground	
120 Volts AC	Reading across L2 and N2	

Possible Failures

A. Unit dead on arrival

- 1. Check the keypad to be sure that the Lockout Mode has not been activated (look for the two LED's) To disable press and hold the HIGH and LOW button for a minimum of 1.0 second.
- 2. Check voltage between N1 and L1 on the main PCB. The voltage should be 120VAC. If voltage is not present check the incoming power supply and all wiring connections. A miswired unit may cause the PCB to fail.
- 3. Check the Keyboard wiring harness and Molex receptacle for open or loose wires. Make sure

Voltage Output For Fan Speedoutput from the main PCB to the exhaust fan motorLow77VAC87VACMedium94VAC101VACHigh115VAC115VAC

that the Molex plug is securely attached to the main PCB.

B. Unit will not raise or lower:

- 1. Check limit switches and the connecting wiring.
- 2. Check main PCB between L3 and N3 for 120 VAC when the UP/DOWN key is pressed. If voltage is not present check between terminals #12 and #13 on the PCB for continuity when the up/down key is depressed. If there is no voltage or continuity the PCB is defective and must be replaced.

C. Vent will go up but motor will not run:

- 1. Check for proper wiring to the exhaust motor. The majority of motors failing to operate on new units are the result of incorrect installation wiring.
- 2. Look for miswired or defective limit switches. Review the functional and operational descrip tions of the limit switches.
- 3. Check voltage output to exhaust motor. This should be 120VAC on the high-speed setting.
- 4. Raise the vent or press the high-speed button. Spin the exhaust motor, if motor runs check capacitor.
- 5. Check for defective PCB. See section on PCB Diagnosis.

D. Vent will not stop, goes up and down continuously:

- 1. Check for misaligned or defective limit switches.
- 2. Check wiring between the limit switches and main PCB.

E. Blower runs only when the vent is down.

- 1. Check for proper wiring at the PCB
- 2. Check for defective limit switches
- 3. Check for defective PCB. See section on PCB Diagnosis.

F. Vent only goes part way up; user must push keypad repeatedly.

- 1. Check for a loose wiring harness or loose wire connections.
- 2. Check for dirt or grease on the Touchpad and Contact board. See section on KeyPad diagnosis.
- 3. Check for defective PCB. See section on PCB diagnosis.

G. Vent operates by itself:

For this to occur the main PCB is detecting some type of electrical interference. Check for the following:

- 1. The installation instructions require a correctly grounded and dedicated circuit. If the unit is connected to a non-dedicated circuit refer the customer back to the installer and inform them that they will be responsible for future repairs until the wiring is corrected.
- 2. If the problem can be traced or associated with the use of an electronic gas cooktop (of any design) then a filter assembly (part number 86325) should be installed.

H. Filter light stays on:

- 1. If the filter light remains on after the filter button is depressed remove power to the unit to deposit to replace the P.C.B
- 2. If the light remains on after resetting the microprocessor, replace the main PCB

I. Main PCB keeps shorting out:

1. Check for reversed polarity on the incoming power supply.
2. Check for possible miswire of the exhaust motor.

Quick Check – Main PCB:

If the vent is not working at all:

- Check the fuse on the main PCB
- If the fuse is good check for continuity between the fuse and L3 (drive motor terminal)
- If this circuit is open the PCB is bad and must be replaced.

When reassembling please be sure all the wiring is correct.

KEYPAD, KEYBOARD REPLACEMENT RV SERIES RAISED VENT

Removal of the cooktop is not required.

- Raise the vent sleeve by pressing the UP/DOWN button. If the unit is dead, raise the vent by removing the black motor sleeve wires L3 and N3 from the main PCB and hook direct to a power source (Auxiliary power cord, pigtail etc)
- With the vent in up position turn off the electrical power to the vent and remove the vent electric cover plate.
- If a cabinet blower is used, disconnect the blower from the vent by loosening the three wing nuts located above the blower and lifting up on the blower retaining bracket.
- If a remote blower is used remove the cover plate.
- Disconnect the 14 wire Molex plug from the main PCB.
- Remove the screws, 1 on each side of the sleeve. Lift topcap assembly from the sleeve assembly.
- -Guide the Molex plug through the electric box and through the channel in the sleeve assembly.
- Remove the right end cap (pressed in). Slide out the bezel, keypad and keyboard as one unit. Replace desired part and reinstall in reverse order.

OFF BUTTON

Pressing and releasing this button will switch off the fan motor. The fan speed indicators will be switched off and the OFF LED will be switched on. The OFF LED will only be switched on to indicate the fan motor is switched of whenever the UPPER LIMIT switch is closed.

If DELAY OFF function is on, this will also be cancelled by pressing the OFF button.

DELAY OFF BUTTON

This button has a toggle action. Pressing and releasing this button will enable the five- minute DELAY OFF function. Pressing and releasing this button again will cancel the selected DELAY OFF function.

When the DELAY OFF function is selected, the fan will continue to operate at the selected speed for five minutes and then turn off automatically.

During this five-minute interval the fan speed can be changed by pressing and releasing the HIGH, MEDIUM, or the LOW button.

FAN SPEED – LOW BUTTON

Pressing and releasing this button will select the low speed for the fan. The LOW speed LED indicator will be on indicating the selected fan speed. Both the MEDIUM and HIGH LED will be off.

FAN SPEED – MEDIUM BUTTON

Pressing and releasing this button will select the medium speed for the fan. The MEDIUM speed LED indicator

will be on and both the LOW and HIGH LED will be off.

FAN SPEED -HIGH BUTTON

Pressing and releasing this button will select the HIGH speed for the fan. The HIGH speed LED indicator will be on and the LOW and MEDIUM LED will be off.

CLEAN FILTER BUTTON

When the total number of hours that the fan has operated exceeds 10 hours, the FILTER CLEAN LED will be on indicating the fan has accumulated over 10 operating hours. Pressing and releasing the FILTER button enables this 10-hour timer to reset, and turns off the FILTER CLEAN LED. This button only becomes operational after the FILTER CLEAN LED is on.

UP/DOWN BUTTON

This button is used to control the sleeve motor. Pressing and releasing this button will stop the fan motor and cancel the DELAY OFF function (if selected). However, this button can carry out three different operations to the sleeve motor.

If the sleeve motor is in its upright position, pressing and releasing this button will start the sleeve motor and lower the vent.

Pressing and releasing this button again before the vent has lowered to its lowest position will stop the sleeve motor. After the vent has stopped, pressing and releasing this button again will start to lower the vent until the LOWER LIMIT switch is closed or the UP/DOWN BUTTON is pressed again.

UPPER LIMIT SWITCH

When this limit switch is closed during the sleeve's upward motion, the sleeve motor will be switched off. This indicates the sleeve is in its full upright. At this instance the fan motor will automatically select HIGH SPEED. Furthermore, the FAN SPEED buttons and the delay off button will then become operational.

LOWER LIMIT SWITCH

When this limit switch is closed during the sleeve's downward motion, the sleeve motor will be switched off automatically. This indicates the sleeve is in its lowest position.

LOCKOUT FUNCTION

Pressing and holding the LOW button and the HIGH speed button for more than 0.5 seconds will select the clean function.

**Once this function is activated, all the buttons will be disabled until this function is enabled by again pressing and holding the two speed buttons for 0.5 seconds. This function will permit the cleaning of the unit without accidentally activating the unit.

INITIAL POWER UP

On power up, the controller will not assume any status of the two limit switches. It is assumed that the sleeve motor will either be in its upright position or its lowest position. If the UPPER LIMIT switch is closed, the controller will automatically select the high fan speed and operate the fan at that speed.

On the other hand, if the lower limit switch is selected, the controller will switch off both the fan motor and the sleeve motor. ALL LED indicators will be switched off indicating the current status of the controller.

However, if both of the UPPER LIMIT and the LOWER LIMIT switches are off, pressing and releasing the UP/DOWN button will either raise or lower the vent depending on the mechanical set up of the vent, until either one of the limit switches are closed. Depending on which limit switch is closed, the vent will respond to the corresponding switch.

Furthermore, the controller will learn the current status of the limit switches and the direction of the sleeve motor. However if both limit switches are closed during any stage of operation, the controller will only be able to operate the sleeve motor.

FAILURE MODE, PCB PROGRAMMING

The software for the vent is designed so that when the sleeve motor is travelling upwards, it will only look for the UPPER LIMIT switch. The software is designed this way so that the mechanical arrangement of the limit switch will not be a determining factor of the sleeve's operation.

However in the situation when the UPPER LIMIT switch fails to close due to either broken wire connection or malfunctioning of the limit switch, the sleeve motor will continue to operate until either the UP/DOWN is pressed again or the power is switched off.

To prevent the above situation from occurring, two timers are incorporated into the software. The sleeve will take 8 seconds to travel from its lowest position to its fully raised position; hence a 15 and a 30-second timer are used.

If the 15 second timer times out before the corresponding limit switch, the microprocessor will assume the limit switch fails to close. It will assume the sleeve motor is now moving in the opposite direction than it was before, due to the mechanical set up of the sleeve, therefore the microprocessor will try to detect the other limit switch. If the 30-second timer has timed out before the limit switch closes, the microprocessor will stop the sleeve motor and all operation will be disabled until a power reset is applied.

Sensor Resistance Chart

Temperature Degrees F	Resistance OHMs
60	1059
70	1080
100	1143
200	1350
300	1553
400	1753
500	1949
600	2142
700	2331
800	2516
900	2697
1000	2874



Technical Manual - Page 39

CER





Technical Manual - Page 40






































































































Technical Manual - Page 86







Technical Manual - Page 89















85061-1 03.22.95





Technical Manual - Page 98




















SELF CLEAN CYCLE





















RR ELEMENT



LOWER OVEN BAKE PREHEAT



LOWER OVEN BROII



LOWER OVEN - SELF CLEAN













CYCLE CHART - ERD48

36 " Oven PERCENTAGES

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	100%	100%	100%			100%
Broil	100%				100%	
Convection Fan	100%		100%	100%		

18" Oven PERCENTAGES

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	100%	100%	100%			100%
Broil	100%				100%	
Convection Fan	100%		100%	100%		

36 "Oven SECONDS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	64 sec	64 sec	64 sec			64 sec
Broil	64 sec				64 sec	
Convection Fan	64 sec		64 sec	64 sec		

18 " Oven SECONDS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	64 sec	64 sec	64 sec			64 sec
Broil	64 sec	13 sec	13 sec		64 sec	
Convection Fan	64 sec		64 sec	64 sec		

All timing is based upon a 64 second cycle. After 64 seconds a new cycle begins. All times reflect "ON" times for elements based upon a 64 second cycle.

CYCLE CHARTS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	100%	100%	100%			100%
Broil					64 sec	
Convection Fan	100%		100%			

PGR - SECONDS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	64 sec	64 sec	64 sec			64 sec
Broil					64 sec	
Convection Fan	64 sec		64 sec			

ERG36 - PERCENTAGES

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	100%	100%	100%			100%
Broil					100%	
Convection Fan	100%		100%			

ERG36 - SECONDS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	64 sec	64 sec	64 sec			64 sec
Broil					64 sec	
Convection Fan	64 sec		64 sec			

All timing is based upon a 64 second cycle. After 64 seconds a new cycle begins. All times reflect "ON" times for elements based upon a 64 second cycle.

CYCLE CHART ERD36 - PERCENTAGES

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	100%	100%	100%			100%
Broil	100%				100%	
Convection Fan	100%		100%	100%		
Convection Element				100%		

ERD - SECONDS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	64 sec	64 sec	64 sec			64 sec
Broil	64 sec				64 sec	
Convection Fan	64 sec		64 sec	64 sec		
Convection Element				64 sec		

SINGLE OVEN - PERCENTAGES

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	100%	81%	81%			58%
Broil	47%	19%	19%		100%	42%
Convection Fan	100%		100%	100%		
Convection Element				100%		

SINGLE OVEN - SECONDS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	64 sec	52 sec	52 sec			37 sec
Broil	30 sec	12 sec	12 sec		64 sec	27 sec
Convection Fan	64 sec		64 sec	64 sec		
Convection Element				64 sec		

All timing is based upon a 64 second cycle. After 64 seconds a new cycle begins. All times reflect "ON" times for elements based upon a 64 sec. cycle.

CYCLE CHART DOUBLE OVEN - CONVECTION CELL - PERCENTAGES

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	100%	81%	81%		58%	
Broil	47%	19%	19%		100%	
Convection Fan	100%		100%	100%		
Convection Element				100%		

DOUBLE OVEN - CONVECTION CELL - SECONDS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	64 sec	52 sec	52 sec			37 sec
Broil	30 sec	12 sec	52 sec			37 sec
Convection Fan	64 sec		64 sec	64 sec		
Convection Element				64 sec		

RSE - PERCENTAGES

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	41%	19%	84%			58%
Broil	59%		16%		100%	42%
Convection Fan	100%		100%	100%		
Convection Element				100%		

RSE - SECONDS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	26 sec	12 sec	54 sec			37 sec
Broil	37 sec		10 sec		27 sec	64 sec
Convection Fan	64 sec		64 sec	64 sec		
Convection Element		52 sec		64 sec		

All timing is based upon a 64 second cycle. After 64 seconds a new cycle begins. All times reflect "ON" times for elements based upon a 64 sec. cycle.

CYCLE CHARTS ERG30 - PERCENTAGES

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	100%	100%	100%			100%
Broil					100%	
Convection Fan	100%		100%			

ERG30 - SECONDS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	64 sec	64 sec	64 sec			64 sec
Broil					64 sec	
Convection Fan	64 sec		64 sec			

ERD30 - PERCENTAGES

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	100%	100%	100%			100%
Broil	100%				100%	
Convection Fan	100%		100%	100%		
Convection Element				100%		

ERD30 - SECONDS

	Preheat	Bake	Convection Bake	Pure Convection	Broil	Self-Clean
Bake	64 sec	64 sec	64 sec			64 sec
Broil	64 sec				64 sec	
Convection Fan	64 sec		64 sec	64 sec		
Convection Element				64 sec		

All timing is based upon a 64 second cycle. After 64 seconds a new cycle begins. All times reflect "ON" times for elements based upon a 64 sec. cycle.


















DWO, EDWO, TDWO



EWO, MWO, PWO

















EHD42, 48, 54

Hood Wiring Diagram for Models EHD42S, EHD48S and EHD54S with internal power ventilator.











Technical Service 950 S. Raymond Ave. Pasadena, CA 91105 Part # 95106 REV.8.7.02