Technical Bulletin

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Date: July, 2010

Panasonic Home and Health Company
Home Appliance Group / Food service

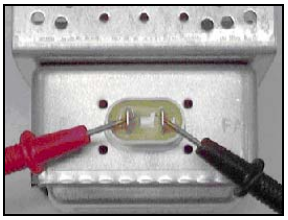
Product: Commercial Mircowave Oven

Model: **NE1257R, NE1258R, NE1757R, NE2157R, NE2180, NE3280**

Subject: Magnetron Test for Opens, shorts or Insufficient Power

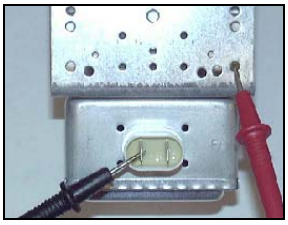
A. The following tests will indicate if a magnetron is open or shorted.

- Unplug the unit
- Discharge all the H.V Capacitors (refer to service manual on how to discharge)
- Disconnect all the leads (connectors) from the magnetron terminals.



Step 1

- Using an Ohm meter on its lowest resistance scale, measure the resistance from one magnetron terminal to the other in either direction as shown on the illustration on the left.
- **Meter should read less than 1Ω** indicating that the filament is good.
- If Filament checks good, proceed to Step 2



Step 2

- Using an Ohm meter on its highest resistance scale, measure the resistance from one of the magnetron terminals to the metal casing of the magnetron as shown on the illustration on the left.
- **Meter should read infinity (open circuit)** regardless of meter polarity. If the meter indicates a short (Less than 1 **Ω**), the magnetron is defective.

B. The following temperature test will indicate if a magnetron is weak. Make sure unit is plugged in.

1. Fill a beaker or cup with **EXACTLY** 8 oz (1 Cup) tap water.
2. Record the temperature of the water (Should be approx. 70° F)
3. Place it in the center of the microwave and heat it for the time specified*.
4. Water should be boiling. Record the temperature again.
5. Temperature should rise approximately 142° F (Go to Step 6 only if temperature rise is considerably lower than 142° F otherwise all magnetrons are functioning properly)
6. To test for the weak magnetron, connect one magnetron at a time and repeat Steps 1-4.
   a. For ovens that contain 2 magnetrons (NE1257R, NE1258R, NE1757R, NE2157R), the temperature rise should be approximately 70° F per magnetron.
   b. For ovens that contain 4 magnetrons (NE2180, NE3280), the temperature rise should be approximately 35° F per magnetron.

*** See field expedient test on the back of the page**

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Field Expedient Power Determination Tests:

- All times calculated using water starting at 70°F {21°C} brought to 212°F {100°C}.
- Times given below should serve as the benchmark. If oven cannot bring vessel to a boil within the time given, (on High" Power) call for Service Information TOLL FREE @ 877-CMO-OVEN

MODEL	AMOUNT OF WATER:	VESSEL:	TIME:
NE-1257/8	1 CUP	PYREX MEASURE	2:15
NE-1757	1 CUP	PYREX MEASURE	1:35
NE-2157	1 CUP	PYREX MEASURE	0:54
NE-2180	1 CUP	PYREX MEASURE	0:54
NE-3280	1 CUP	PYREX MEASURE	0:40

*Inside of the oven should be relatively clean
*Remove Metal Rack(s) for this test