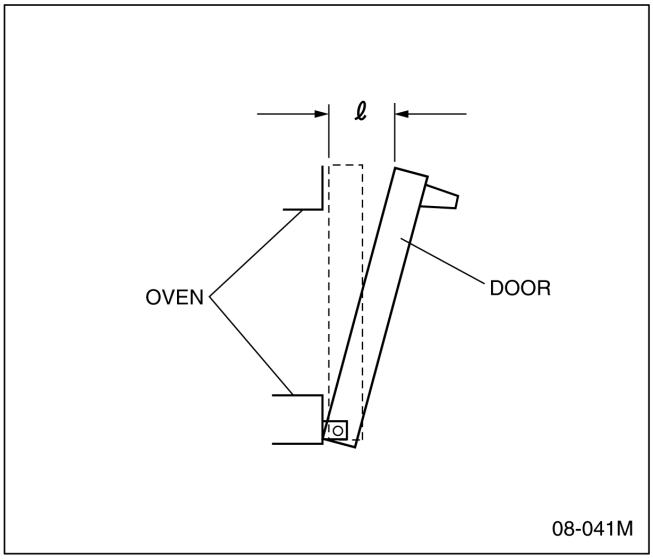
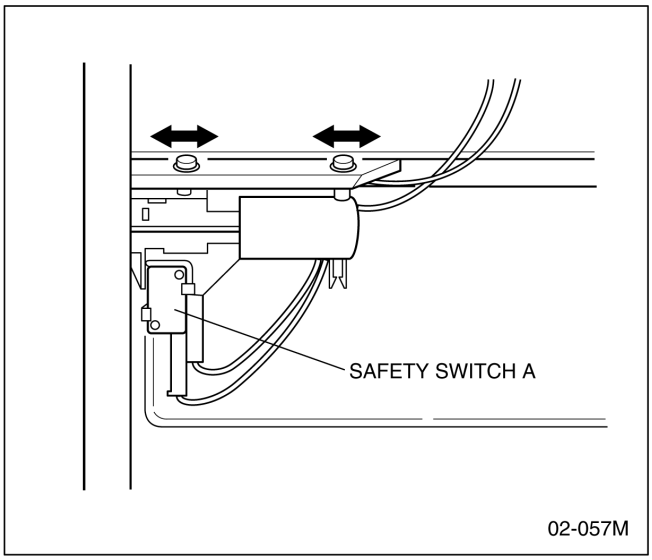
Output power performance test procedure.

1. Fill the beaker with exactly one litre of tap water. Stir the water using the thermometer and note the temperature. (Record as T1)
2. Place the beaker in the center of cook plate. Set the oven for High power and heat for exactly one minute.
3. After completion of the heating cycle, stir the water again with the thermometer and note the temperature. (Record as T2)

The normal temperature rise (T2 — T1) at High power position for each models is as shown in following table.

Model	Temperature Rise (1 liter — 1 Min.)
NE-3280 NE-3240	Min. 27.4°C
NE-2180 NE-2140	Min. 18°C





17 TROUBLESHOOTING GUIDE

CAUTION

1. Check grounding before checking for trouble.
2. Be careful of high voltage circuit.
3. Discharge high voltage capacitor.
4. When checking the continuity of the switches or the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.

   When disconnecting a plastic connector from a terminal, you must hold the plastic connector instead of the lead wire and then disconnect it, otherwise lead wire may be open or the connector cannot be removed.
5. Be sure to ground any static electric charge built up in your body, before handling the D.P.C.
6. A 230-240V/400V AC is present at the shaded area ( ) of the power supply circuit board (Terminals of power relays and primary circuit of low voltage transformer). When troubleshooting, be cautious of possible electrical shock hazard.

First of all operate the microwave oven following the correct operating procedures described on pages 3 of this service manual in order to find the exact cause of any trouble.

NOTE

If the unit shows faulty symptom as shown below, check the parts listed in possible cause column depending on failure indication e.g. F81, F82 in the display.

[TROUBLE] Oven does not operate at all or oven does not start cooking. NE-3280, NE-3240

DISPLAY	CONDITIONS	POSSIBLE CAUSE	TIMING OF FAILURE INDICATION
F33	Open temperature sensor (exhaust)	1. Temperature sensor failure 2. Digital programmer circuit failure 3. Loose connector CN5	It is appeared when failure occurred.

DISPLAY	CONDITIONS	POSSIBLE CAUSE	TIMING OF FAILURE INDICATION
F34	Short temperature sensor (exhaust)	1. Temperature sensor failure 2. Digital programmer circuit failure	It is appeared when failure occurred.
F44		1. Shorted power select switch 2. Shorted membrane switch	It is appeared 2 minutes after failure occurred.
F01 (With continuous beep sounds)	Exhaust temperature exceeds 120°C	1. Burning food in the oven due to over cook	It is appeared when exhaust temperature exceeds above 120°C.
F03	Input voltage exceed + 12.5%	1. Increase in power source voltage	It is appeared when the unit is plugged in. Note that it returns normal operation mode by tapping the RESET pad ( ).
F04	Input voltage is less than — 12.5%	1. Decrease in power source voltage	It is appeared when the unit is plugged in. Note that it returns normal operation mode by tapping the RESET pad ( ).
F05	Memory failure	1. Digital programmer circuit failure	
No display	1.25/3A fuse blown	1. Switch failure (short switch) 2. Low-Voltage transformer failure	
No display	1.25/3A fuse is OK	1. Thermal cutout failure 2. Low voltage transformer failure 3. Digital programmer circuit failure	
F81	No voltage supply to high voltage trans. (lower/left)	1. Relay failure RY-3 (A) 2. Loose connector CN256, CN257 3. Digital programmer circuit failure	It is appeared when failure occurred.
F82	No voltage supply to high voltage trans. (lower/right)	1. Relay failure RY-5 (B) 2. Loose connector CN258, CN259 3. Digital programmer circuit failure	It is appeared when failure occurred.
F83	No voltage supply to high voltage trans. (upper/left)	1. Relay failure RY-7 (C) Loose connector CN260, CN261 2. Digital programmer circuit failure	It is appeared when failure occurred.
F84	No voltage supply to high voltage trans. (upper/right)	1. Relay failure RY-9 (C) Loose connector CN262, CN263 2. Digital programmer circuit failure	It is appeared when failure occurred.
F86	Shorted contacts of RY-3	1. Replay failure RY-3 (A) 2. Digital programmer circuit failure	It is appeared when failure occurred.
F87	Shorted contacts of RY-5	1. Replay failure RY-5 (B) 2. Digital programmer circuit failure	It is appeared when failure occurred.
F88	Shorted contacts of RY-7	1. Replay failure RY-7 (C) 2. Digital programmer circuit failure	It is appeared when failure occurred.
F89	Shorted contacts of RY-9	1. Replay failure RY-9 (D) 2. Digital programmer circuit failure	It is appeared when failure occurred.

[TROUBLE]Oven does not operate at all or oven does not start cooking. NE-2180, NE-2140

DISPLAY	CONDITIONS	POSSIBLE CAUSE	TIMING OF FAILURE INDICATION
F33	Open temperature sensor (exhaust)	1. Temperature sensor failure 2. Digital programmer circuit failure 3. Loose connector CN5	It is appeared when failure occurred.
F34	Short temperature sensor (exhaust)	1. Temperature sensor failure 2. Digital programmer circuit failure	It is appeared when failure occurred.
F44		1. Shorted power select switch 2. Shorted membrane switch	It is appeared 2 minutes after failure occurred.
F01 (With continuous beep sounds)	Exhaust temperature exceeds 120°C	1. Burning food in the oven due to over cook	It is appeared when exhaust temperature exceeds above 120°C.
F03	Input voltage exceed + 12.5%	1. Increase in power source voltage	It is appeared when the unit is plugged in. Note that it returns normal operation mode by tapping the RESET pad ( ).
F04	Input voltage is less than — 12.5%	1. Decrease in power source voltage	It is appeared when the unit is plugged in. Note that it returns normal operation mode by tapping the RESET pad ( ).
F05	Memory failure	1. Digital programmer circuit failure	
No display	1.25/3A fuse blown	1. Switch failure (short switch) 2. Low-Voltage transformer failure	

DISPLAY	CONDITIONS	POSSIBLE CAUSE	TIMING OF FAILURE INDICATION
No display	1.25/3A fuse is OK	1. Thermal cutout failure 2. Low voltage transformer failure 3. Digital programmer circuit failure	
F81	No voltage supply to high voltage trans. (lower/left)	1. Relay failure RY-3 (A) 2. Loose connector CN256, CN257 3. Digital programmer circuit failure	It is appeared when failure occurred.
F84	No voltage supply to high voltage trans. (upper/right)	1. Relay failure RY-9 (C) Loose connector CN262, CN263 2. Digital programmer circuit failure	It is appeared when failure occurred.
F86	Shorted contacts of RY-3	1. Replay failure RY-3 (A) 2. Digital programmer circuit failure	It is appeared when failure occurred.
F89	Shorted contacts of RY-9	1. Replay failure RY-9 (D) 2. Digital programmer circuit failure	It is appeared when failure occurred.