International Commercial Microwave-Technical Information

230 VAC, 50 Hz model

ALD510D	**P1331003M**	**UALD510D**	**P1331004M**
MLD510D	**P1331007M**	**UMLD510D**	**P1331008M**

- Due to possibility of personal injury or property damage, always contact an authorized technician for servicing or repair of this unit.
- Refer to Service Manual 16026969 for installation, operating, testing, troubleshooting, and disassembly instruction.

⚠ CAUTION

All safety information must be followed as provided in Service Manual 16026969.

⚠ WARNING

To avoid the risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Models	ALD510D MLD510D		UALD510D UMLD510D	
Power Source				
Voltage AC	230 VAC		230 VAC	
Amperage (Single Unit)	15 A		15 A	
Frequency	50 Hz		50 Hz	
Single Phase, 3 wire grounded	X		X	
Plug	CEE 7/7 Schuko		BS1363A	
Power Output – Microwave				
Nominal microwave energy (IEC705)	1000 Watts		1000 Watts	
Minimum temperature rise (ΔT)	10ºF / 5ºC		10ºF / 5ºC	
Operating Frequency	2450 MHz		2450 MHz	
Power Consumption				
Microwave only	1500 Watts		1500 Watts	
Dimensions				
Cabinet (in cm)				
Width	22"	56 cm	22"	56 cm
Height	13 1/2"	34.4 cm	13 1/2"	34.4 cm
Depth	18 29/32"	47.9 cm	18 29/32"	47.9 cm
Oven Interior (in cm)				
Width	14 1/2"	36.9 cm	14 1/2"	36.9 cm
Height	8 3/4"	22.1 cm	8 3/4"	22.1 cm
Depth	15 3/4"	40 cm	15 3/4"	40 cm
Weight				
Uncrated	40.7 lbs.	18.5 kg	40.7 lbs.	18.5 kg
Features				
Timer	10 minute single speed		10 minute single speed	
Power Selection	5 Levels		5 Levels	
Cavity Volume	1.2 cu. Ft.		1.2 cu. Ft.	

©2006 Maytag Services

Component Testing Procedures

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Illustration	Component	Testing	Results
	Thermal cutout	Disconnect all wires from TCO. Measure resistance across terminals. Cavity TCO..... Magnetron TCO.....	 Closed at 50ºC (122ºF) and Opens at 85ºC (185ºF) Closed at 115ºC (249ºF) and Opens at 160ºC (320ºF)
	Diode	**Discharge Capacitor** Remove diode lead from capacitor and connect ohmmeter. Reverse leads for second test.	Infinite resistance should be measured in one direction and 50KΩ or more in the opposite direction. **NOTE:** Ohmmeter must contain a battery of 6 volts minimum.
	Capacitor	**Discharge Capacitor** Remove wires from capacitor terminals and connect ohmmeter, set on highest resistance scale to terminals. Also check between each terminal and capacitor case.	 Between Terminals: Meter should momentarily deflect towards zero then return to over 5 MΩ. If no deflection occurs, or if continuous deflection occurs, replace capacitor. Terminal to Case: Infinite resistance
	Magnetron	**Discharge Capacitor** Remove wires from magnetron and connect ohmmeter to terminals. Also check between each terminal and ground.	Between Terminals: Less than 1 Ω Each terminal to ground measures Infinite resistance. **NOTE:** This test is not conclusive. If oven does not heat and all other components test good replace the magnetron and retest.
	Blower motor	Remove all wires from motor. Measure resistance across coil	 Approximately 96 Ω
	Stirrer motor	Remove all wires from motor. Measure resistance across terminals	 Approximately 14.7K Ω
Secondary Filament Primary	Transformer	**Discharge Capacitor** Remove all wires from terminals. Measure resistance from: Primary ..... Filament..... Secondary to Ground screw on transformer stack.....	 Less than <1 Ω Less than <1 Ω Approximately 91 Ω
3 M 2 1	Dial timer	Remove leads from timer contact terminals. Measure resistance of following terminals: 1 to 3—Timer in OFF position ..... 1 to 3—Timer in ON position..... 2 to M—Timer in OFF or ON position.....	If timer does not indicate readings below, replace timer. Infinite Ω Approximately <1 Ω Approximately 13.6 KΩ (timer motor)
	Lamp and receptacle	Test continuity of receptacle terminals.	Indicates continuity with bulb installed.
	Wire Harness	Test continuity of wires	Indicates continuity

©2006 Maytag Services

Component Testing Procedures

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Illustration	Component	Testing	Results
	High voltage fuse	Test continuity of terminals	Indicates continuity, if not replace fuse.
	Slow acting relay assembly	Disconnect black wire from relay and measure voltage from neutral (blue wire on Filter Assembly) to relay terminal with black wire removed. Power Out terminals.....	230 VAC If no power out, replace assembly
	Fuse block / Filter assembly	Power In terminals ..... Power Out terminals.....	230 VAC 230 VAC If no power in, check power outlet If no power out, check fuses
1 2 3 4 5 6	Interlock switch assembly (Mechanical) PRIMARY INTERLOCK SWITCH INTERLOCK MONITOR SWITCH SECONDARY INTERLOCK SWITCH	Disconnect wires to switch. With door open measure resistance from: Monitor – Terminals 3 - 4 ..... Primary – Terminals 1 - 2..... Secondary – Terminals 5 - 6 ..... With door closed measure resistance from: Monitor – Terminals 3 - 4 ..... Primary – Terminals 1 - 2..... Secondary – Terminals 5 - 6 ..... **After verifying or replacing the module, re-connect wires to switch and check operation of monitor circuit before operating the oven.**	 Indicates continuity Infinite Ω Infinite Ω Infinite Ω Indicates continuity Indicates continuity

©2006 Maytag Services

Power Test

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

All Amana and Menumaster microwave oven power outputs are rated using the IEC705 standards. Using the IEC705 test method requires precision measurements and equipment that is not practical to be performed in the field. Using the test shown below will indicate if the oven performance is satisfactory.

Test equipment required:

- 1000 ml test container and thermometer (Amana power test kit R0157397 Fahrenheit / Menumaster power test kit M95D5 Celsius).
- Digital watch / watch with a second hand for use on ovens with electromechanical timers.

Important Notes:

- Low line voltage will cause low temperature rise / power output.
- Ovens must be on a dedicated circuit, properly grounded, and polarized. Other equipment on the same circuit may cause a low temperature rise / power output.
- This test and results are not a true IEC705 test procedures and are only intended to provide servicers with an easy means of determining if the microwave oven cooking output is correct.

Procedure

1. Fill the test container to the 1000 ml line with cool tap water.

NOTE: Water temperature should be approximately 60°F / 16°C

2. Using the thermometer, stir water for five to ten seconds; measure, and record the temperature (T1).
3. Place test container of water in the center of oven cavity and close door.
4. Heat the water for a 33-second full power cycle.

NOTE: Use a digital watch or a watch with a second hand for ovens with electromechanical timers.

5. At end of the cycle, remove test container. Using the thermometer, stir water for five to ten seconds and record temperature (T2).
6. Subtract the starting water temperature (T1) from the ending water temperature (T2) to obtain the temperature rise (ΔT).
7. If the temperature rise (ΔT) meets or exceeds the minimum, the test is complete. If the temperature rise (ΔT) fails to meet the minimum temperature rise, test the line voltage to verify it is correct. Then repeat steps 1 - 6 making sure to change the water. If the temperature rise (ΔT) fails to meet the minimum temperature rise again the oven will require service.

Minimum Temperature Rise at Thirty -Three (33) Seconds Run Time

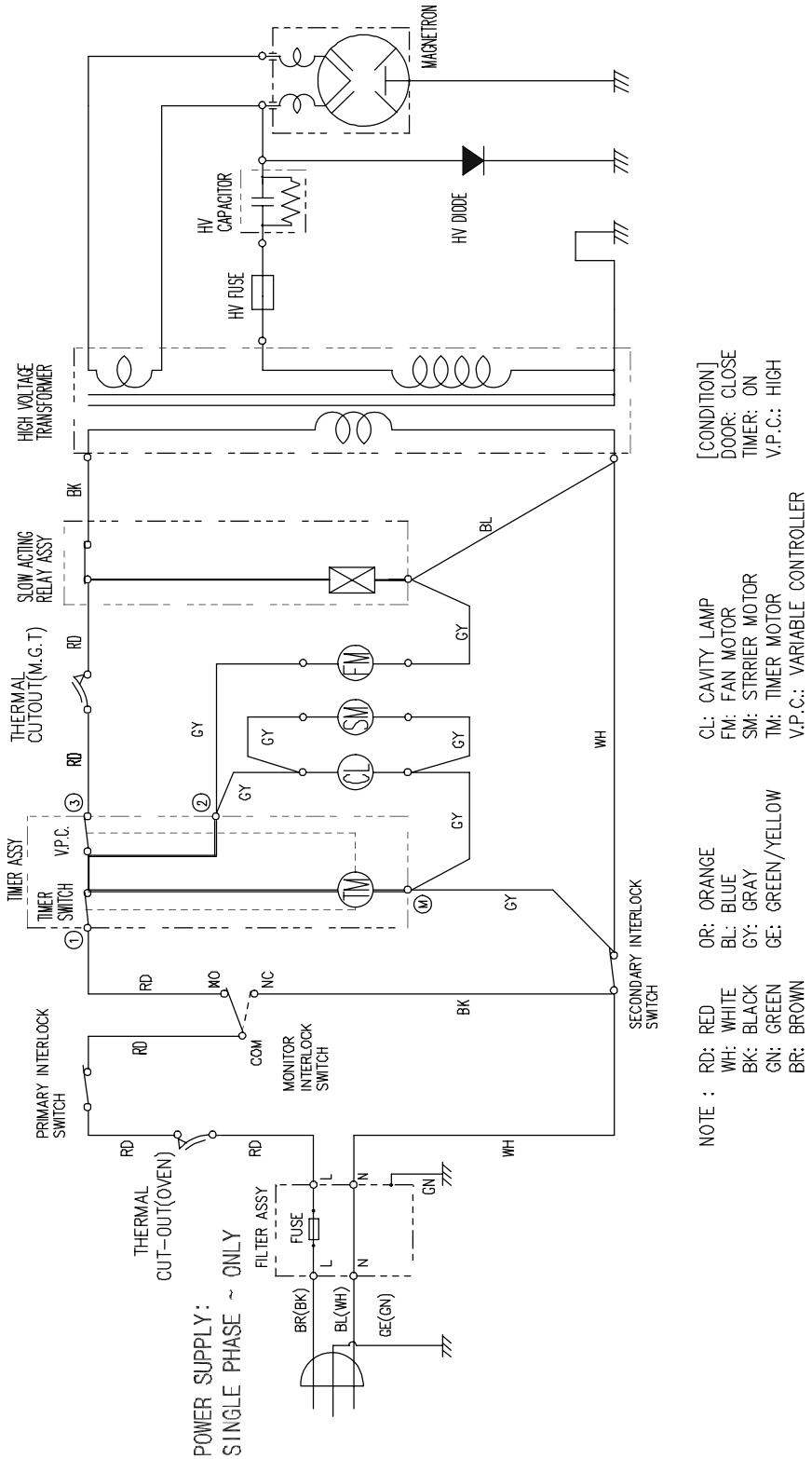
ΔT (°F)	Cooking Power Output	ΔT (°F)	Cooking Power Output	ΔT (°C)	Cooking Power Output	ΔT (°C)	Cooking Power Output
10	1000	20	2000	5	1000	11	2000
11	1100	21	2100	5.5	1100	11.5	2100
12	1200	22	2200	6.5	1200	12	2200
14	1400	24	2400	7.5	1400	13	2400
17	1700	25	2500	9.5	1700	13.5	2500
18	1800	27	2700	10	1800	15	2700
19	1900	30	3000	10.5	1900	16.5	3000

©2006 Maytag Services

Wiring Diagram and Schematic

WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.



©2006 Maytag Services