

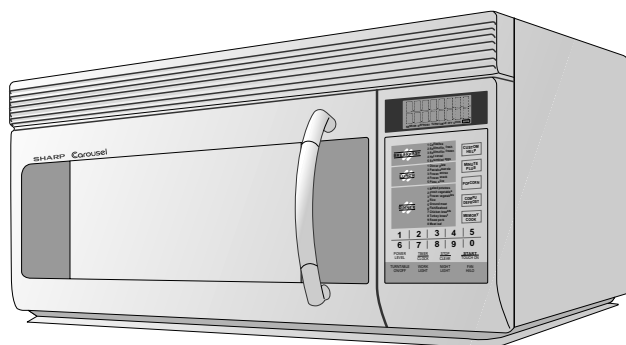
SHARP SUPPLEMENTAL SERVICE MANUAL

R-1380
R-1381

S10M141R1380E

OVER THE RANGE MICROWAVE OVEN

MODELS **R-1380**
R-1381



In the interest of user-safety the oven should be restored to its original condition and only parts identical to those specified should be used.

WARNING TO SERVICE PERSONNEL: Microwave ovens contain circuitry capable of producing very high voltage and current. Contact with the following parts may result in a severe, possibly fatal, electrical shock. (High Voltage Capacitor, High Voltage Power Transformer, Magnetron, High Voltage Rectifier Assembly, High Voltage Harness etc..)

This is a supplemental Service Manual for Microwave Oven model R-1380/R-1381. This model is quite similar to the base model R-1480/81 (S/M# S3807R1480X//). This supplemental manual must be used in conjunction with the base model service manual for complete operation, service, safety and replacement parts information.

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SHARP CORPORATION

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The contents are subject to change without notice.

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- (a) Do not operate or allow the oven to be operated with the door open.
- (b) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary: (1) interlock operation, (2) proper door closing, (3) seal and sealing surfaces (arcing, wear, and other damage), (4) damage to or loosening of hinges and latches, (5) evidence of dropping or abuse.
- (c) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.
- (d) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.
- (e) A microwave leakage check to verify compliance with the Federal Performance Standard should be performed on each oven prior to release to the owner.

BEFORE SERVICING

Before servicing an operative unit, perform a microwave emission check as per the Microwave Measurement Procedure outlined in this service manual.

If microwave emissions level is in excess of the specified limit, contact SHARP ELECTRONICS CORPORATION immediately @1-800-237-4277.

If the unit operates with the door open, service person should 1) tell the user not to operate the oven and 2) contact SHARP ELECTRONICS CORPORATION and Food and Drug Administration's Center for Devices and Radiological Health immediately.

Service personnel should inform SHARP ELECTRONICS CORPORATION of any certified unit found with emissions in excess of $4\text{mW}/\text{cm}^2$. The owner of the unit should be instructed not to use the unit until the oven has been brought into compliance.

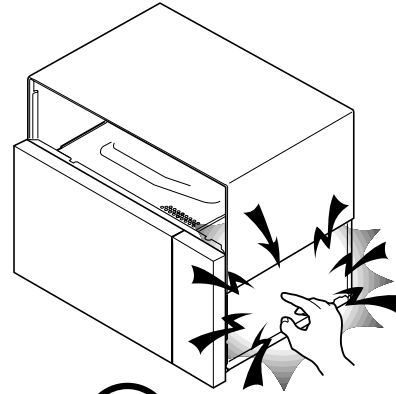
WARNING TO SERVICE PERSONNEL

Microwave ovens contain circuitry capable of producing very high voltage and current, contact with following parts may result in a severe, possibly fatal, electrical shock.

(Example)

High Voltage Capacitor, High Voltage Power Transformer, Magnetron, High Voltage Rectifier Assembly, High Voltage Harness etc..

Read the Service Manual carefully and follow all instructions.



**Don't Touch !
Danger High Voltage**

Before Servicing



1. Disconnect the power supply cord , and then remove outer case.
2. Open the door and block it open.
3. Discharge high voltage capacitor.

WARNING: RISK OF ELECTRIC SHOCK. DISCHARGE THE HIGH-VOLTAGE CAPACITOR BEFORE SERVICING.

The high-voltage capacitor remains charged about 60 seconds after the oven has been switched off. Wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

Whenever troubleshooting is performed the power supply must be disconnected. It may in, some cases, be necessary to connect the power supply after the outer case has been removed, in this event,

1. Disconnect the power supply cord, and then remove outer case.
2. Open the door and block it open.
3. Discharge high voltage capacitor.
4. Disconnect the leads to the primary of the power transformer.
5. Ensure that these leads remain isolated from other components and oven chassis by using insulation tape.
6. After that procedure, reconnect the power supply cord.

When the testing is completed,

1. Disconnect the power supply cord, and then remove outer case.
2. Open the door and block it open.
3. Discharge high voltage capacitor.
4. Reconnect the leads to the primary of the power transformer.
5. Reinstall the outer case (cabinet).
6. Reconnect the power supply cord after the outer case is installed.
7. Run the oven and check all functions.

After repairing

1. Reconnect all leads removed from components during testing.
2. Reinstall the outer case (cabinet).
3. Reconnect the power supply cord after the outer case is installed.
4. Run the oven and check all functions.

Microwave ovens should not be run empty. To test for the presence of microwave energy within a cavity, place a cup of cold water on the oven turntable, close the door and set the power to HIGH and set the microwave timer for two (2) minutes. When the two minutes has elapsed (timer at zero) carefully check that the water is now hot. If the water remains cold carry out **Before Servicing** procedure and re-examine the connections to the component being tested.

When all service work is completed and the oven is fully assembled, the microwave power output should be checked and microwave leakage test should be carried out.

MICROWAVE MEASUREMENT PROCEDURE

A. Requirements:

- 1) Microwave leakage limit (Power density limit): The power density of microwave radiation emitted by a microwave oven should not exceed 1 mW/cm^2 at any point 5cm or more from the external surface of the oven, measured prior to acquisition by a purchaser, and thereafter (through the useful life of the oven), 5 mW/cm^2 at any point 5cm or more from the external surface of the oven.
- 2) Safety interlock switches Primary interlock relay and door sensing switch shall prevent microwave radiation emission in excess of the requirement as above mentioned, secondary interlock switch shall prevent microwave radiation emission in excess of 5 mW/cm^2 at any point 5cm or more from the external surface of the oven.

B. Preparation for testing:

Before beginning the actual measurement of leakage, proceed as follows:

- 1) Make sure that the actual instrument is operating normally as specified in its instruction booklet.

Important:

Survey instruments that comply with the requirement for instrumentation as prescribed by the performance standard for microwave ovens, 21 CFR 1030.10(c)(3)(i), must be used for testing.

- 2) Place the oven tray in the oven cavity.
- 3) Place the load of $275\pm 15\text{ ml}$ (9.8 oz) of tap water initially at $20\pm 5\frac{1}{2}\text{C}$ (68°F) in the center of the oven cavity. The water container shall be a low form of 600 ml (20 oz) beaker with an inside diameter of approx. 8.5 cm (3-1/2 in.) and made of an electrically nonconductive material such as glass or plastic. The placing of this standard load in the oven is important not only to protect the oven, but also to insure that any leakage is measured accurately.
- 4) Set the cooking control on Full Power Cooking Mode
- 5) Close the door and select a cook cycle of several minutes. If the water begins to boil before the survey is completed, replace it with 275 ml of cool water.

C. Leakage test:

Closed-door leakage test (microwave measurement)

- 1) Grasp the probe of the survey instrument and hold it perpendicular to the gap between the door and the body of the oven.
- 2) Move the probe slowly, not faster than 1 in./sec. (2.5 cm/sec.) along the gap, watching for the maximum indication on the meter.
- 3) Check for leakage at the door screen, sheet metal seams and other accessible positions where the continuity of the metal has been breached (eg., around the switches, indicator, and vents). While testing for leakage around the door pull the door away from the front of the oven as far as is permitted by the closed latch assembly.
- 4) Measure carefully at the point of highest leakage and make sure that the highest leakage is no greater than 4 mW/cm^2 , and that the secondary interlock switch does turn the oven OFF before any door movement.

NOTE: After servicing, record data on service invoice and microwave leakage report.

SERVICE MANUAL

SHARP

OVER THE RANGE
MICROWAVE OVEN

R-1380 / R-1381

FOREWORD

This Manual has been prepared to provide Sharp Electronics Corp. Service Personnel with Operation and Service Information for the SHARP OVER THE RANGE MICROWAVE OVEN, R-1380, R-1381

It is recommended that service personnel carefully study the entire text of this manual so that they will be qualified to render satisfactory customer service.

Check the interlock switches and the door seal carefully. Special attention should be given to avoid electrical shock and microwave radiation hazard.

Note

This supplemental service manual contains updated information only. Please refer to base model service manual (R-1480/R-1481) for complete service information.

WARNING

Never operate the oven until the following points are ensured.

- (A) The door is tightly closed.
- (B) The door brackets and hinges are not defective.
- (C) The door packing is not damaged.
- (D) The door is not deformed or warped.
- (E) There is not any other visible damage with the oven.

Servicing and repair work must be carried out only by trained service personnel.

DANGER

**Certain initial parts are intentionally not grounded and present a risk of electrical shock only during servicing. Service personnel - Do not contact the following parts while the appliance is energized;
High Voltage Capacitor, Power Transformer, Magnetron, High Voltage Rectifier Assembly, High Voltage Harness;
If provided, Vent Hood, Fan assembly, Cooling Fan Motor.**

All the parts marked "*" on parts list are used at voltages more than 250V.

Removal of the outer wrap gives access to voltage above 250V.

All the parts marked on "Δ" parts list may cause undue microwave exposure, by themselves, or when they are damaged, loosened or removed.

SHARP ELECTRONICS CORPORATION

SHARP PLAZA, MAHWAH,
NEW JERSEY 07430-2135

PRODUCT DESCRIPTION

OPERATION

WIRING DIAGRAM

PARTS LIST

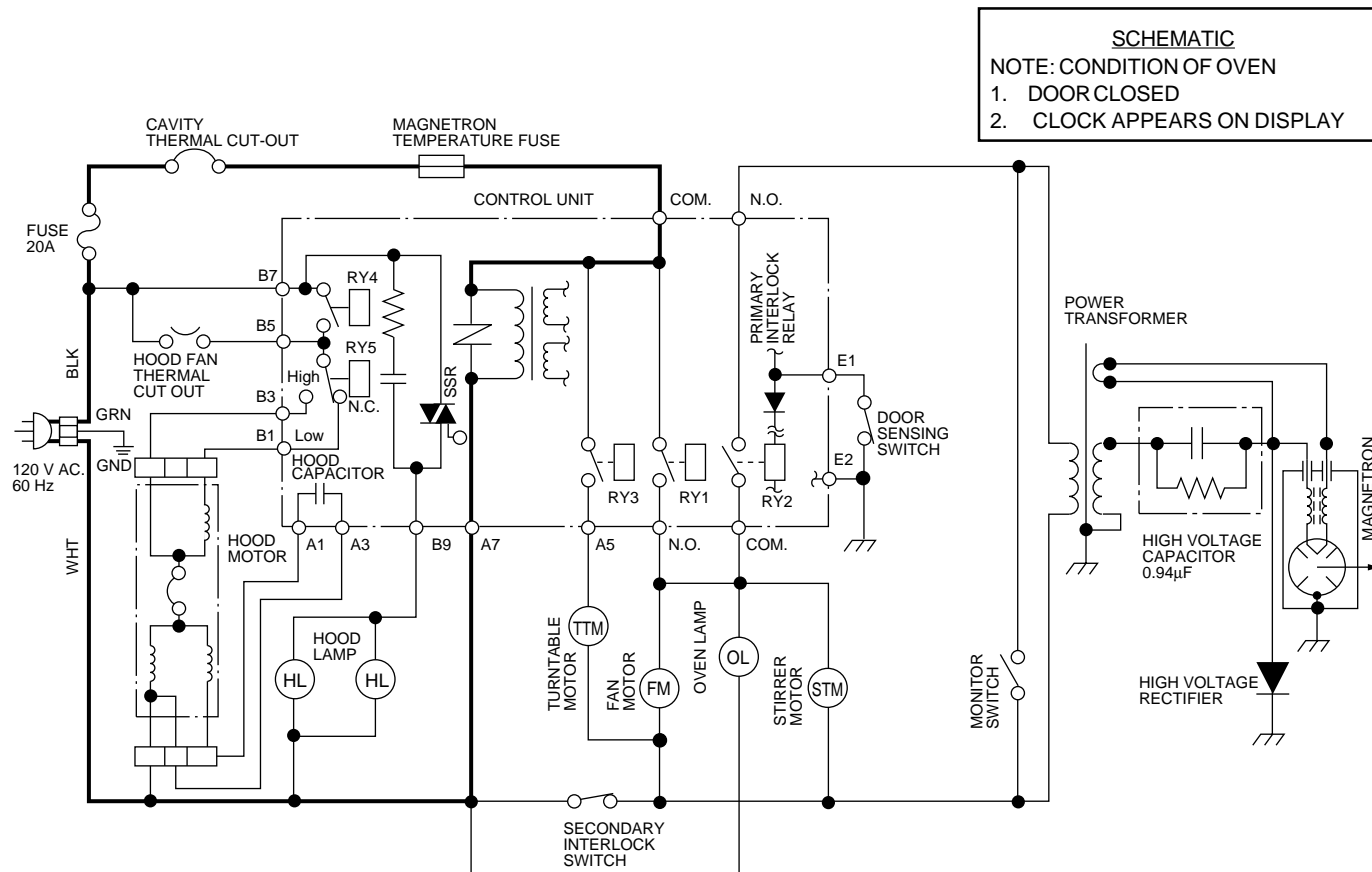


Figure O-1. Oven Schematic-Off Condition

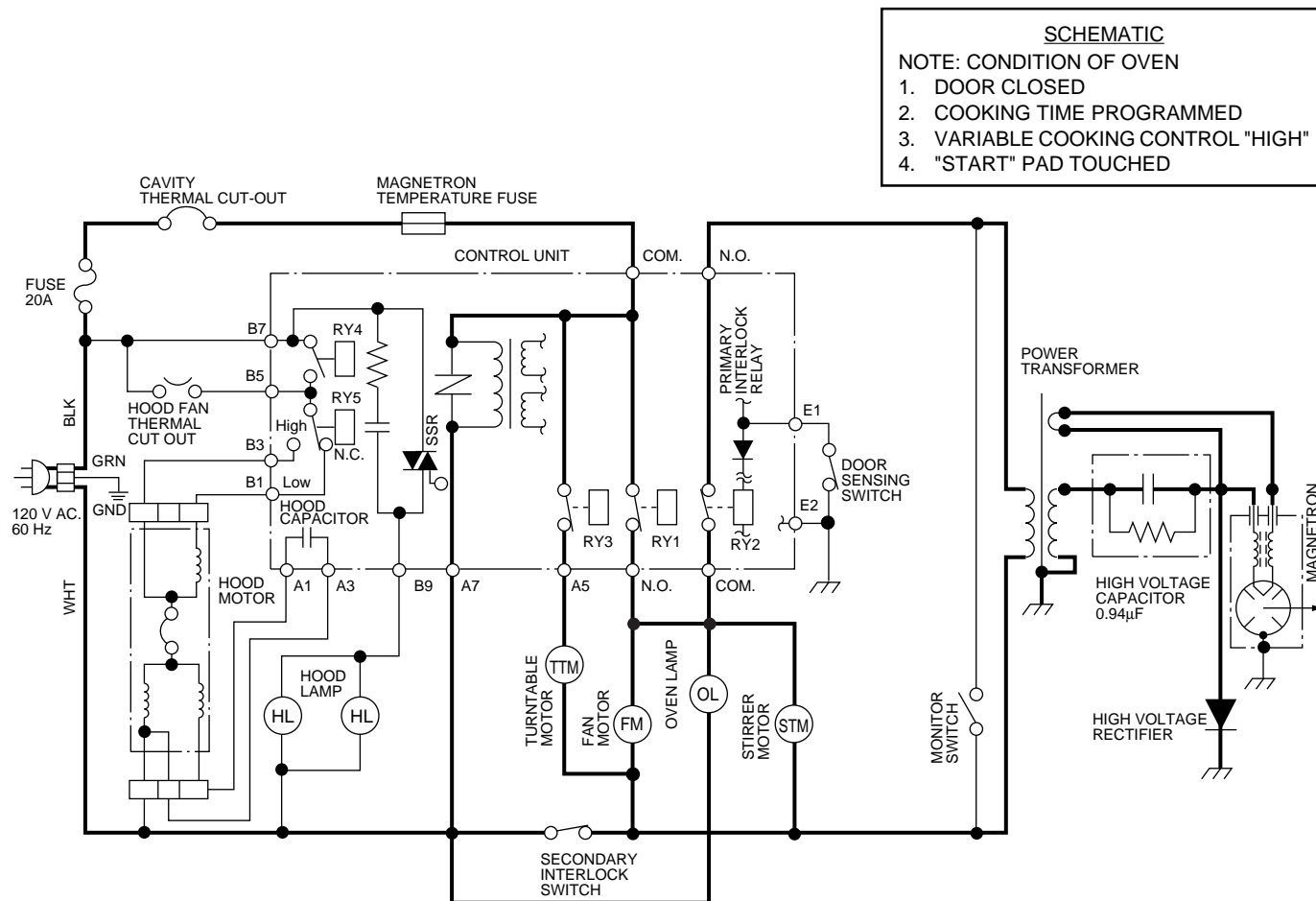


Figure O-2. Oven Schematic-Cooking Condition

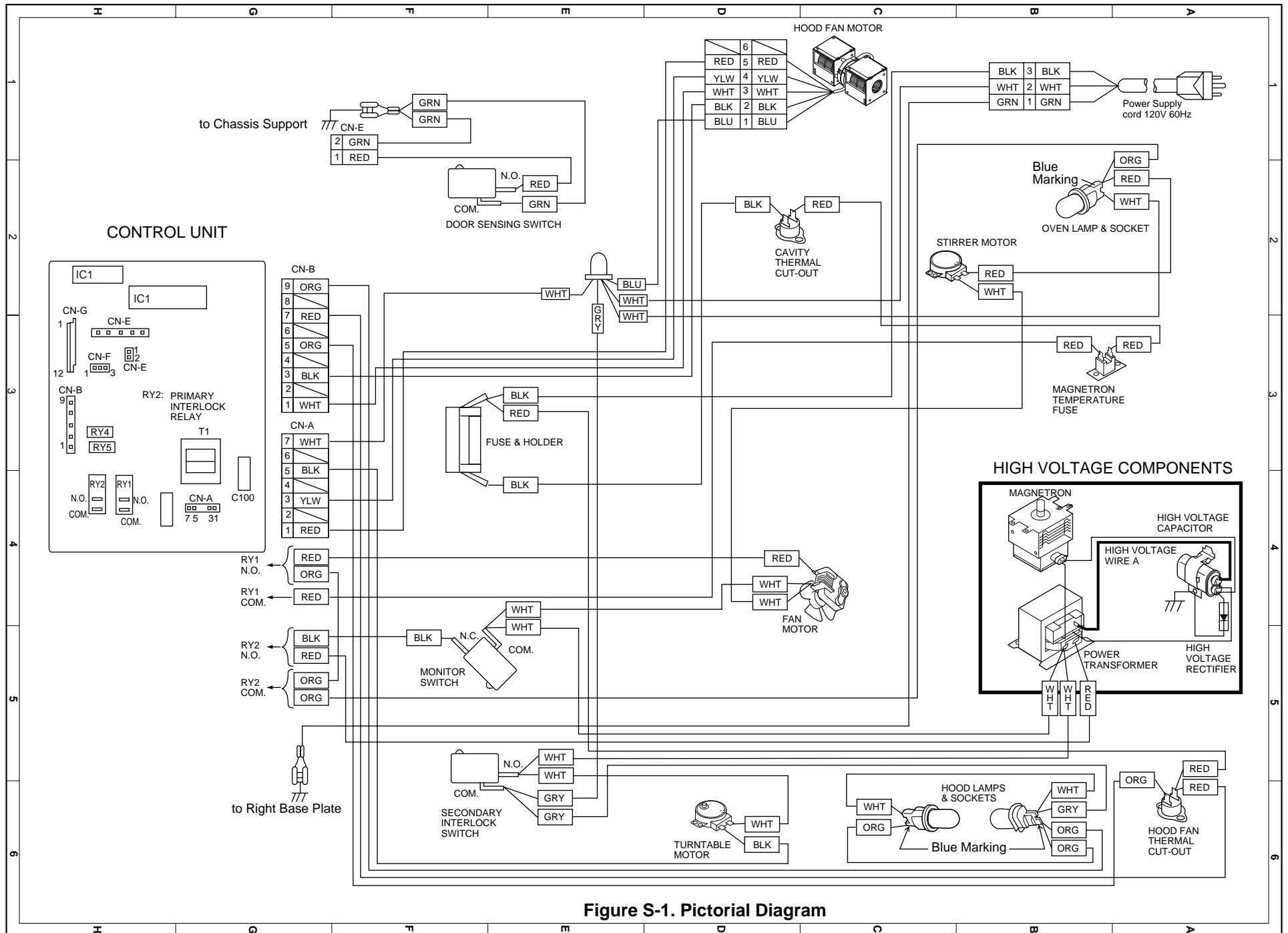


Figure S-1. Pictorial Diagram

PARTS LIST

Note: The parts marked "Δ" may cause undue microwave exposure.

The parts marked "*" are used in voltage more than 250V.

"§" MARK: PARTS DELIVERY SECTION

REF. NO.	PART NO.	§	DESCRIPTION	Q'TY	CODE
ELECTRIC PARTS					
* 1- 1	FH-DZB012MRY0	M	High voltage rectifier assembly	1	AK
* 1- 2	RC-QZA234WRE0	M	High voltage capacitor	1	AP
1- 3	QFS-TA013WRE0	M	Temperature fuse 150°C (Magnetron)	1	AG
1- 4	RMOTDA211WRE0	M	Turntable motor	1	AL
1- 5	RMOTDA214WRE0	M	Stirrer motor	1	AQ
1- 6	RTHM-0044MRE0	M	Thermal cut-out N.O. 60°C (Hood Fan)	1	
1- 7	RTRN-B062MRE0	M	Power transformer	1	BF
* 1- 8	RV-MZA281WRE0	M	Magnetron	1	BC
1- 9	QFSHDB003MRE0	M	Fuse holder	1	AD
Δ * 1-10	QSW-MA110WRE0	M	Secondary interlock and door sensing switches	2	AE
1-11	FFS-BA016/KIT	M	Monitor switch with fuse assembly	1	AF
1-12	FACCDB011MRE0	M	Power supply cord	1	AP
1-13	QSOCLB006MRE0	M	Oven lamp socket	3	AE
1-14	FMOTEA402WRK0	M	Hood fan motor	1	BE
1-15	RMOTEA346WRE0	M	Fan motor	1	AR
1-16	RLMPTA068WRE0	M	Oven lamp	3	AE
1-17	RTHM-A070WRE0	M	Thermal cut-out 145°C (Cavity)	1	AG

CABINET PARTS

2- 1	LSTY-B021MRP0	M	Rear stay	1	AF
2- 2	PDIF-B018MRF0	M	Hood exhaust louver [R-1380]	1	AT
2- 2	PDIF-B019MRF0	M	Hood exhaust louver [R-1381]	1	AT
2- 3	GDAI-B058MRP0	M	Right base plate	1	AM
2- 4	PCUSUB040MRP0	M	Base cover cushion	1	AA
2- 5	GCABUB084MRP0	M	Outer case cabinet [R-1380]	1	BA
2- 5	GCABUB090MRP0	M	Outer case cabinet [R-1381]	1	BC
2- 6	TMAPCB052MRR0	M	Schematic diagram	1	AB
2- 7	FANGKB009MRY0	M	Hood lamp glass assembly [R-1380]	1	AN
2- 7	FANGKB010MRY0	M	Hood lamp glass assembly [R-1381]	1	AM
2-7-1	LANGQB016MRP0	M	Hood lamp glass angle [R-1380]	1	AG
2-7-1	LANGQB020MRP0	M	Hood lamp glass angle [R-1381]	1	AG
2-7-2	PGLSPB004MRE0	M	Hood lamp glass	1	AH
2- 8	PCOVPB064MRT0	M	Base cover [R-1380]	1	AY
2- 8	PCOVPB066MRT0	M	Base cover [R-1381]	1	AY

CONTROL PANEL PARTS

3- 1	DPWBFB081MRU0	M	Control unit	1	BL
3- 1A	QCNCMA447DRE0	M	4-pin connector CN-A	1	AA
3- 1B	QCNCMA448DRE0	M	5-pin connector CN-B	1	AA
3- 1C	QCNCMA275DRE0	J	2-pin connector CN-E	1	AB
3- 1C	QCNCWA030DRE0	J	12-pin connector CN-G	1	AE
3- 1E	RV-KXB004MRE0	M	Fluorescent display tube	1	AS
3- 1F	PTPEHB010MRE0	M	Tape 2mm	1	AB
C1	RC-KZA087DRE0	J	Capacitor 0.1 uF 50V	1	AB
C2	VCEAB31VW108M	J	Capacitor 1000 uF 35V	1	AF
C5	VCKYD11CY103N	J	Capacitor 0.01 uF 16V	1	AH
C6	VCEAB31VW106M	J	Capacitor 10 uF 35V	1	AB
C7-8	VCKYD11CY103N	J	Capacitor 0.01 uF 16V	1	AH
C9-10	RC-KZA087DRE0	J	Capacitor 0.1 uF 50V	1	AB
C20	VCEAB31VW106M	J	Capacitor 10 uF 35V	1	AB
C21	VCEAB31HW104M	J	Capacitor 0.1 uF 50V	1	AM
C30	VCKYD11CY103N	J	Capacitor 0.01 uF 16V	1	AH
C70-73	VCKYD11HB331K	J	Capacitor 0.01 uF 16V	4	AA
C100	RC-QZB014MRE0	M	Capacitor 7 uF 230V	1	AK
C110	RC-QZB019MRE0	M	Capacitor 330 pF 50V	1	AC
CF1	RCRS-A010DRE0	M	Ceramic resonator (CST4.00MGW)	1	AD
D1-4	VHD11ES1///-1	J	Diode (11ES1)	4	AB
D20	VHD1SS270A/-1	J	Diode (1SS270A)	1	AA
D25-28	VHD1SS270A/-1	J	Diode (1SS270A)	4	AA
D30-31	VHD1SS270A/-1	J	Diode (1SS270A)	2	AA
D71-77	VHD1SS270A/-1	J	Diode (1SS270A)	7	AA
IC1	RH-IZA876DRE0	J	LSI	1	AW
Q3	VSKRA101M///-3	J	Transistor (KRA101M)	1	AB
Q4	VSDTA123ES/-3	J	Transistor (DTA123ES)	1	AA
Q20	VSKRA101M///-3	J	Transistor (KRA101M)	1	AB

REF. NO.	PART NO.	§	DESCRIPTION	Q'TY	CODE
Q24-26	VSKRA101M//-3	J	Transistor (KRA101M)	3	AB
Q27	VSKRC243M//-3	J	Transistor (KRC243M)	1	AB
Q28	VSKRA101M//-3	J	Transistor (KRA101M)	1	AB
Q30	VSKRA101M//-3	J	Transistor (KRA101M)	1	AB
R1	VRD-B12HF432J	J	Resistor 4.3k ohm 1/2W	1	AH
R2	VRD-B12EF152J	J	Resistor 1.5k ohm 1/4W	1	AA
R3	VRS-B13AA751J	J	Resistor 750 ohm 1W	2	AB
R4	VRD-B12HF511J	J	Resistor 510 ohm 1/2W	1	AA
R7-8	VRD-B12EF472J	J	Resistor 4.7K ohm 1/4W	1	AB
R10	VRD-B12HF3R3J	J	Resistor 3.3 ohm 1/2W	1	AB
R20	VRD-B12HF102J	J	Resistor 1k ohm 1/2W	1	AA
R30	VRD-B12EF153J	J	Resistor 15k ohm 1/4W	1	AA
R31	VRD-B12EF472J	J	Resistor 4.7k ohm 1/4W	1	AA
R40	VRD-B12EF332J	J	Resistor 3.3k ohm 1/4W	1	AA
R70-73	VRD-B12EF332J	J	Resistor 3.3k ohm 1/4W	4	AA
R77-83	VRD-B12EF332J	J	Resistor 3.3k ohm 1/4W	7	AA
R91-93	VRD-B12EF104J	J	Resistor 100K ohm 1/4W	3	AA
R110	VRS-A12HA470J	J	Resistor 47 ohm 1/2W	1	AH
RY1-2	RRLY-A113DRE0	M	Relay (DU24D1-1PR(M))	2	AG
RY3-4	RRLY-A080DRE0	M	Relay (OJ-SH-124LM)	2	AG
RY5	RRLY-A112DRE0	M	Relay (VE24HSE-K)	1	AH
SSR1	RH-SZA009DRE0	M	Solid state relay	1	AG
SP40	RALM-A014DRE0	J	Buzzer (PKM22EPT)	1	AG
T1	RTRNPNB014MRE0	M	Transformer	1	AM
VRS1	RH-VZA032DRE0	J	Varistor (10G471K)	1	AE
ZD1	VHEHZ6A3///-1	J	Zener diod (HZ6A-3)	1	AC
ZD3	VHEHZ5C2///-1	J	Zener diod (HZ5C-2)	1	AA
ZD4	VHEHZ4A2///-1	J	Zener diod (HZ4A-2)	1	AA
3- 2	FPNLCB205MRK0	M	Control panel sub. assembly [R-1380]	1	AZ
3- 2	FPNLCB211MRK0	M	Control panel sub, assembly [R-1381]	1	AZ
3- 2-1	FUNTKB153MRE0	M	Key unit [R-1380]	1	AU
3- 2-1	FUNTKB159MRE0	M	Key unit [R-1381]	1	AU
3- 2-2	GMADIB030MRF0	M	Display window	1	AF
3- 3	XEPSD30P10XS0	M	Screw; 3mm x 10mm	5	AB

OVEN PARTS

	4- 1	FFTA-B003MRK0	M	Exhaust damper assembly	1	AH
	4- 2	FROLPB025MRK0	M	Turntable support assembly	1	AN
	4- 3	NTNT-A090WRE0	M	Turntable tray	1	AN
	4- 4	LANGKB010MRP0	M	Capacitor holder	1	BB
	4- 5	FCOVPB016MRK0	M	Stirrer cover assembly	1	AN
	4- 6	FFAN-B009MRK0	M	Stirrer fan assembly	1	AH
Δ	4- 7	*****	M	Oven cavity (Not replaceable part)	1	--
	4- 8	PPACGB014MRF0	M	Turntable motor packing	1	AA
Δ	4- 9	PHOK-B017MRF0	M	Latch hook	1	AG
	4-10	LANGTB036MRP0	M	Unit mounting plate	1	AP
	4-11	NFANPB001MRE0	M	Fan blade	1	AC
	4-12	LBSHC0037WRE0	M	Cord bushing	1	AB
	4-13	PCOVPB065MRP0	M	Oven lamp cover	1	AD
	4-14	PDUC-B084MRP0	M	Hood intake duct R	1	AM
	4-15	PCUSUB039MRP0	M	Hood intake duct cushion	2	AA
	4-16	PFILWB005MRP0	M	Lamp filter	1	AB
	4-17	PSKR-B012MRP0	M	Magnetron air guide	1	AB
	4-18	LANGTB046MRP0	M	Chassis support left	1	AD
	4-19	LANGTB040MRP0	M	Chassis support right	1	AE
	4-20	PDUC-B078MRF0	M	Hood duct	1	AX
	4-21	PCUSUB043MRP0	M	Hood duct cushion	1	AE
	4-22	LSTPPB031MRF0	M	Door stopper	1	AC

DOOR PARTS

Δ	5	CDORFB245MRK0	M	Door assembly [R-1380]	1	
Δ	5	CDORFB246MRK0	M	Door assembly [R-1381]	1	
Δ	5-1	FDORFB060MRT0	M	Door panel assembly	1	AX
Δ	5- 2	FCOV-B125MRK0	M	Door frame assembly [R-1380]	1	AS
Δ	5- 2	FCOV-B127MRK0	M	Door frame assembly [R-1381]	1	AS
Δ	5-2-1	PGLSPB012MRE0	M	Front door glass [R-1380]	1	AQ
Δ	5-2-1	PGLSPB014MRR0	M	Front door glass [R-1381]	1	AQ
	5-2-2	LSTPPB030MRF0	M	Latch head	1	AC
	5-2-3	LSTPPB032MRF0	M	Glass stopper	1	AC
	5-2-4	MSPRTA046WRE0	M	Latch spring	1	AB
Δ	5- 3	FCOVHB005MRK0	M	Choke cover assembly	1	AG
	5- 4	PSHEPB024MRE0	M	Sealer film	1	AF

REF. NO.	PART NO.	§	DESCRIPTION	Q'TY	CODE
5- 5	JHNDPB007MRF0	M	Door handle assembly [R-1380]	1	AK
5- 5	JHNDPB008MRF0	M	Door handle assembly [R-1381]	1	AK
5- 6	XCPD40P08000	M	Screw : 4mm x 8mm	6	AA

MISCELLANEOUS

6- 1	CFZK-B131MRK0	M	Installation material assembly	1	AM
6-1-1	LBSHC0040MRE0	M	Grommet	1	AC
6-1-2	LX-BZ0195WRE0	M	Toggle screw	4	AC
6-1-3	LX-MZB001MRE0	M	Cord holder	1	AB
6-1-4	XBRSD50P60000	M	Screw : 5mm x 60mm	2	AC
6-1-5	XOTSD40P12000	M	Screw : 4mm x 12mm	1	AA
6-1-6	XTSSD50P35000	M	Screw : 5mm x 35mm	6	AA
6-1-7	XWHSD50-16300	M	Washer	2	AA
6- 2	TINSEB227MRR0	M	Installation instruction	1	AB
6- 3	TINSEB223MRR0	M	Operation manual	1	AD
6- 4	TINSKB047MRR0	M	Top template	1	AC
6- 5	TINSKB048MRR0	M	Wall template	1	AB
* 6- 6	QW-QZB023MRE0	M	High voltage wire A	1	AD
6- 7	FW-VZB145MRE0	M	Main harness A	1	AU
6- 8	TCAUAA025WRR0	M	Caution label	2	AA
6- 9	TCAUAB037MRR0	M	Monitor caution label	1	AA
6-10	TCAUAB005MRR0	M	DHHS caution label	1	AB
6-11	FW-VZB149MRE0	M	Stop switch harness	1	AM
6-12	PFIL-B004MRE0	M	Charcoal filter	1	AH
6-13	PFIL-B002MRE0	M	Grease filter	2	AF
6-14	PCLICB003MRE0	M	Canoe clip	1	AA

SCREWS,NUTS AND WASHERS

7- 1	XCPD40P08000	M	Screw : 4mm x 8mm	2	AA
7- 2	XOTSF40P12000	M	Screw : 4mm x 12mm [R-1380]	4	AB
7- 2	XOTSE40P12000	M	Screw : 4mm x 12mm [R-1381]	4	AA
7- 3	XOTSD40P12000	M	Screw : 4mm x 12mm	13	AA
7- 4	XBTS40P08000	M	Screw : 4mm x 8mm	2	AA
7- 5	LX-CZA038WRE0	M	Special screw	4	AA
7- 6	LX-CZ0052WRE0	M	Special screw	2	AA
7- 7	LX-BZ0081YBE0	M	Screw : 4mm x 8mm	5	AA
7- 8	XCPD30P08000	M	Screw : 4mm x 8mm	2	AA
7- 9	LX-BZB012MRE0	M	Unit mounting screw	4	AD

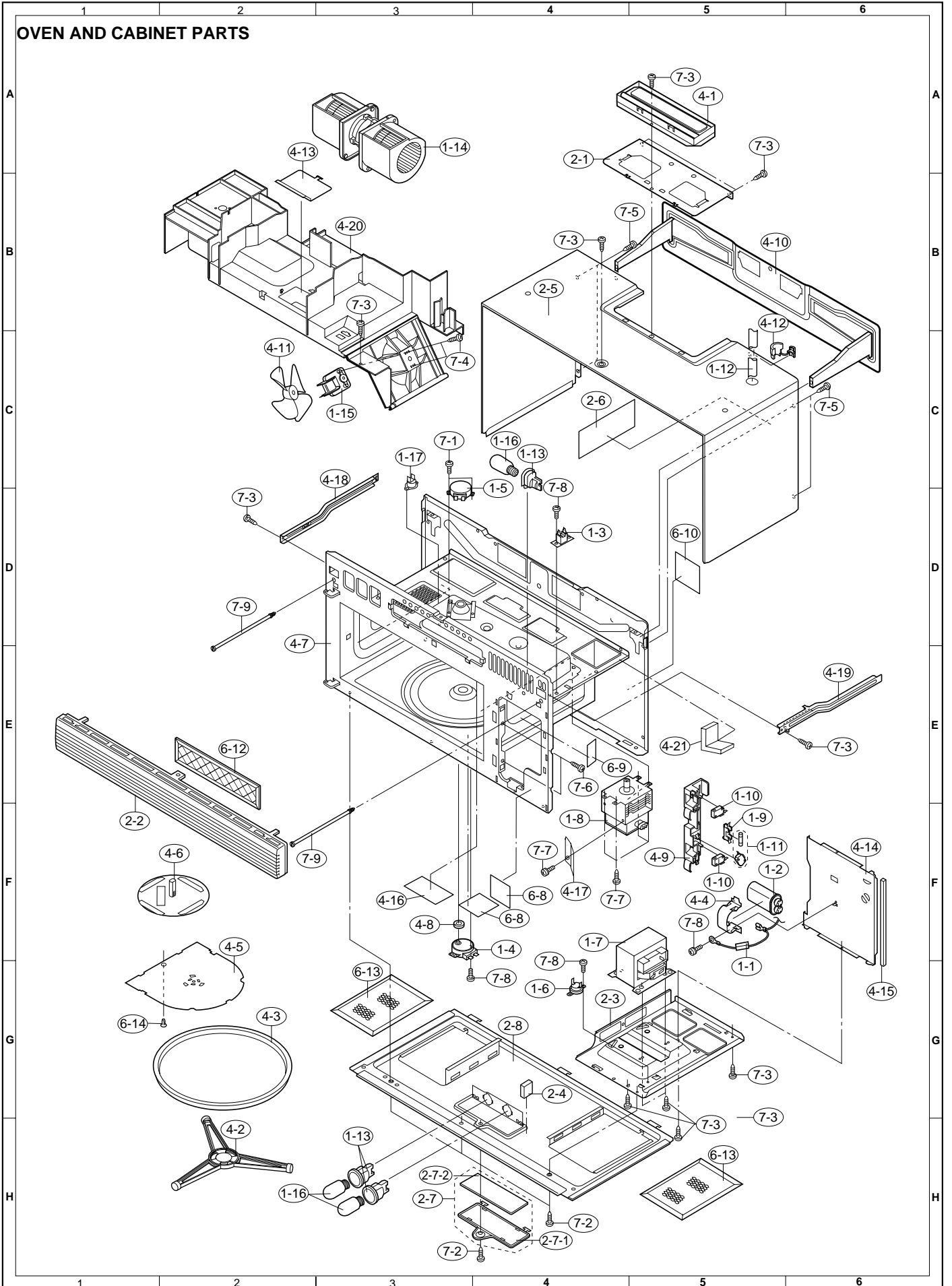
HOW TO ORDER REPLACEMENT PARTS

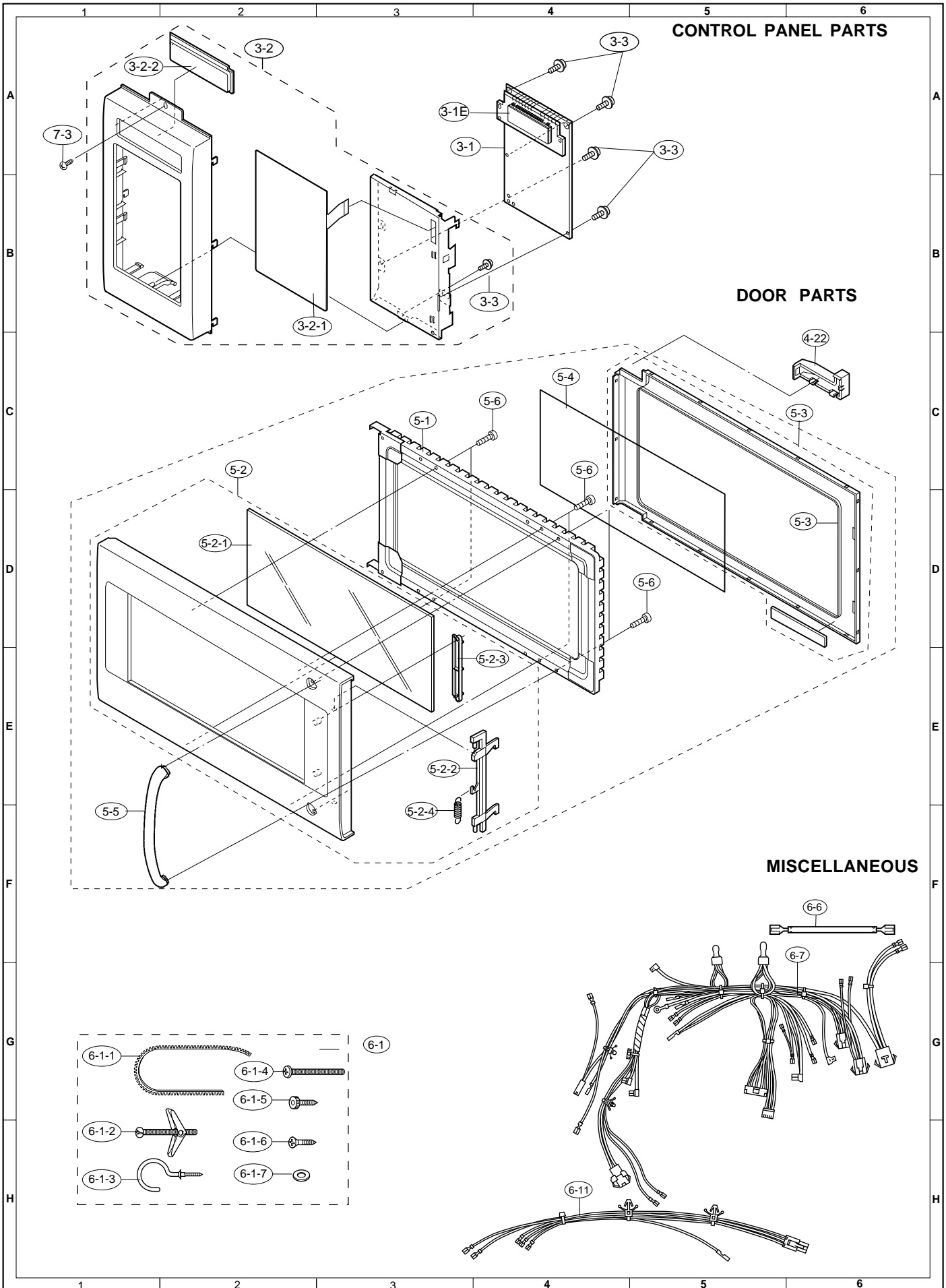
To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER 2. REF. NO. 3. PART NO. 4. DESCRIPTION

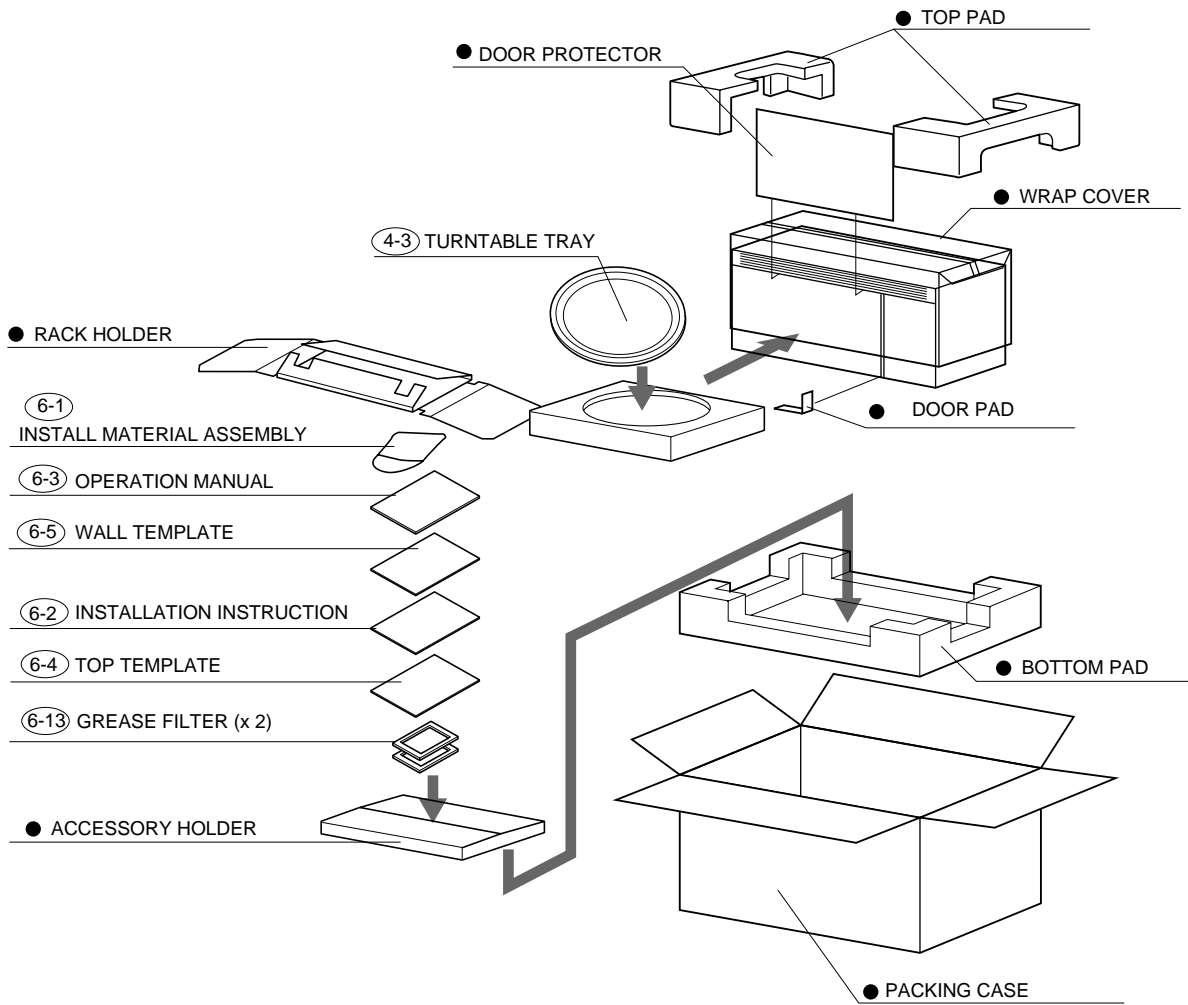
Order Parts from the authorized SHARP parts Distributor for your area.

Defective parts requiring return should be returned as indicated in the Service Policy.





PACKING AND ACCESSORIES



● Non-replaceable items

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