

Over the Range Microwave Oven Installation Instructions

MWT4461D

MWT4461WW

MVH120E

MVH220E

MVH220W

MVH320E

MVH320L

MVH320W

Read all instructions before starting installation.

Important--Save these instructions for electrical inspector's use.

Installation Requirements

Important Safety Instructions

 **Recognize this symbol as a SAFETY message**

 **Caution**

To avoid electrical shock hazard remove house fuse or open circuit breaker before installing microwave oven.

 **Caution**

To avoid personal injury, mounting surface must be capable of supporting microwave oven (65 lbs.) and oven loads (up to 50 lbs.) for a total weight of 115 lbs.

 **Caution**

To avoid personal injury, do not install microwave oven in island or peninsula. This microwave oven must be mounted to both top cabinet and wall.

 **Caution**

To avoid personal injury, protect hands and arms. Microwave oven may have sharp edges.

 **Caution**

To reduce risk of fire, use only metal duct.

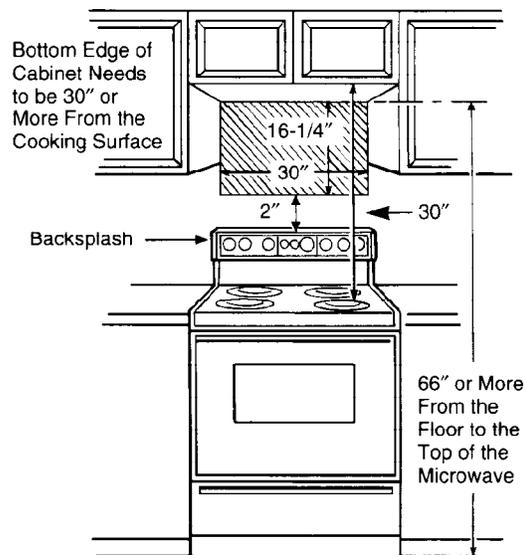
Electrical Requirements

This product requires three-prong grounded outlet. Verify outlet box is properly grounded. If box is not properly grounded or does not meet electrical requirements, contact qualified electrician. Oven rating is 120 volts AC, 60 Hertz, 13.5 amps, and 1.45 kilowatts. Oven must be connected to circuit of proper voltage and frequency. Wire size must conform to requirements of National Electric Code or prevailing local code. Power supply cord and plug should be connected to separate 15 to 20 amp. circuit, single grounded outlet. Outlet box should be located in cabinet above oven. Outlet box and supply circuit should be installed by qualified electrician and conform to National Electric Code or prevailing local code. For easier installation and personal safety, two people should install microwave oven.

Mounting Space

This over-the-range microwave oven requires wall mounting space, as shown below.

- Minimum of 30 inches between cabinets is required for installation. If space between cabinets is greater than 30 inches, filler panel kit may be used to fill in gap between microwave oven and cabinets. Contact dealer to purchase filler panel kit.



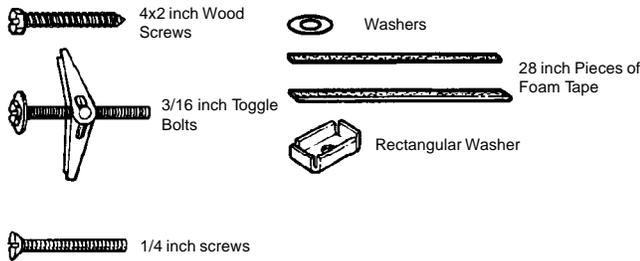
- Verify bottom edge of cabinet is at least 66 inches from floor and 30 inches from cooking surface.
- Bottom of microwave oven should be at least 2 inches above range backsplash for easy access to change hood and range lamps.
- For outside ventilation, see "Preparing Microwave Exhaust Duct" section.
- Charcoal filter kit is needed for recirculating exhaust installation. Contact dealer to purchase charcoal filter kit.
- When installing microwave oven beneath smooth, flat cabinets, follow instructions on top cabinet template for power cord clearance.
- Cabinets may have trim that interferes with microwave oven installation. Remove interfering trim to allow microwave oven installation and leveling.
- Space must be 30 inches wide. Remove any cabinet side trim that interferes with 30 inch space, front or back.
- Top cabinet trim (front, back, or both) can be left in place if there is enough clearance for proper installation. If top front trim is left in place, and there is no back trim, verify that mounting plate is positioned down far enough to keep microwave oven level. Keep space between bottom of cabinet and mounting plate equal to height of top front trim. This will ensure that microwave oven is level.

Materials Needed (Not Supplied)

- Phillips screwdriver
- Pencil
- Ruler or tape measure and straight edge
- Protective gloves
- Carpenter square (optional)
- Tin snips (in some applications)
- Electric drill with 1/8 inch, 3/16 inch and 5/8 inch drill bits
- Hammer
- Stud finder (optional)
- Filler blocks, if needed for top cabinet spacing
- Saw (jig or keyhole)
- Charcoal filter kit (for inside recirculating installation)
- Filler panel kit (if space between cabinets is greater than 30 inches)

Materials Needed (Supplied)

Installation hardware is contained in packet shipped with microwave oven. Verify all parts listed below are included in packet.



Hardware	Quantity
4 inch x 2 inch Wood Screws	2
3/16 inch Toggle Bolts (and spring loaded nuts)	4
1/4 inch Screws	3
Washers	3
Nylon Grommet (for metal cabinets)	2
28 inch Pieces of Foam Tape	2
Rectangular Washer	1
Top Cabinet Template*	1
Separately Packed Grease Filter*	2
* Not Shown	

Accessories Available for Purchase from Dealer

- **Charcoal filter kit:** Charcoal filter kit is needed for recirculating exhaust installation.
- **Filler panel kit:** If space between cabinets is greater than 30 inches, filler panel kit may be used to fill in gap between microwave oven and cabinets.

Hood Exhaust Duct

Outside ventilation requires hood exhaust duct. Use only metal duct. Read the following carefully.

Exhaust Connection: Hood exhaust has been designed to mate with standard 3 1/4 inch x 10 inch rectangular duct. If round duct is required, rectangular-to-round transition adaptor must be used. Do not use less than 6 inch diameter duct.

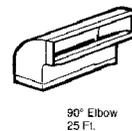
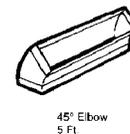
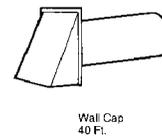
Rear Exhaust: If rear or horizontal exhaust is to be used, care should be taken to align exhaust with space between studs.

Maximum Duct Length: Total duct length of 3 1/4 inch x 10 inch rectangular or 6 inch diameter round duct should not exceed 140 equivalent feet for satisfactory air movement.

Elbows, Transitions, Wall and Roof Caps, Etc.

Elbows, transitions, wall and roof caps, etc., create additional resistance to airflow and are equivalent to a section of straight duct. When calculating total duct length, add equivalent lengths of all transitions and adaptors, plus length of all straight duct sections. Chart below shows approximate feet of equivalent length of some typical ducts.

Duct	Equivalent Length
Rectangular-to-Round Transition Adaptor	5 FT.
Wall Cap	40 FT
90° Elbow	10 FT.
45° Elbow	5 FT.
90° Elbow	25 FT.
45° Elbow	5 FT.
Roof Cap	24 FT.

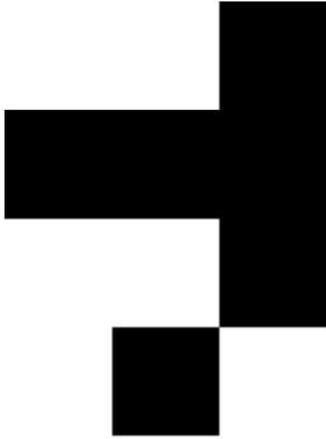


* If rectangular-to-round transition adaptor is used, bottom corners of damper will have to be cut to fit, using tin snips, in order to allow free movement of damper.

Installation Instructions

A. Removing Mounting Plate

1. Place protective blanket on work surface to protect outer case of microwave oven. Place microwave oven on control panel side.



2. Remove 2 screws from mounting plate, as shown above. Plate will be used as rear wall template.
3. Locate separately packed grease filters and hardware packet.
4. Remove any adhesive tape on exhaust adaptor, grease filters, and power supply cord.

B. Preparing Microwave Exhaust Duct

This microwave oven is designed for adaptation to the following three types of ventilation.

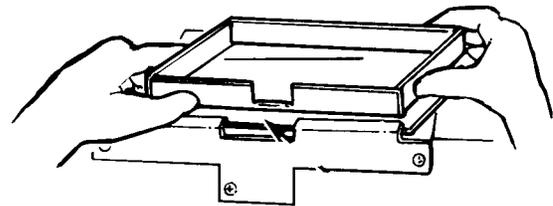
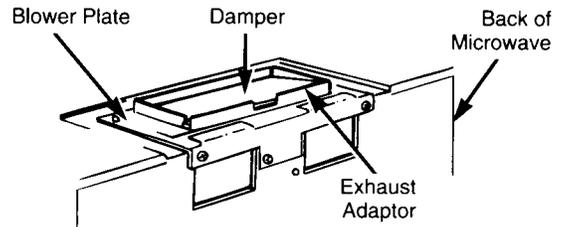
- **Outside Top Exhaust** (Vertical Duct)
- **Outside Back Exhaust** (Horizontal Duct)
- **Recirculating** (Non-vented/Ductless)

Select type of ventilation required for your installation and proceed to that section.

NOTE: Microwave oven is shipped assembled for top exhaust. Adjustments will need to be made to assure proper alignment with current exhaust duct after microwave oven is installed.

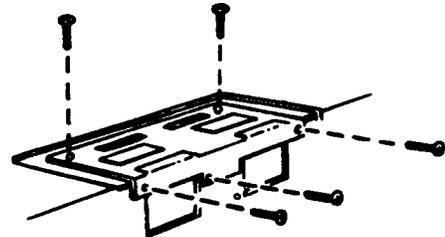
Outside Top Exhaust (Vertical Duct)

1. Slide exhaust adaptor to one side, squeeze sides and remove. Save damper and exhaust adaptor.
2. Proceed to "Preparing Top Cabinet".

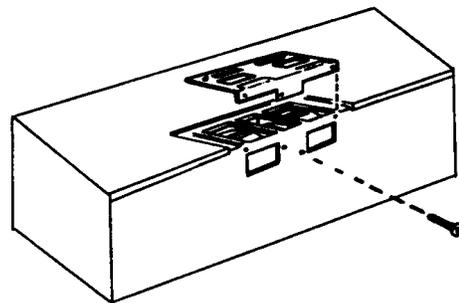


Outside Back Exhaust (Horizontal Duct)

1. Slide exhaust adaptor to one side, squeeze sides and remove. Save damper and exhaust adaptor. See diagram above.
2. Remove and save 5 screws holding blower plate to microwave oven.

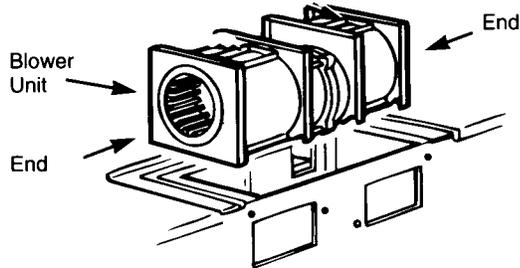


3. Lift off blower plate.

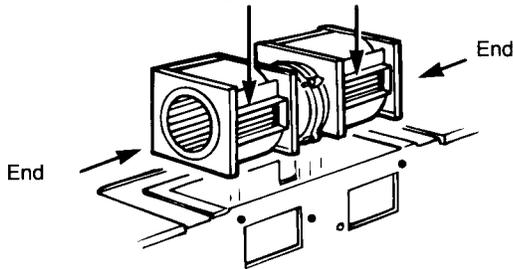


4. Remove and save the screw that holds power motor to microwave.

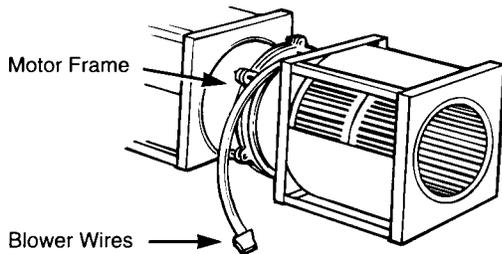
5. Carefully pull out blower unit. Wires extend far enough to allow for blower adjustments.
6. Turn blower unit end-over-end. Roll blower unit so fan blade openings are facing out back of microwave oven. Blower unit exhaust openings should match exhaust openings on rear of microwave oven. Wires should be routed in front of motor fan.



Fan Blade Openings Facing Back



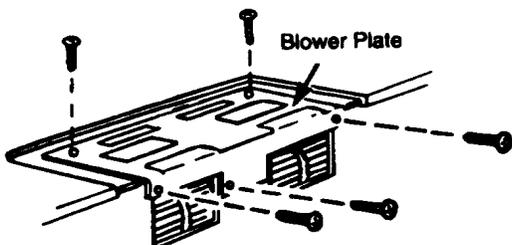
7. Guide wires into duct while placing blower unit back into opening.



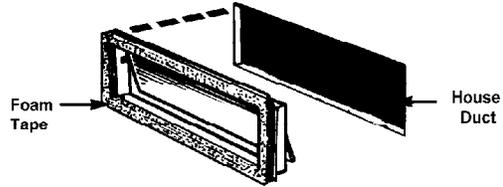
Caution

To avoid product failure, do not pull, stretch, or pinch blower wiring.

8. Replace blower plate using 5 screws.



9. Fit exhaust adaptor into house duct. Be sure damper hinge is on top and damper swings free into wall outlet.

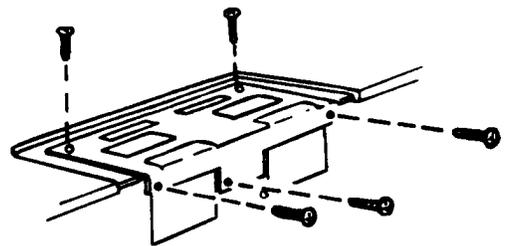


10. Remove paper from sticky side of 28 inch foam tape strip. Press sticky side onto front edge of exhaust adaptor. (Do not stretch foam tape).
11. Proceed to "Preparing Top Cabinet".

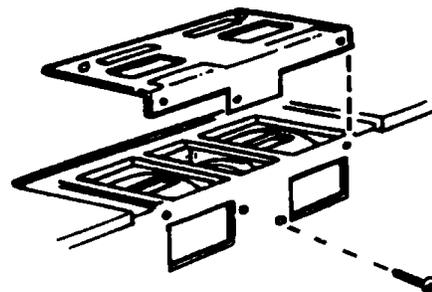
Recirculating Exhaust (Non-Vented/Ductless)

Exhaust adaptor with damper is not needed for recirculating models. Save exhaust adaptor with damper for possible future use. Charcoal filter kit must be used. Contact dealer to purchase charcoal filter kit.

1. Slide exhaust adaptor to one side, squeeze sides and remove. Save damper and exhaust adaptor.
2. Remove and save 5 screws that hold blower plate to microwave oven.

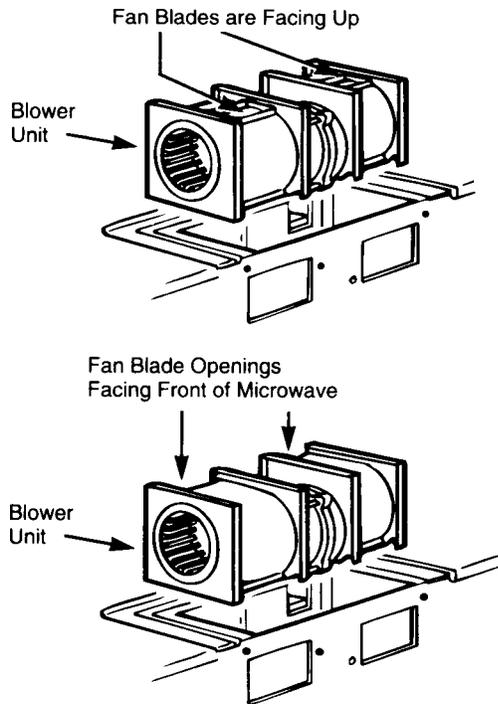


3. Lift off blower plate.

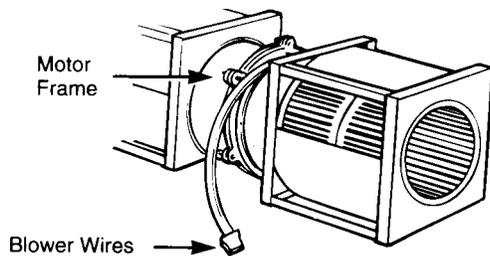


4. Remove and save the screw that holds blower motor to microwave.

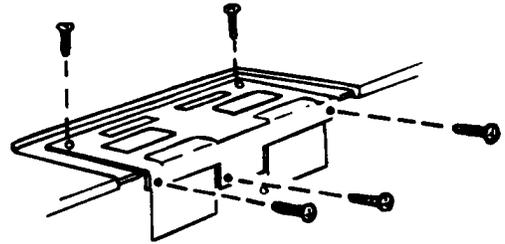
5. Carefully pull out blower unit. Wires extend far enough to allow blower adjustments.
6. Roll blower unit so blades face towards front of microwave oven. Wires should be routed in front of motor frame.



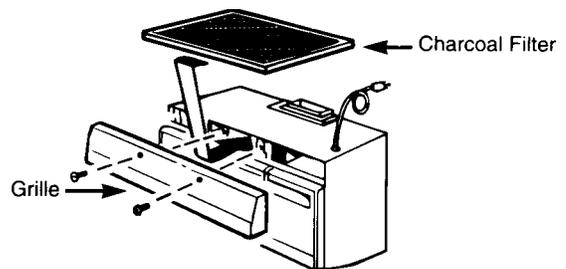
7. Guide wires into duct while placing blower unit back into opening.



8. Replace blower plate using 5 screws.



9. Remove 2 screws on front of grille. Remove grille.



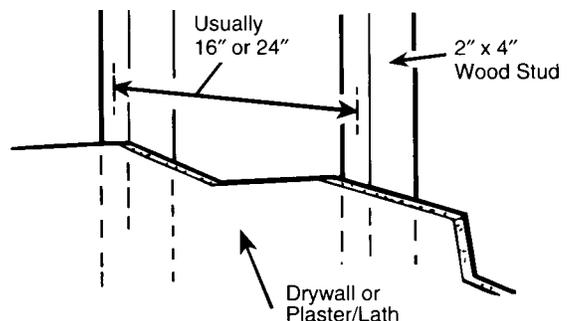
10. Install charcoal filter. (Contact dealer to purchase charcoal filter kit).
11. Replace grille and 2 screws.
12. Proceed to "Preparing Top Cabinet".

C. Preparing Top Cabinet

1. Read instructions on top cabinet template.
2. Tape template underneath top cabinet.
3. Drill holes, following instructions on template.

D. Mounting Bracket Assembly to Wall

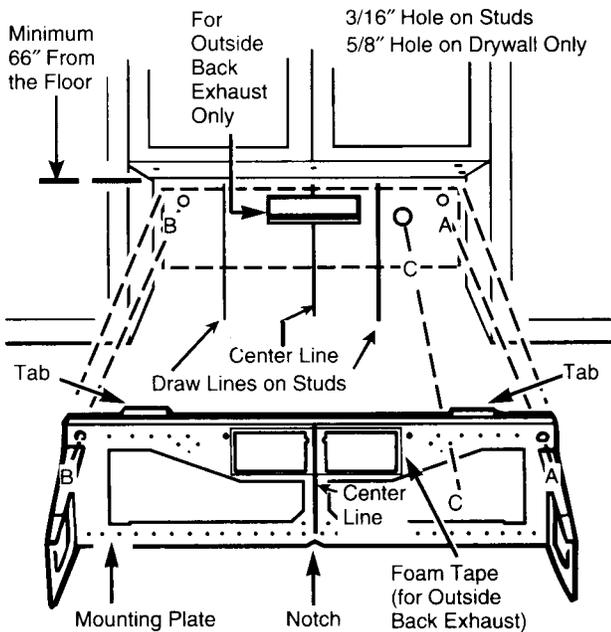
Microwave oven needs to be mounted against and supported by flat, vertical wall. Wall construction should be minimum of 2 inch x 4 inch wall studing and 3/8 inch or more, thick drywall or plaster/lath. Microwave oven must be attached to minimum of one 2 inch x 4 inch wall stud.



Caution

To avoid product failure, do not pull, stretch, or pinch blower wiring.

- Find studs, using one of following methods:
 - Stud finder--magnetic device which locates nails.
 - Use hammer to tap lightly across mounting surface to find solid sound. This will indicate stud location.
- Note: After locating stud or studs, stud center can be found by probing wall with small nail to find edges of stud. Place mark halfway between edges. Center of any adjacent stud should be 16 inches or 24 inches from mark.
- Draw line down middle of studs. Microwave must be connected to at least one wall stud.
 - Draw vertical line on wall, at center of 30 inch wide space.
 - Use mounting plate as template for rear wall. Place mounting plate on wall, verify tabs are against bottom of cabinet. Line up notch and center line on mounting plate to center line on wall.
 - While holding mounting plate with one hand, draw circles on wall at holes A and B, marked on mounting plate. See diagram below. Holes A and B are shown by arrows stamped into mounting plate and must be used for mounting. If holes are not used, improper installation will occur. Use toggle bolts through these holes unless one lines up with stud. Use wood screw for stud. Set mounting bracket aside.

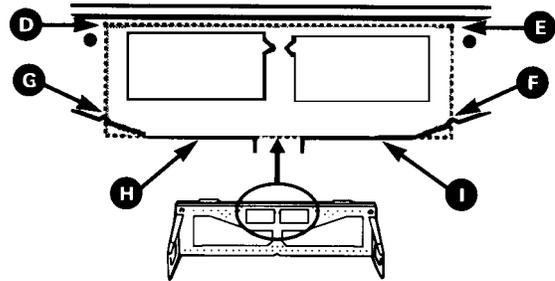


- Drill holes through circles. Diameter of holes should be 5/8 inch for toggle bolts and 3/16 inch for wood screws on studs. Use at least 1 wood screw in stud, and 2 toggle bolt assemblies into drywall or plaster.
- Attach mounting plate to wall.
- Remove toggle assembly from screws. Insert screws into mounting plate and replace toggle assembly to 3/4 inch past screw ends. Insert toggle assembly into holes in wall to mount bracket. Pull forward on bracket to tighten toggle bolts.

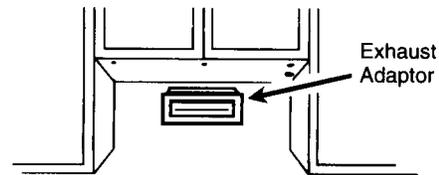
If installation is other than outside back exhaust, proceed to step F.

E. Preparing Rear Wall Cutout Opening for Outside Back Exhaust

- Place mounting plate against rear wall, as described in diagram at left.
- Using pencil, draw dots through holes D and E, and in tips of notches G and F. Mark straight edges of H and I for bottom line. This will give location and size of box cutout for rear wall duct.



- Verify exhaust adaptor (with damper) is squared up in house duct and lines up with holes in mounting plate.



- Attach 28 inch foam tape to front of mounting plate, around both exhaust openings where it will touch microwave oven.

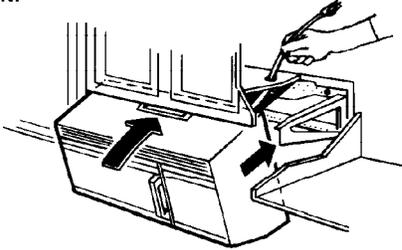
NOTE: Exhaust must be aligned within space between studs.

- Draw third circle through one of top or bottom holes to match location of stud.

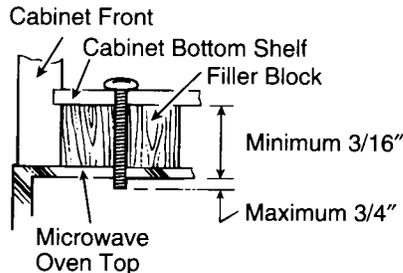
NOTE: For outside back exhaust, microwave oven requires rear wall cutout opening for rear wall duct. See "Preparing Rear Wall Cutout Opening for Outside Back Exhaust" section.

F. Mounting Microwave Oven

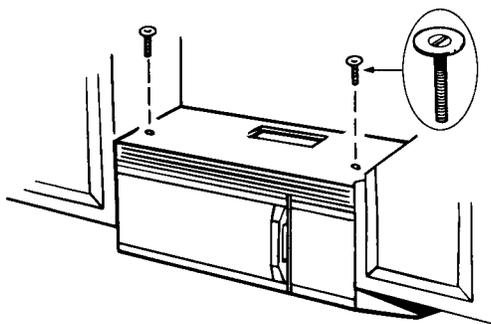
1. Locate grease filters packed separately and set aside. Thread power cord through hole, or slot, in bottom of top cabinet. Keep cord tight throughout step 2.
2. Install microwave by sliding onto arms of mounting plate. Push microwave oven flush to wall. Verify cord is tight.



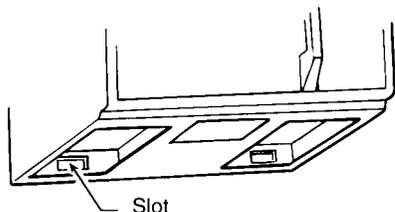
3. Attach microwave oven to top cabinet. Use filler block if cabinet front hangs below cabinet bottom shelf.



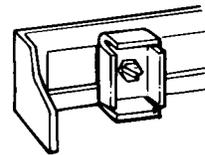
4. Insert 2 screws with washers through top cabinet holes and tighten to top of microwave oven. (While tightening screws, lift front side of microwave oven and push toward wall.)



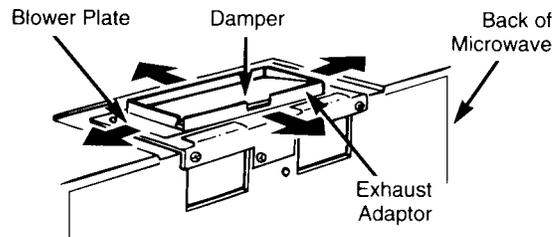
5. Install rectangular washer under microwave oven for extra stability. Rectangular slot is located under microwave oven, inside left grease filter area.



6. Use rectangular washer to mark hole for drilling in left side rectangular slot. Place washer in slot by grasping "ears" on washer to center in opening. Mark location of hole on rear wall with pencil. Center carefully to assure good fit.
7. Drill small pilot hole with 1/8 inch drill to determine if stud is behind hole. If stud is found, drill 3/16 inch diameter hole for wood screw; if no stud is found, drill 5/8 inch diameter hole for toggle bolt.
8. If stud is found, use wood screw to attach rectangular washer lightly to wall. Twist washer 90° to lock before tightening. If no stud is found, use toggle bolt to attach rectangular washer lightly to wall. Twist washer 90° to lock before tightening.



9. Install grease filters.
10. For top exhaust, open top cabinet and attach exhaust adaptor to microwave oven through cabinet bottom. For front-to-back or side-to-side adjustment, slide exhaust adaptor as needed.



Twist exhaust adaptor to fit under flaps of blower plate. Verify damper moves freely. Square corner on hinge ends.

11. Pull house duct down to connect to exhaust adaptor.

G. Installation Checklist

1. Verify microwave oven has been installed according to instructions.
2. Remove all packing material from microwave oven.
3. Replace house fuse or turn on breaker.
4. Plug power cord into outlet.
5. Read use and care manual.







