

**MODELS 508, 508MX, 509, 509S
&509SMX
AUTOMATIC WALL FANS**

BROAN®

**READ AND SAVE THESE
INSTRUCTIONS**

WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application.
8. Never place a switch where it can be reached from a tub or shower.
9. This unit must be grounded.

TO REDUCE THE RISK OF A RANGE TOP GREASE FIRE:

1. Never leave surface units unattended at high settings. Boilovers cause smoking and greasy spillovers that may ignite. Heat oils slowly on low or medium settings.
2. Always turn hood ON when cooking at high heat or when cooking flaming foods.
3. Clean ventilating fans frequently. Grease should not be allowed to accumulate on fan or filter.
4. Use proper pan size. Always use cookware appropriate for the size of the surface element.

TO REDUCE THE RISK OF INJURY TO PERSONS IN THE EVENT OF A RANGE TOP GREASE FIRE, OBSERVE THE FOLLOWING:*

1. SMOTHER FLAMES with a close-fitting lid, cookie sheet, or metal tray, then turn off the burner. BE CAREFUL TO PREVENT BURNS. If the flames do not go out immediately, EVACUATE AND CALL THE FIRE DEPARTMENT.
2. NEVER PICK UP A FLAMING PAN - You may be burned.
3. DO NOT USE WATER, including wet dishcloths or towels - a violent steam explosion will result.
4. Use an extinguisher ONLY if:
A. You know you have a Class ABC extinguisher and you already know how to operate it.
B. The fire is small and contained in the area where it started.
C. The fire department is being called.
D. You can fight the fire with your back to an exit.

*Based on "Kitchen Firesafety Tips" published by NFPA.

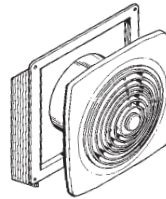
CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
3. Please read specification label on product for further information and requirements.

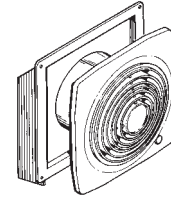
**TOOLS AND
MATERIALS REQUIRED**

- Straight blade screwdriver
- Drill, electric or ratchet drive
- Hammer
- Pliers
- 1-1/4" Spade bit
- Circular saw
- Saber saw
- Tape measure or ruler and pencil
- Electrical supplies of type needed to comply with local codes
- 4-1/2' of 1x2 for framing installation opening
- High quality caulking compound

**INSTALLER: Leave This Manual With The Homeowner.
HOMEOWNER: Use and Care Information on Page 4.**



**508,
508MX, 509**



**509S
509SMX**

TYPICAL INSTALLATION

This unit mounts between walls 4-1/2" to 9-1/2" thick. Outside housing flange is fastened to casing strips (1 x 2's). See Fig. 1. If sheathing behind siding is not wood, provide extra supports between walls (nailed or screwed to siding).

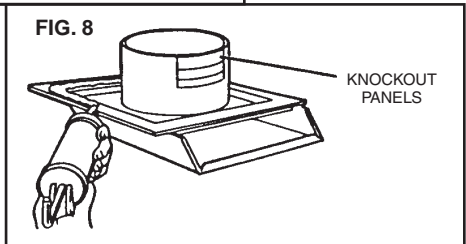
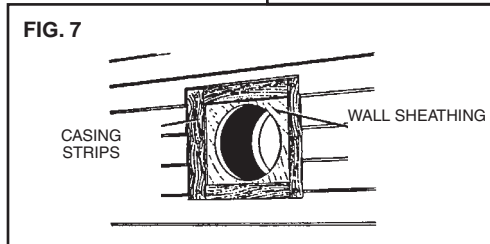
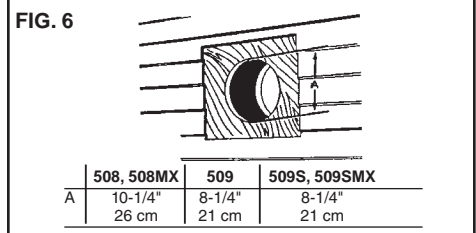
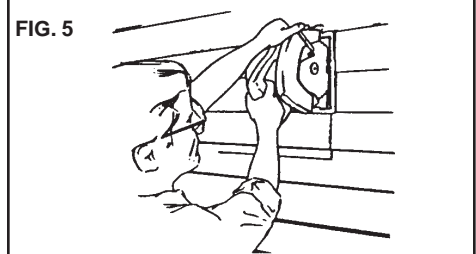
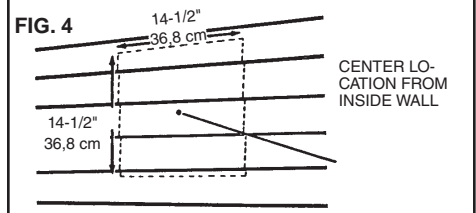
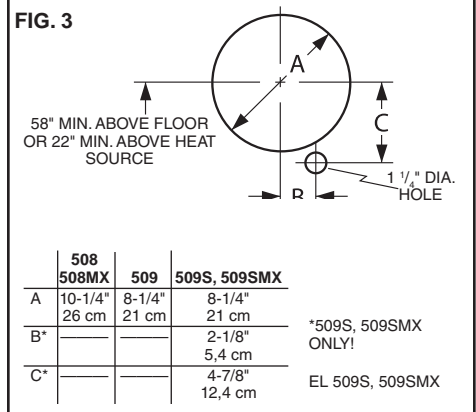
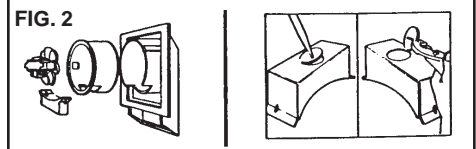
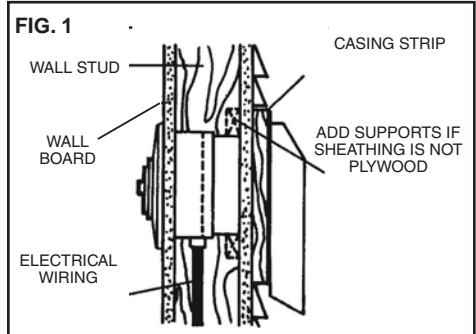
PREPARE FAN

1. Remove motor assembly by loosening mounting screws, rotating assembly and lifting motor assembly out of inner housing. (FIG. 2)
2. Use care when handling motor bracket assembly to prevent damage to blade. Do not set down assembly with weight of motor resting on the blade.
3. Pull inner housing out of outer housing.
4. Remove wiring knockout from bottom of wiring box (provided in plastic parts bag). (FIG. 2)

NOTE
Remove bottom knockout ONLY!

INSTALL FAN

1. Choose location on inside wall. Make sure that wall stud does not run through opening. Lay out hole on wall. (FIG. 3) **NOTE:** If fan is installed above a cooking surface, grille center must be located at least 58" above floor or at least 22" above heat source.
2. **509S, 509SMX ONLY.** Lay out smaller hole for rotary switch as shown in Figure 3.
3. Transfer center of hole to outside wall.
4. Cut out hole on inside wall.
5. Lay out 14-1/2" square around center location transferred from inside room. (FIG. 4)
6. Cut square hole in **SIDING ONLY! DO NOT CUT SHEATHING** (FIG. 5)! Nail down all siding ends.
7. Cut round hole for fan housing in sheathing. (FIG. 6)
8. Nail or screw 1x2 casing strips inside square opening. (FIG. 7)
9. Put a large bead of caulk on the inside of flange on outer housing. (FIG. 8)
10. If wall is less than 8" thick, remove one or more knockouts on outer sleeve. (FIG. 8) Use inner sleeve for test fit.



11. Insert outer housing through hole on outside wall and nail or screw housing to casing strips. Caulk all around filler strips and flange. (FIG. 9)
12. Run wiring to fan location. Pull wire through both sleeves. (FIG. 10) Insert inner sleeve into opening and fasten sleeves together with three black sheet metal screws provided in plastic bag.
13. Attach wiring to wiring box with proper connector for type of wire being used. Drop box into opening in housing.
14. **509S, 509SMX ONLY!** Insert switch into wiring box and fasten with nut provided. (FIG. 11)
15. Make electrical connections as shown in Figures 12 and 12A. Make sure unit is grounded using green ground screw.
16. Install wiring box cover. Use two screws provided in plastic bag.
17. Reinstall motor assembly and plug in motor.
18. Fasten grille to motor bracket with knob and stud from parts bag. **509S, 509SMX ONLY:** Attach knob to rotary switch. (FIG. 13)

FIG. 9

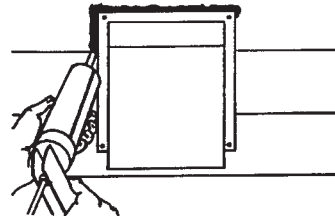


FIG. 10

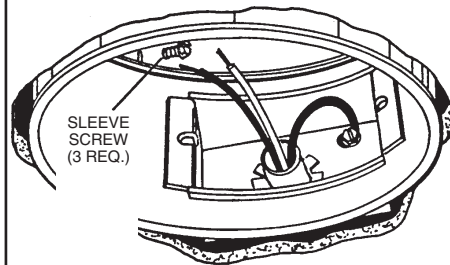


FIG. 11

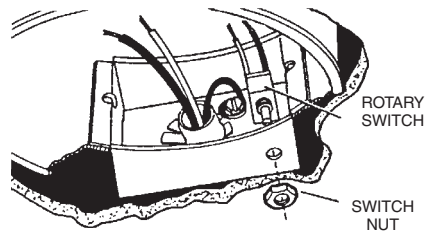


FIG. 12

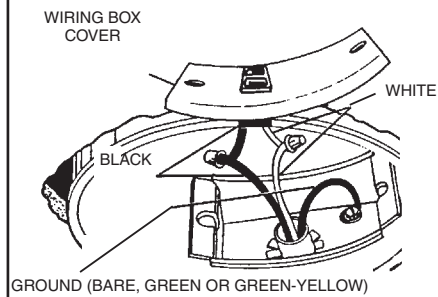


FIG. 12A

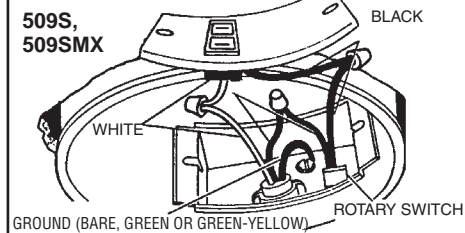
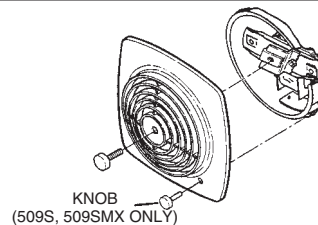


FIG. 13



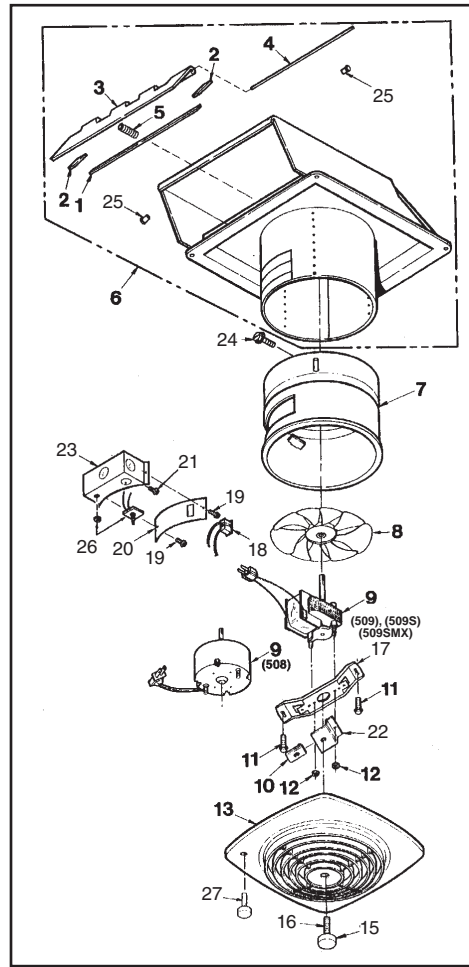
USE AND CARE

DISCONNECT ELECTRICAL POWER SUPPLY BEFORE SERVICING FAN.

Always unplug the fan motor before servicing the fan. The motor is permanently lubricated and will never need oiling.

Clean the grill in warm, soapy water. Use a mild detergent, such as a dishwashing liquid. DO NOT USE ABRASIVE CLOTHS, STEEL WOOL OR SCOURING POWDERS.

Clean the fan blade and motor every six months by removing the grille, unplugging the motor, and gently vacuuming the fan blade and motor.



SERVICE PARTS

MODELS 508, 508MX, 509, 509S, 509SMX

KEY NO.	508, 508MX	509	509S/509SMX	DESCRIPTION
1	99100489	99100489	99100489	Foam – Long (2 Req.)
2	99100490	99100490	99100490	Foam – Short (2 Req.)
3	98006086	98006086	98006086	Damper Flap
4	98006048	98006048	98006048	Damper Rod
5	99140145	99140145	99140145	Damper Spring
6	97011241	97011240	97011240	Outer Housing Assembly (Includes Key Nos. 1, 2, 3, 4, 5, 24)
7	97013672	97007085	97007085	Inner Housing
8	99020271	99020165	99020165	Fan Blade
9	99080596	99080180	99080180	Motor
10	99260434	99260434	99260434	¼-20 U-Type Sheet Metal Nut
11	99150479	99150479	99150479	#8-32 x ½ Hex Hd. Self Tapping Screws (2 Req.)*
12	99260425	99260428	99260428	Motor Nuts (2 Req.)*
13	97011851	97011919	97011727	Grille (Polymeric) (includes knob)
15	97011918	97011918	97011918	Grille Knob
16	—	99420586	99420586	Grille Stud – 2-5/8" long
17	98006066	98007820	98007820	Motor Bracket
18	99270982	99270982	99270982	Receptacle
19	99170245	99170245	99170245	#8B x 3/8 Hex Hd. Self Tapping Screws (2 Req.)*
20	98006047	98006047	98006047	Wiring Box Cover
21	99150471	99150471	99150471	#10-32 x ½ Hex Hd. Self Tapping Screw*
22	98008494	98007819	98007819	Grille Bracket
23	98006046	98006046	98008491	Wiring Box
24	99150417	99150417	99150417	#8A x ¼ Hex Hd. Sheet Metal Screws (3 Req.)*
25	99100379	99100379	99100379	Plug, Closed End (2 Req.)
26	—	—	97005328	Rotary Switch (Includes Nut)
27	—	—	99360218	Rotary Switch Knob (for polymeric grille)

* Standard Hardware. May be purchased locally

99043948B

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