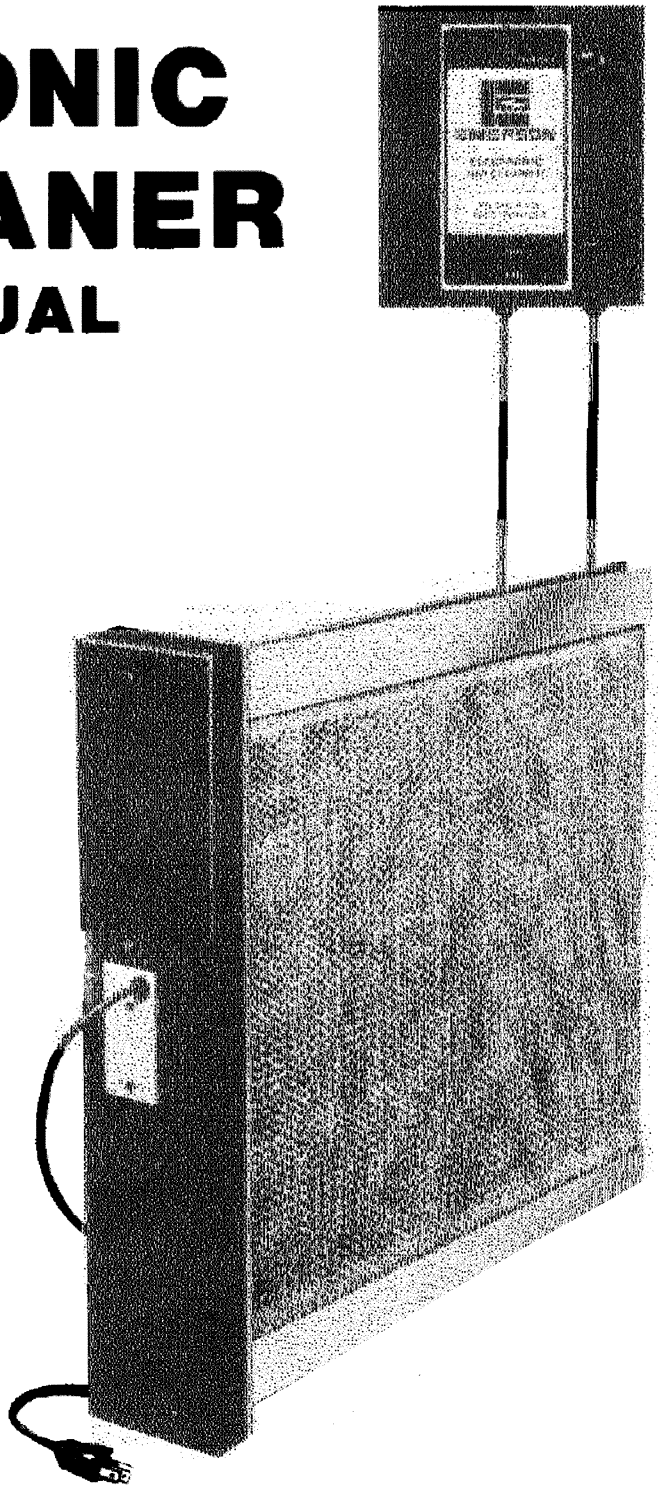
ELECTRONIC AIR CLEANER

OWNERS MANUAL



- Installation
- Operation
- Repair Parts

MODEL NOS:

8C11Y-41002
12C11Y-41002
14C11Y-41002
16C11Y-41002

CAUTION: Read rules for safe operation and installation instructions carefully
Save this manual for future reference

Printed in U.S.A.

Thank You!

Thank you for selecting an Emerson Electronic Air Cleaner. You can be sure it will provide years of service when given proper care and maintenance.

Introduction

Please read these instructions before using/installing your new Electronic Air Cleaner. This will help you obtain the full benefit of the unit. It will also help you avoid any unnecessary service calls and fees.

To function properly, your air cleaner must be installed correctly. You must know how to use the tools and equipment (listed below) and understand electrical wiring and its potential hazzards. If there is any doubt, we ask that you contact your Emerson salesperson. They will arrange for a professional installation.

Rules for safe installation and operation

1. Read the Owners Manual carefully. Failure to do so could cause a malfunction of the air cleaner or result in unsatisfactory service.
2. Check your local codes and utility requirements. The installation must comply with their rules.
3. Always shut off the electricity before servicing.
4. Follow a regular service and maintenance schedule for efficient operation.

Basic tools and materials needed

Tools: Screwdriver, adjustable wrench, power drill, 1/4 and 3/8-in. drill bits, center punch, tin snips or sabre saw, file and 6 ft. rule or tape measure.

Materials: Duct tape.

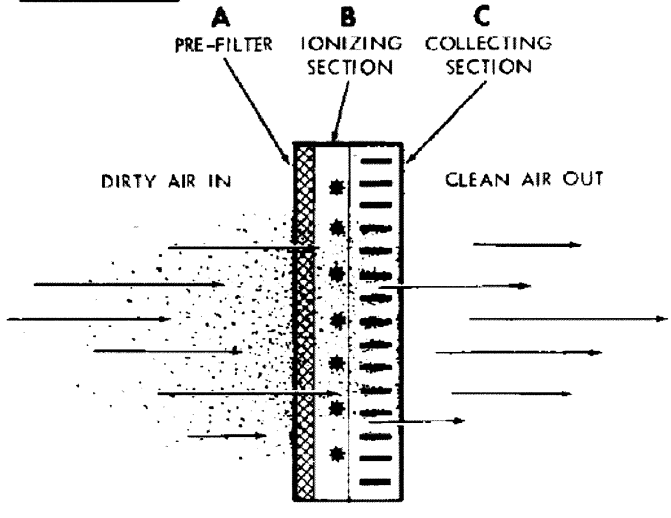
HOW YOUR AIR CLEANER WORKS
(Fig. 1)

Air containing dirt flows through the ducts and enters the pre-filter (A) where large particles (hair, lint, etc.) are trapped. Smaller particles (smoke, dust, pollen, etc.) pass through this pre-filter and enter the ionizing section (B). Here, each tiny particle receives a positive electrical charge. These positively charged particles then enter the collecting chamber (C). This section has a series of plates which are alternately charged positive and negative.

The postively charged dust particles are repelled by the positive plates and attracted to the negative plates, where they are collected . . . just as a magnet attracts iron filings.

Thus, only clean, filtered air re-enters the system to be circulated throughout your home.

FIG. 1



AIR CLEANER CONSTRUCTION
(Fig. 2)

Your new air cleaner is easy to install, plus it's also easy to operate and maintain. Its basic components are:

Collecting Cell — collects the dust, dirt and other impurities from the air. It contains the ionizing and collecting sections as described on page 2. The cell must be installed with the ionizing wires on the air intake side. It must be positioned with the handles and contact button toward the cell cover.

Pre-filter — serves to trap large particles such as hair and lint before they can enter the cell.

Cell Template — serves as a duct stiffener and support for the collecting cell — and as a pattern for cutting the duct when installing the Collecting Cell.

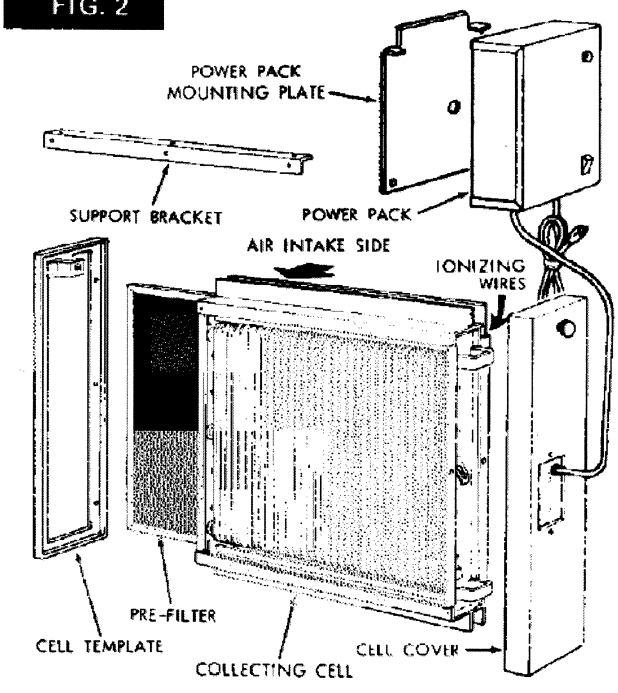
Cell Cover with Hi-Voltage Lead — provides positive electrical contact and firmly holds the Collecting Cell in place.

Power Pack — contains the operating light as well as the solid state airflow switch and electrical components.

Support Bracket — used in some installations.

Power Pack Mounting Plate — supports the Power Pack.

FIG. 2



A. Locating the air cleaner

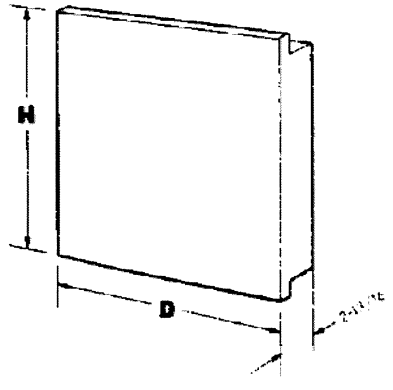
Select a location that assures:

1. Your air cleaner will be mounted in the return air duct so that the air flow first enters the pre-filter side of the cell.
2. The air cleaner should not be placed in the discharge side of either the heating or cooling unit.

Model No.	Size H	Size D	Space Needed
8C11Y-41002	16" x 20"		20-in.
12C11Y-41002	16" x 24"		24-in.
14C11Y-41002	20" x 20"		20-in.
16C11Y-41002	20" x 24"		24-in.

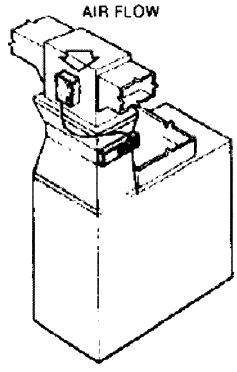
IMPORTANT: If you have an atomizing (spray type) humidifier, it must be installed downstream from the air cleaner.

Allow the following space to permit removal of cell and pre-filter:



B. Typical mounting locations

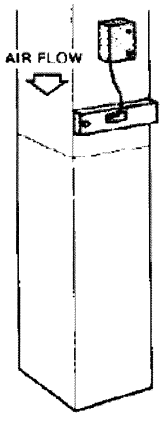
FIG. 3



BASEMENT FURNACE (LOWBOY)

Mounted horizontally in return duct or plenum, just above furnace. Fig. 3

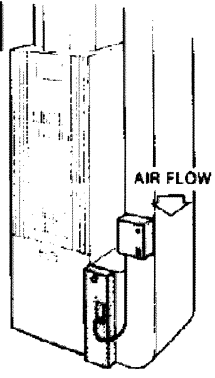
FIG. 4



COUNTERFLOW FURNACE

Mounted horizontally in return duct or plenum, just above furnace. Fig. 4.

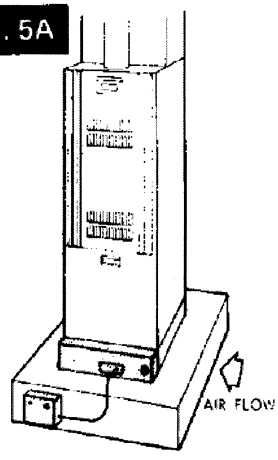
FIG. 5



SPACE SAVER FURNACE (HIGHBOY)

Side installation. Cleaner is mounted vertically, where return air enters side inlet of furnace. Fig. 5.

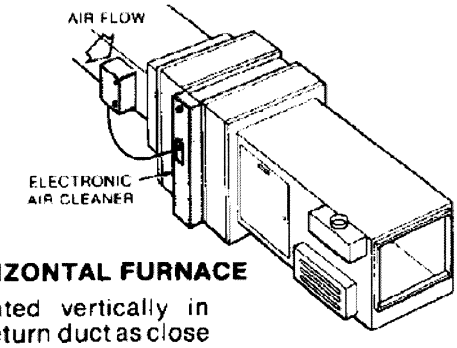
FIG. 5A



SPACE SAVER FURNACE (HIGHBOY)

Installation beneath furnace. Cleaner mounts horizontally, where return air enters from below. Raise furnace and install. Fig. 5A.

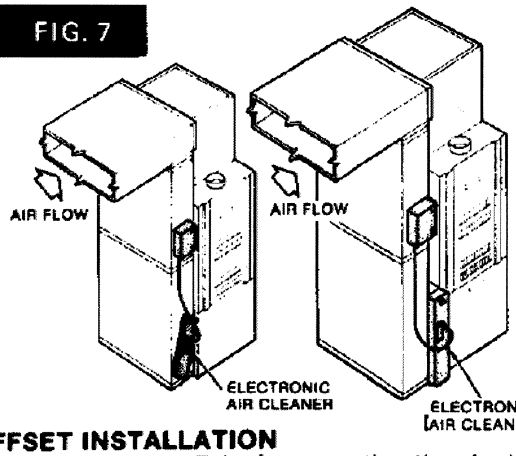
FIG. 6



HORIZONTAL FURNACE

Mounted vertically in the return duct as close to furnace as possible. Fig. 6.

FIG. 7

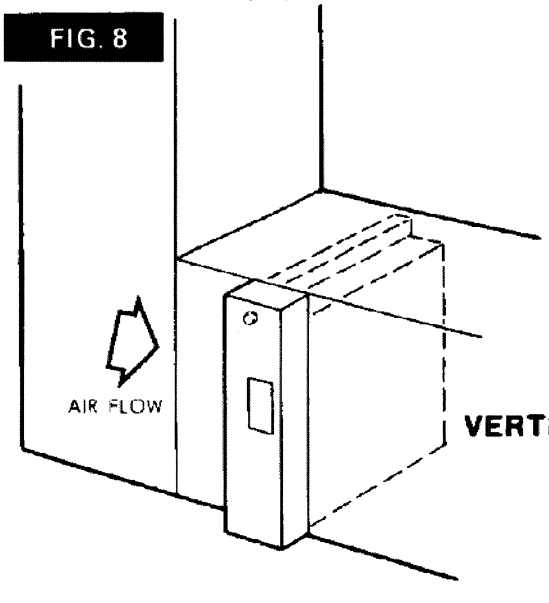


OFFSET INSTALLATION

If there is less than 7-in. for mounting the air cleaner between the duct and the furnace, move the return air drop. Fig. 7.

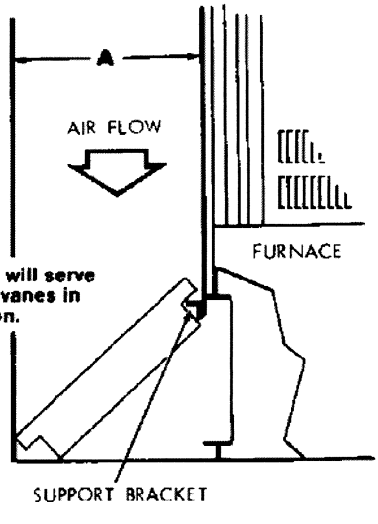
C. Mounting positions

FIG. 8



VERTICAL

FIG. 9



ANGLE

D. Installation

IMPORTANT: Turn off electric power to furnace before you do anything else!

Remove the old filter and discard. See Fig. 10 for typical locations.

CLEAN BLOWER COMPARTMENT

NOTE: The air cleaner cannot remove existing dirt from the blower and ducts. Therefore, clean the area as thoroughly as possible before you begin.

1. Place the cell template at the location selected (Fig. 11) on the duct. Be sure the "Air Flow" arrows on the template point in the direction of the air flow in the duct. Also, be sure the inside edges of the template do not overlap the edges of the duct. If this occurs, the template must be repositioned (Fig. 8 and 9) at some other location on the Duct.
2. Mark the area to be cut out and mark the eight mounting holes. (Fig. 12)
3. Using a nail or center punch, punch the center of the eight mounting holes. (Fig. 13)
4. Using a 1/4" drill bit, drill each of the eight mounting holes. (Fig. 14)
5. On each area to be cut out (Fig. 12), punch mark the six corners 1/4" inside of the marked line. (Fig. 13)

FIG. 10

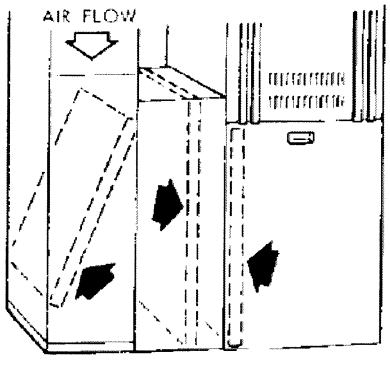


FIG. 11

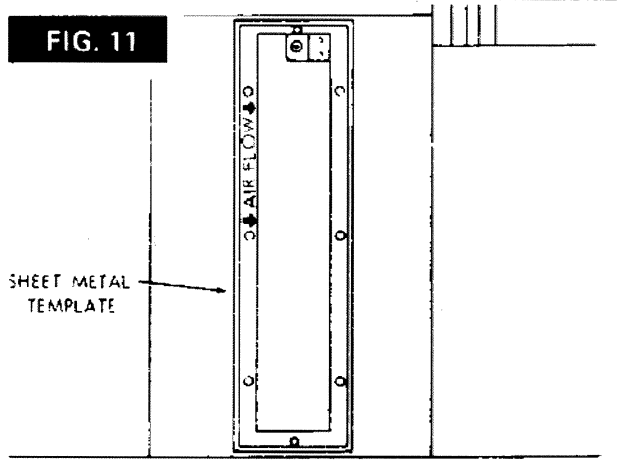


FIG. 12

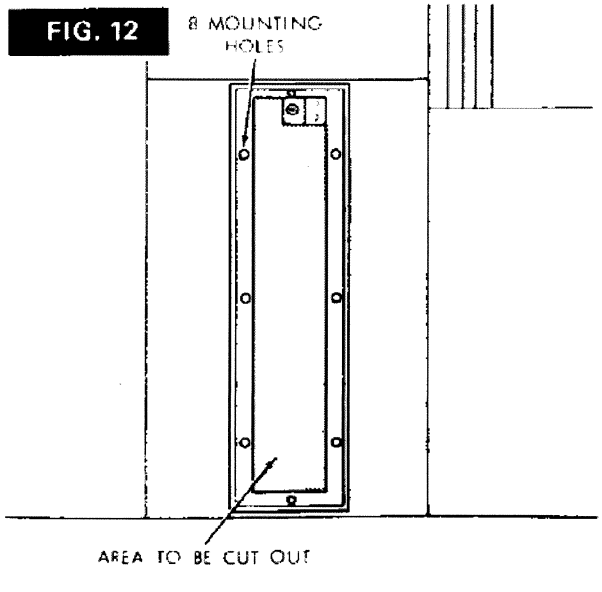


FIG. 13

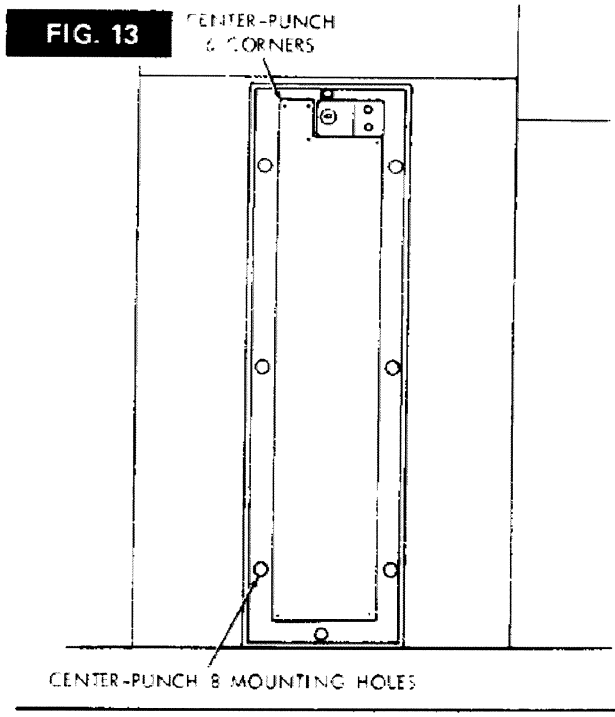


FIG. 14

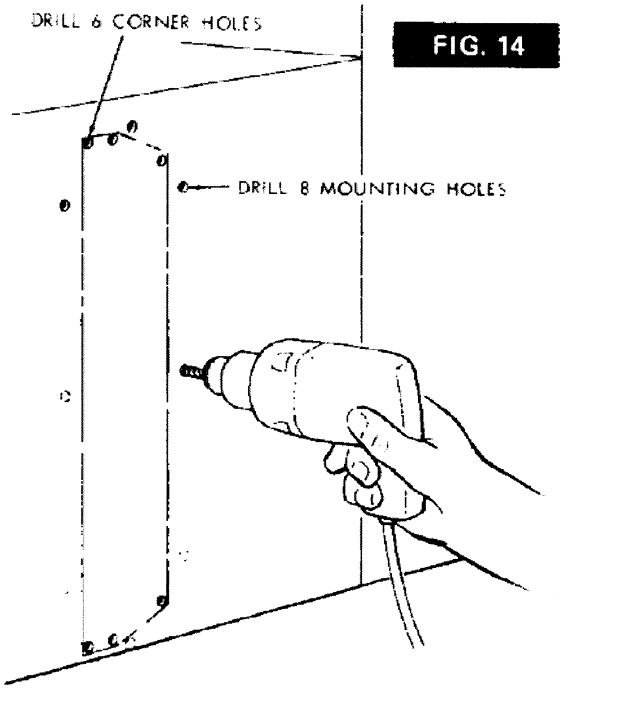


FIG. 15

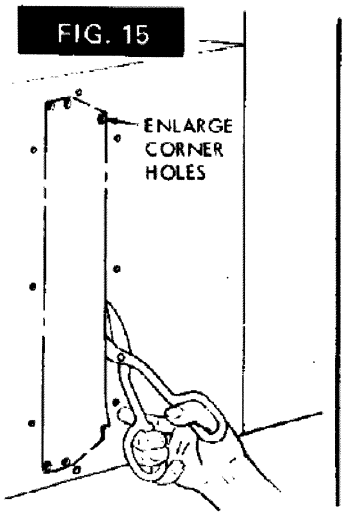
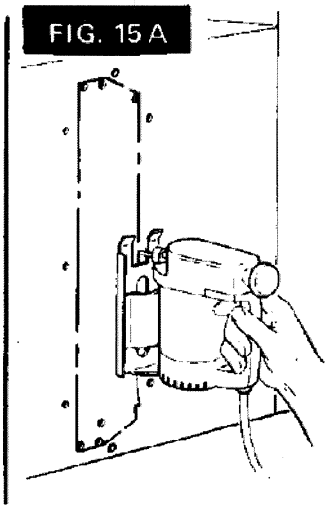


FIG. 15 A



INSTALLATION CON'T.

6. Using a 1/4" drill bit, drill each of the corners. Enlarge these holes with a 3/8" drill bit for access of tin snips or a sabre saw blade. (Figs. 15 and 15A)
7. Cut just outside the marked area to allow access for the collecting cell. (Figs. 15, 15A)
8. File rough edges smooth. Attach the template to the duct using the six no. 10 screws, nuts and lockwashers provided. (Fig. 16)
9. Mount the two guide studs to the template and duct as shown in Fig. 17.
10. Install the collecting cell with the pre-filter in place.

    NOTE: The filter is designed to be installed in the cell track in only one direction. Align the guide studs with the end plate holes. (Fig. 18)
11. Attach the electrical contact to the inside of the Cell cover with the two screws and nuts. (Fig. 19) Attach the ground wire to the terminal on the Cell cover. Attach the Cell cover to the mounting template with the quarter turn fastener.

    NOTE: Cell must be fully inserted for fastener to engage.

FIG. 16

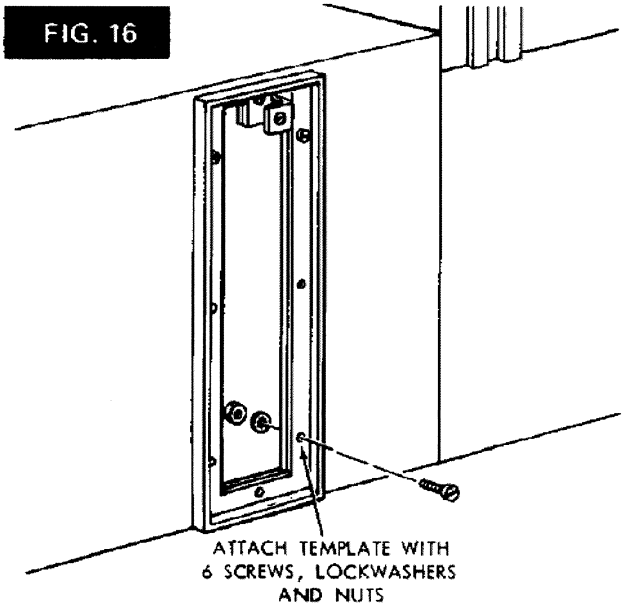


FIG. 17

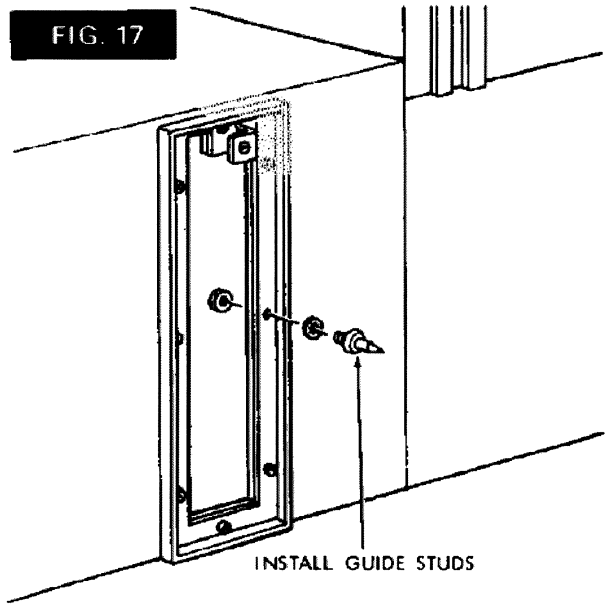


FIG. 18

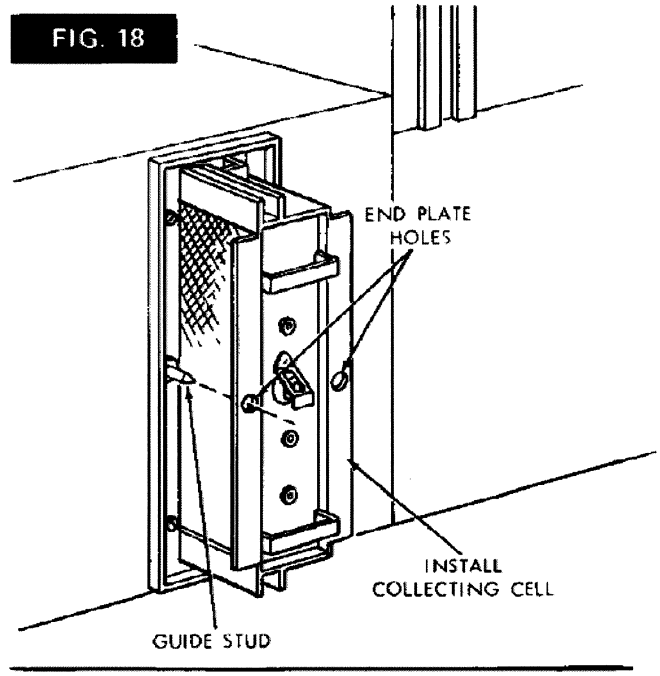


FIG. 19

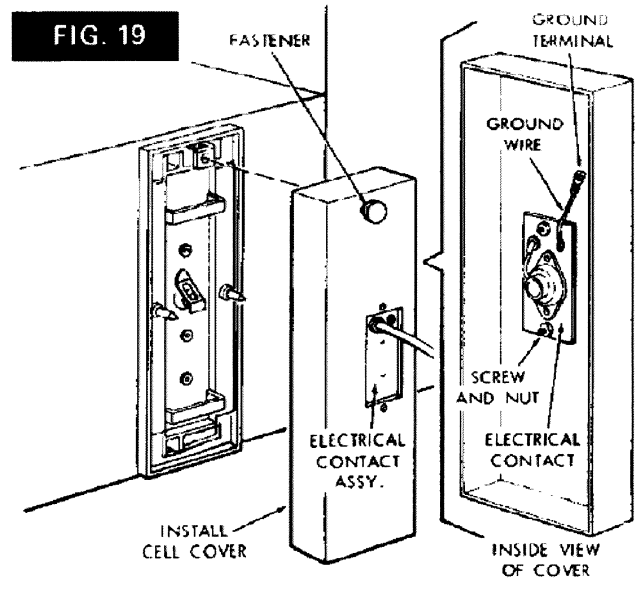
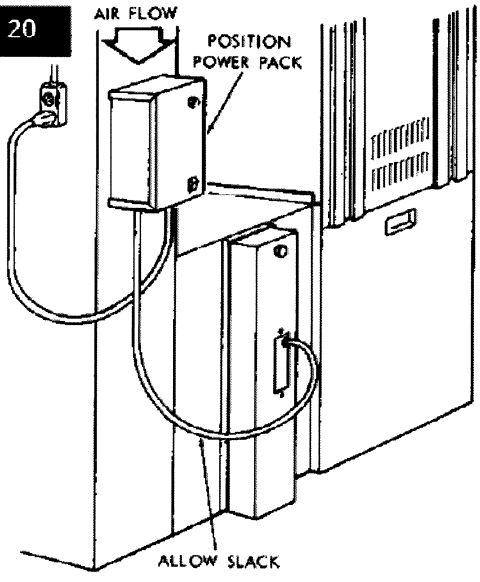


FIG. 20



12. Hold the Power Pack on the duct in a location upstream or before the Collecting Cell. Allow some slack in the hi-voltage cord. (Fig. 20)
13. At the Power Pack location install the Power Pack mounting plate. Follow instructions on the plate. (Fig. 21)

    Attach the Power Pack to the Mounting Plate.

    Plug power cord into a standard 3 hole 120 volt grounded outlet. **CAUTION: Do not use an extension cord.**

E. Operation

1. Turn on the electrical power. Push the On/Off Switch to "ON." It will light and the green light will be lit momentarily. (Fig. 22)
2. The furnace fan must be running before the air cleaner will operate. A built-in air switch will sense air flow and turn the air cleaner on . The green light will be lit.

   NOTE: An occassional flicker of the green light may be accompanied by harmless sparking or snapping noise, which is normal. This is caused by the trapping of large particles.

F. Maintenance

1. **Cleaning**

   During normal maintenance, clean the airflow switch sensor to remove accumulated dirt and dust. Fig. 23
2. **Washing Cell and Pre-Filter**

   Regular washing is necessary to insure proper performance. A thorough washing once every two months will be adequate for most installations. More frequent washings (once a month) may be necessary on some installations (new homes for example) where there is new carpeting, plaster dust, or there is above normal cigarette smoke, etc.

FIG. 21

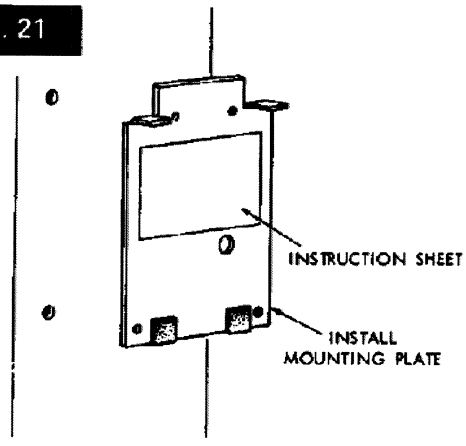


FIG. 22

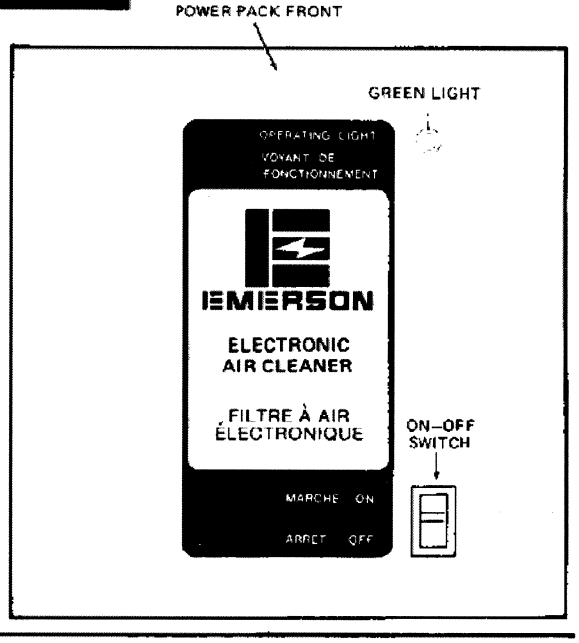
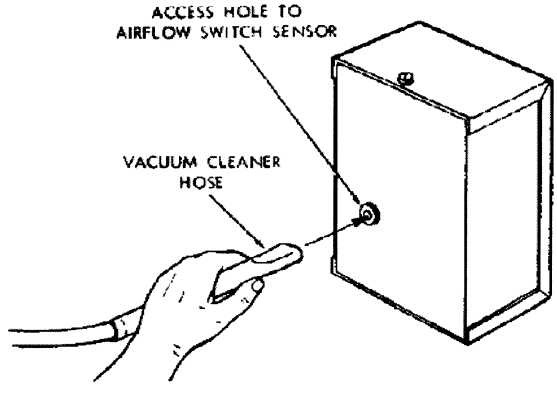


FIG. 23



3. **How to wash**
   A. Push "Operating Control" switch to "Off." Wait 15 seconds.
   B. Remove cell and pre-filter.
   C. Separate the cell and pre-filter and set aside. Avoid damage to cell plates and ionizing wires. (Inspect wires to see if they are heavily coated. If so, wipe each wire clean with a cloth or brush).
4. **Prepare the wash water**
   A. Place enough hot water in the utility tub (sold separately) to cover the cell.
   B. Dissolve two ounces of automatic dishwasher detergent in the water.
5. **Soak**
   A. Lay the cell on its side in the container and allow it to soak for 30 minutes. Fig. 24
   B. Then "slosh" the cell up and down in the solution until it appears clean. Remove the cell from the container.
   C. Then "slosh" the pre-filter up and down in the solution until it appears clean. Drain out dirty water.
6. **Rinse**
   A. Hold cell upright in container. Fig. 25.
   B. With a hose, rinse with warm water.
   C. Hose should be held about 10-in. from cell plates and at a slight angle for better cleaning results. Rinse both sides until water runs clear.
   D. Flush the cell frame along the edges to dislodge any trapped dirt or lint. Carefully wipe a damp cloth along the ionizing wires.
   E. Flush and rinse pre-filter on both sides.
   F. Stand cell and pre-filter up to drain. Fig. 26. Wait about two hours to dry.
   G. Replace pre-filter and cell in cabinet or duct work. Check that arrow on cell points in same direction as air flow through the duct.

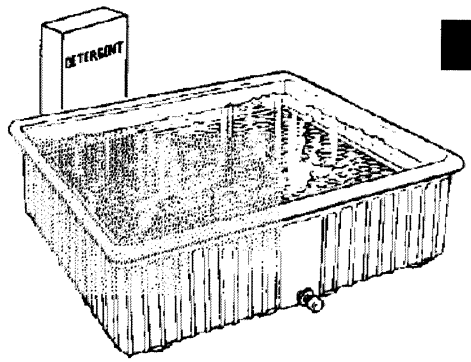


FIG. 24

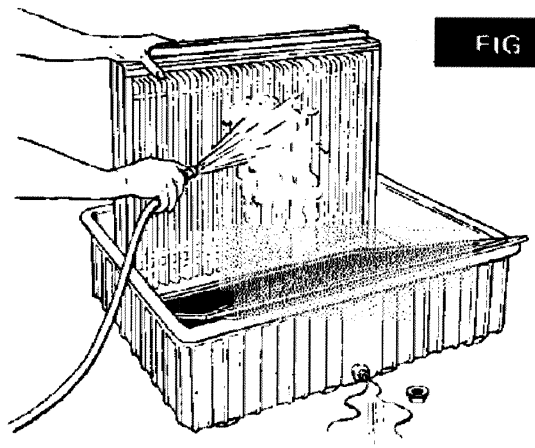


FIG. 25

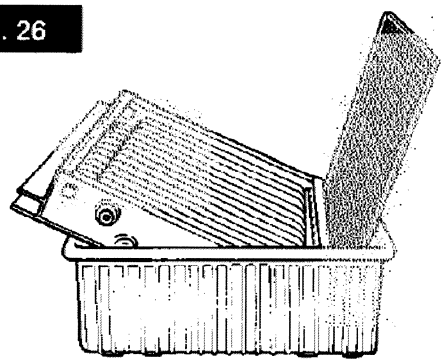


FIG. 26

REPLACING AN IONIZING WIRE

If an ionizing wire should break, it can be replaced as follows:

1. Remove all pieces of broken wire. Make sure supports at each end are in good condition and not bent out of shape.
2. Hook the new wire onto the support at one end.
3. Hold your finger against the support at the other end (Fig. 30) and hold the ionizing wire between thumb and forefinger as shown. Press on spring and push on wire loop until it slips over the end of the support. Make sure wire is securely anchored at each end.

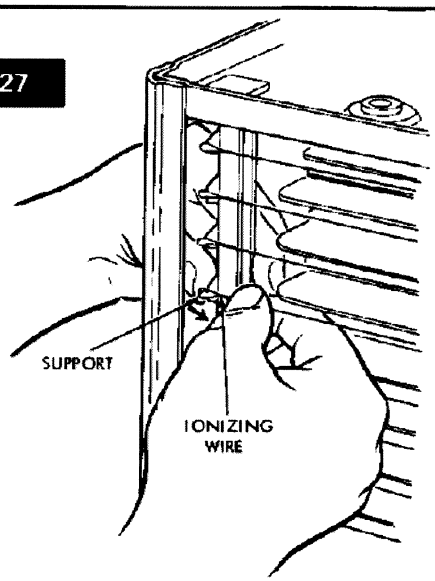


FIG. 27

G. Service hints

If you feel your Electronic Air Cleaner is not operating properly, please check the following before calling your service man.

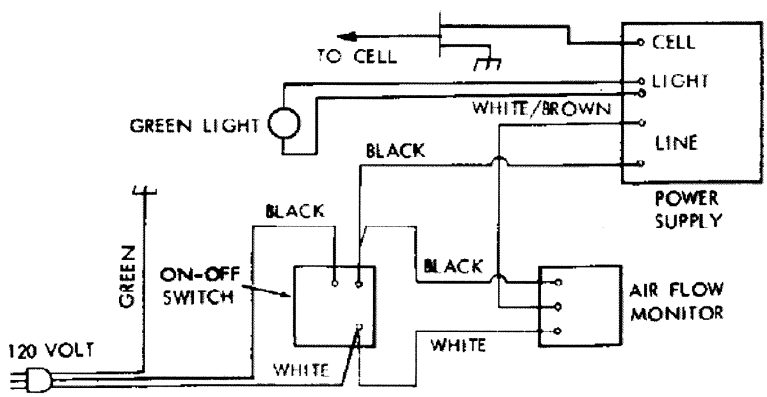
1. Is the main fuse blown or the circuit breaker tripped?
2. Is the air cleaner On/Off switch light on?
3. Is the furnace blower running? Air flow is essential for operation.

If your Air Cleaner still does not operate properly after you have made these checks, call your service man for service.

SERVICE CHECK LIST

SYMPTOMS	POSSIBLE CAUSE
Switch light off	1. Switch is not on. 2. Power outlet not energized. 3. Power cord not plugged in.
Switch light on Green light off	1. Blower not running
Switch light on, blower running, green light off	1. Dirty Cell, or plate shorted by large obstruction. 2. Defective cell. (Bent plate, loose ionizing wire, etc.) 3. Defective light.
Randomly flickering green light (An occasional flicker is not abnormal)	1. After washing allow more drying time. 2. Check to see if electrical contact is installed on inside of Cell cover. (Fig. 22) 3. A "popping" noise will be heard. This is caused by the trapping of large particles.

WIRING DIAGRAM



Repair Parts

ELECTRONIC AIR CLEANER

MODEL NOS. 8C11Y-41002 12C11Y-41002 14C11Y-41002 16C11Y-41002

Always order by Part Number – not by Key Number

Key No.	Part Numbers for Model Numbers				Description
	8C11Y-41002 16" x 20"	12C11Y-41002 16" x 24"	14C11Y-41002 20" x 20"	16C11Y-41002 20" x 24"	
1.	F857-0516	F857-0516	F857-0516	F857-0516	Power Pack Mounting Plate (Includes 2 & 3)
2.	F848-0314	F848-0314	F848-0314	F848-0314	Dual Lock Fastener
3.	F868-0039	F868-0039	F868-0039	F868-0039	Screw, No. 8 x 3/4 (4 Req.)*
4.	F858-0849	F858-0849	F858-0849	F858-0849	Power Pack (Includes 5 thru 14 and 22)
5.	F868-0039	F868-0039	F868-0039	F868-0039	Screw, 8 x 3/8 (4 Req.)*
6.	F888-0100	F888-0100	F888-0100	F888-0100	Grommet
7.	F858-0644	F858-0644	F858-0644	F858-0644	Power Pack Enclosure (Includes 2, 5 & 6)
8.	F859-0274	F859-0274	F859-0274	F859-0274	Air Flow Switch
9.	F858-0845	F858-0851	F858-0851	F858-0851	Power Pack Cover (Includes 5)
10.	F844-0131	F844-0131	F844-0131	F844-0131	Green Light
11.	F876-0189	F876-0189	F876-0189	F876-0 39	Lighted On-Off Switch
12.	F843-1216	F843-1216	F843-1216	F843-1216	120 Volt Power Cord (Includes 13)
13.	F888-0101	F888-0101	F888-0101	F888-0101	Strain Relief
14.	F858-0903	F858-0903	F858-0903	F858-0903	Power Supply
19.	F843-1217	F843-1217	F843-1218	F843-1218	Ionizing Wire
20.	F820-0242	F820-0242	F820-0243	F820-0243	Cover (Includes 21)
21.	F839-0018	F839-0018	F839-0018	F839-0018	Knob
22.	F837-0312	F837-0312	F837-0312	F837-0312	Electrical Contact (Includes Cord)
23.	F811-0351	F811-0352	F811-0353	F811-0354	Collecting Cell (Includes 19 & 24)
24.	F825-0399	F825-0400	F825-0401	F825-0402	Pre-Filter
25.	F857-0517	F857-0517	F857-0518	F857-0518	Cell Template (Includes 26)
26.	F875-0025	F875-0025	F875-0025	F875-0025	Guide Stud (2 Req.)
27.	F806-0511	F806-0511	F806-0511	F806-0511	Support Bracket (Small)
28.	F801-0135	F801-0135	F801-0135	F801-0135	Mounting Hardware for Air Flow Switch
+	F848-0092	F848-0092	F848-0092	F848-0092	Wash Tub (Optional)
+	846-2021	846-2021	846-2021	846-2021	Owner's Manual

*Standard Hardware Item – May be Purchased Locally.
+ Not Shown

ELECTRONIC AIR CLEANER