

30451 GRANGER

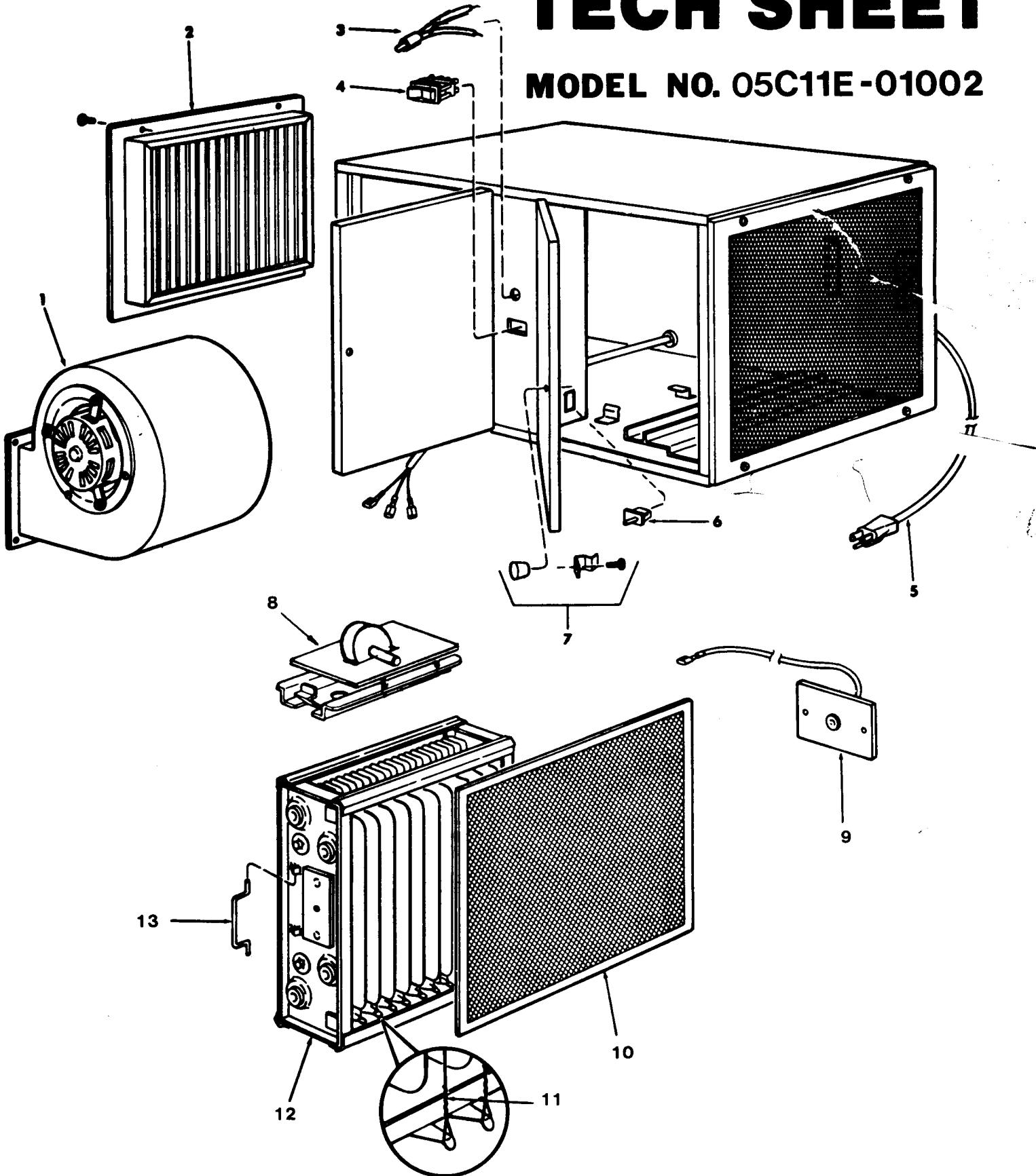
**Electro-air**  
ELECTRONIC AIR CLEANERS

# SC-500

## TECH SHEET

REPAIR PARTS ILLUSTRATION

MODEL NO. 05C11E-01002



# INTRODUCTION

## ELECTRO-AIR TECH REPAIR SHEET

### MODEL NO. 05C11E-01002

This sheet contains service checks to assist service personnel in locating and correcting any malfunction that might occur to render the air cleaner ineffective or inoperative. The air cleaner has been designed with replaceable components, such as the high-voltage power supply which allows the serviceman to simply replace a defective component rather than attempt repairs of such components in the field.

The first chart "Basic Service Guide" will probably cover many owner complaints. If after checking the items listed, the air cleaner still fails to operate properly, continue with the second chart "Complete Checkout Procedure" until the trouble has been located. (See wiring diagram.)

#### **CAUTION:**

This Tech Sheet was designed to be used only by personnel qualified to recognize shock hazards and those trained in the repair of electronic air cleaners. These instructions are not implied to be adequate to ensure safe usage by non-qualified personnel.

### **NORMAL OPERATION**

ON/OFF Switch in High or Low position. Blower motor running. Indicator light "ON".

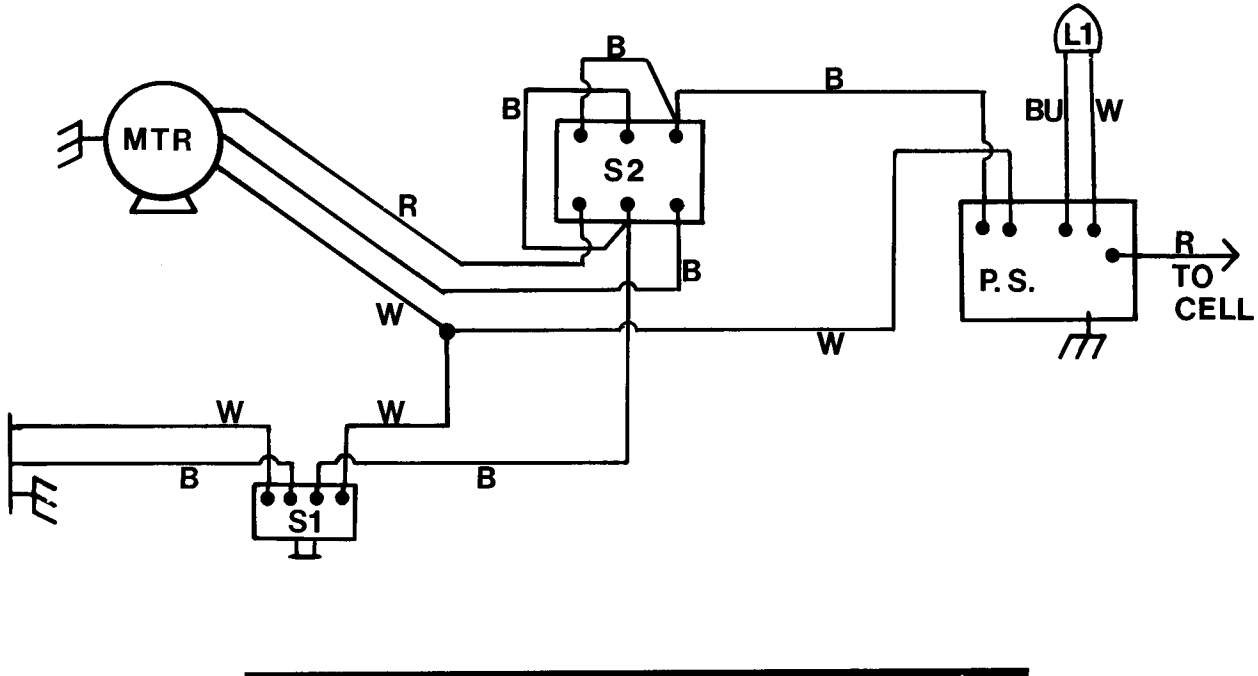
- Voltage on air cleaner cell, either ionizer or plates 6000 to 6500 VDC.
- Voltage at cell contact, located in rear of cabinet, no cell attached. (Open Circuit) 7500 to 9000 VDC.

# BASIC SERVICE GUIDE

SERVICE INDICATION	SERVICE CHECKS
<ul style="list-style-type: none"> <li>• Indicator light "ON"</li> <li>• Blower Operating (High or Low)</li> </ul>	<ul style="list-style-type: none"> <li>◦ Unit operating correctly.</li> <li>◦ Voltage at collecting cell <math>6200 \pm 300</math> VDC.</li> </ul>
<ul style="list-style-type: none"> <li>• Indicator light "OFF"</li> <li>• Blower not operating.</li> </ul>	<p>Power is not being supplied to air cleaner.</p> <ul style="list-style-type: none"> <li>A. Check voltage at 120 VAC receptacle. If none, check fuse or circuit breaker at input line.</li> <li>B. Check ON/OFF switch which must be in either "High" or "Low" position.</li> </ul>
<ul style="list-style-type: none"> <li>• Indicator light "ON" (blinking)</li> <li>• Blower operating (high or low)</li> </ul>	<ul style="list-style-type: none"> <li>A. Remove cell from cabinet.</li> <li>B. Close cell door and turn switch "ON".</li> <li>C. If indicator light comes "ON" and voltage reading at cell contact is 7500 VDC or above, problem is in cell. Check as above.</li> <li>D. If indicator light remains "OFF" and voltage reading at cell contact is less than 7500 VDC problem is in the D. C. Power Supply (See Power Supply Test.)</li> </ul>
<ul style="list-style-type: none"> <li>• Indicator light "OFF"</li> <li>• Blower operating (high or low)</li> </ul>	<ul style="list-style-type: none"> <li>A. Remove cell from cabinet.</li> <li>B. If indicator light comes "ON" and voltage reading at cell contact is 7600 VDC or above, problem is in cell. Check as above.</li> <li>C. If indicator light remains "OFF" and voltage reading at cell contact is less than 7600 VDC problem is in the D. C. Power Supply (see Power Supply Test).</li> </ul>
<ul style="list-style-type: none"> <li>• Cell "arcing" excessively.</li> </ul> <p><u>Note:</u> An occasional "arc" is considered normal.</p>	<ul style="list-style-type: none"> <li>A. Check voltage to air cleaner. Voltage should not exceed 120 VAC.</li> <li>B. Remove cell and pre-filter, wash thoroughly.</li> </ul> <p><b><u>IMPORTANT:</u></b> All ionizing wires must be completely clean with no buildup on wires.</p>

S1 - DOUBLE THROW SAFETY SWITCH  
 S2 - D.P.D.T. SWITCH "OFF" IN MIDDLE  
 POSITION  
 MTR - 2-SPEED BLOWER (360/480 CFM)  
 P. S. HIGH FREQUENCY D.C. POWER SUPPLY  
 L1 - L.E.D. OPERATING INDICATOR LIGHT

COLLECTING CELL OUTPUT  
 6.5 KVDC  
 .75 MA



## COMPLETE CHECKOUT PROCEDURE

If the malfunction has not been eliminated in the "Basic Service Guide" proceed to the "Checkout Chart" to locate the problem. When the defective component is discovered and replaced, the air cleaner will resume normal operation.

All voltage measurements indicated can be made with a high voltage D. C. probe and a general purpose volt-ohm meter. For example: Simpson 260 or equivalent.

# CHECKOUT CHART

## CONDITION I

### ● INDICATOR LIGHT "OFF" - BLOWER MOTOR OPERATING EITHER HIGH OR LOW.

1. Remove the collecting cell and charcoal filter from air cleaner cabinet.
2. Apply 120 VAC to the air cleaner, depress safety switch and measure voltage at terminal marked "LINE" on the D.C. Power Supply. Voltage should be the same as that applied.
3. If 120 VAC does not appear at "LINE" terminals, the problem is in the primary voltage circuit. Check "Hi/Low/Off" switch, safety switch and all wiring points.
4. If 120 VAC did appear at "LINE" terminal then check the voltage output to the terminals marked "LIGHT" (Blue and white) on the D.C. Power Supply. DO NOT DISCONNECT THE LIGHT WIRES FROM THE TERMINALS. Voltage should be .2 to .6 volts, D.C.
  - A. If voltage to light is .2 VDC or above, replace the operating light.
  - B. If voltage to light is below .2 VDC, check the voltage at the collector cell contact located in the back of the cabinet.
  - C. If the voltage at the cell contact is 7800 VDC or above, the power supply is functioning properly.
  - D. If the voltage at the cell contact is below 7800 VDC,, replace the D.C. Power Supply.

### D. C. POWER SUPPLY SPECIFICATIONS

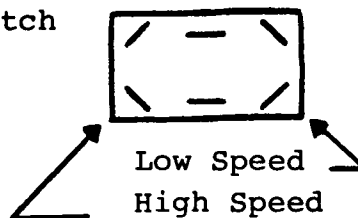
The power supply is a Solid State, High Frequency A. C. to D. C. power source and is not designed for individual component part replacement. Electro-air recommends the replacement of the entire "snap-in" power supply in the event of a failure.

Input voltage -----	120 VAC, 60 HZ
Output to light -----	.2 to .6 VDC
H. V. Output (no load) -----	7500 - 9000 VDC
H. V. Output (loaded) -----	6000 - 6500 VDC

# BLOWER MOTOR TEST

1. Locate and remove the wire nut that joins three white wires just above the D. C. Power Supply.
2. Using an extension cord with two well insulated alligator clips, attach one clip to the three white wires located in Step # 1. Attach the other clip to the lower right hand (from front) terminal of the Hi/Low Switch. This terminal contains one single black wire. Apply 120 VAC to these two points and motor should run at high speed.
3. Move the clip from the lower right hand terminal of Hi/Low Switch to the lower left hand terminal that contains one single red wire. Apply 120 VAC to these two points and motor should run at low speed.

View of Switch  
from Back



In the event that the problem has not been corrected by using the procedures outlined on this Tech Repair Sheet, then contact

Service Manager  
Electro-air Division  
Emerson Electric Company  
North Industrial Park Road  
Harrison, Arkansas 72601  
Phone (501) 741-3464

## PARTS LIST FOR ELECTRONIC AIR CLEANER MODEL NO. 05C11E-01002

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING

1. The PART NUMBER
  2. The PART DESCRIPTION
  3. The MODEL NUMBER
  4. The NAME OF ITEM — Electronic Air Cleaner
- Always Order by "Part Number" . . . Never by "Item No."**

Item No.	Part No.	Description
1.	F848-0281	Direct Drive Blower
2.	F831-0085	Grille Assembly
3.	F844-0136	Light
4.	F848-0305	Operating Switch
5.	F876-0188	Power Cord Assembly
6.	F876-0116	Safety Switch
7.	F839-0011	Knob & Latch
8.	F858-0707	Power Supply
9.	F819-0144	Cell Contact Board
10.	F825-0327	Pre-Filter
11.	F843-0777	Ionizing Wire
12.	F811-0313	Collecting Cell
13.	F832-0039	Cell Handle
14.	F806-0480	Wall Mounting Brackets (Optional)
15.	846-0264	• Owner's Manual

• Not Illustrated

### WHITE-RODGERS

White-Rodgers Division, Emerson Electric Co.  
9797 Reavis Road, St. Louis, MO 63123  
(314) 577-1300



**846-0545**