

# IMPORTANT INSTRUCTIONS - OPERATING MANUAL

Models: ES80S, ES130S,  
ES80D, ES130D



Exhaust Fan

## READ AND SAVE THESE INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING TO ASSEMBLE, INSTALL, OPERATE OR MAINTAIN THE PRODUCT DESCRIBED. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!

RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

## GENERAL SAFETY INFORMATION

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock and injury to person, including the following:

### **WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK AND INJURY TO PERSON, OBSERVE THE FOLLOWING:**

- a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- b) Before servicing or cleaning the 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.

### **WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK AND INJURY TO PERSON, OBSERVE THE FOLLOWING:**

- a) Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-related construction.
- b) Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. 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.
- c) When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.

- d) Ducted fans must always be vented to the outdoors.
- e) If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) - protected branch circuit.
- f) This unit must be grounded.
- g) To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
- h) NEVER place a switch where it can be reached from a tub or shower.
- i) Suitable for use with electronic speed control device.
- j) Do not install into ceilings thermally insulated to a value greater than R40.

**CAUTION: FOR GENERAL VENTILATING USE ONLY. DO NOT USE TO EXHAUST HAZARDOUS OR EXPLOSIVE MATERIALS AND VAPORS.**

**WARNING: DO NOT USE IN KITCHENS.**

- k) Read all instructions before installing or using exhaust fan.

## SAVE THESE INSTRUCTIONS

# INSTALLATION INSTRUCTIONS

**CAUTION: MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE STARTING INSTALLATION.**

## SECTION 1

### Preparing the Exhaust Fan

1. Unpack fan from the carton and confirm that all pieces are present. In addition to the exhaust fan you should have:
  - 1 - Grill
  - 1 - Damper Assembly (attached)
  - 4 - Mounting Rails
  - 1 - Instruction/Safety Sheet
2. Choose the location for your fan. To ensure the best air and sound performance, it is recommended that the length of ducting and the number of elbows be kept to a minimum, and that insulated hard ducting be used. Larger duct sizes will reduce noise and airflow restrictions. This fan will require at least 10" of clearance in the ceiling or wall, and will mount through drywall up to 3/4" thick.
3. Select the most convenient electrical knockout and remove using a straight-blade screw driver (Figure 1).

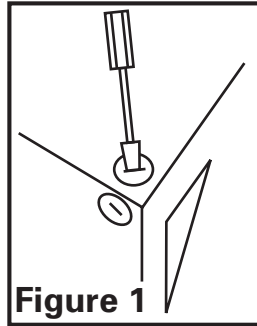


Figure 1

## SECTION 2

### New Construction

1. Install the rails on the housing and position the housing next to the joist. Line up housing so that it will be flush with the finished ceiling. Secure the ends of the rails with screws or nails (not included) to the joists and slide the housing into the final position (Figure 2).

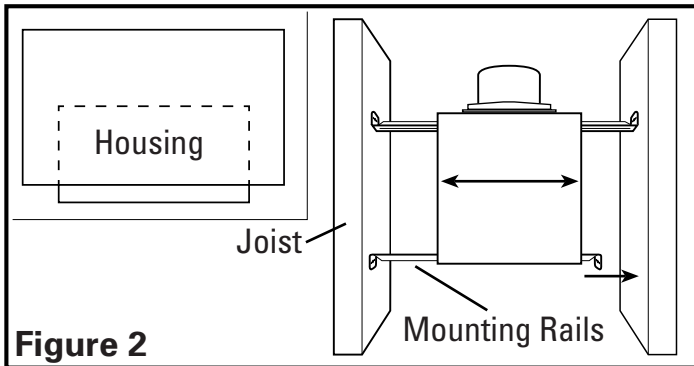


Figure 2

## SECTION 3

### Existing Construction

1. Set housing in position between the joist and trace an outline onto the ceiling material (Figure 3). Set housing aside and cut opening, being careful not to cut or damage any electrical or other hidden utilities. Install the rails on the housing and position the housing in the previously cut hole so that it is flush with the finished ceiling. Secure the ends of the rails to the joists (Figure 3).

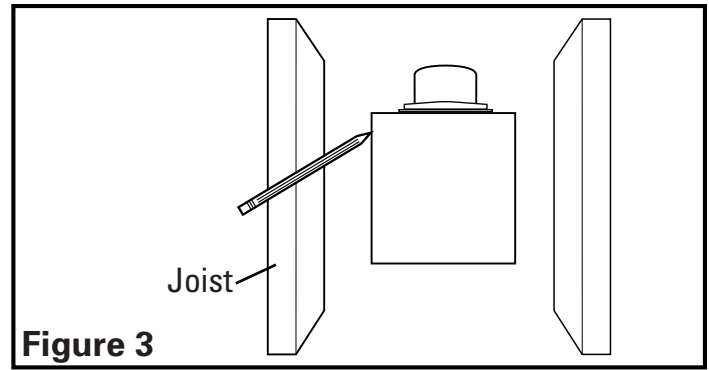


Figure 3

## SECTION 4

### Ducting

**CAUTION: ALL DUCTING MUST COMPLY WITH LOCAL AND NATIONAL BUILDING CODES.**

1. Connect the ducting to the fan's duct collar (Figure 4). Secure in place using tape or screw clamp. Always duct the fan to the outside through a wall or roof cap.

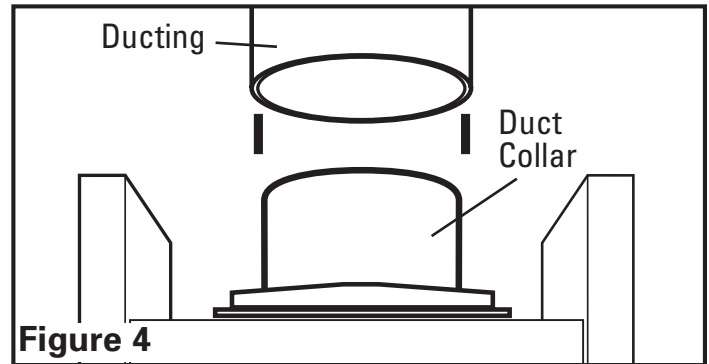


Figure 4

## SECTION 5

### Wiring

**CAUTION: MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE STARTING INSTALLATION.**

**CAUTION: ALL ELECTRICAL CONNECTIONS MUST BE MADE IN ACCORDANCE WITH LOCAL CODES, ORDINANCES, OR NATIONAL ELECTRICAL CODE. IF YOU ARE UNFAMILIAR WITH METHODS OF INSTALLING ELECTRICAL WIRING, SECURE THE SERVICES OF A QUALIFIED ELECTRICIAN.**

**NOTE:** This unit includes a side access panel for wiring that does not require the removal of the fan's blower assembly. If you choose to wire the unit from the inside, you will need to remove the blower assembly and internal wiring compartment. Both methods are equally effective.

- 1a. External Wire Compartment: Remove the wire compartment cover screw and place cover in a secure place (Figure 5).

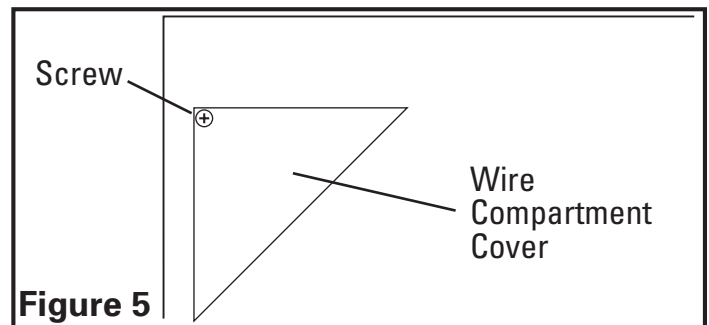
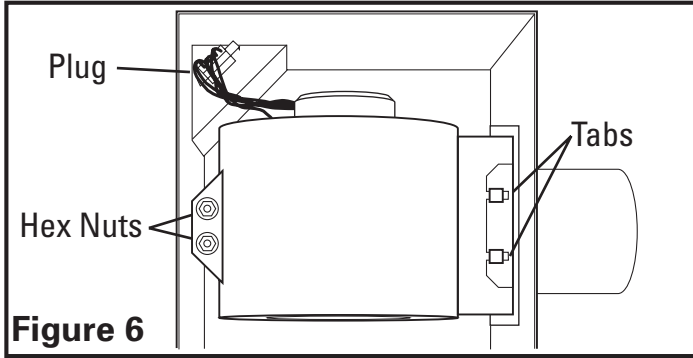
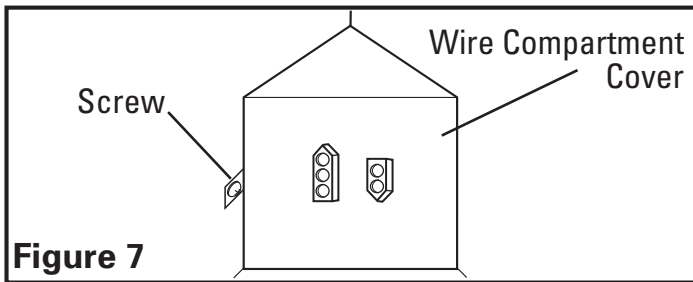


Figure 5

- 1b. **Internal Wire Compartment:** Using a 7/16" socket, remove the two hex nuts holding the blower assembly in place. Lift up on the assembly and slide it out of the tabs on the housing (**Figure 6**). Remove the wire compartment cover screw and place the cover in a secure place (**Figure 7**).

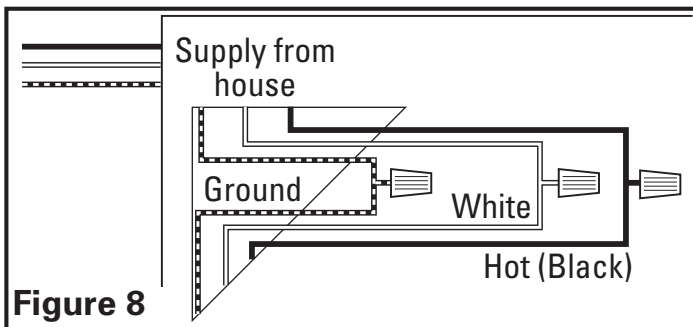


**NOTE:** If the fan motor plug is connected to the fan housing receptacle, unplug so the blower assembly can be completely removed.



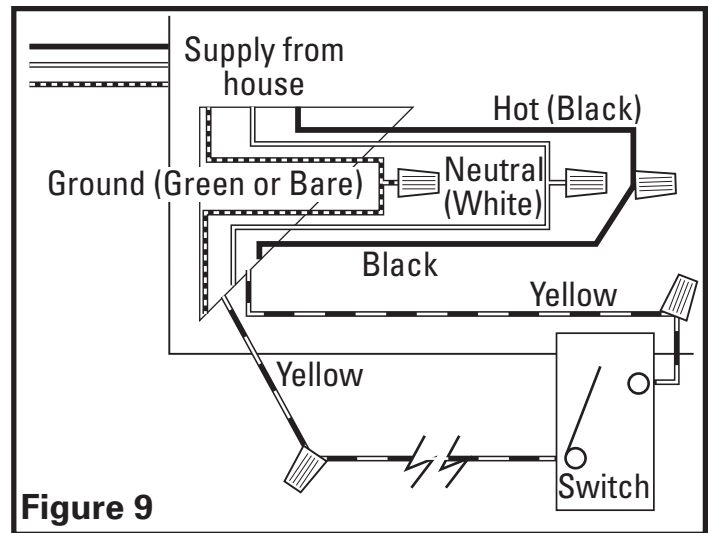
#### SINGLE SPEED UNITS (models ES80S and ES130S)

- 2a. Run wiring from an approved wall switch (not included) carrying the appropriate rating. One neutral (white), one ground (green or bare copper), and one hot (black lead connected to the switch). Secure the electrical wires to the housing with an approved electrical connector. Make sure you leave enough wiring in the box to make the connection to the fan's receptacle.
- 2b. From where you have chosen to access the fan's junction box, connect the white wire from the house to the white wire from the fan's receptacle. Connect the black wire from the wall switch to the black wire from the fan's receptacle. Connect the ground wire from the house to the green wire from the fan housing (**Figure 8**). Use approved methods for all connections.

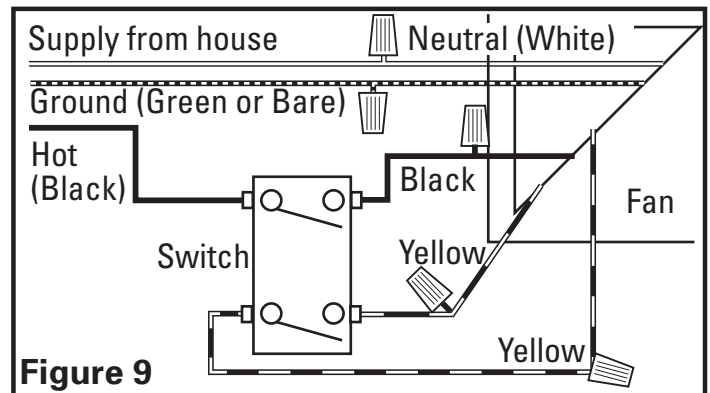


#### TWO SPEED UNITS (models ES80D and ES130D)

- 3a. **Continuous Ventilation:** For two speed fans wired for continuous ventilation, connect the White wire of the fan to the White (Neutral) wire from the power source. Connect the ground wire from the house to the green wire from the fan housing. Run 2 wires from a properly grounded wall switch (not included) to the fan. Connect the Black wire of the fan to the Black wire (Hot) from the power source. Connect the Hot Yellow wire from the fan to the input of the switch. Connect the second Yellow wire from the fan to the output side of the switch. Closing the switch will change from normal to high speed (**Figure 9**).



- 3b. **Intermittent Ventilation:** For two speed fans wired for intermittent ventilation with a standard duplex toggle switch (such as Leviton 5224-2W not included). Connect the White wire of the fan to the White (Neutral) wire from the power source. Connect the ground wire from the fan to the ground wire from the power source. Properly ground the switches. Connect the black wire from the supply to one side of the top switch. Connect the black wire from the fan to the other side of the top switch, Connect 1 yellow wire from the fan to each side of the bottom switch. The top switch turns the fan On & Off, the bottom switch changes speed between high and low (**Figure 10**).



**NOTE:** The fan's receptacle wires might need to be pulled outside compartment for connection. Only pull the five loose wires outside of compartment. Additional wires will be present.

**NOTE:** Unit must be grounded according to all local and national codes.

4. Carefully tuck wire back inside wire compartment and replace wire compartment cover securing with the screw that was removed earlier.

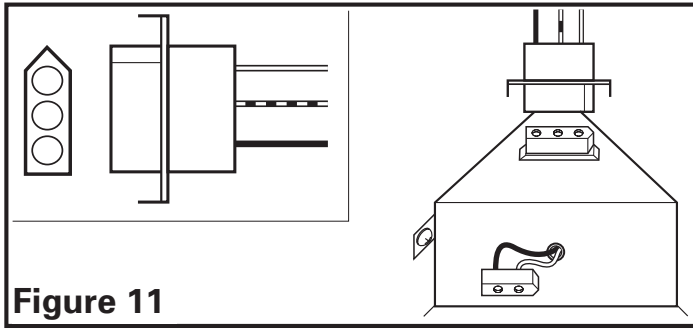
## SECTION 6 Completing the Installation

1. If the fan's blower assembly was removed during the wiring process, reinstall the blower by reversing the directions in **Section 4 (Wiring), Step 1b**.

#### SINGLE SPEED UNITS (models ES80S and ES130S)

2. Plug the fan's 2 pin quick connect motor cord into the receptacle located on the side of the wire compartment cover. Plug the 3 pin

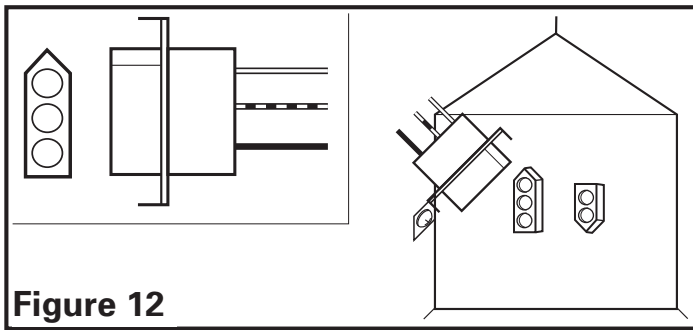
quick connect motor cord into the receptacle located on the top of the wire compartment cover. These cords will only fit one way into the receptacles (**Figure 11**).



**Figure 11**

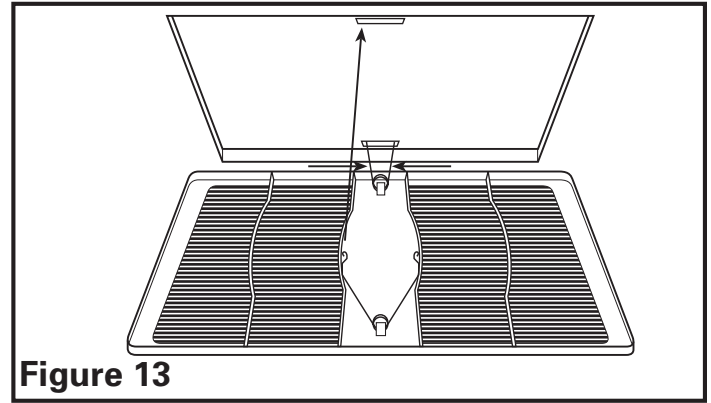
**TWO SPEED UNITS** (models ES80D and ES130D)

3. Plug the fan's 2 pin quick connect motor cord and the 3 pin quick connect motor cord into the receptacles located on the top of the wire compartment cover. These cords will only fit one way into the receptacles (**Figure 12**).



**Figure 12**

4. Install the grill by squeezing the two ends of the springs together and installing them up into the slots on the fan's housing. Push the grill up into position (**Figure 13**).



**Figure 13**

5. Restore power and test your installation.

## SECTION 7

### Use and Care

**CAUTION: MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE SERVICING THE UNIT.**

1. **Cleaning the Grill:** Remove grill and use a mild detergent, such as dishwashing liquid, and dry with a soft cloth. NEVER USE ANY ABRASIVE PADS OR SCOURING POWDERS. Completely dry grill before reinstalling. Refer to instructions in **Section 5 Finishing the Installation**, to reinstall grill.
2. **Cleaning the Fan Assembly:** Wipe all parts with a dry cloth or gently vacuum the fan. NEVER IMMERSE ELECTRICAL PARTS IN WATER.

## Troubleshooting Guide

Trouble	Probable Cause	Suggested Remedy
1. Fan does not operate when the switch is on.	1a. A fuse may be blown or a circuit tripped. 1b. Connector plug from motor is not plugged in. 1c. Wiring is not connected properly. 1d. Motor has stopped operating.	1a. Replace fuse or reset circuit breaker. 1b. Turn off power to unit. Remove Grill and plug motor into receptacle in housing. Restore power to unit. 1c. Turn off power to unit. Check that all wires are connected. 1d. Replace motor.
2. Fan is operating, but air moves slower than normal.	2. Obstruction in the exhaust ducting.	2. Check for any obstructions in the ducting. The most common are bird nests in the roof cap or wall cap where the fan exhausts to the outside.
3. Fan is operating louder than normal	3a. Motor is loose. 3b. Fan blade is hitting housing of unit.	3a. Turn off power to unit. Remove grill and check that all screws are fully tightened. Restore power to unit. 3b. Call your dealer for service.

# LIMITED WARRANTY

**WHAT THIS WARRANTY COVERS:** This product is warranted against defects in workmanship and/or materials.

**HOW LONG THIS WARRANTY LASTS:** This warranty extends only to the original purchaser of the product and lasts for five (5) years from the date of original purchase or until the original purchaser of the product sells or transfers the product, whichever first occurs.

**WHAT AIR KING WILL DO:** During the warranty period, Air King will, at its sole option, repair or replace any part or parts that prove to be defective or replace the whole product with the same or comparable model.

**WHAT THIS WARRANTY DOES NOT COVER:** This warranty does not apply if the product was damaged or failed because of accident, improper handling or operation, shipping damage, abuse, misuse, unauthorized repairs made or attempted. This warranty does not cover shipping costs for the return of products to Air King for repair or replacement. Air King will pay return shipping charges from Air King following warranty repairs or replacement.

**ANY AND ALL WARRANTIES, EXPRESSED OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY), LAST ONE YEAR FROM THE DATE OF ORIGINAL PURCHASE OR UNTIL THE ORIGINAL PURCHASER OF THE PRODUCT SELLS OR TRANSFERS THE PRODUCT, WHICHEVER FIRST OCCURS AND IN NO EVENT SHALL AIR KING'S LIABILITY UNDER ANY EXPRESS OR IMPLIED WARRANTY INCLUDE (I) INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM ANY CAUSE WHATSOEVER, OR (II) REPLACEMENT OR REPAIR OF ANY HOUSE FUSES, CIRCUIT BREAKERS OR RECEPTACLES. NOTWITHSTANDING ANYTHING TO THE CONTRARY, IN NO EVENT SHALL AIR KING'S LIABILITY UNDER ANY EXPRESS OR IMPLIED WARRANTY EXCEED THE PURCHASE PRICE OF THE PRODUCT AND ANY SUCH LIABILITY SHALL TERMINATE UPON THE EXPIRATION OF THE WARRANTY PERIOD.**

Some states and provinces do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so these exclusions or limitations may not apply to you. This warranty gives you specific legal rights. You may also have other rights which vary from state to state and province to province. Proof of purchase is required before a warranty claim will be accepted.

## CUSTOMER SERVICE:

**Toll-Free (800) 465-7300**

Our Customer Service team is available to assist you with product questions, service center locations, and replacement parts. They can be reached Monday through Friday, 8am-4pm Eastern. Please have your model number available, as well as the type and style (located on the label inside of your product).

Please do not return product to place of purchase.

[www.airkinglimited.com](http://www.airkinglimited.com)

**PARTS FOR DISCONTINUED, OBSOLETE AND CERTAIN OTHER PRODUCTS MAY NOT BE AVAILABLE. DUE TO SAFETY REASONS, MANY ELECTRONIC COMPONENTS AND MOST HEATER COMPONENTS ARE NOT AVAILABLE TO CONSUMERS FOR INSTALLATION OR REPLACEMENT.**

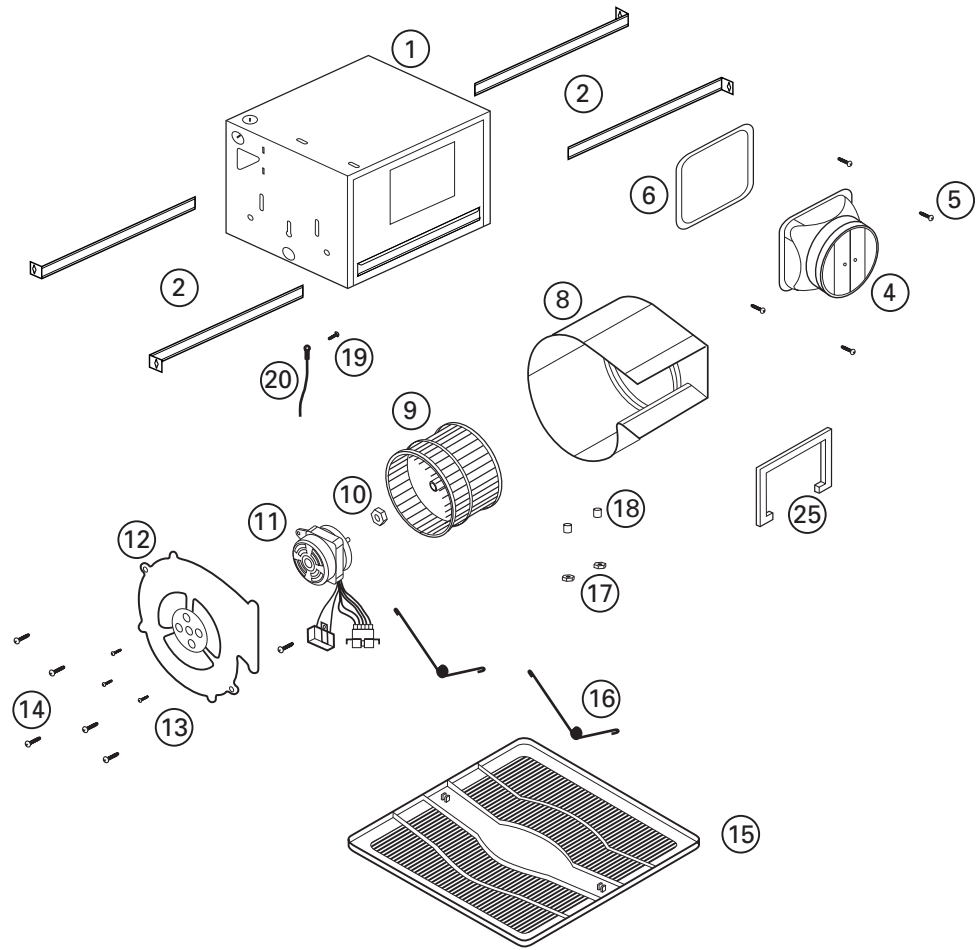
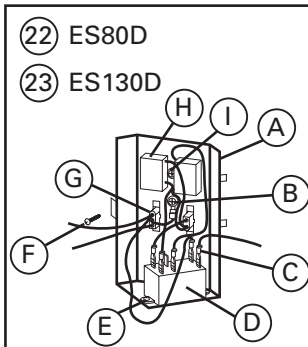
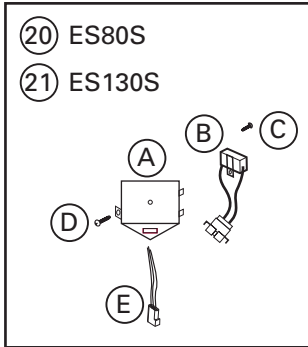
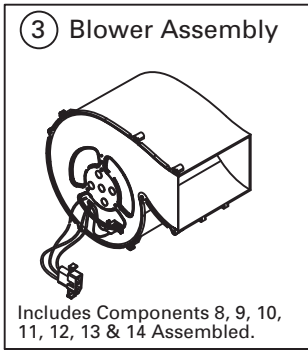
Installer: \_\_\_\_\_

Installation Date: \_\_\_\_\_

Place of Purchase: \_\_\_\_\_

Model Number: \_\_\_\_\_

# REPLACEMENT PARTS DIAGRAM



#	Qty.	Description	Replacement Part #
1	1	Fan Housing	5S1239009
2	4	Mounting Rails	5S1299002
3	1	Blower Assembly	5S2239008
4	1	6" Metal Collar Assembly	5S5299100
5	4	Screws	5S1999010
6	1	Collar Gasket	5S1202054
7	1	Outlet Gasket	5S1202053
8	1	Blower Housing	5S2202022
9	1	Blower Wheel	5S2202023
10	1	Hex Nuts	5S2202014
11	1	Motor	5S2239001
12	1	Motor Plate	5S2202020
13	3	Motor Mount Screws	5S2202027
14	6	Plate Mount Screws	5S2202017
15	1	Grill	5S1202048
16	2	Grill Springs	5S1202046
17	2	Flange Nut	5S1202031
18	2	Grommets	5S1202032
19	1	#10 Ground Screw	5S1999002
20	1	14 ga Ground Wire	5S1999003

#	Qty.	Description	Replacement Part #
21	1	Wire Compartment Assembly - ES80S	5S1239001
22	1	Wire Compartment Assembly - ES130S	5S1239002
A	1	Wire Compartment	5S1239003
B	1	Capacitor Harness - ES80S	5S2239002
	1	Capacitor Harness - ES130S	5S2239003
C	1	Capacitor Mount Screw	5S1202049
D	1	Wire Cover Screw	5S1202049
E	1	Power Harness	5S2239004
23	1	Wire Compartment Assembly - ES80D	5S1239004
24	1	Wire Compartment Assembly - ES130D	5S1239005
A	1	Wire Compartment	5S1239006
B	1	#10 Ground Screw	5S1999002
C	1	ESD Jumper Wire	5S1239007
D	1	SPDT 120 Volt Relay	5S1239008
E	2	Relay Mount Screw	5S1202049
F	1	Wire Cover Screw	5S1202049
G	1	Power Harness	5S2239005
H	1	2 Speed Cap Harness - ES80D	5S2239006
	1	2 Speed Cap Harness - ES130D	5S2239007
I	1	Capacitor Mount Screw	5S1202049