



# BATH FAN

## INSTALLATION INSTRUCTIONS

Model No. \_\_\_\_\_

ABF80G15 Series

ABF80G16 Series

ABF80L5 Series

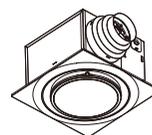
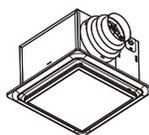
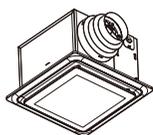
ABF80L6 Series

ABF110G15 Series

ABF110G16 Series

ABF110L5 Series

ABF110L6 Series



### READ AND SAVE THESE INSTRUCTIONS

Thank you very much for purchasing our bath fan. Please read the instructions carefully before attempting to install, operate, or service our bath fan. Failure to comply with instructions could result in personal injury or property damage. Please retain this booklet for future reference.

### TABLE OF CONTENTS

UNPACKING .....	02
SUPPLIED ACCESSORIES .....	02
DESCRIPTION .....	02
GENERAL SAFETY INFORMATION .....	03
DIMENSIONS .....	04
WIRING DIAGRAM .....	04
INSTALLATION I (NEW CONSTRUCTION) .....	05
INSTALLATION II (RETROFIT) .....	08
MAINTENANCE (CLEANING) .....	09
PRACTICAL GUIDE TO INSTALLATION .....	10
SPECIFICATIONS .....	11
PRODUCT SERVICE .....	11

## UNPACKING

Unpack and carefully remove the unit from carton.  
Refer to the supplied accessories list to verify that all parts are present.

## SUPPLIED ACCESSORIES

Part name		Quantity
Grille	<p>G15 or G16 or L5 or L6</p>	1
Suspension bracket assembly		1
Long screw (ST4X30)		5
Wire Protector Nut		1
Installation instructions		1

## DESCRIPTION

These bath fan models are listed by ETL under ETL file No.5011292.  
These bath fan models use a Sirocco fan driven by a capacitor motor.  
The motor is designed to have an extended service life with reduced energy consumption.  
The motor incorporates a thermal-cutoff for safety. The grille covering the fan body is a spring-loaded, quick attach type. A damper for preventing air counterflow is provided.  
The suspension bracket assembly can be used for both new and retrofit construction.  
The light uses a bright SMD LED.

## GENERAL SAFETY INFORMATION

1. Do not install this bath fan where interior room temperature may exceed 104°F (40°C).
2. Make sure that the electric service supply voltage is AC 120V, 60Hz.
3. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC), and the Occupation Safety and Health Act (OSHA).
4. Always disconnect the power source before working on or near the fan, motor, light fixture, or junction box.
5. Protect the power cord from sharp edges, oil, grease, hot surfaces, chemicals, or other objects.
- 6 Do not kink the power cord.
7. Do not install the unit where ducts are configured as shown in Fig.A.
8. Provide make up air for proper ventilation.



Fig. A

### CAUTION:

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. Not for use in cooking area. (Fig.B)
3. This product must be properly grounded.

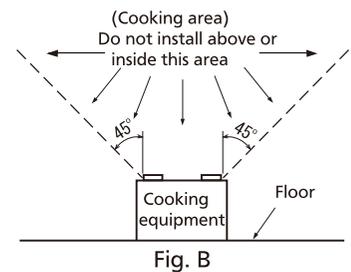


Fig. B

### WARNING:

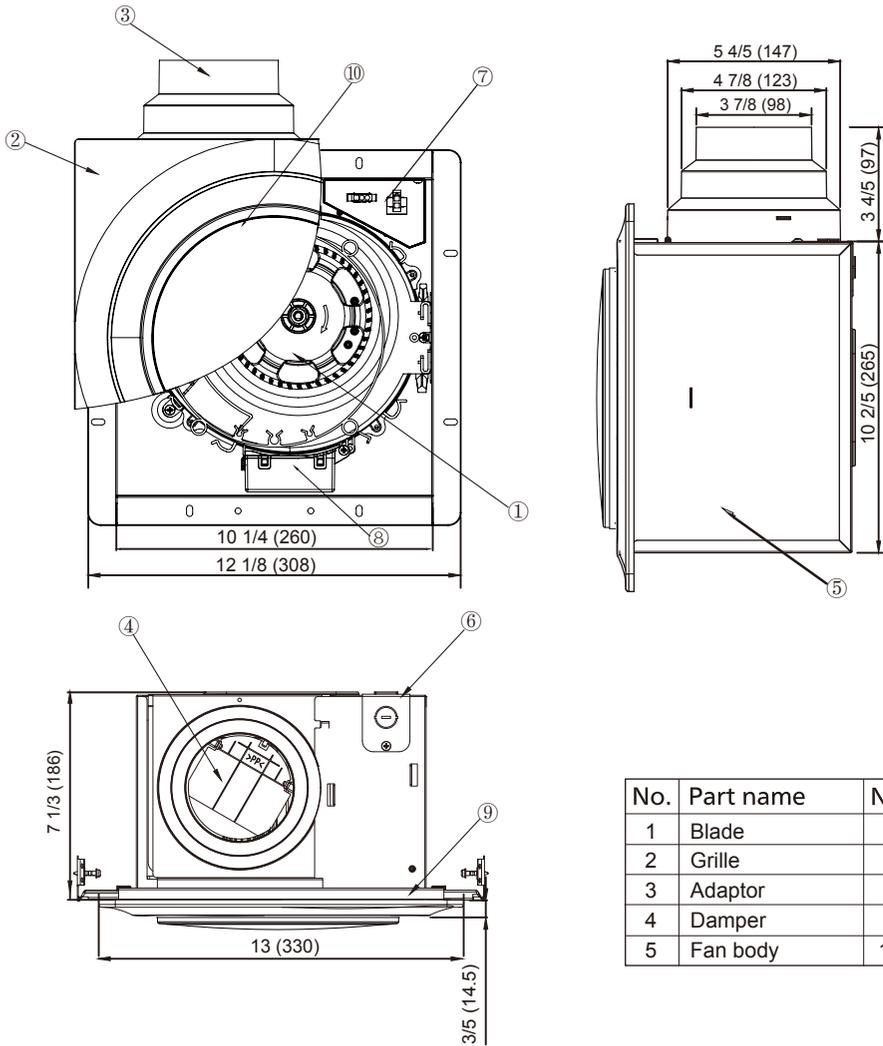
To reduce the risk of fire, electric shock, or injury to persons, observe the following:

1. Use this unit only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.
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 qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
4. 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 of 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 and be connected to a GFCI (Ground Fault Circuit Interrupter)-protected branch circuit.
8. These models are ETL listed for tub and shower enclosures.
9. Not to be installed in a ceiling thermally insulated to a value greater than R40. (This is required for installation in Canada only).

# DIMENSIONS

Series: ABF80L6, ABF110L6

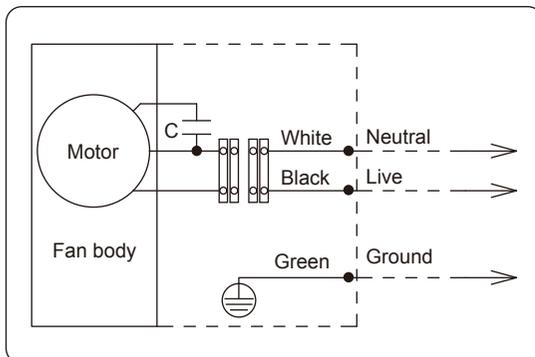
Unit: inches (mm)



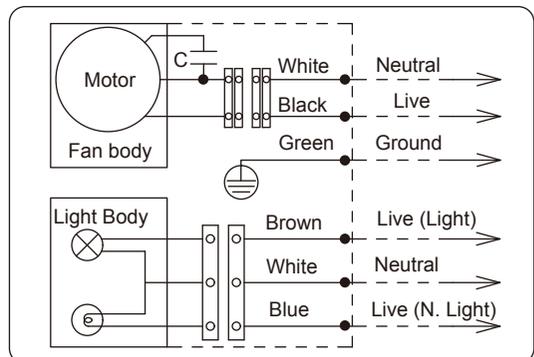
No.	Part name	No.	Part name
1	Blade	6	Knock-out plate
2	Grille	7	Junction box
3	Adaptor	8	Capacitance box
4	Damper	9	Bracket assembly
5	Fan body	10	LED light

# WIRING DIAGRAM

Fan only model:



With light model:



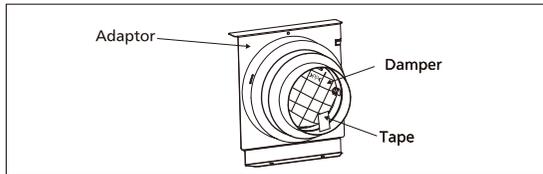
## INSTALLATION I (NEW CONSTRUCTION)

### ! CAUTION:

Please wear gloves during the installation work.

### IMPORTANT:

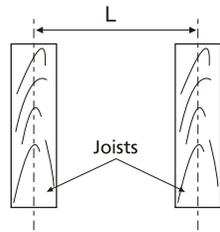
Remove the tape from damper and adaptor before installation. As shown below:



### Joist situation:

Two cases of spacing L :

- △ A 12 inches (305 mm)
- △ B 16~24 inches (406~610 mm)



- △ A If the spacing L is 12 inches (305 mm) on joists, please follow the installation step as (Fig.1). Secure 4 screws (ST4X30) at flange of frame to the joists. Then follow steps 6 to 9 of installation (page 6-8) to complete the installation.

- △ B If the spacing L is 16~24 inches (406~610 mm), use the suspension bracket assembly.

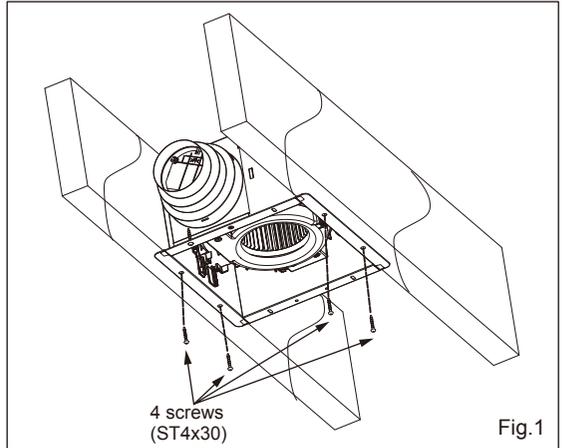


Fig.1

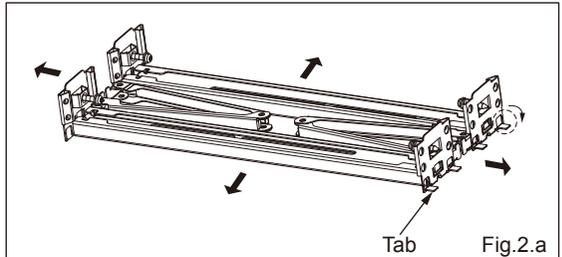


Fig.2.a

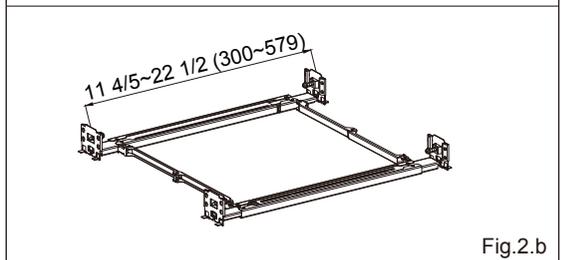


Fig.2.b

1. Bend down 8 tabs for positioning as (Fig.2.a) and unfold the bracket assembly as (Fig.2.b).
2. Fix one side of the bracket assembly to the joists by drilling 2 tapping screws (ST4x20) which have been fixed on it. (Fig.3)
3. Adjust the length of bracket assembly as the spacing between joists, and install to joist by drilling the other 2 tapping screws which have been fixed on the other side. Adjust the active part of bracket assembly to the proper position. (Fig.3)
4. Place the adaptor on the bracket assembly as indicated position and install it by using 2 self-drilling screws (ST4X30). (Fig.4)

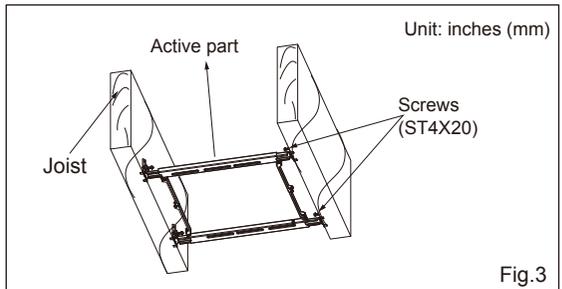


Fig.3

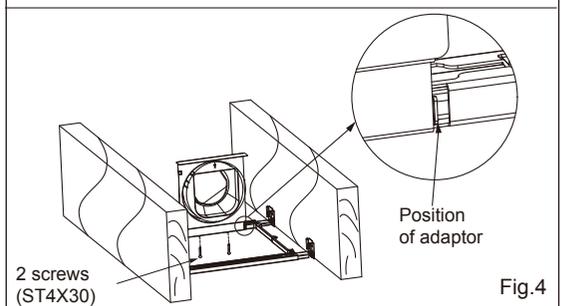
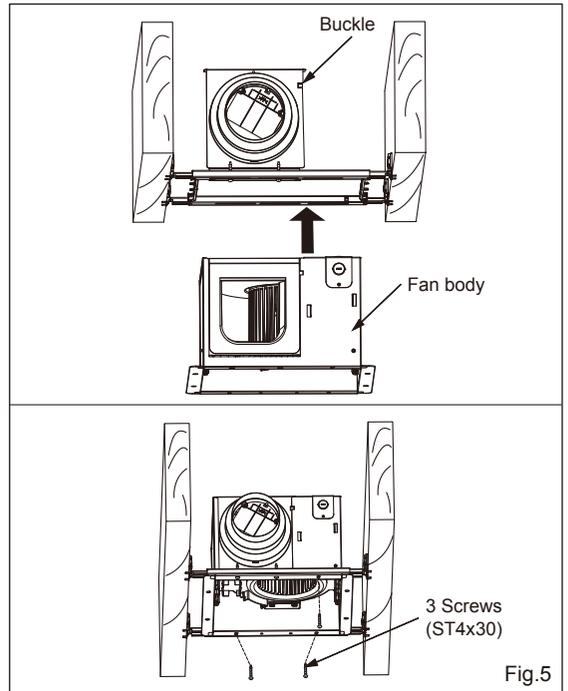


Fig.4

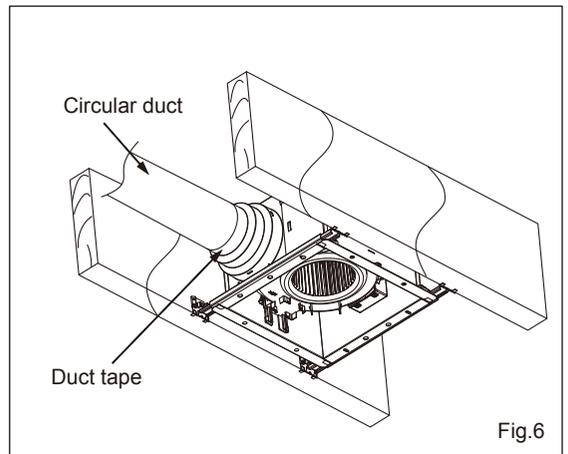
## INSTALLATION I (NEW CONSTRUCTION) CONTINUED

5. Push the fan body upwards until the fan body is stopped by the buckle on the adapter and secure the fan body by using the remaining 3 self-drilling screws (ST4X30). (Fig.5)

**! CAUTION:**  
Hold the fan body to prevent falling before fixing the screws.



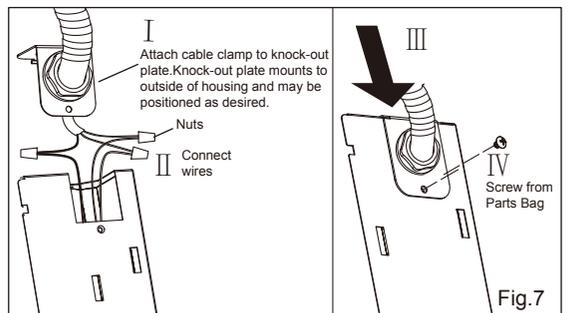
6. Install a circular duct and secure it with clamps or ties and seal it with mastic or approved duct tape. A 4" , 5" , or 6" circular duct is needed to connect to relevant part of adaptor. (Fig.6)



7. Remove the knock-out plate and secure conduit or wire protector nut to knock-out hole. (Fig.7. )

Refer to wiring diagram on page 4.  
Using UL approved wire nuts, connect house power wires to the ventilating fan wires (Fig.7.Ⅱ ), then attach it to fan body.

**IMPORTANT:**  
Follow all the local electrical safety codes as well as the National Electrical Code (NEC).

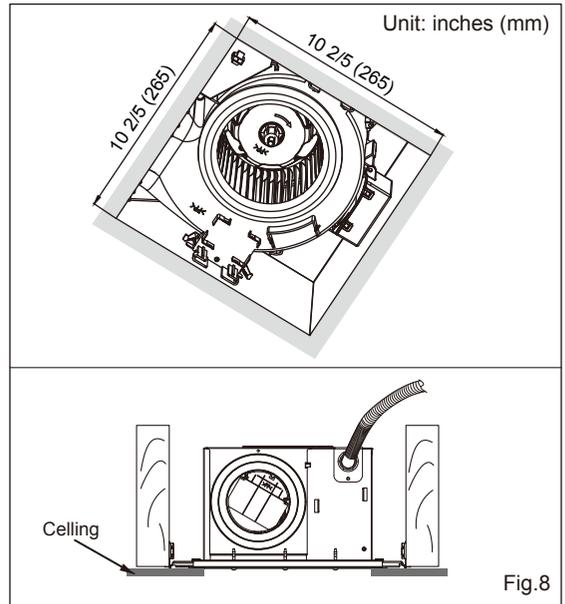
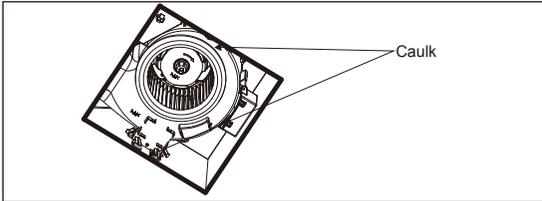


## INSTALLATION I (NEW CONSTRUCTION) CONTINUED

8. Finish ceiling work. Align ceiling hole with the inside edges of the flange. (Fig.8)

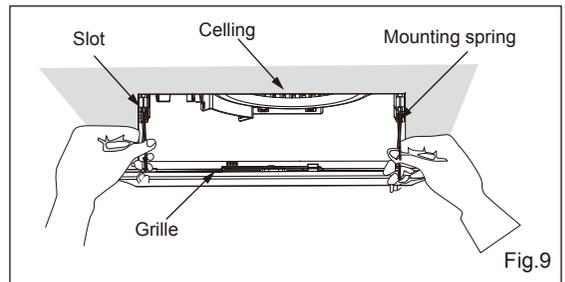
### IMPORTANT:

After finishing the ceiling work, fill gap between flange and ceiling with caulk or other sealant to prevent air leakage.



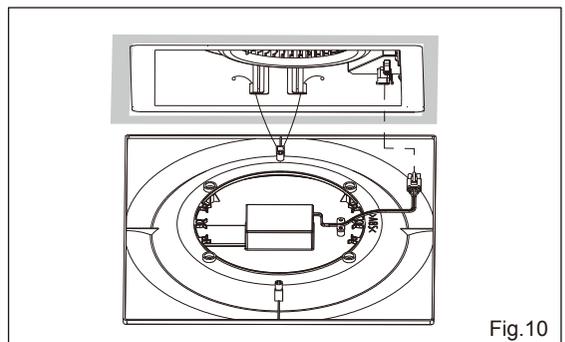
9. Insert mounting springs into slots and mount grille to fan body. (Fig.9)

For grille with a light, refer to the following installation method.



### ! CAUTION:

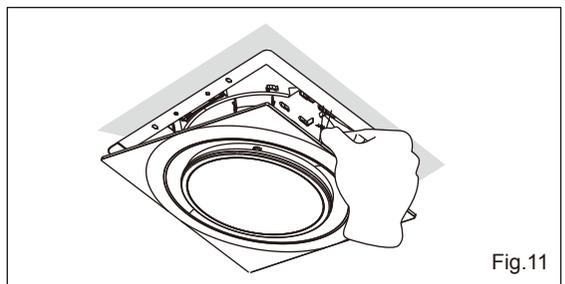
1. Before turning on the light, make sure the connector is at the correct position. If not, the lighting will not work.
2. The claw of connector must be secured to the rib completely. (Fig.10)



- Insert the grille mounting spring on the wiring side into the slot. (Fig.10)
- Insert the plug connector into the housing of the lighting unit and insert other mounting spring into the slot as shown and mount grille to fan body. (Fig.10, Fig.11)

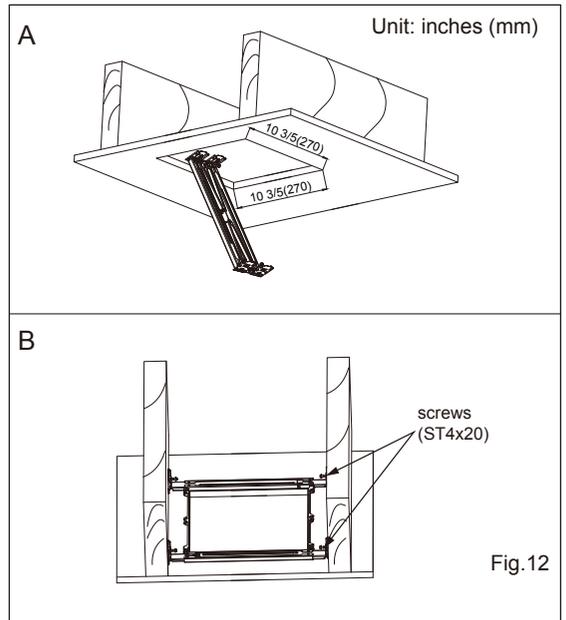
### ! CAUTION:

Mount grille carefully so the lead wire of light unit is not pinched.



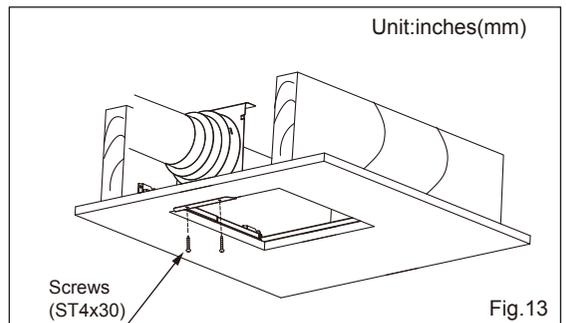
## INSTALLATION II (RETROFIT)

- Put the folded bracket assembly into ceiling hole, then follow step 3-4 of Installation I (NEW CONSTRUCTION page 5) to complete the extra spacebracket installation. (Fig.12)



- Install a circular duct and secure with clamps or ties and seal with mastic or approved foil tape. A 4" , 5" , or 6" circular duct is needed to connect to relevant part of adaptor. (Fig.13)

Follow step 4 of Installation I (NEW CONSTRUCTION page 6) to complete the adaptor installation. (Fig.13)



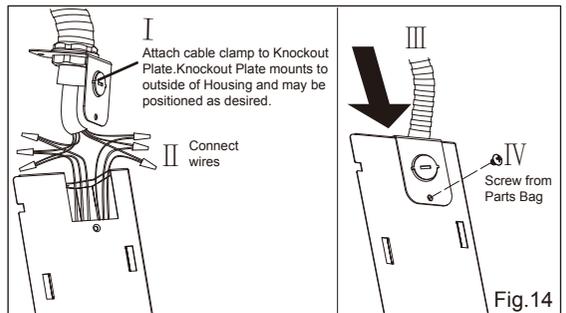
- Remove the knock-out plate and secure conduit or wire protector nut to knock-out hole. (Fig.14)

Refer to wiring diagram on page 4.

Using UL approved wire nuts, connect house power wires to the ventilating fan wires (Fig.14), then attach it to fan body.

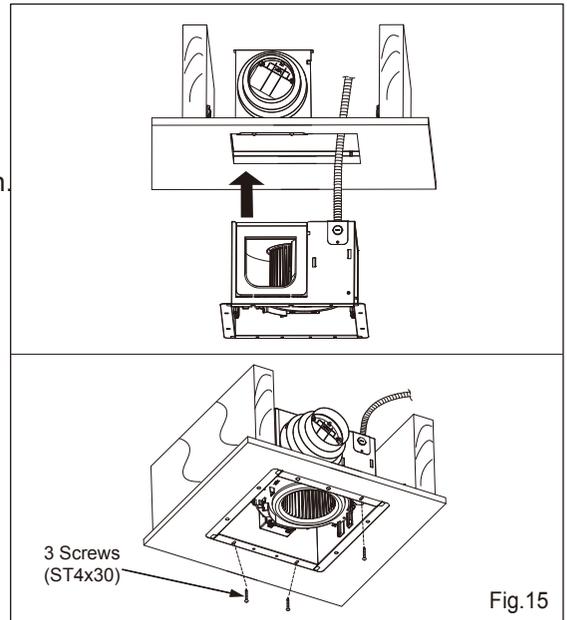
### IMPORTANT:

Follow all the local electrical safety codes as well as the National Electrical Code (NEC).



## INSTALLATION II (RETROFIT) CONTINUED

4. Push the fan body upwards until the fan body is secure with the joint, and secure them by using the remaining 3 self-drilling screws (ST4X30) (Fig.15)
5. Follow step 10 of Installation I (NEW CONSTRUCTION page 7-8) to complete installation.



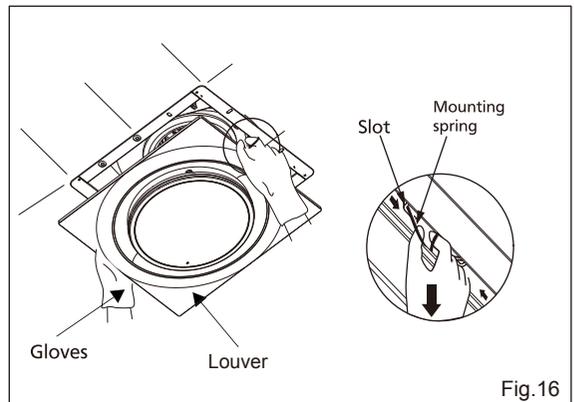
## MAINTENANCE (CLEANING)

### WARNING:

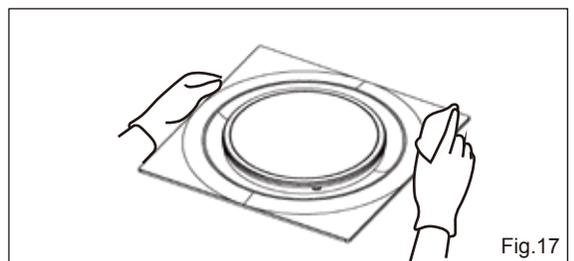
Disconnect power source before working on unit. Routine maintenance must be done every year.

### CAUTION:

1. Never use gasoline, benzene, thinner, or any other such chemicals for cleaning the ventilating fan.
2. Do not immerse motor in water when cleaning.
3. Do not soak resin parts in water over 140°F (60°C).

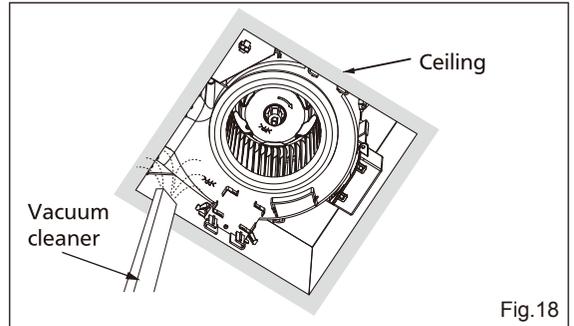


1. Remove grille. (Squeeze mounting spring and pull down carefully). (Fig.16)
2. Clean grille. (Don't put into hot water. Use non-abrasive kitchen detergent then wipe dry with clean cloth). (Fig.17)
3. The grille should be dry after cleaning before reattaching to fan motor.

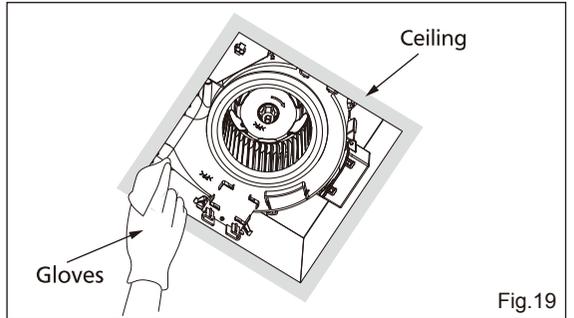


## MAINTENANCE (CLEANING) CONTINUED

4. Remove dust and dirt from fan body using a vacuum cleaner. (Fig.18)



5. Using a cloth dampened with kitchen detergent, remove any dirt from fan body then wipe dry with clean cloth. (Fig.19)



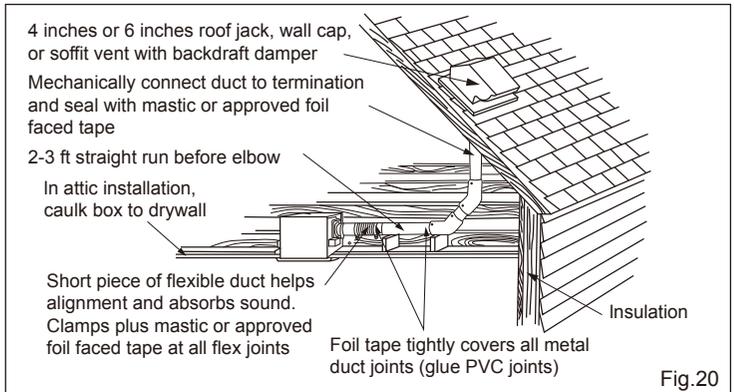
6. Reinstall Grille.

## PRACTICAL GUIDE TO INSTALLATION

Properly insulate the area around the fan to minimize building heat loss and gain. (Fig.20)

Loose fill or batt insulation can be placed directly over the fan housing in the attic.

The fans and fan/light combination units do not create excessive heat that is a common problem with recessed light fixtures or some competitors' fan / light combinations. Our efficient, cool-running motors and our LED lighting unit do not create enough ambient heat to be subjected to these limitations.



The ducting from this fan to the outside of the building has a strong effect on the air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated air flow.

## SPECIFICATIONS

Model No.	Air direction	Voltage (V)	Frequency (Hz)	Duct diameter (inches)	Noise (sones)	Power consumption (W)			Speed (rpm)	Air volume at 0.1"WG (CFM)
						Fan	Light	N.Light		
ABF80G15OR ABF80G15SN ABF80G15W	Exhaust	120	60	4", 5", 6"	0.4	18.7			849	80
ABF80G16OR ABF80G16SN ABF80G16W	Exhaust	120	60	4", 5", 6"	0.4	18.7			849	80
ABF110G15OR ABF110G15SN ABF110G15W	Exhaust	120	60	4", 5", 6"	1.1	25.2			1140	110
ABF110G16OR ABF110G16SN ABF110G16W	Exhaust	120	60	4", 5", 6"	1.1	25.2			1140	110
ABF80L15OR ABF80L15SN ABF80L15W	Exhaust	120	60	4", 5", 6"	0.3	18.4	10	0.7	928	80
ABF80L16OR ABF80L16SN ABF80L16W	Exhaust	120	60	4", 5", 6"	0.3	18.4	10	0.7	928	80
ABF110L15OR ABF110L15SN ABF110L15W	Exhaust	120	60	4", 5", 6"	0.9	25.6	10	0.7	1080	110
ABF110L16OR ABF110L16SN ABF110L16W	Exhaust	120	60	4", 5", 6"	0.9	25.6	10	0.7	1080	110