

# Air Storm 54" Fiberglass Fan Installation and Operation Manual

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## GrowerSELECT General Page

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### General Installation Notes:

Make sure that power is disconnected from system prior to servicing.

Installation of this equipment and related OEM equipment should be in accordance with these instructions, OEM's installation instructions and local codes (if applicable). Failure to follow specified instructions may cause damage to equipment and/or personal injury or death.

Take special note of any Warnings or Safety Decals on the equipment and in manuals.

Always wear protective clothing and any applicable Personal Protective Equipment (Safety Glasses and/or Ear Plugs) when working with the equipment.

Discarded materials, equipment and boxes should be recycled in accordance with local and national codes.

### Safety Instructions:

Read all safety messages in this manual and on equipment safety decals. Follow recommended precautions and safe operating practices.

Ground all electrical equipment for safety.

Ground all non-current carrying metal parts to guard against electrical shock.

Always keep safety decals in good condition and replace missing or damaged decals.



## Safety

### Warning Labels

Warning Decals have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety signs.

#### Safety–Alert Symbol

This is a safety–alert symbol. When you see this symbol on your equipment, be alert to the potential for personal injury. GrowerSelect equipment is designed to be installed and operated as safely as possible...however, hazards do exist.



Safety decals should be read and understood thoroughly by individuals within the local area of the fan. Safety decals should be visible from both the front and back of the fan. Should a decal be missing or damaged, please contact Hog Slat Inc. for a free replacement:

**Hog Slat Inc.**  
 206 Fayetteville St.  
 Newton Grove, NC 28366  
 Toll Free: 800-949-4647  
 Local: 910-594-0219

The below safety decal should be represented and visible on both the front and back sides of the fan. This label is identified by the HSLABEL-080 part number in the lower right corner.

#### WARNING – FLYING OBJECTS AND ROTATING PARTS

Ensure fan guards are in place during operation.  
 Securely tighten propeller to shaft to avoid slipping.  
 Disconnect power supply for inspection or service when guards are removed and personnel are exposed to propeller.

#### WARNING – HIGH VOLTAGE

Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically states otherwise.  
 Ground all electrical equipment for safety.  
 All electrical wiring must be done by a qualified electrician in accordance with local and national electrical codes.

Ground all non-current carrying metal parts to guard against electrical shock. With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.





## ***Installation***

Prior to any installation product should be inspected for any damage caused during shipping. Any damage found should be documented and communicated to liable parties.

## ***Operation Safety***

When fan is in operation no attempt should be made to service or interact with parts from the fan. Any attempt to interact with fan parts while the fan is operating could result in injury. Inlet and exit guards and or shutters are in place to help prevent foreign objects from entering inside the outer perimeter of the housing. If maintenance to the fan is required, interrupt the source of power to the motor and allow propeller to come to a complete stop before moving forward with any efforts to service.

## ***Maintenance Safety***

Air Storm Fans are designed and built with operator safety in mind. Some safeguards must be disassembled or removed for the parts to be serviced or replaced. As this fan does have moving parts and is supplied with electrical power, steps must be taken to ensure safety around these presented hazards.

### READ THESE INSTRUCTIONS BEFORE SERVICE OR PART REPLACEMENT

1. Read and understand the operating manual before trying to install or operate Air Storm Fans.
2. Power supply should be turned OFF and LOCKED OUT for service to motor and electrical components. Use **CAUTION** in checking voltage or other procedures requiring power to be ON.
3. DO NOT attempt to bypass any safety features or devices to operate the fan.
4. Keep fan clean of all debris that may collect the motor, prop, and any bearings, belts, or pulleys.
5. Use **CAUTION** is working around all moving parts of the fan.

Fan guards or shutters must be in place before fan can be safely started and operational.

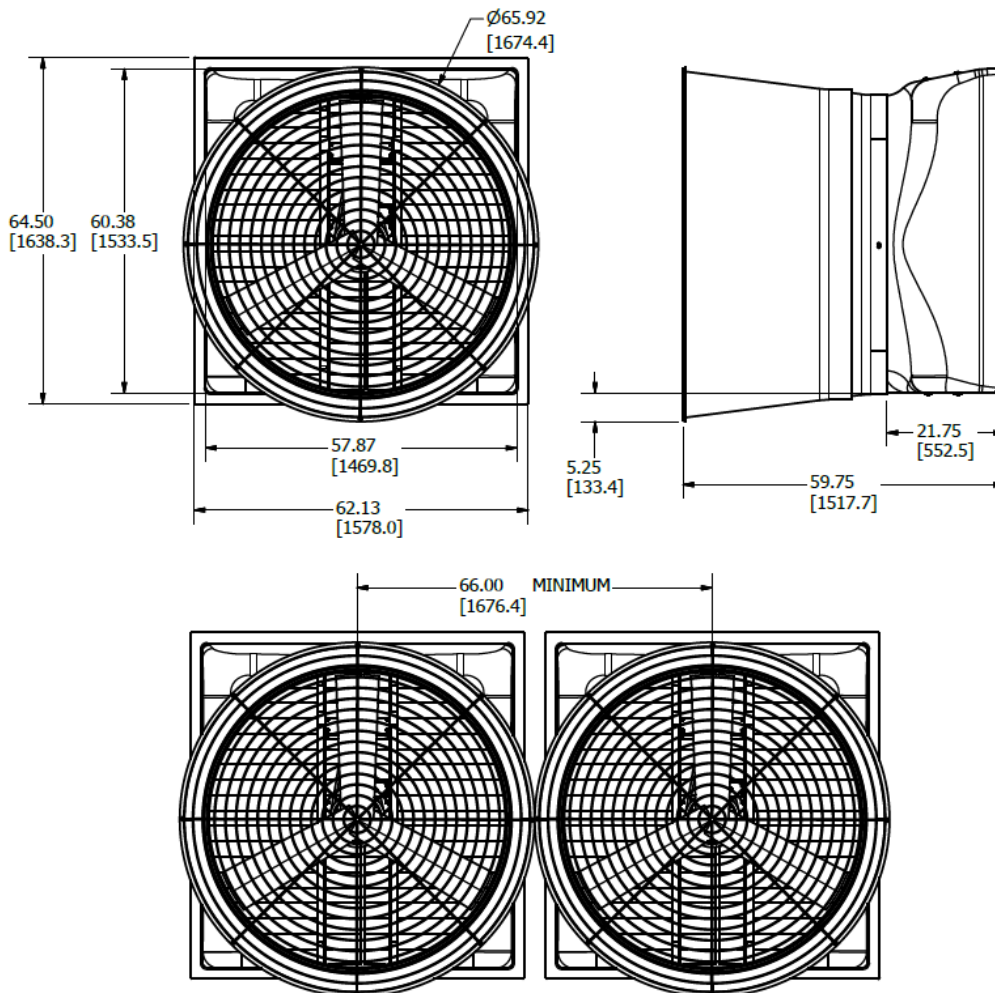


# Installation

## Framing

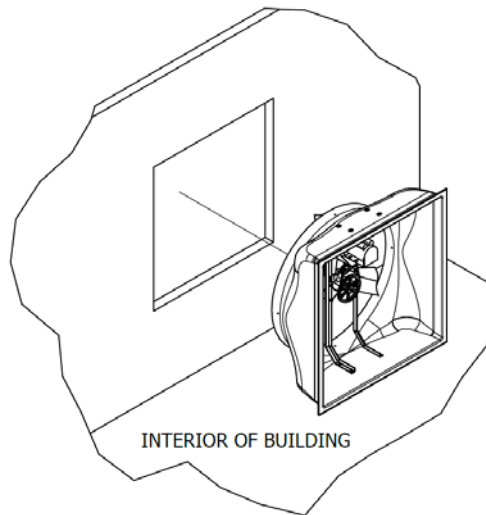
The rough in opening for the fan is an exact measurement that accounts for the heads of fasteners and openings for fan. Ensure there is proper clearance for installation or rough opening may require larger measurements.

Fan Model	Rough Opening (Width x Height)
54" Fiberglass Exhaust Fan	58" X 60.5" (147.32 cm x 153.67 cm)

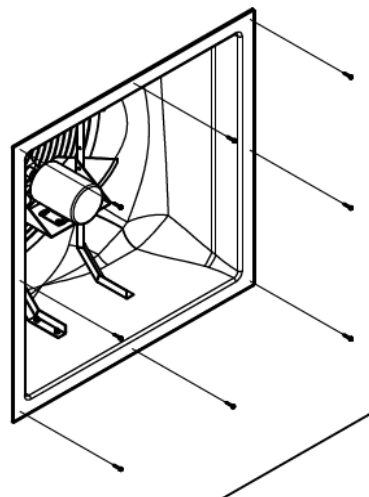


## Assembly

1. Remove packaging from Fan and cone if applicable.
  - Locate hardware kit(s) and supplied literature and store for later use.
  - Ensure not to damage the fan or components during this step.
2. Remove shutter from fan housing then from the inside of the building insert fan shroud into rough opening.

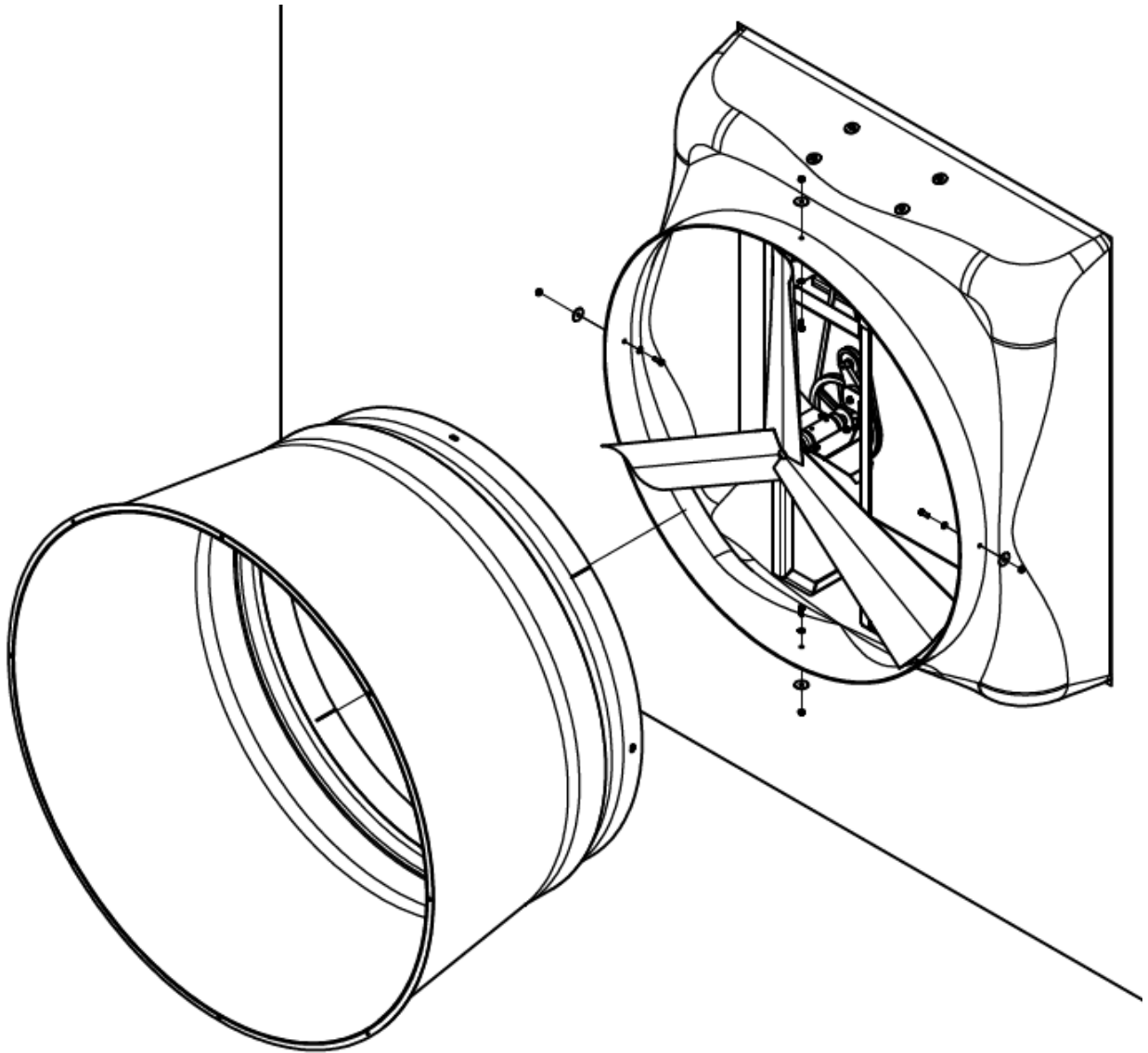


3. Using supplied #14 Sheet Metal Screws (805060), secure housing to framework.
  - A total of 8 fasteners are recommended to completely secure fan.
  - Each corner should be secured along with the midpoint between each corner.
  - Ensure adequate room is allowed to the inside of the fasteners for the shutter to mount flush to the fan housing.



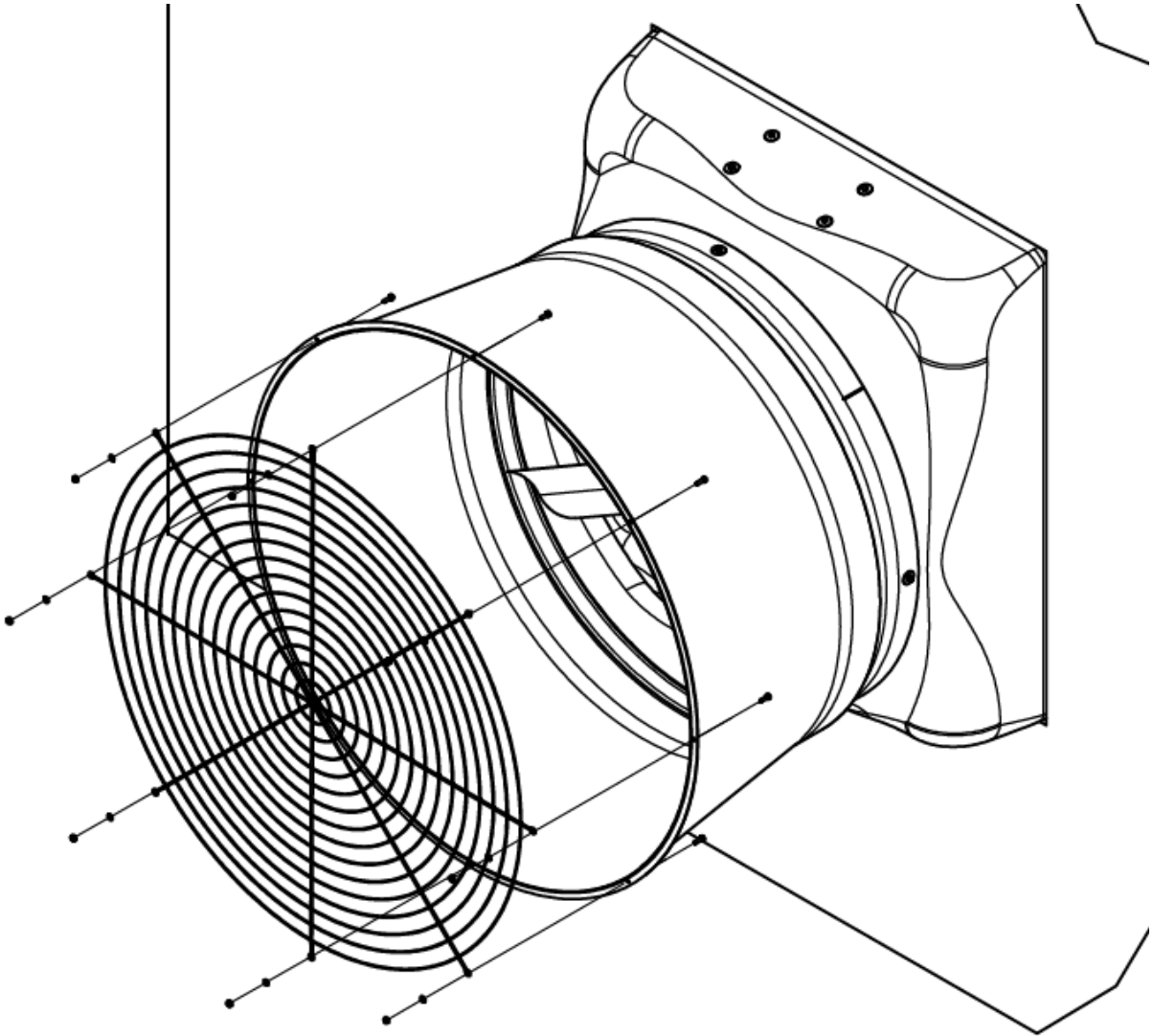
4. Insert cone onto fan housing orifice.  
Align predrilled holes in cone with pre drilled holes in housing and secure.
- Slotted holes are provided in the cone for easier installation.
  - Assemble as shown below with the flat head bolts, lock nuts, and fender washers.
  -

**! FLAT HEAD BOLTS SHOULD BE INSTALLED FLUSH IN HOUSING WITH LOCK NUTS AND WASHER ON THE EXTERIOR OF THE CONE!**



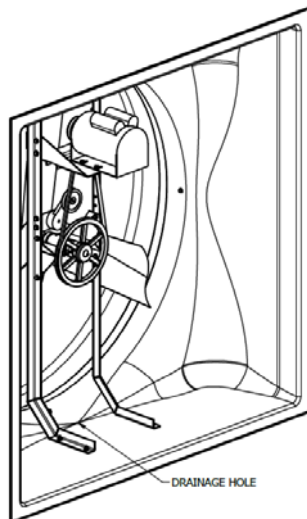


5. Place the fan exit guard onto the outlet flange of the cone as shown below. Secure with supplied fasteners with the bolt head facing the building and flange nuts facing away from fan.

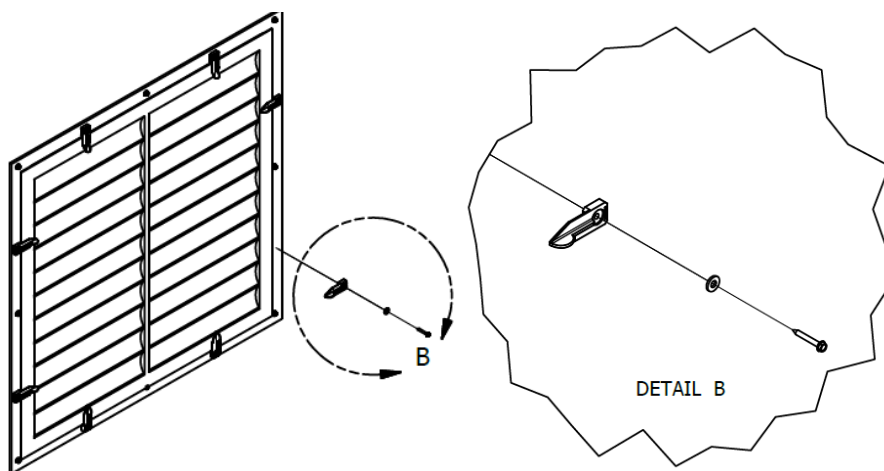


6. Using a 1/2" drill bit drill a relief hole in the housing at desired location for entry of power cord
  - ! ENSURE HOLE LOCATION WILL NOT ALLOW POWER CORD TO APPROACH THE PATH OF THE ROTATING FAN BLADE OR SHUTTER ACTION!

- Also ensure hole location will not allow excessive entry of water during adverse weather conditions
  - Image shown is recommendation only! Actual point of power entry should be determined by installer.
7. A second relief hole is recommended in most applications in the bottom of the housing to allow drainage of any liquid that could accumulate in the bottom of the housing. This hole should be drilled in base of the housing centered between the vertical support and orifice exit.



8. From the interior of the house use WS-001 Hardware package contents to secure the shutter to the fan inlet opening. Place shutter into fan inlet opening. Ensure shutter is oriented so shutter will swing upward when air flows from the interior of the house through the fan to the exterior of the house.
9. Attach (8) shutter retainer clips with aluminum washer and self tapping screw to fan housing. Space the retainer clips evenly between securing screws applied in step 2.



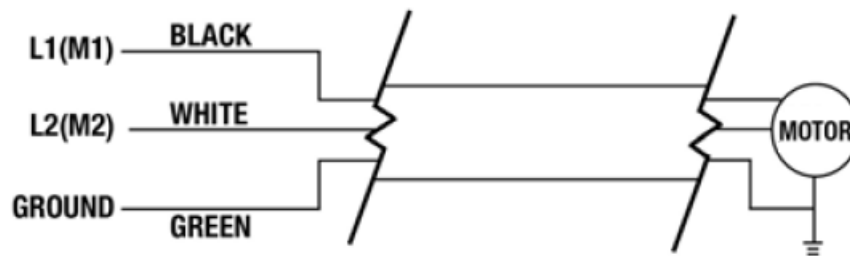
**THIS COMPLETES THE HOUSING ASSEMBLY OF THE FAN**

## Wiring

To access motor turn shutter retainer clips so shutter can be removed.

**Again, make sure that power is disconnected from system prior to servicing.**

This Power Unit is supplied prewired for 230 volt operation with the proper rotation direction for correct auger rotation. If 115 volt operation is required please see wiring instruction on Motor Data Label for converting to 115 volt operation. Black wire should connect to L1(M1) and White wire should connect to L2(M2). Green should be connected to Ground



### ELECTRICAL SHOCK HAZARD!

- Motor replacement and the associated wiring changes should only be made by qualified and properly trained individuals.
- Failure to follow the above warning can cause improper equipment function, premature failure of equipment or electrical shock, leading to property damage or personal injury.

## Pre-Operation Assessment

Before beginning fan operation, please follow the below checklist to ensure that:

- ✓ Fan power cord securely connected to a good power supply.
- ✓ All safety labels are visible to personnel that will work in the area.
- ✓ Exit wire guard and inlet shutter are in place and secured to the fan housing.
- ✓ No foreign objects are protruding through the fan housing.



## Operation

At all times during operation fan orifice should be free of debris. In the event any component of the fan is compromised discontinue use immediately and contact your local Hog Slat representative.

During operation shutter doors should open completely and rotate a full 90 degrees. In the event shutter doors are not opening completely force door open 90 degrees. (Slight deformation of the corner of the shutter door lip is expected and will not affect the performance and or life of the shutter)

## Maintenance

In order to begin any maintenance or service to the fan, power must be turned OFF and all moving parts must come to a complete STOP before accessing. All parts inside of the fan housing are accessed by removing the exit wire guard and inlet shutter.

Once service is complete, clean excessive build-up from parts. Excessive dust and dirt on parts can cause vibration in the propeller and overheating of the motor. Before beginning operation again, ensure that all safeguards are back in place and all foreign objects are free from the area.

## Performance

**Hog Slat Inc. takes great pride in supplying our customers with fans that meet or exceed their performance numbers. This is achieved by testing fans from the production line and continually working to maintain consistency in test data.**

**BESS LABS TEST NUMBER 14520 NOVEMBER 17, 2014**

**With Cone**

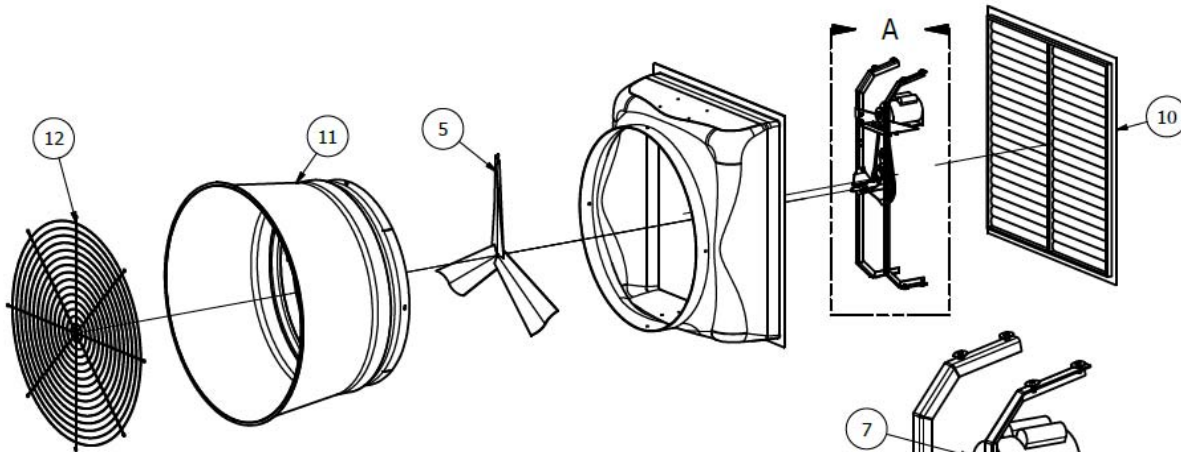
Static Pressure (in.H2O)	Airflow (cfm)	Rpm	Volts	Amps	Watts	cfm/Watt
0.00	27800	544	230.4	5.77	1284	21.6
0.05	26000	542	230.3	6.02	1340	19.4
0.10	24200	540	230.2	6.29	1399	17.3
0.15	22000	539	230.2	6.53	1454	15.1
0.20	18800	537	230.0	6.73	1495	12.6
0.25	14300	537	230.1	6.77	1506	9.5
0.30	10000	531	230.2	7.21	1603	6.2



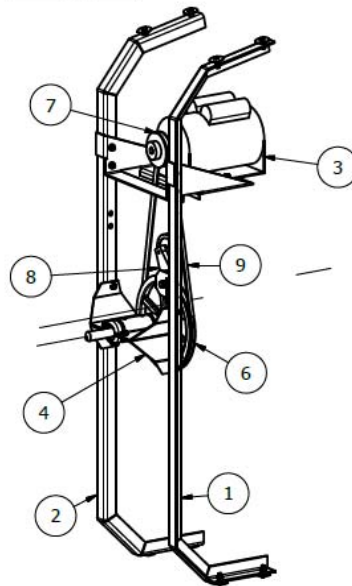
## Troubleshooting

Trouble	Possible Cause(s)	Corrective Action
<b>Excessive noise</b>	Worn motor bearing.	Replace
	Damage to fan blade	Replace prop
	Loose fasteners on motor or housing	Tighten fasteners
<b>Excessive vibration</b>	Fan blade is out of balance due to dirt build-up.	Clean entire unit
	Fan blade is out of balance due to damage	Replace prop
<b>Insufficient airflow</b>	Intake or exhaust guards clogged with debris	Clean entire unit
	Intake or exhaust blocked by foreign object	Remove object from airflow path
<b>Fan won't operate</b>	Open power supply circuit.	Check wiring and reset circuit breaker
	Defective motor	Reset motor, repair, or replace
<b>Motor overheats and nuisance trips</b>	Improper airflow due to clogged Inlet/Outlet	Clean entire unit
	Motor or Fan prop has excessive debris build-up	Clean entire unit

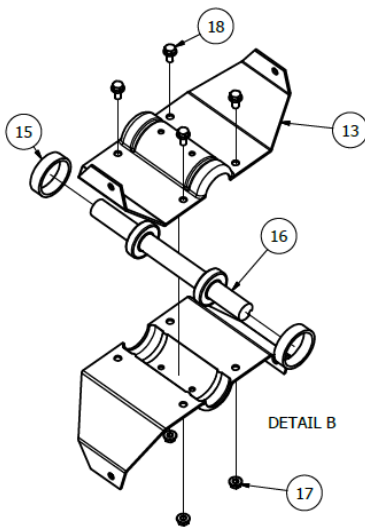
## Exploded Diagrams/Replacement Parts



PARTS LIST		
ITEM	PART NUMBER	DESCRIPTION
1	AS-54314	Vertical Support, Left 54" Airstorm
2	AS-54315	Vertical Support, Right 54" Airstorm
3	HS9014	Motor 1.5HP 1725RPM 56FR 1PH 115/208-230V HD
4	HS903-6	Jack Shaft Housing SS
5	HS900-54F	Prop 54.50" 3 Blade Stainless
6	PAK-1141	Pulley AK114-1"
7	PAK3458	Pulley AK34-5/8
8	HS903-3	Tensioner Rotary Assembly With Splash Guards
9	HS903-7	Belt Power Twist Red AS-54C
10	HS901-6	Shutter PVC 57" X 59"
11	AS-54206	Cone 54" Poly Air Storm Fan
12	HS902-3	Guard 68" For 54" Air Storm Fan
N/S	SWE59	Key Machine 1/4" X 1-1/2" Undersized Square End
N/S	WS-HW1	Hardware Kit Shutter Retainer 8ct.
N/S	WS-HW4	Hardware Kit Cone Mounting 54" Fan
N/S	HSLABEL-080	Label Warning-High Voltage, Flying Objects, Rotating Blade



DETAIL A



DETAIL B

PARTS LIST				
ITEM	QTY	PART NUMBER	DESCRIPTION	
13	2	HS903-6-1	Bracket, Shaft Housing Stainless	
15	2	HS903-2-3	Bushing, Rubber Jack Shaft Housing	
16	1	HS903-6-2	Shaft, Assembly With Bearings HS903-6	
17	4	606240	Nut Serrated Flange 5/16"-18 SS	
18	4	605082	Bolt Ss 5/16" X 3/4"	

For OSHA compliant guards, contact your local Hog Slat representative.

## Hog Slat Limited Warranty

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Hog Slat warrants products to be free from defects in material or workmanship for a period of twenty-four (24) months from the date of **original purchase**. Hog Slat will credit, repair, or replace, at its option any product deemed defective within this time period. Labor costs associated with the replacement or repair of the product are not covered by the Seller/Manufacturer.

### Conditions and Limitations

1. The product must be installed by and operated in accordance with the instructions published by the **Seller/Manufacturer or Warranty will be void.**
2. Warranty is void if **all components** are not original equipment supplied by the **Seller/Manufacturer.**
3. This product must be purchased from and installed by an authorized retailer/distributor or certified representative thereof or the Warranty will be void.
4. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under the Warranty.
5. This Warranty applies only to components/systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this Warranty.
6. This Warranty applies only to the Original Purchaser of the product.

The **Seller/Manufacturer** shall not be liable for any **Consequential or Special Damage** which any purchaser may suffer or claim to suffer as a result of any defect in the product. **“Consequential” or “Special Damages”** as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.

THIS WARRANTY CONSTITUTES THE SELLER/MANUFACTURER'S ENTIRE AND SOLE WARRANTY AND THIS MANUFACTURER EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSES SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Hog Slat Retailers/Distributors are not authorized to modify or extend the terms and conditions of this Warranty in any manner or to offer or grant any other warranties for GrowerSelect products in addition to those terms expressly stated above. An officer of Hog Slat must authorize any exceptions to this Warranty in writing. The Seller/Manufacturer reserves the right to change models and specifications at any time without notice or obligation to improve previous models.



This equipment must be installed in accordance with all State and Local Codes and applicable Regulations which should be followed in all cases. Authorities having jurisdiction should be consulted before installations are made.



Hog Slat, Inc.  
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[www.hogslat.com](http://www.hogslat.com)

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Part Number: HSManual-055 Rev A3  
HSART-377  
Market: Hog & Poultry

