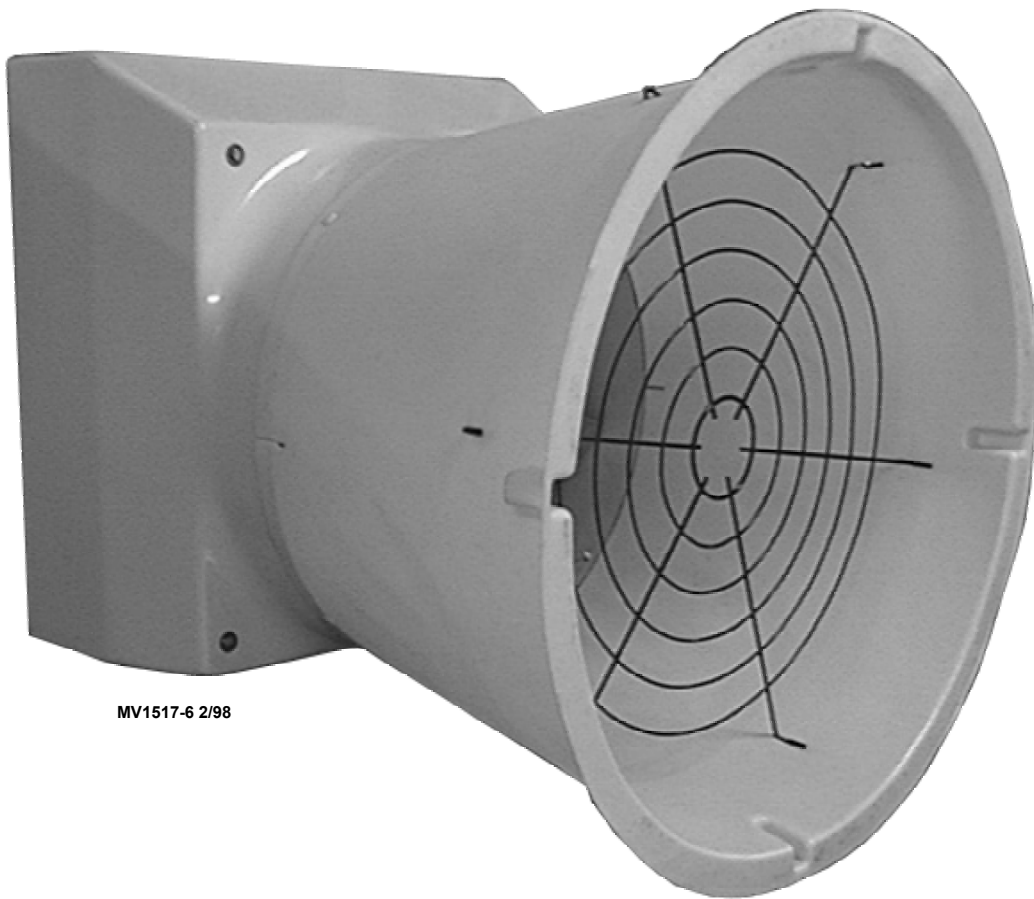




24" Fiberglass Fans

Installation & Operator's Instruction Manual



MV1517-6 2/98

ProTerra® Fan Extended Warranty

Agile Manufacturing warrants new ProTerra® Fiberglass Fans and components manufactured by it to be free from defects in material or workmanship from the date of initial installation by the original purchaser until expiration of the appropriate period set forth below. If such a defect is found by Agile Manufacturing to exist within the applicable period, Agile Manufacturing will, at its option, (a) repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement. The extended warranty is provided to the original purchaser for the following periods:

- *1. Fan fiberglass housings and cast aluminum blades - for as long as the original purchaser owns the product.
- *2. Fan motors and bearings - for two years from date of installation.
- *3. Fan components, including plastic shutters and polyethylene cones - for three years from date of installation.

Conditions and Limitations

1. The product must be installed by and operated in accordance with the instructions published by the **Manufacturer or Warranty will be void.**
2. Warranty is void if **all components** of the system are not original equipment supplied by the **Manufacturer.**
3. This product must be purchased from and installed by an authorized 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 systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this Warranty.

The **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 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.

Pro-Terra® 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 Pro-Terra® products in addition to those terms expressly stated above. An officer of Agile Manufacturing must authorize any exceptions to this Warranty in writing. The Manufacturer reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

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*Legend: C = Customer (end user), D = Distributor (sales), I - Installer of equipment

Support Information

The ProTerra[®] 24" Fiberglass Fans are designed to be used as exhaust fans in corrosive environments. The primary components are made from fiberglass, plastic, or stainless steel. Using this equipment for any other purpose or in a way not within the operating recommendations specified in this manual will void the warranty and may cause personal injury.

This manual is designed to provide comprehensive planning, installation, operation, and parts listing information. The Table of Contents provides a convenient overview of the information in this manual. The Table of Contents also specifies which pages contain information for the sales personnel, installer, and consumer (end user).

Distributor and Installer Information

Please fill in the following information about your Product.
Keep this manual in a clean, dry place for future reference.

Distributor's Name _____

Distributor's Address _____

Distributor's Phone _____ **Date of Purchase** _____

Installer's Name _____

Installer's Address _____

Installer's Phone _____ **Date of Installation** _____

System Specifications _____

Safety Information

Caution, Warning and Danger 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.

Using the equipment for purposes other than specified in this manual may cause personal injury and or damage to the equipment.

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. This equipment is designed to be installed and operated as safely as possible...however, hazards do exist.



Signal Words

Signal words are used in conjunction with the safety–alert symbol to identify the severity of the warning.

DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



WARNING

CAUTION indicates a hazardous situation which, if not avoided, **MAY** result in minor or moderate injury.



CAUTION

DANGER: Electrical Hazard

Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

Ground all electrical equipment for safety.

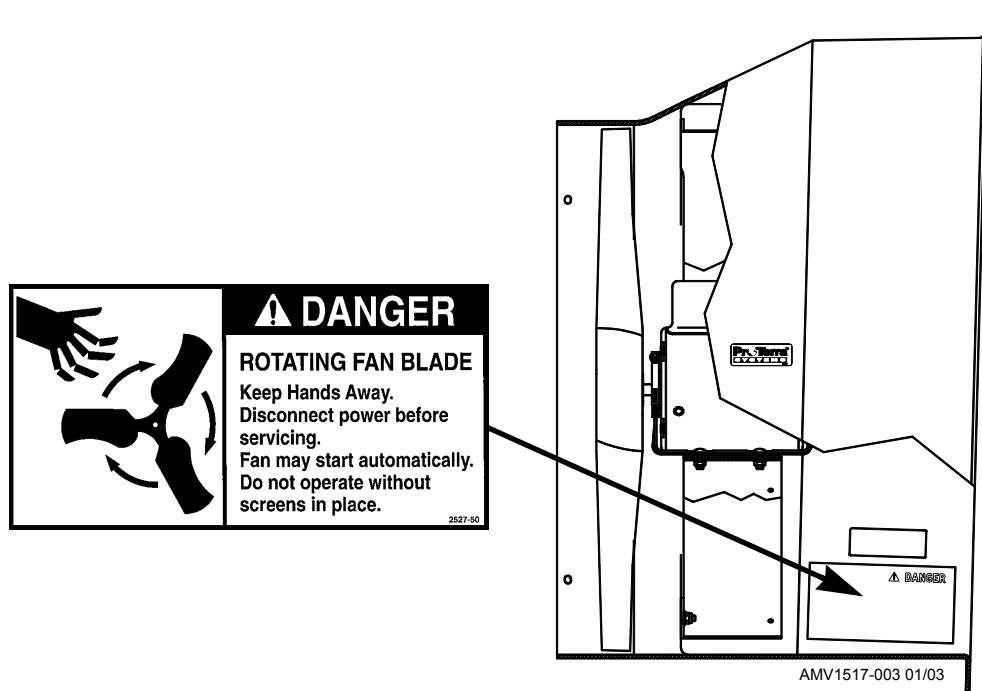
All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes.

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.



This diagram shows the proper location of the safety decal (DANGER–ROTATING FAN BLADE) as shipped from the factory. Replace damaged or missing decals. Make sure the decals may be easily seen at all times. Make sure the decal location shown below is clean and dry. Remove the backing of the decal and affix it to the Fan Shroud.



Technical Information

Motor Specifications:	24" Fiberglass Fan, 60 Hz.	24" Fiberglass Fan, 50 Hz.
Horsepower	1/3 H.P.	1/3 H.P.
Voltage	230 V	200-230 V
Hz.	60 Hz.	50 Hz.
Phase	Single Phase	Single Phase
R.P.M.	1075 R.P.M.	1350 R.P.M.

Blade:	24" Fiberglass Fan
Size	24"(610 mm)
Type	Cast Aluminum

IMPORTANT

Agile Manufacturing strongly recommends that a good alarm system should be installed in confinement buildings to warn of power failure and high temperature.

Agile Manufacturing also recommends that an alternate power source be available for confinement buildings in case of power failure.

Tools Required

- 7/16" Open End Wrench or Socket Wrench with 7/16" Socket
- Wire Cutters & Strippers
- Adequate Size & Quantity of Electrical Wire

Planning the Fiberglass Fan Installation

Carefully plan the installation. Dimensions are provided for the Fans with Cones and the Fan Covers. See **Figure I**. Be sure to allow enough space to install fans without interfering with other fans or equipment.

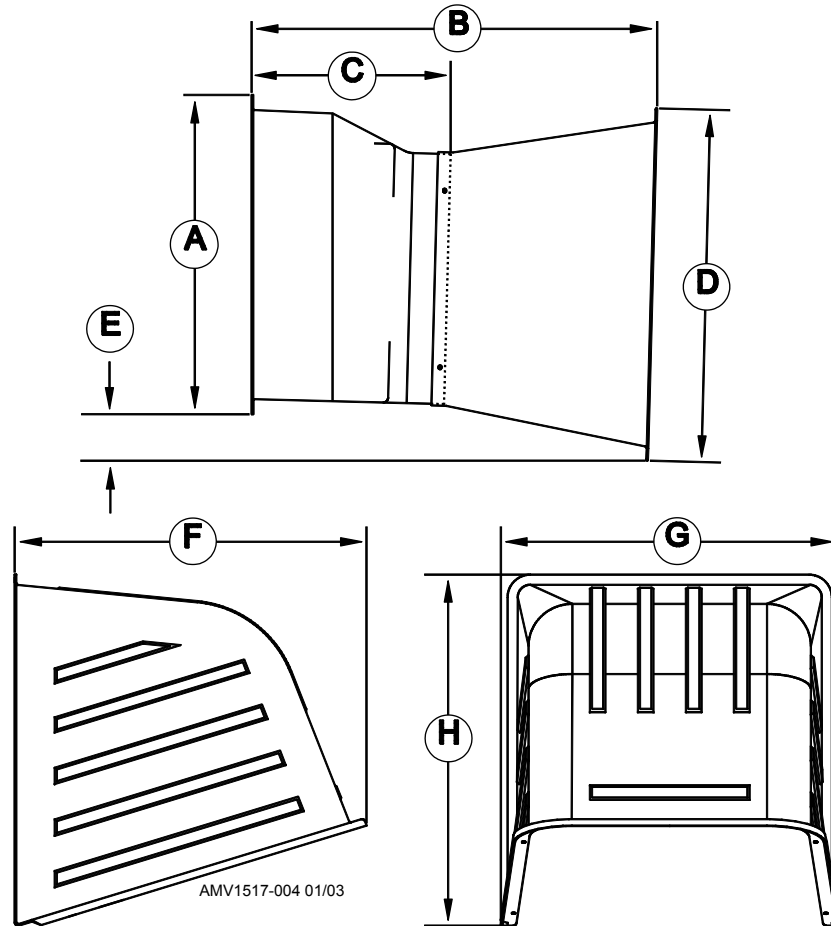


Figure I. Fan Dimensions

	A Sq.	B	C	D Dia.	E	F	G	H
24" Fan	31.50 (80.01 cm)	40.00 (101.6 cm)	19.75 (50.17 cm)	34.75 (88.27 cm)	4.50 (11.43 cm)	34.75 (88.27 cm)	33.50 (85.09 cm)	34.75 (88.27 cm)

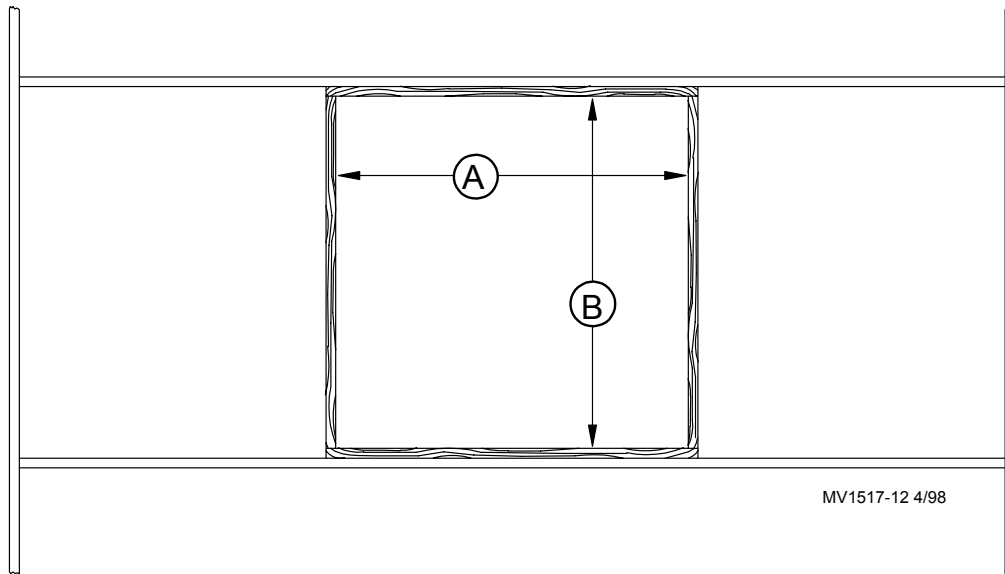
Fan Installation

The installation procedure is similar for the 24" Fiberglass Fans, unless otherwise noted. The primary difference is the size of opening required. See **Figure 2**.

Step I - Build the Wall Framing

Build wall framing as specified in **Figure 2**. The required wall opening for each fan is included in the chart below.

The Fans are shipped completely assembled and need only to be fastened to the wall.



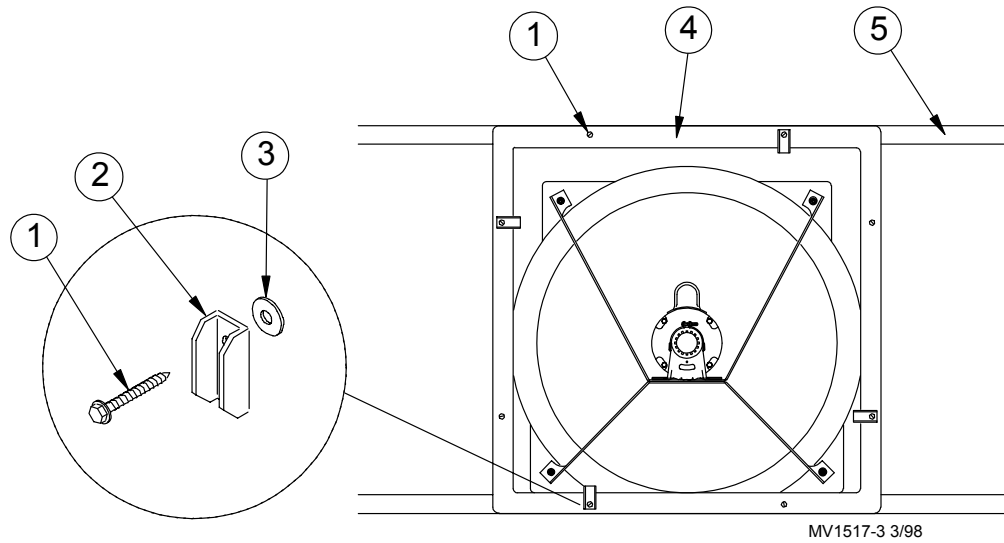
	A	B
24" Fiberglass Fan	28.50 (72.39 cm)	28.50 (72.39 cm)

Figure 2. Framing Dimensions

Step 2 - Install Fan in Opening

The Hardware Kit, supplied, includes (8) 1/4 x 1-3/4 Lag Screws, (4) Shutter Clips, and (4) Nylon Washers to secure the fan to the framed opening. Install as shown in **Figure 3**.

The Shroud Flange should be secured square in the opening.



Item	Description	Part No.
1	1/4 x 1-3/4 Lag Screw	40938
2	Shutter Clip	36729
3	Nylon Washer	4856
4	Fiberglass Fan	
5	Side Wall Framing	

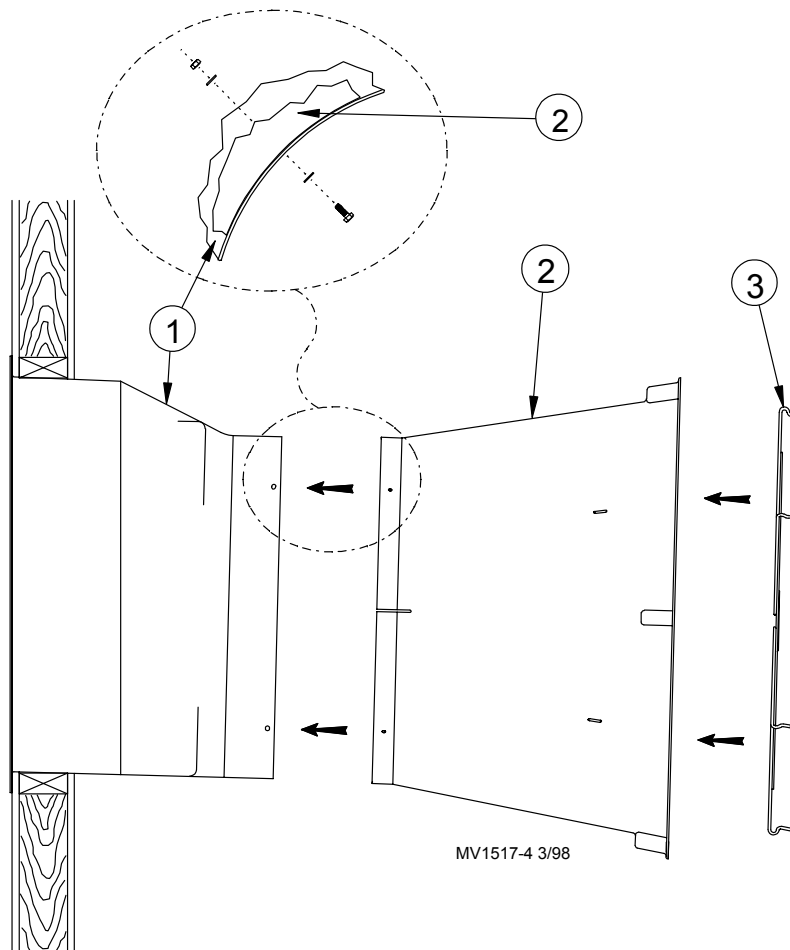
Figure 3. Installing Fiberglass Fan into Framed

Step 3 - Installing the Cone and Grill or Cover and Guard

Installing the Cone and Grill

Cones may be installed to improve the performance of the Fans. Slide the Cone over the Fan and align the holes and assemble using the included 1/4-20 x 3/4 bolts, 5/8 outside diameter flat washers, and 1/4-20 plastic nuts, as shown in **Figure 4**.

A Grill **must** be installed inside the Cone to prevent injury from rotating blades. Assemble as shown in **Figure 4**.



Item	Description
1	Fiberglass Fan
2	Cone
3	Grill

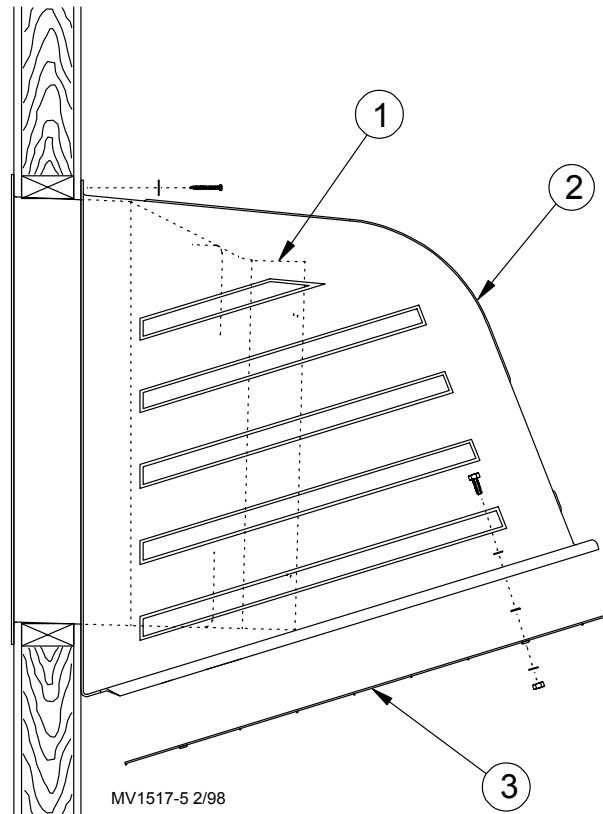
Figure 4. Installing the Cone and Grill

Installing the Weather Cover and Cover Guard

The Plastic Hood should be installed over the fan as shown in **Figure 5**.

The Hardware Kit includes 2" screws or 2-1/2" nails and 1" outside diameter washers to secure the Hood to the building.

Install the Guard Cover on the Weather Cover opening, using the 1/4-20 x 7/8 plastic bolts, 5/8 outside diameter flat washers, and 1/4-20 plastic nuts supplied. See **Figure 5**.



Item	Description
1	Fiberglass Fan
2	Weather Cover
3	Cover Guard

Figure 5. Installing the Weather Cover and Cover Guard

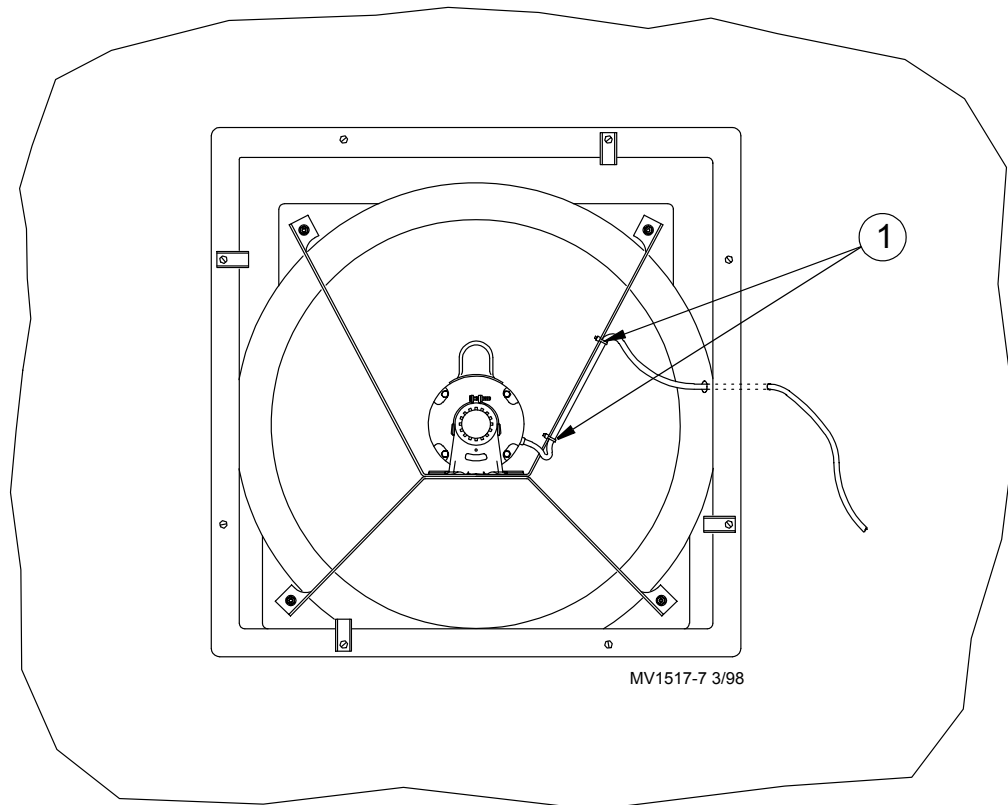
Step 4 - Motor Cord Routing

Install an electric disconnect within reach of each Fan.

Route the Motor Cord along the Upper Motor Mount Bracket and attach with the included Wire Ties. See **Figure 6**.

Some installations may require an exit hole for the motor cord be drilled in the side of the Fan. These installations must have electrical wires routed through conduit to protect them from damage. See **Figure 6**.

Note: Make sure the conduit or wires do not interfere with the Shutter operation.



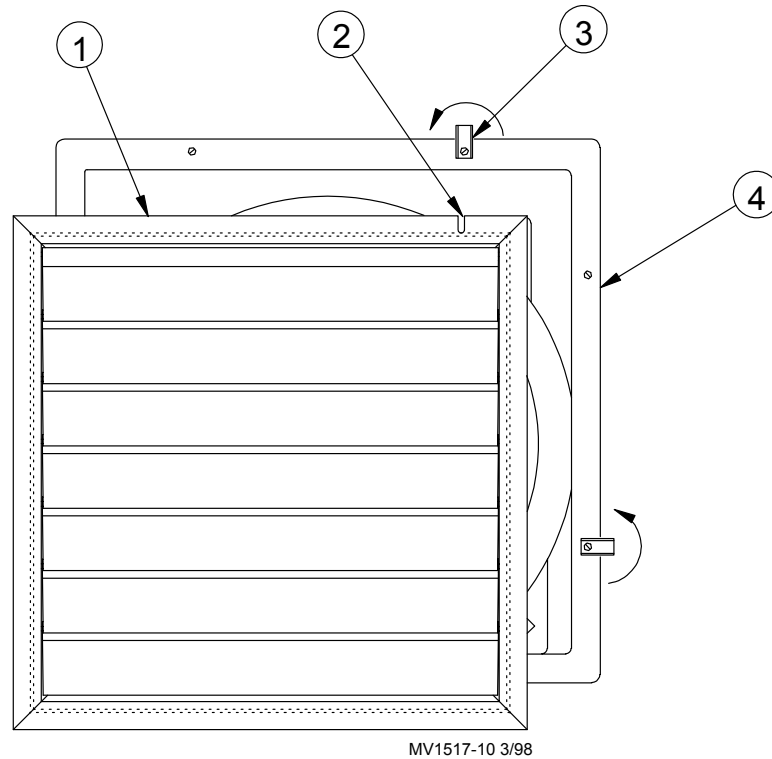
Item	Description
1	Wire Tie

Figure 6. Routing the Motor Cord

Step 5 - Shutter Installation

If the cord is not routed through the side wall of the fan, cut a 3/8" slot in the top flange of the shutter to route the Motor Cord through when the Shutter is installed. See **Figure 7**.

Place the Shutter in the Fan opening and lock it in place by rotating the Shutter Clips. See **Figure 7**.



Item	Description
1	Shutter
2	3/8" Slot in Shutter Flange
3	Shutter Clip
4	Fan Housing

Figure 7. Installing the Shutter

Maintenance:



Service and maintenance of fans should be done only by a qualified technician.

DISCONNECT POWER PRIOR TO MAINTAINING OR CLEANING THE FAN! The fan may start automatically causing serious injury or death.

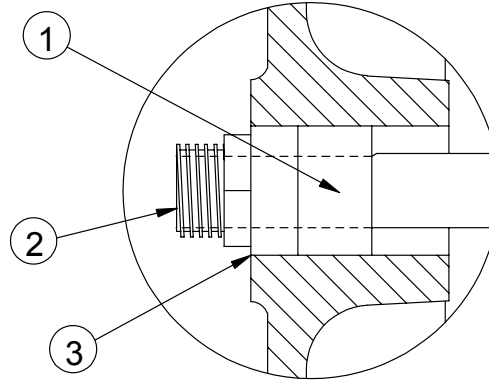
Keep the fan clean for maximum life and best performance.

Fan Blade Mounting

To mount the fan blade, align blade, bushing and shaft as shown in **Figure 8**. Use 3/4" socket or closed end wrench to torque nut on bushing to 175 in. lbs.

IMPORTANT

Do not lubricate or clean bushing.



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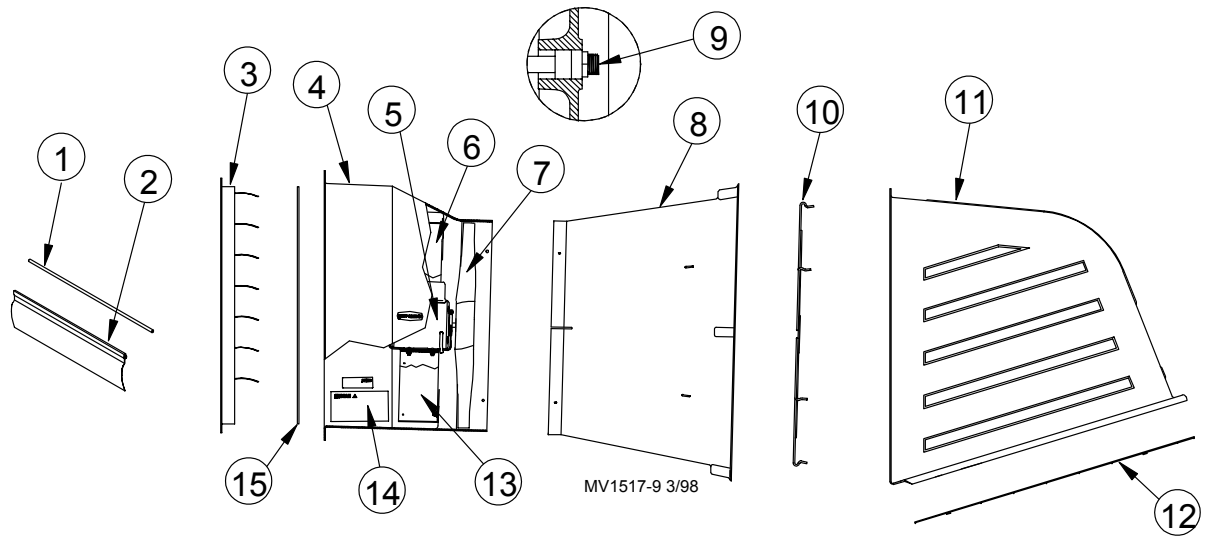
Item	Description
1	Fan Motor Shaft
2	Align end of Fan Motor Shaft flush with 1/2" Expanding Bushing
3	Align Fan Blade Hub flush with 1/2" Expanding Bushing as shown

Figure 8. Aligning Blade, Bushing and Shaft

Part Numbers for Fiberglass Fans

	60Hz, 1Ph 24" Part No.	60 Hz, 3 Ph 24" Part No.
Fan with Cone and Shutter	A40452-2422	A40452-2442
Fan with Weather Cover and Shutter	A40453-2422	A40453-2442

Fiberglass Fan Parts Listing



Item	Description	60Hz	50 Hz
		24" Part No.	24" Part No.
1	Shutter Pivot Rod	38702-9	38702-9
2	Shutter Louver	38038-9	38038-9
3	Shutter	A40602	A40602
4	Fiberglass Housing	40177	40177
5	Motor	33893	3005
6	Upper Motor Mount	40123	40123
7	Fan Blade	40671	4146
8	Fan Cone	40179	40179
9	Expanding Bushing 1/2"	40674	-
10	Fan Grill	35338	35338
11	Weather Cover	6950	6950
12	Weather Cover Guard	7009	7009
13	Lower Motor Mount	40124	40124
14	Danger Decal	2527-50	2527-50
15	Winter Shutter Insert (Optional)	41141-3	41141-3



Revisions to this Manual

Page No.	Description of Change
Various	Changed from TM to R
Page 2	Updated Warranty

Contact your nearby **ProTerra**[®] distributor or representative for additional parts and information.

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