



FARM PRODUCTS DIVISION

MEMBER OF AMCA
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FGDC16-36 FIBERGLASS FANS

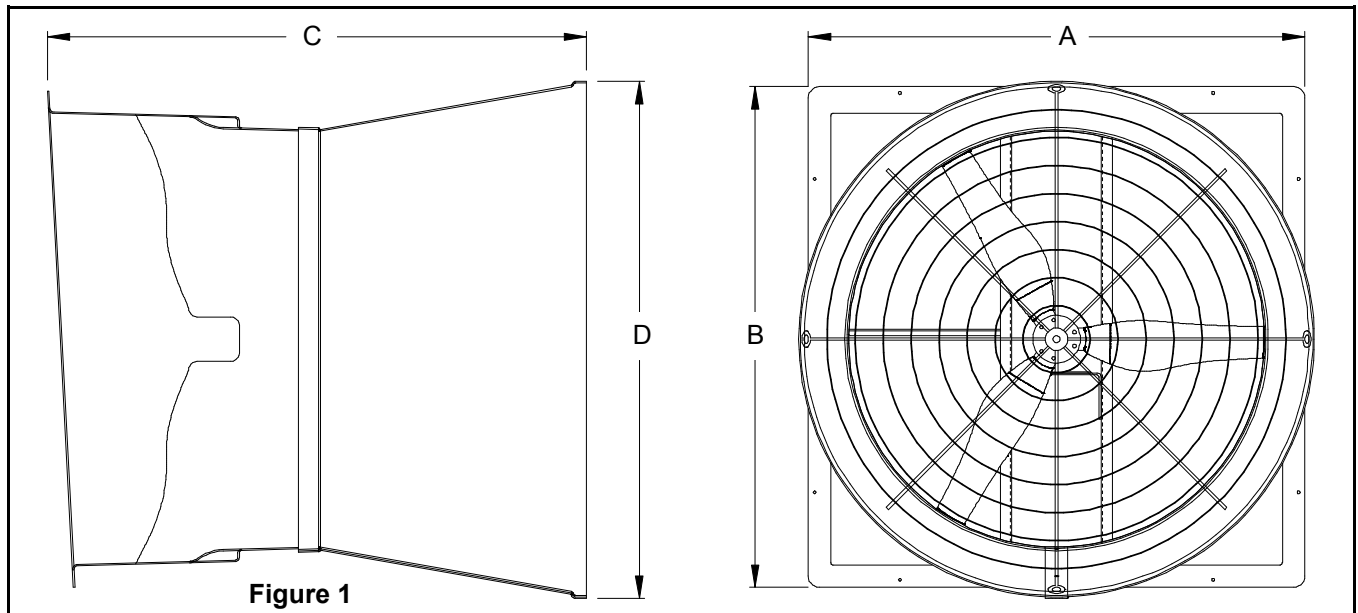


Figure 1

FAN SIZE	A	B	C	D	FRAMED ROUGH OPENING
16	23	23	27 5/8	22	20 X 20
20	27	27	30 3/4	27	24 X 24
26	33	33	31 5/8	33	30 X 30
36	44 1/2	44 3/4	48 1/8	46	41 1/2 X 41 1/2

FGDC16F17 * FGDC20H16 * FGDC26H11 * FGDC36J8

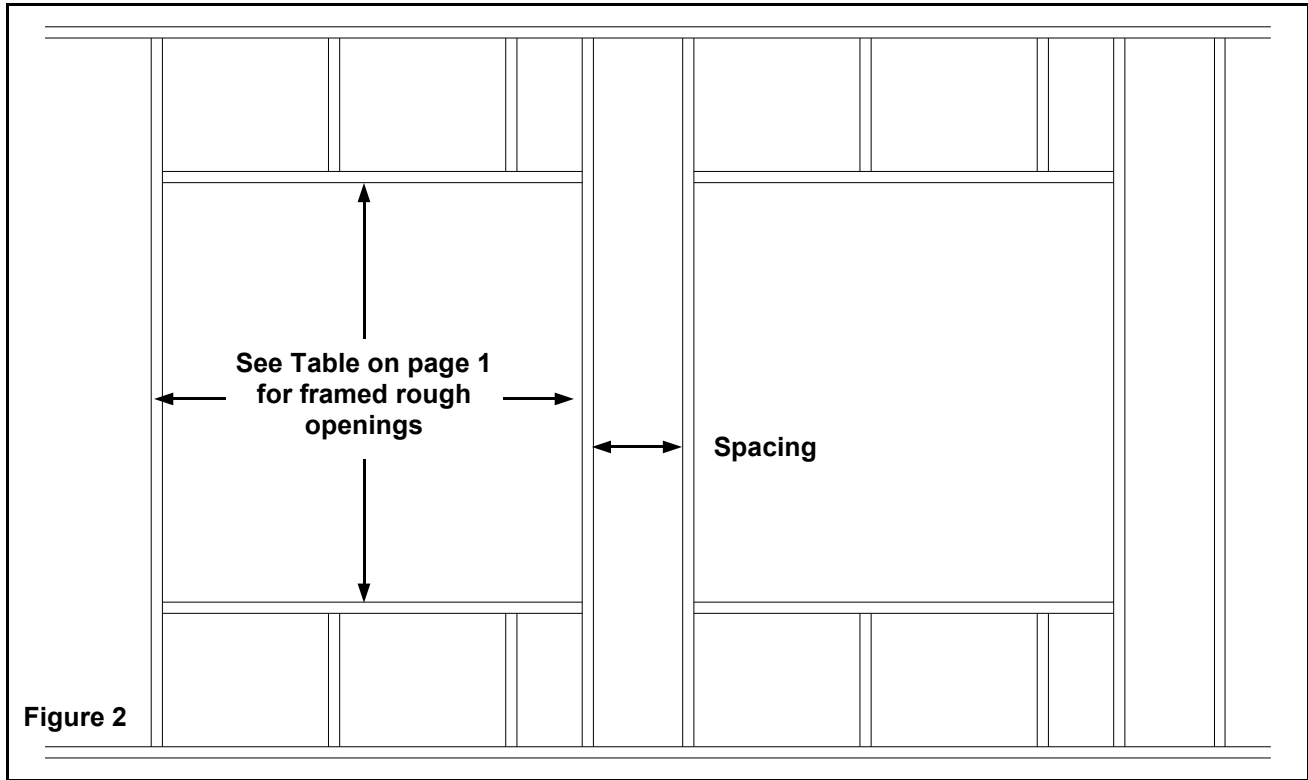
UNPACKING

Inspect the fan for signs of shipping damage. It is the responsibility of the customer to report any shipping damage to the freight carrier.

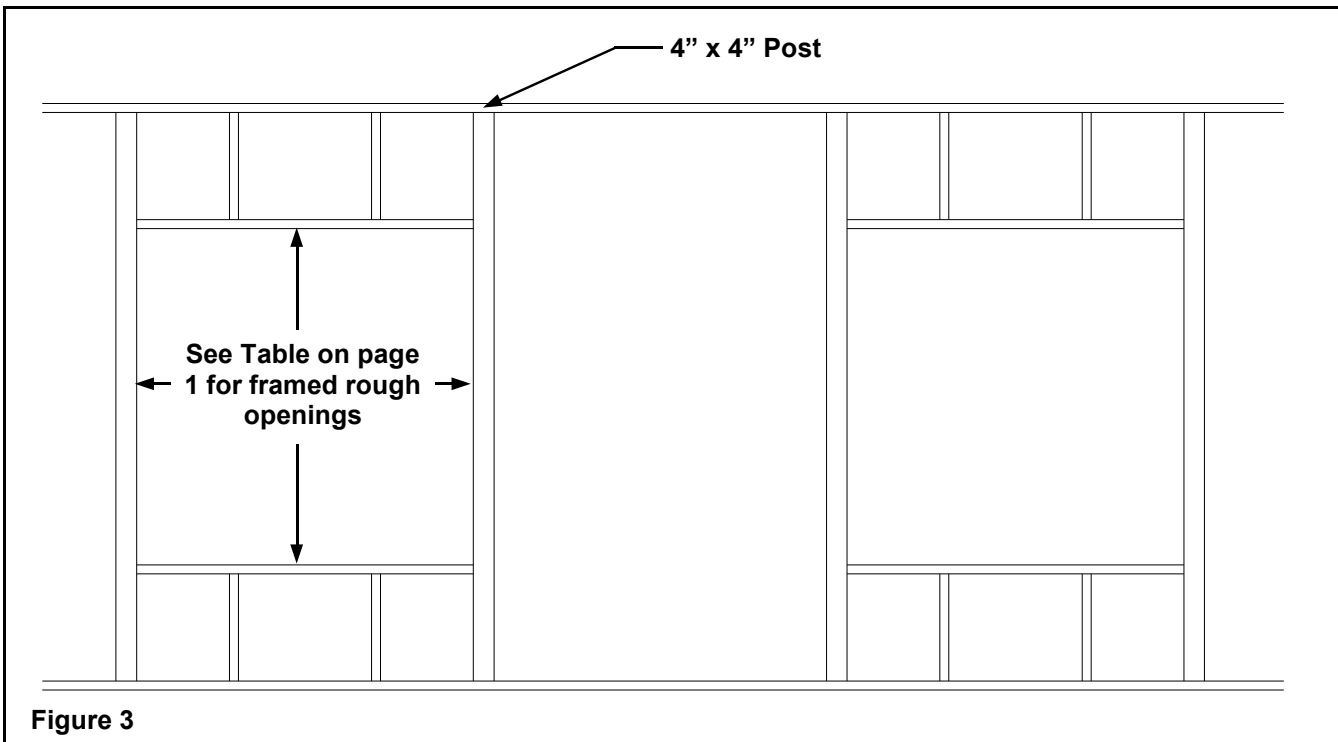
WHAT SHOULD YOU FIND?

Fan, Shutter, Cone, Guard and Hardware Package

FRAMING INSTRUCTIONS



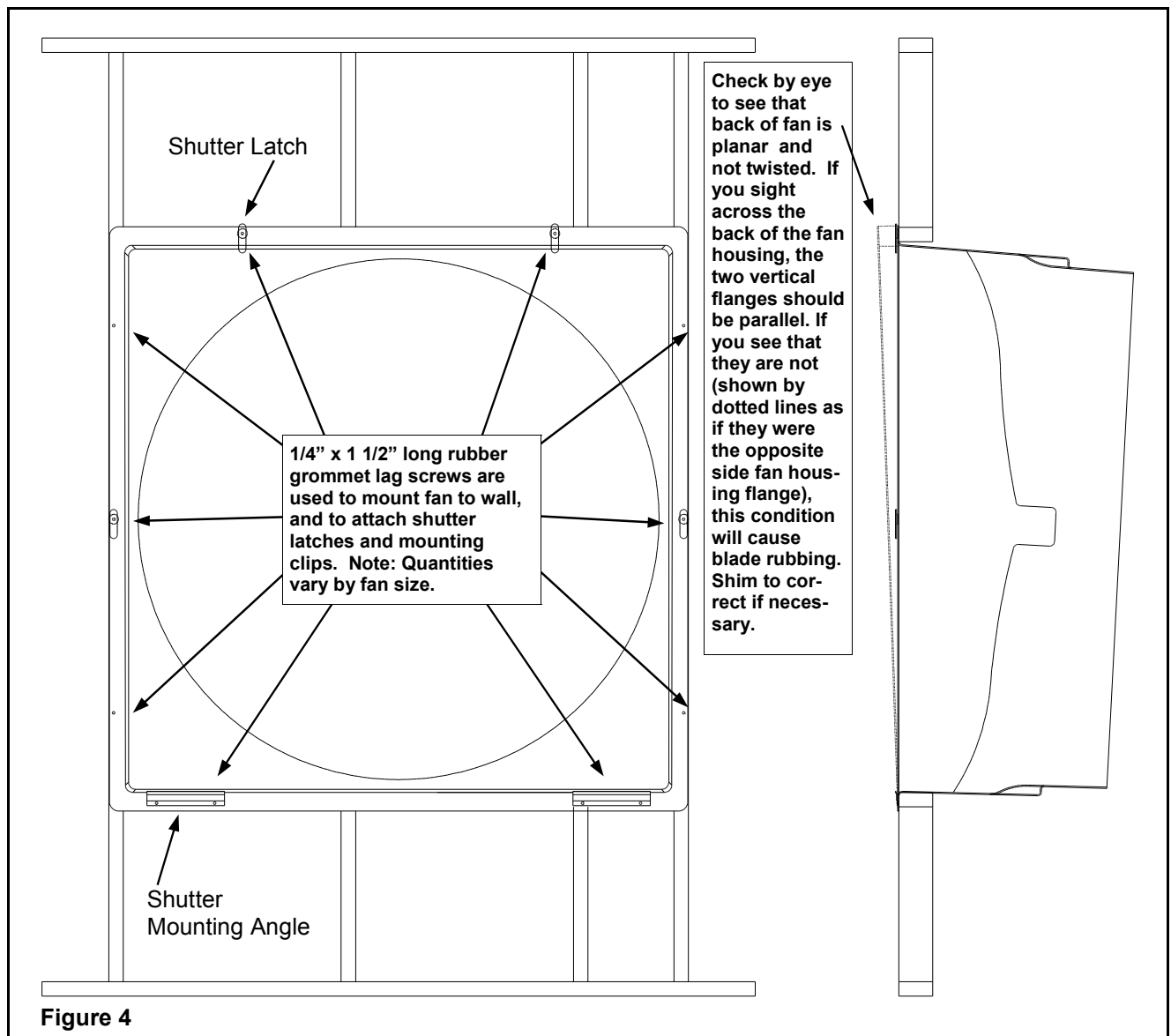
FRAME CONSTRUCTION RECOMMENDED SPACING IS 12"



POST CONSTRUCTION

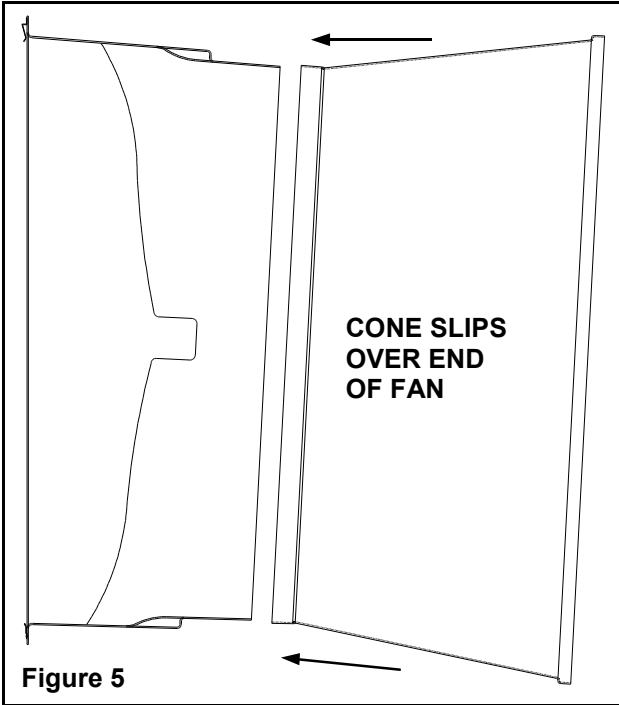
FAN HOUSING INSTALLATION INSTRUCTIONS

Insert the fan housing assembly through the framed opening of the wall from the inside, and secure it to the wall using the 1/4" x 1 1/2" long rubber grommet lag screws through the pre-drilled holes in the side flanges of the fan housing. Check installation by eye and see if back of fan housing is planar and not twisted in the wall opening. The fan housing MUST NOT be installed out of square. Doing so will result in an out of round condition and blade rubbing will occur. If necessary, shim the housing so it is square. The shutter mounting clips (one for size 16 and two for sizes 20, 26 and 36) are attached to the fan using the 1/4" x 1 1/2" long rubber grommet lag screws through the pre-drilled holes in the bottom flange of the fan housing and into the framed opening. Finally, the shutter latches (one for sizes 16, 20, 26 and four for size 36) are attached to the fan using the 1/4" x 1 1/2" long rubber grommet lag screws. Place the shutter in the shutter mounting clips and match, mark and drill the 1/4" hole(s) through the fan housing so shutter latch can rotate 90 degrees out of the way to remove the shutter. Install flashing around fan and caulk to properly seal fan to wall. See Figure 4.

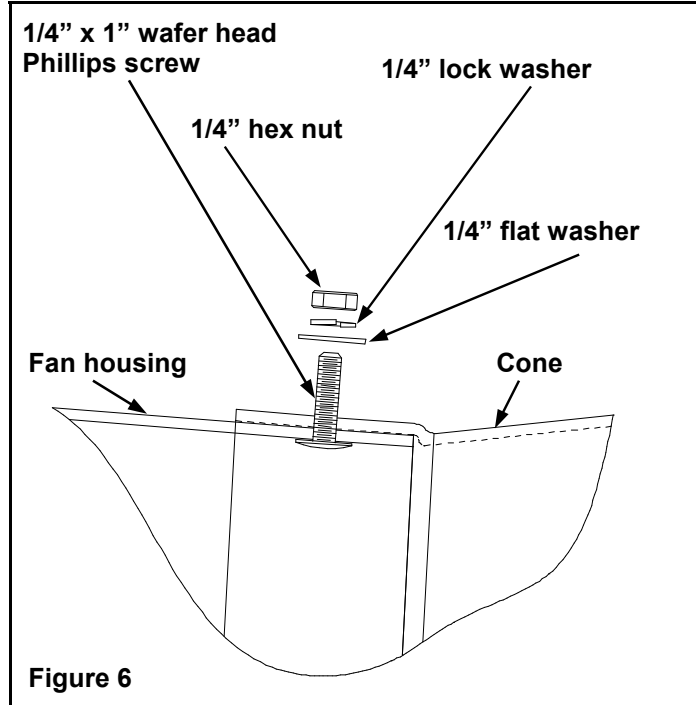


Note: Fan components have been removed for clarity of details.

CONE INSTALLATION INSTRUCTIONS

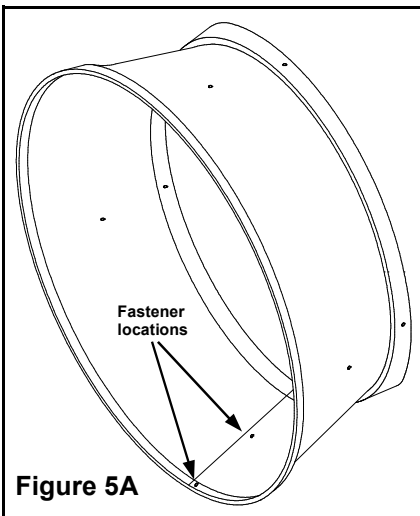


Side View of Fan Housing and Cone

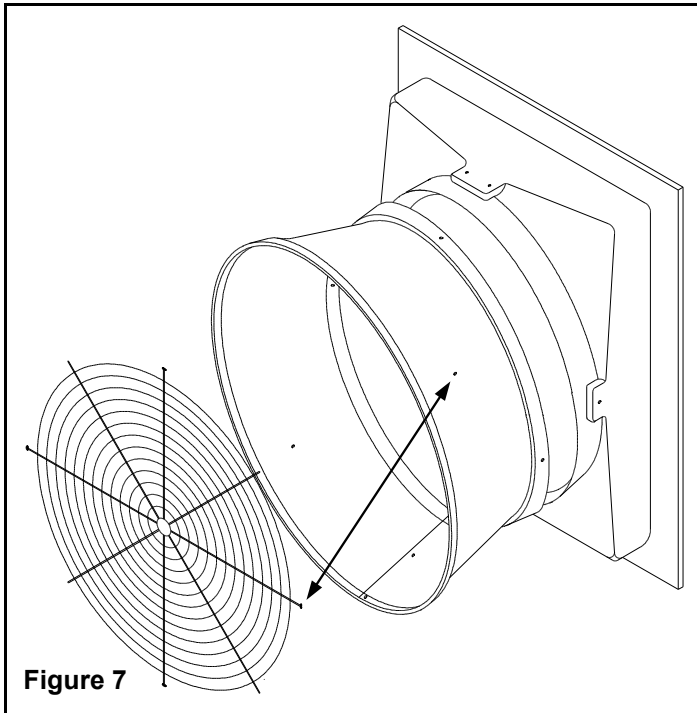


Detailed View of Hardware for Cone to Fan Housing

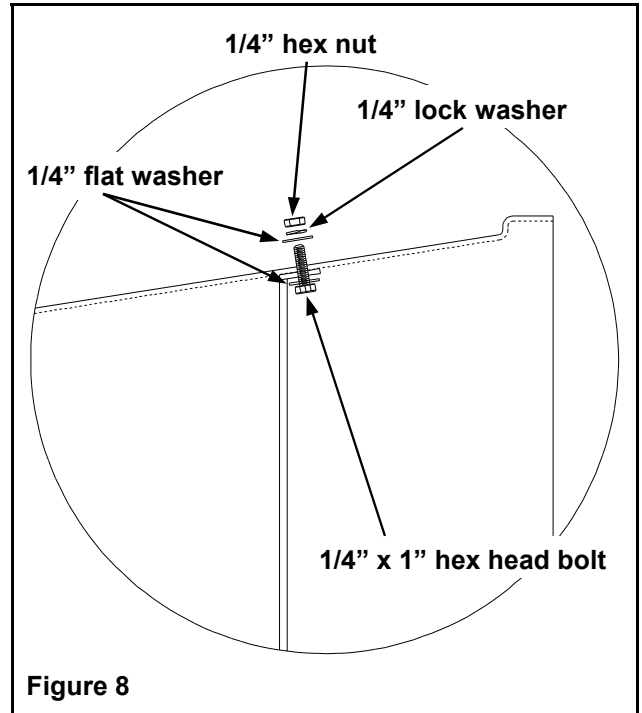
The cone is tapered at the inlet end so it will fit snugly over the fan housing. Fasten the cone at the overlap with two (2) 1/4" x 1" hex head bolts, flat washers, lock washers and nuts, only finger tight for now. See Figure 5A. Rotate cone while pushing it against the fan to line up the pre-drilled holes, and it will slide over the fan. See Figure 5. Fasten the cone to the fan housing with four (4) 1/4" x 1" wafer head Phillips screws, pushing the screws from inside the fan, through the fan housing and through the cone. Then, secure the cone to the fan housing on each screw with a flat washer, lock washer and hex nut. See Figure 6. Now, you can tighten all the hardware.



CONE GUARD INSTALLATION INSTRUCTIONS



View of Cone and Guard



Detailed View of Hardware for Cone and Guard

WARNING
THE FAN MUST NOT BE OPERATED WITHOUT THE GUARD MOUNTED IN THE CONE.

Hold the guard out in front of you and visually line up the eyelets in the guard with the pre-drilled holes in the cone. See Figure 7. Starting with the hole at the top, push one (1) of the four (4) 1/4" x 1" hex head bolts and 1/4" flat washers from the inside, through the guard eyelet and through the cone. Then, finger tighten the guard to the cone on the bolt with a flat washer, lock washer and hex nut. See Figure 8. Repeat this for the other three guard eyelet to cone connections. Once all hardware is in place, tighten to complete the assembly.

CONSTRUCTION FOR WINTER WEATHER PROTECTION

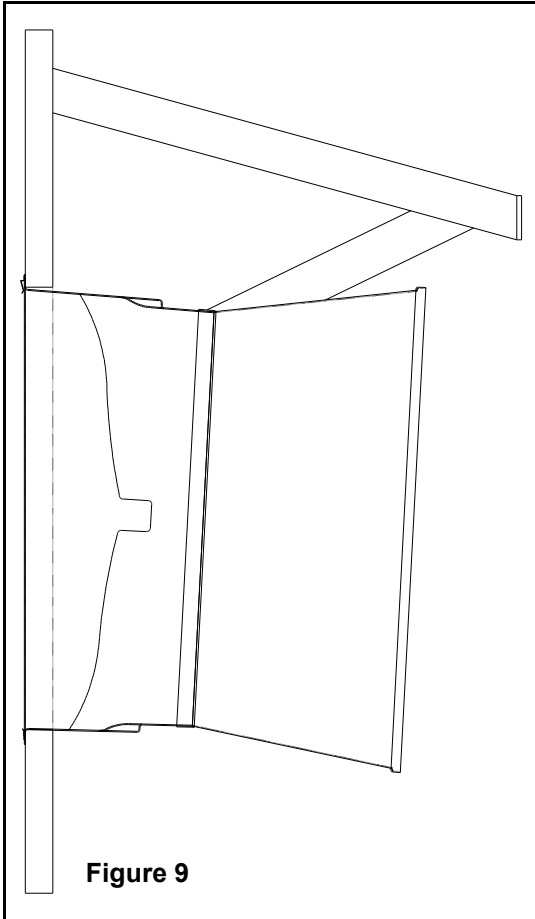
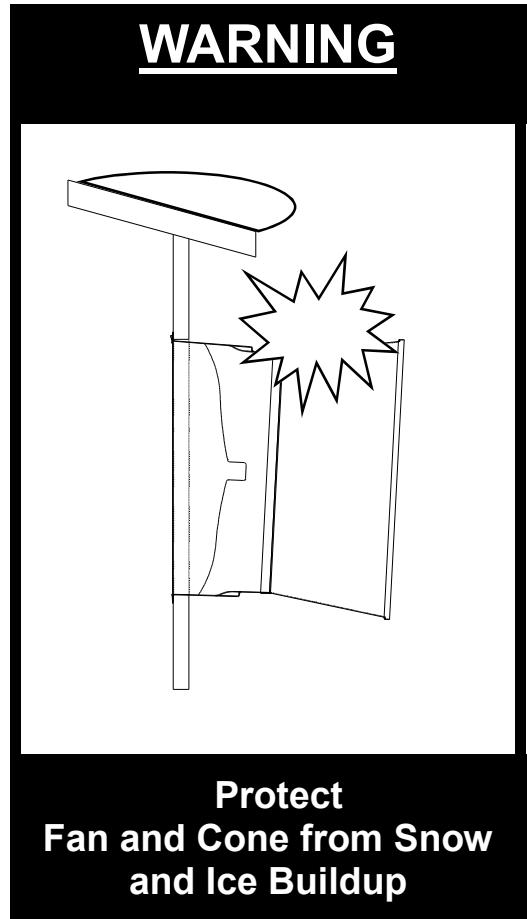


Figure 9



WARNING

**Protect
Fan and Cone from Snow
and Ice Buildup**

If your area is subject to snow, consideration must be taken to protect from the possibility of snow and ice building up on the roof and sliding down onto the fan and cone. One option is to build a small section of roof over the fan and cone. See Figure 9.

WARNING

Fan and/or cone damage caused by this type of external source WILL NOT be covered by AMERICAN COOLAIR warranties.

During winter months, you may not need to operate all of your fans. It is advisable to seal up those fans which will not be used during the colder months to minimize heat loss as well as condensation. To do this, turn the fan control off, and insulate the fan intake.

ELECTRICAL WIRING

All wiring must comply with national, state and local electrical codes. If fans are to be used for livestock ventilation to support life where failure could result in loss or injury, and continuous ventilation is essential, it is recommended that the fans be wired to individual electrical circuits, or at least two circuits per room. Any minimum ventilation fans should be on individual circuits.

WARNING

If the fans are going to be used for livestock building ventilation to support life where failure could result in loss or injury, the user must provide an adequate backup ventilation system and a failure alarm system. The user must accept the risk of such loss or injury from failure of the ventilation system.

INITIAL STARTUP

1. With shutter not installed, spin the blade assembly by hand and make sure that the blade assembly rotates freely and did not shift during shipment. If the blades rub in the fan housing, refer to page 3 for instructions on correcting a housing installed out of square. If the motor/bracket/blade assembly has shifted in shipment, it will be necessary to center the blade assembly in the fan. If the blade rubs at top or bottom, loosen the bolts that attach the motor bracket to the uprights and center the motor/bracket/blade. If the blade rubs on either side, loosen the bolts that attach the motor to the motor bracket, and center the motor/blade in the fan. Tighten all bolts. Again, spin the blade assembly by hand and make sure that the blade assembly rotates freely.
2. Check circuit phase, voltage and wiring connection against that shown on motor nameplate.
3. Check for correct fan rotation.
4. Replace the shutter. The fan is now set for proper operation.

MAINTENANCE

CLEANING

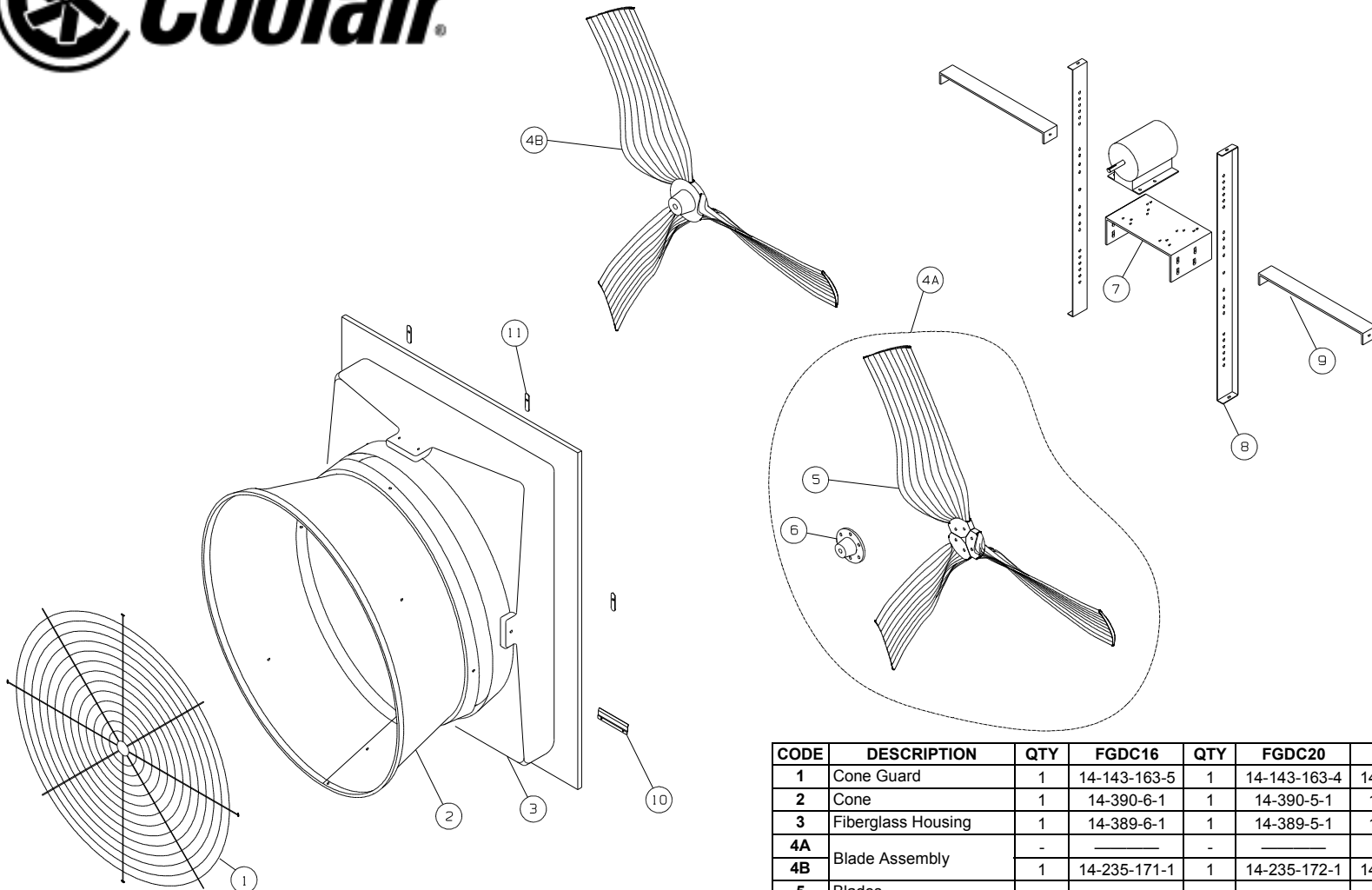
- The fan should be cleaned regularly. Always turn the fan off before cleaning.
- The motor should be wiped with a cloth or a brush. This will keep the motor running cool. **DO NOT** pressure wash the motor.
- The blades should be wiped clean to maintain maximum air performance and minimize fan imbalance.
- The inlet shutter should be wiped clean so blades will pivot freely and open completely. A dirty shutter can “starve” the fan of it’s air performance.

CHECK FASTENERS

Inspect all fasteners on the fan. This is a very important safety issue. If any loose hardware is found, tighten it immediately.

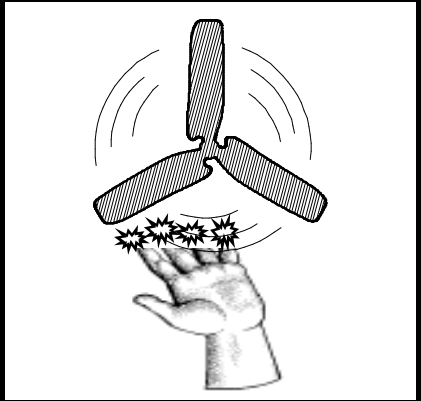


FGDC16-36 FAN PARTS LIST



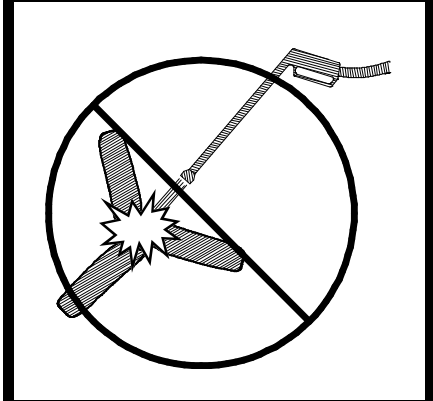
CODE	DESCRIPTION	QTY	FGDC16	QTY	FGDC20	FGDC26	QTY	FGDC36
1	Cone Guard	1	14-143-163-5	1	14-143-163-4	14-143-163-3	1	14-143-163-2
2	Cone	1	14-390-6-1	1	14-390-5-1	14-390-4-1	1	14-390-3-1
3	Fiberglass Housing	1	14-389-6-1	1	14-389-5-1	14-389-4-1	1	14-389-3-1
4A	Blade Assembly	-	-	-	-	-	1	14-235-174-1
4B		1	14-235-171-1	1	14-235-172-1	14-235-173-1	-	-
5	Blades	-	-	-	-	-	3	CALL
6	Hub	-	-	-	-	-	1	14-152-43-2
7	Motor Bracket	1	14-161-199-1	1	14-161-199-1		1	14-161-197-1
8	Uprights	2	14-193-91-1	2	14-193-91-2	14-193-92-1	2	14-193-105-1
9	Kneebraces	-	-	-	-	-	2	14-115-162-1
10	Shutter Mounting Clips	1	14-122-71-2	2	14-122-71-2		2	14-122-71-2
11	Shutter Latches	1	14-150-2-1	1	14-150-2-1		4	14-150-2-1

WARNING



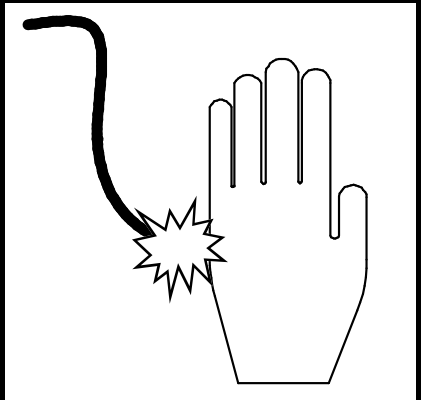
— Moving Parts —
Disconnect power
before servicing the
fan

WARNING



Precision Motor
Bearings
Do Not
Pressure Wash at
blade assembly center

WARNING



— High Voltage —
Disconnect power
before servicing the
fan

WARNING

CAUTION



DO NOT INSTALL FAN WITH MOVING PARTS WITHIN 8 FEET OF FLOOR OR GRADE LEVEL WITHOUT A GUARD THAT COMPLIES WITH OSHA REGULATIONS. **DO NOT** USE UNLESS ELECTRICAL WIRING COMPLIES WITH ALL APPLICABLE CODES. **DO NOT** WIRE WITHOUT PROVIDING FOR A POWER SOURCE DISCONNECT AT THE FAN ITSELF. **DO NOT** SERVICE EXCEPT BY A QUALIFIED MAINTENANCE TECHNICIAN AND ONLY AFTER DISCONNECTING THE POWER SOURCE. FAILURE TO OBSERVE THESE PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.



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