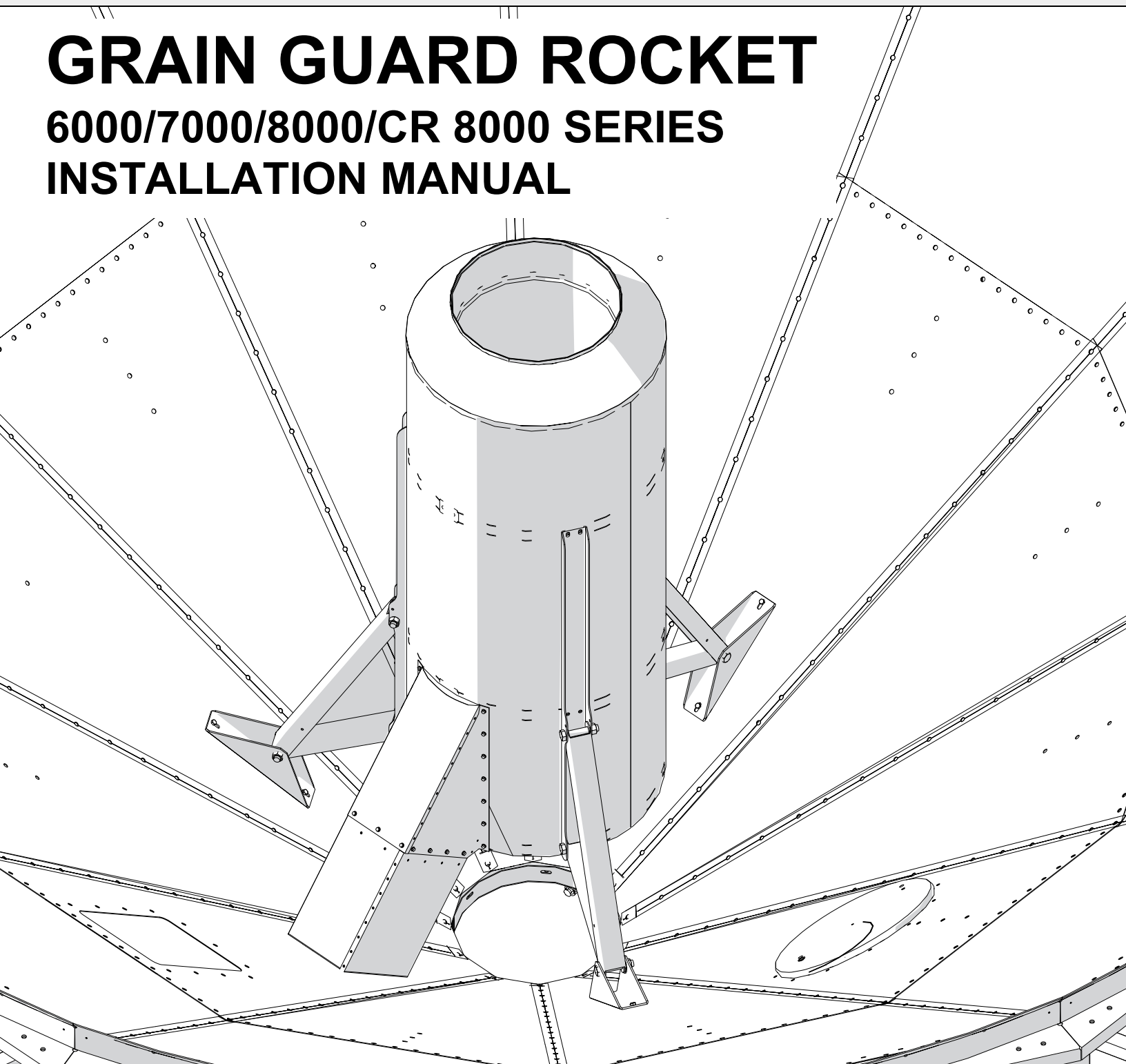




GRAIN GUARD ROCKET

6000/7000/8000/CR 8000 SERIES

INSTALLATION MANUAL



Read this manual before using product. Failure to follow instructions and safety precautions can result in serious injury, death, or property damage. Keep manual for future reference.

Part Number: RNA-2864 R3

Revised: 20/8/15

This product has been designed and constructed according to general engineering standards^a. Other local regulations may apply and must be followed by the operator. We strongly recommend that all personnel associated with this equipment be trained in the correct operational and safety procedures required for this product. Periodic reviews of this manual with all employees should be standard practice. For your convenience, we include this sign-off sheet so you can record your periodic reviews.

[illegible]

- a. Standards include organizations such as the American Society of Agricultural and Biological Engineers, American National Standards Institute, Canadian Standards Association, International Organization for Standardization, EN Standards, and/or others.

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1. Introduction

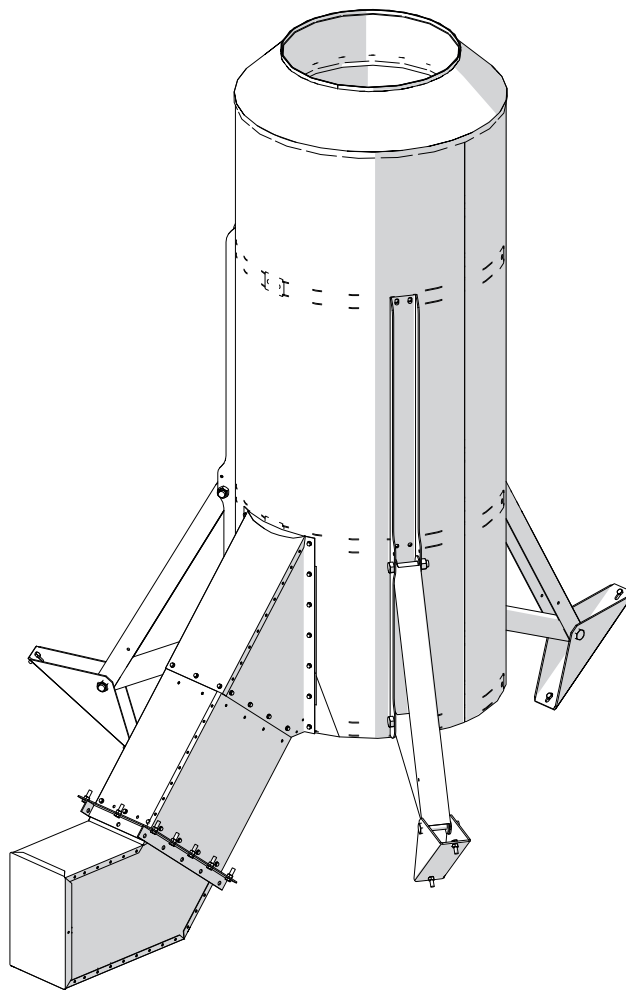
Thank you for your purchase. The Grain Guard Rocket 6000/7000/8000/CR 8000 is an excellent addition to any bin and it will allow you to harvest in damp conditions, maintain stored grain in peak condition, and prevent mold growth and insect infestation. With proper care during and after installation, your aeration system will provide you with many years of trouble-free service.

The Grain Guard Rocket is designed to reduce grain drying time and increase fan efficiency by forcing air into the center of the bin. This system dries grain more uniformly and efficiently than conventional bottom-up aeration systems.

Safe, efficient and trouble-free operation of the Rocket aeration system requires that you, and anyone else who may operate this equipment, read and understand all safety instructions and procedures.

Keep this manual handy for frequent reference and to review with new personnel. Call your local distributor or dealer if you need assistance or additional information.

Note: *The Grain Guard Rocket is intended for grain use only. Do not use with fertilizer or other material.*



2. Safety First

2.1. GENERAL SAFETY



- It is the equipment owner and the operator's responsibility to read and understand **ALL** safety instructions, safety decals, and manuals and follow them before assembling operating, or maintaining the equipment. All accidents can be avoided.



- Use this equipment for its intended purposes only.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety, and could affect the life of the equipment. Any modification to the equipment voids the warranty.
- Have a first-aid kit available for use should the need arise, and know how to use it.

- Wear appropriate protective gear. This list includes, but is not limited to:

- a hard hat
- gloves
- protective shoes with slip-resistant soles
- protective goggles
- hearing protection



- Follow good shop practices:
 - keep service area clean and dry
 - be sure electrical outlets and tools are properly grounded
 - use adequate light for the job at hand
 - Think SAFETY! Work SAFELY!



3. Installation

The following location and installation instructions apply to the 6000, 7000, and 8000 Series Rockets. The specifications for these aeration systems are given in the table below.

Series	Part No.	Maximum Sidewall Height	Rocket Diameter (outer/inner)	Bin Size	Airflow Capacity (CFM) @ 1 cfm/bus	Air Inlet Size
GG 6000 6'	GGR-8736	15'	15" slim rocket (for existing bins)	1200 to 2500 bu.	3,000	9" x 14"
GG 7000 4'	GGR-8737	30'	30"/20"	1500 to 3500 bu.	6,000	9" x 14"
GG 7000 6'	GGR-8738	30'	30"/20"	up to 5000 bu.	7,000	9" x 14"
GG 7000 8'	GGR-8739	30'	30"/20"	up to 6000 bu.	9,000	9" x 14"
GG 8000 4'	GGR-8740	30'	45"/30"	up to 7000 bu.	9,000	12" x 17"
GG 8000 6'	GGR-8741	30'	45"/30"	up to 8000 bu.	11,000	12" x 17"
GG 8000 8'	GGR-8742	30'	45"/30"	up to 10000 bu.	13,500	12" x 17"
CR 8000 4'	GGR-8743	40'	45"/30"	up to 15000 bu.	9,000	12" x 17"
CR 8000 6'	GGR-8744	40'	45"/30"	up to 20000 bu.	11,000	12" x 17"
CR 8000 8'	GGR-8745	40'	45"/30"	up to 25000 bu.	13,500	12" x 17"

NOTICE

Grain Guard Rockets are not to be used on hopper slopes more than 40° from the horizontal. For hoppers with slopes steeper than 40°, consult Edwards before installation.

3.1. LOCATION

All models of the Grain Guard Rocket are designed to be installed in the center of hopper-bottom bins, with the rocket center aligned with the center of hopper cone. To ensure proper airflow, the rocket must be installed completely vertical.

3.2. INSTALLATION

Refer to Figure 3.5, one of Figures 4.1–4.4, and one of Tables 4.1–4.4 found in Appendix during installation, depending on the model being installed.

The following tools are required for proper installation:

- 9/16" wrench
- electric drill with 7/16" bit
- marker
- torch or cutting wheel
- level
- tin snips
- safety equipment (e.g. goggles)
- silicone

For GG 6000 6' only (on existing bins):

1. Unbolt and remove air inlet on rocket if required to fit through existing manhole.
2. Do likewise with legs if required.
3. Once inside, replace legs, assemble in the installed position as shown in Figure 4.1.
4. Replace air inlet and apply silicone around inlet. Bolt back in place.



For all Grain Guard Rockets:

1. Attach feet to legs with 3/4 x 4" bolts and 3/4" locknuts as shown in Figure 3.2.
2. Unfold legs by removing the three 3/16 x 4" bolts and lowering legs to assembled position as shown in Figure 3.1.
3. Place 3/4" x 4" bolt through top lug on vertical leg and top of diagonal leg brace. Repeat for all legs. Tighten all 3/4" bolts (three per leg).
4. Secure 17" straight duct to air inlet with twelve #14 x 3/4" tek screws as shown in Figure 3.3. Use four screws on each side and two screws on both the top and bottom of duct.
5. Center rocket in bin over hopper unload chute. Use a level to ensure rocket sits true to both the horizontal and the vertical.

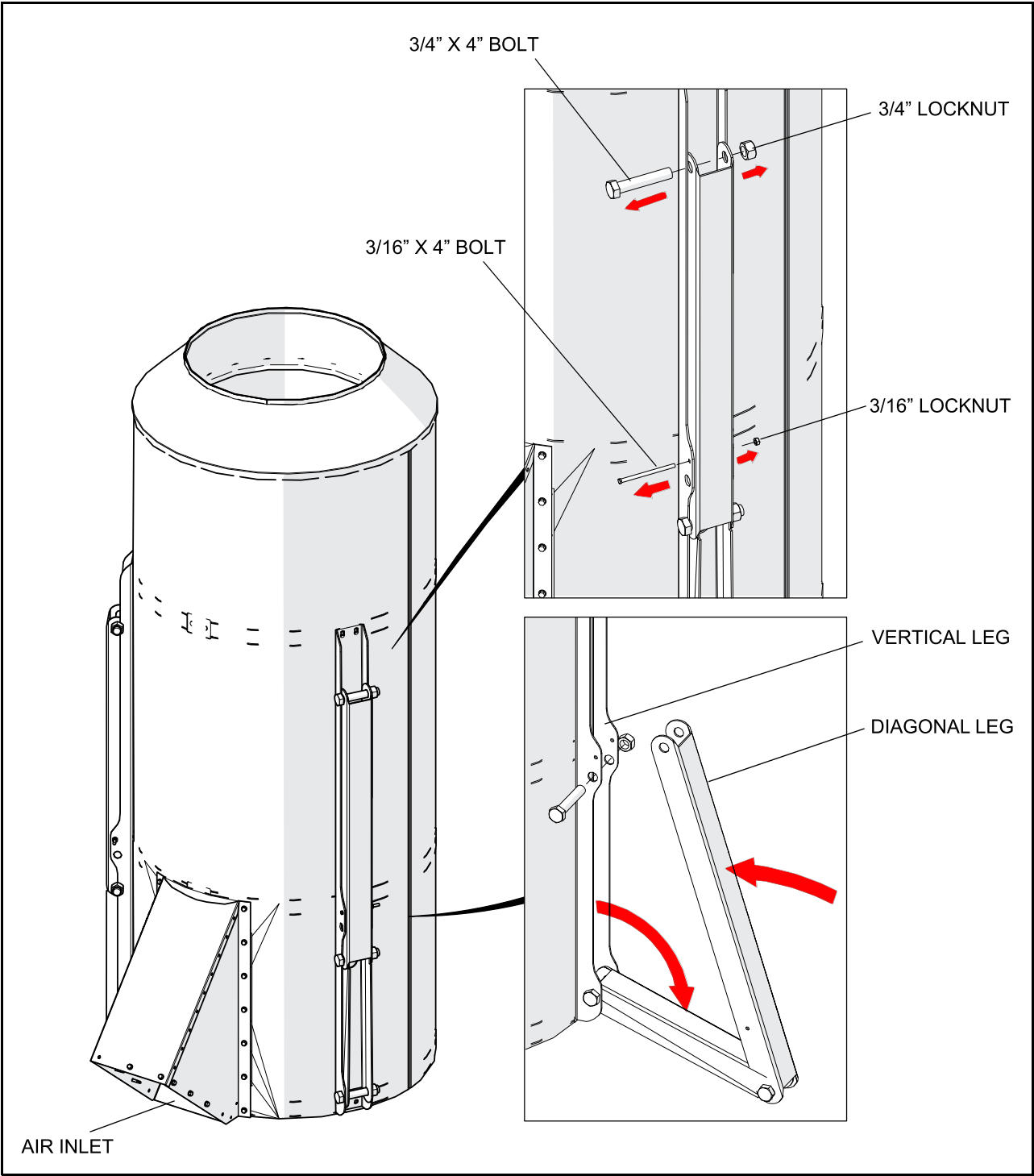


Figure 3.1

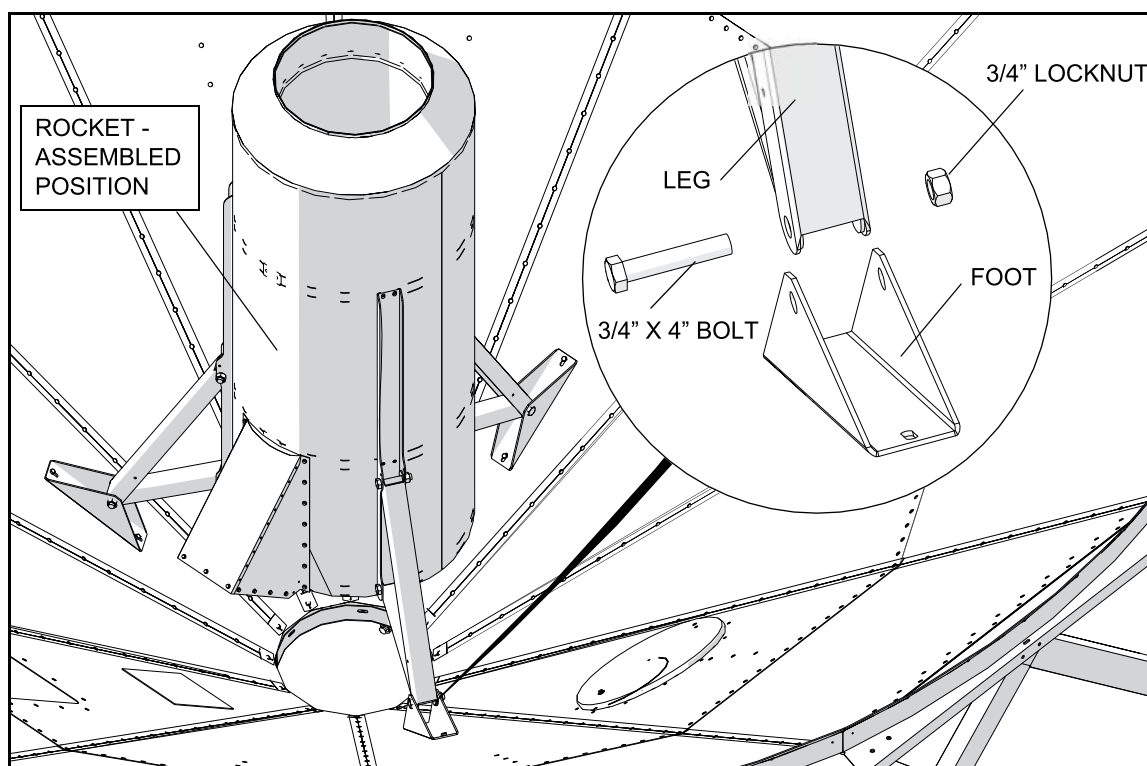



Figure 3.2

6. Mark outline of outside of straight duct on hopper cone for inlet opening as shown in Figure 3.3.
7. Rotate rocket in bin so it is out of the way and cut inlet opening in hopper cone. A torch or cutting wheel is recommended.

CAUTION	
	Wear protective eyewear while cutting opening in hopper cone.

Important: *Make cut inside the marked line to help keep the opening as clean as possible. Ensure that the minimum size of hole is 8-7/8" x 13-7/8", and that the maximum size is no larger than 9" x 14". This means dimension A in Figure 3.3 will be between 8-7/8" and 9" long and dimension B in Figure 3.3 will be between 13-7/8" and 14" long.*

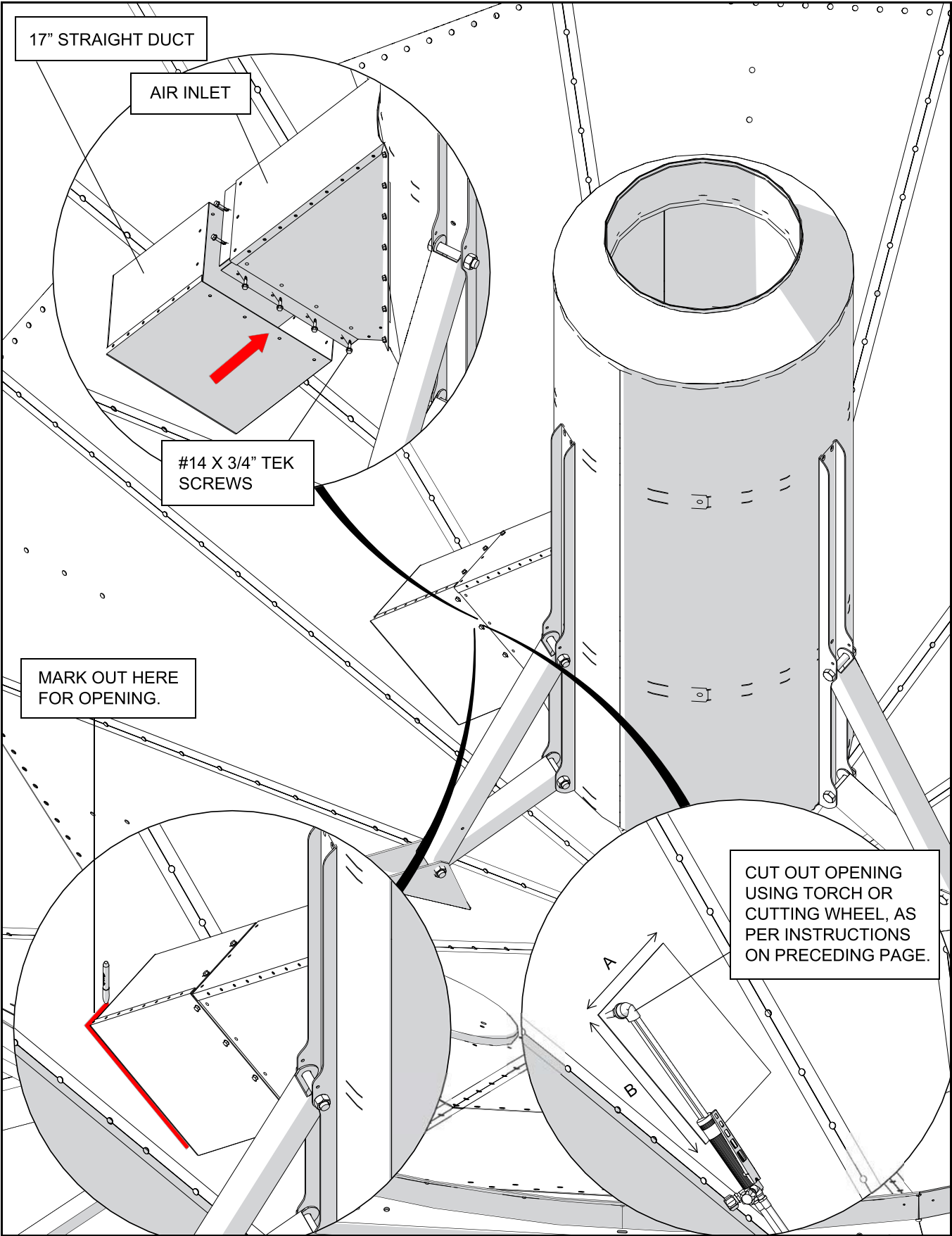


Figure 3.3

8. Re-align rocket in bin so that the 17" straight duct lines up with the rectangular inlet opening on the hopper. With the rocket in a vertical position, check if any of the straight duct protrudes outside the exterior hopper wall (this may occur on hopper cones that have fewer degrees of slope).
 - Trim off any excess straight duct with tin snips to make duct flush with hopper cone.
9. Install duct elbow as follows (see Figure 3.4):
 - a. Place elbow angle frame on the uncapped (short) end of duct elbow. Ensure that the flat side of elbow angle frame faces outward on duct elbow.
 - b. Insert duct elbow and elbow angle frame into the precut opening and the 17" straight duct until at least 1-1/2" of the elbow is inside the hopper cone and straight duct. Ensure that the long edge of elbow is parallel to the ground. Support elbow in this position.
 - c. Move elbow angle frame up duct elbow until it lays flush against the hopper cone. Mark the location of all holes:
 - 12 holes through elbow angle frame and hopper cone.
 - 12 holes through elbow angle frame and duct elbow.
 - d. Remove duct elbow and elbow angle frame from inlet hole and pre-drill all marked holes with a 3/16" drill bit, then drill out with a 7/16" drill bit.
 - e. Slide duct elbow and elbow angle frame back into opening and straight duct. Ensure that the long edge of elbow is parallel to the ground.
 - f. Fasten elbow angle frame to hopper cone (at 12 places) and to elbow (at 12 places) with 3/8" x 1-1/4" bolts, flatwashers/lockwashers and nuts, as shown in Figure 3.4.

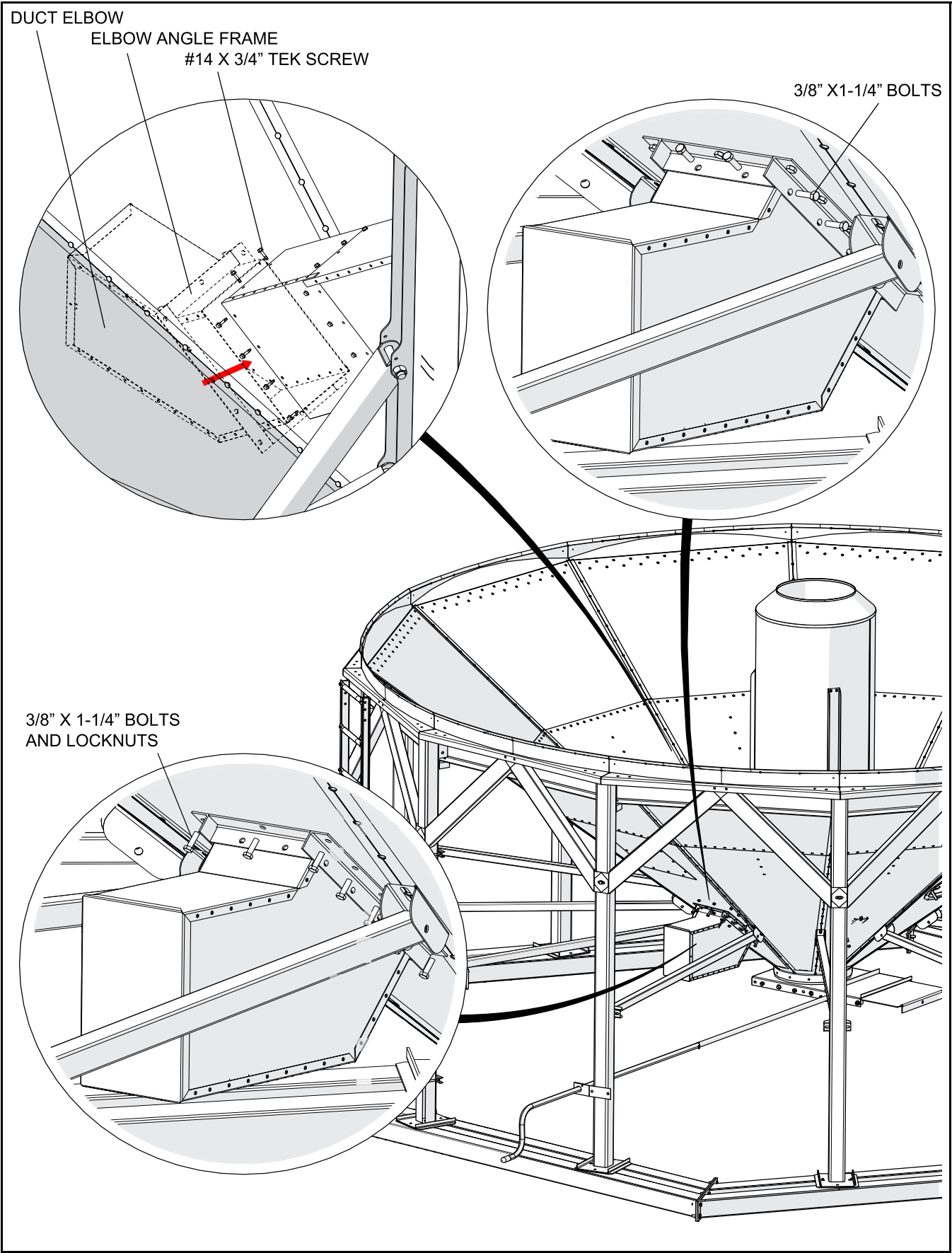


Figure 3.4

10. Ensure that 17" straight duct is aligned over duct elbow. Fasten 17" straight duct to duct elbow using twelve #14 x 3/4" tek screws as shown in Figure 3.4. Use 4 screws on each side and 2 screws on both the top and the bottom of the duct.
11. Using the holes in rocket feet as a guide, drill 7/16" holes in the hopper cone as shown in Figure 3.5. Attach rocket feet to hopper cone with 3/8" x 1-1/4" bolts and nuts. See Figure 3.5.

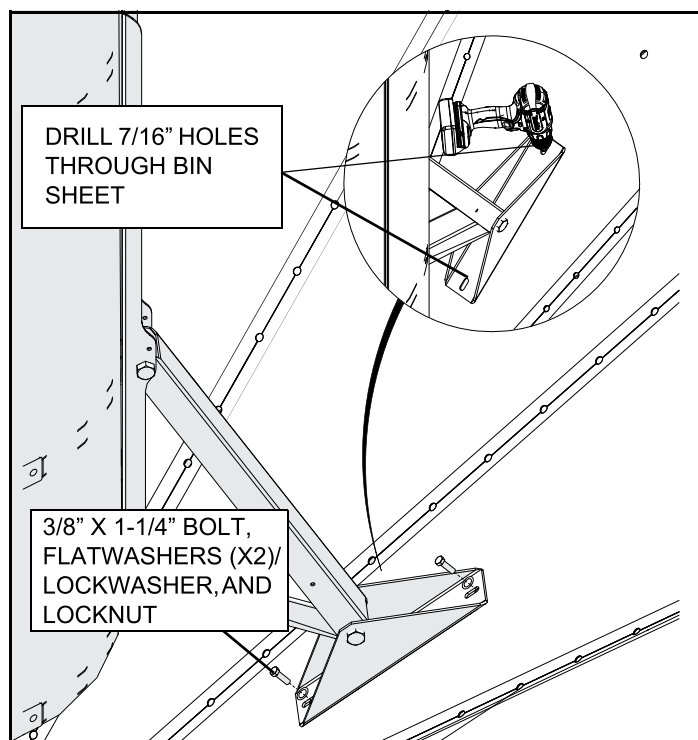
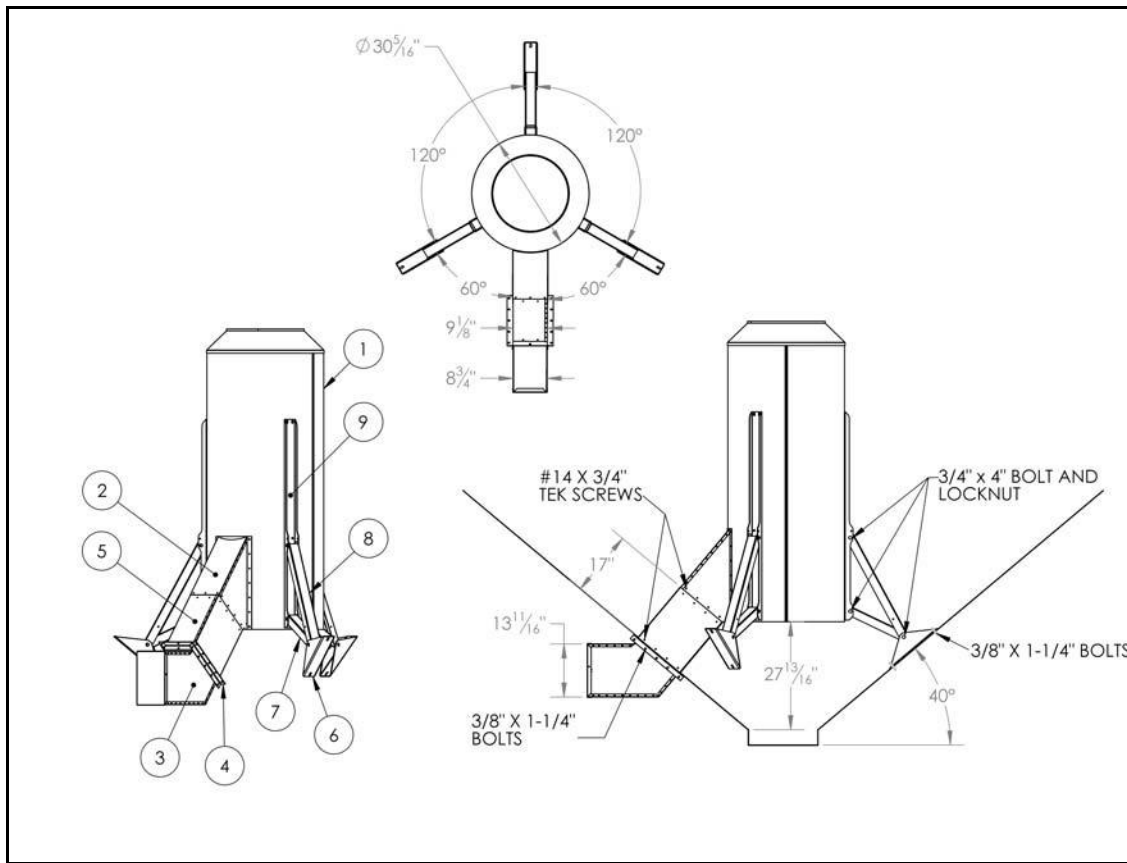


Figure 3.5

Table 4.1 GG 6000 Series Components

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	—	GG6000 Rocket Body Diameter 6'	1
2	RVA-5027	GG6000 Inlet (9" X 14")	1
3	RZA-7230	9" X 14" Elbow w/ Weather Cap	1
4	RGA-5032	9" X 14" Elbow Angle Frame (Curved)	1
5	RZA-7228	Rectangular Duct Section (17")	1
6	RBF-2362	Rocket Foot	3
7	RBA-4031	Rocket Leg, Lower	3
8	RBA-4033	Rocket Leg, Upper	3
9	RBA-4035	Rocket Channel	3

**Figure 4.2 GG 7000 Series Rocket****Table 4.2 GG 7000 Series Components**

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	—	GG7000 Rocket Body 30" Diameter (4', 6', or 8')	1
2	RUB-5035	GG7000 Inlet (9" X 14")	1
3	RZA-7230	9" X 14" Elbow w/ Weather Cap	1
4	RGA-5032	9" X 14" Elbow Angle Frame (Curved)	1
5	RZA-7228	Rectangular Duct Section (17")	1
6	RBA-1240	Rocket Foot	3
7	RBB-2857	Rocket Leg Lower	3
8	RBB-2858	Rocket Leg Upper	3
9	RBB-2859	Rocket Channel 4'	3
10	RBB-2860	Rocket Channel 6'	3
11	RBB-2861	Rocket Channel 8'	3

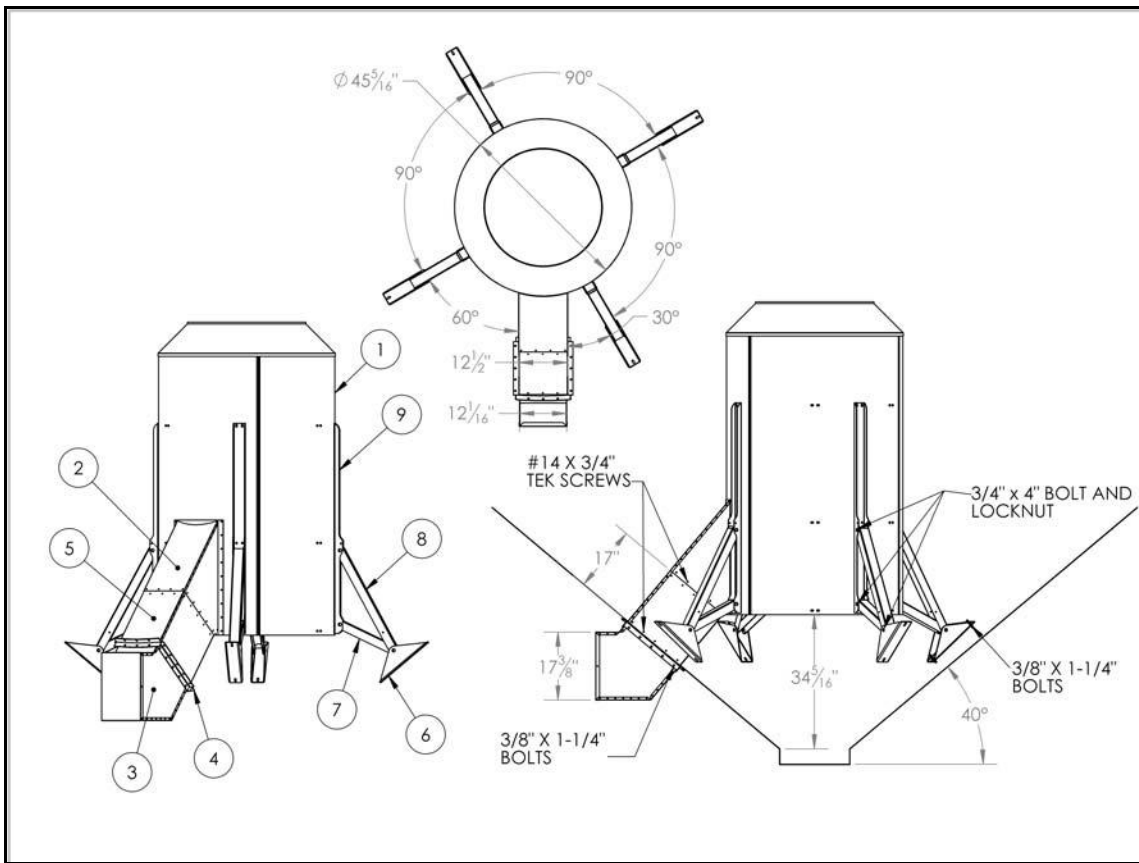
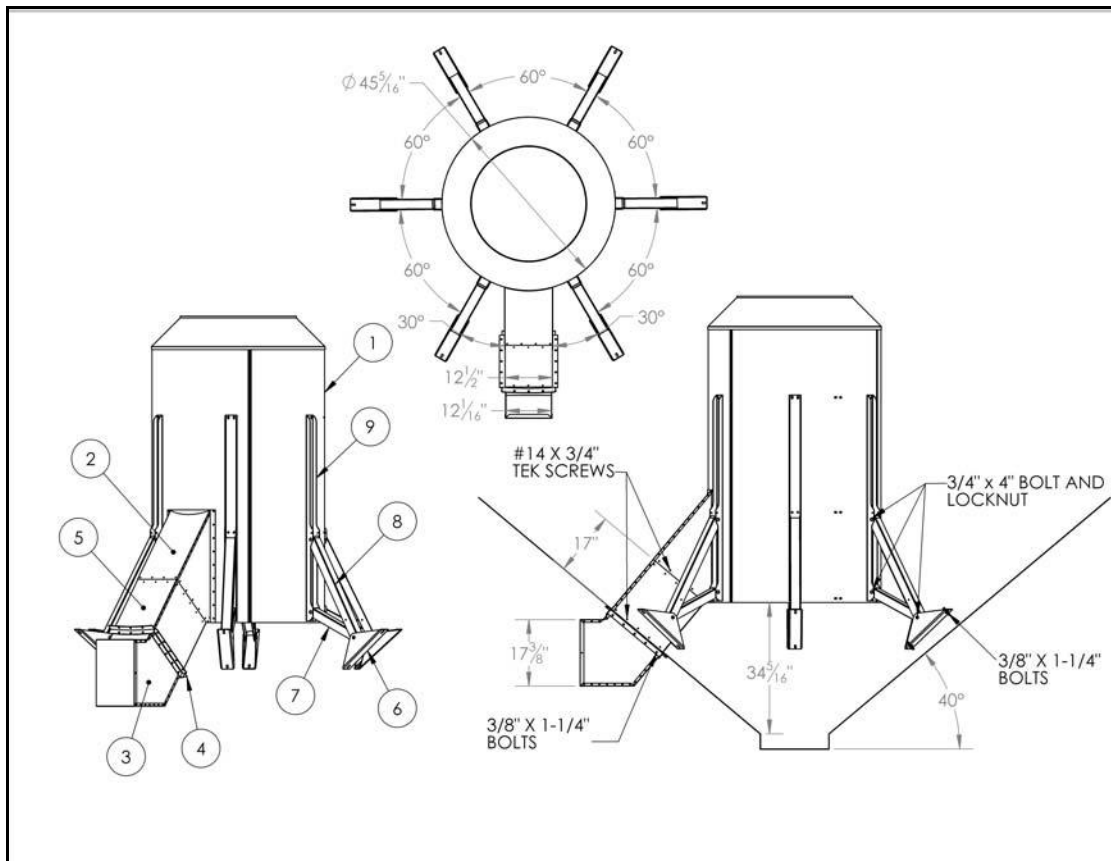


Figure 4.3 GG 8000 Series Rocket

Table 4.3 GG 8000 Series Components

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	—	GG8000 Rocket Body 45" Diameter (4', 6', or 8')	1
2	RZC-7314	GG8000 Inlet (12" X 17")	1
3	RZC-7308	12" X 17" Elbow w/ Weather Cap	1
4	RGC-5242	12" X 17" Elbow Angle Frame (Curved)	1
5	RZC-7307	Rectangular Duct Section (17")	1
6	RBA-1240	Rocket Foot	4
7	RBA-2857	Rocket Leg Lower	4
8	RBA-2858	Rocket Leg Upper	4
9	RBB-2859	Rocket Channel 4'	4
10	RBB-2860	Rocket Channel 6'	4
11	RBB-2861	Rocket Channel 8'	4

**Figure 4.4 CR 8000 Series Rocket****Table 4.4 CR 8000 Series Components**

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	—	CR8000 Rocket Body 45" Diameter (4', 6', or 8')	1
2	RUC-5022	CR8000 Inlet (12" X 17")	1
3	RZC-7308	12" X 17" Elbow w/ Weather Cap	1
4	RGC-5242	12" X 17" Elbow Angle Frame (Curved)	1
5	RUC-5023	Re-inforced Rectangular Duct Section (17")	1
6	RBA-1240	Rocket Foot	6
7	RBB-2857	Rocket Leg Lower	6
8	RBB-2858	Rocket Leg Upper	6
9	RBB-2859	Rocket Channel 4'	6
10	RBB-2860	Rocket Channel 6'	6
11	RBB-2861	Rocket Channel 8'	6

WARRANTY

Except as expressly provided in this agreement, Edwards (hereinafter called the Manufacturer) excludes all express or implied warranties, conditions, and obligations of the Manufacturer, whether statutory or otherwise, concerning the quality of the units or their fitness for any purpose.

Under no circumstances will the Manufacturer be liable for any kind of special, consequential, indirect, or incidental damages resulting from the use of its products, nor shall the Manufacturer's liability ever exceed the selling price of the product.

Edwards warrants their products as follows:

1. Goods free from defect:
 - a. The unit shall be free from defects in materials and workmanship and shall operate properly in accordance with industry standards when employed in normal usage, provided the unit has been properly installed for a period of: three (3) years from the original date of purchase.
2. The warranty does not include:
 - a. Routine replacement of parts due to normal wear and tear arising from use.
 - b. Any defect attributable in whole or in part to misuse or improper installation.
 - c. Any damage or defect attributable to repair of the unit outside the Manufacturer's facilities or those of an authorized dealer, or the installation of unapproved parts on the unit in the Manufacturer's judgment to affect its performance or reliability, or which has been subject to misuse, negligence, or accident.
 - d. Any damage attributable to accident or to lightning, power surge, brownout, leaking, damage, or connection to a power source having a greater rating than that specified in the unit specifications.
3. Repair or Replacement

Where any part of the unit fails during normal usage during the warranty period specified, the Manufacturer, or authorized dealer of the Manufacturer, shall repair or replace the defective part of the unit with a new or factory reconditioned part, such replacement or repair to be made without charge for parts or labor, F.O.B. the Manufacturer.

4. Warranties shall not apply to any product made by the Manufacturer that has not been operated in accordance with the Manufacturer's printed instructions or shall have been operated beyond the rated capacity of the product or a use not intended.
5. The Manufacturer reserves the right to make design or specification changes at any time, without contingent obligation to purchasers of products already sold.

WARRANTY VOID IF NOT REGISTERED



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