

## Rocketail Installation Manual - Version 3.1

THIS DOCUMENT OUTLINES THE INSTALLATION PROCEDURE FOR THE ROCKETAIL AERODYNAMIC SYSTEM.



Rocketail install will take two people with experience about 35 minutes for a dry van and 1 hour and 15 minutes for a reefer. All installations should be performed by an experienced mechanic.

### Revision History

Revision Date	Version	Description
1/1/2020	3	Added Automatic Collision Resonse hinges and AntiFriction rollers to wing.
9/8/2020	3.1	Added 3M VHB tape to leading edge of Top Element.

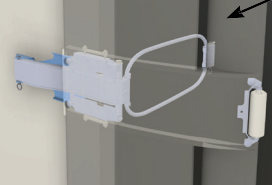
### EMISSION-RELATED INSTALLATION INSTRUCTION

FAILING TO FOLLOW THESE INSTUCTIONS WHEN COMPLETING ASSEMBLY OF A HEAVY-DUTY MOTOR VEHICLE VIOLATES FEDERAL LAW, SUBJECTS TO FINES OR OTHER PENALTIES AS DECRIED BY THE CLEAN AIR ACT.



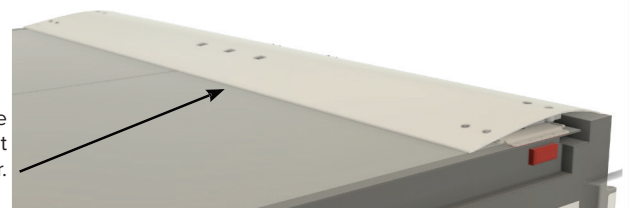
**WARNING**  
LOOSE OR DAMAGED PARTS CAN CAUSE SERIOUS INJURY OR DEATH.  
PRIOR TO EVERY TRIP INSPECT THE SYSTEM AND ENSURE IT IS SECURLY MOUNTED TO THE TRAILER.

\*Wing transparent



Check hinge connections and look for hinge damage.

Check Top Element and ensure leading edge is tight against trailer.



## Required Tools

Tape Measure - Speed Square - Sharpie - Drill - 1/4" Rivet Tool - Ladder - Acetone  
Wrenches: 3/8", 7/16" & 1/2" - Drill Bits: F & 3/8" - [Silicone for Reefer]

Note: Due to the nature of the product, all hardware is stainless steel. Therefore, hardware galling is possible and we recommend tightening hardware by hand and use an anti-seize to reduce the likelihood.

### 1 Mark trailer frame for Base Plate install

#### Trailer doors closed

- Measure from rear header and mark rear trailer post at 23" and 72". Repeat on both sides of trailer.
- Use speed square to mark the width of the trailer frame post with a straight line.

Note: Measure from rear header.

Tools & Materials: tape measure, speed square, sharpie

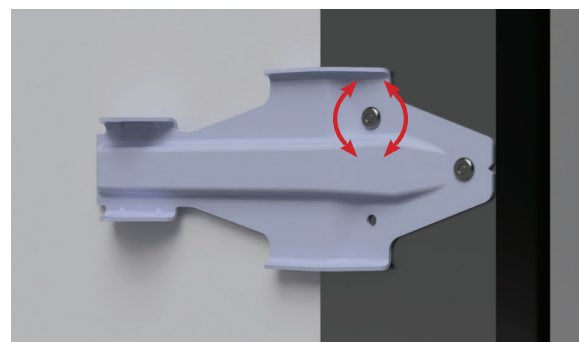


## 2 Attach Base Plates

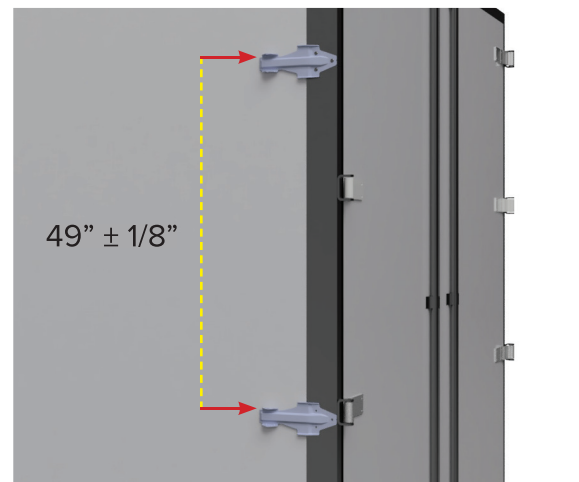
*Trailer doors opened to 90°*

- Center Base Plate on mark from step one and align back of Base Plate with back of trailer frame.
- Use Base Plate as guide to mark holes.
- Only mark top hole and center hole for now.
- Using F drill bit, drill top and center holes.
- Insert and pop the 1/4" stainless steel structural rivet in top and center holes.

X4



*Note: center hole has additional tolerance to allow micro adjustments prior to fixing position with final rivet.*



- Ensure Base Plate is square using speed square.
- Measurement from top of Base Plate to the top of the second Base Plate should be **49" ± 1/8"**.
- Once the position is correct, drill the bottom holes and pop the remainder of the rivets.



*Only use the provided 1/4" stainless steel structural rivets. Watch for wires in the post.*

Tools & Materials: (4) Base Plates, drill, F drill bit, sharpie, (12) 1/4" stainless steel structural rivets, 1/4" rivet tool

## 3 Attach Door Bracket

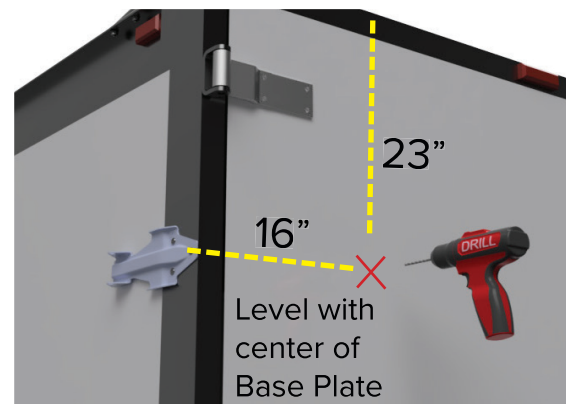
*Trailer doors closed*

- Measure and mark trailer door at 16" from side of trailer.
- Ensure mark is level with center of Base Plate.
- Drill hole using a 3/8" drill bit.

X4

*Note: Park trailer on level surface.*

Tools & Materials: tape measure, sharpie, drill, 3/8" drill bit



## Trailer doors opened to 90°

X4

- Dry Van - attach Door Bracket using provided 1.5" carriage bolts, oversized washer and 5/16" - 18 lock nut.
- Reefer - attach Door Bracket using provided 4.5" carriage bolts, oversized washer and 5/16" - 18 lock nut.
- Tighten lock nuts with 1/2" wrench to 11 ft-lbs torque.

*Note: For reefers, inject silicone into drill hole before inserting carriage bot. Hardware is stainless steel, use an anti-seize lubricant to prevent galling.*

Tools & Materials: (4) Door Brackets, (4) 1.5" carriage bolt [4.5" for reefers], (4) oversized washer, (4) 5/16"-18 lock nut, 1/2" wrench



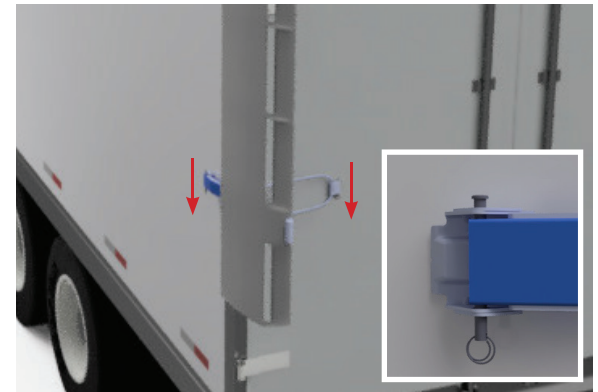
## 4 Hang Wings on Base Plates and Door Brackets

### Trailer doors opened to 90°

X4

- Hang the Rocketail Wing on the Base Plate using provided 5/16" clevis pin.
- Attach Cable Bracket to Door Bracket using provided (2) 1/4" clevis pin.
- Add provided circle cotter to each clevis pin to secure.

Tools & Materials: (2) Rocketail Wing, (4) 5/16" clevis pin, (4) 1/4" clevis pin, (8) circle cotter



## 5 Mount Top Element *Note: Inspect roof for damage and repair if necessary. Leading edge of Top Element should sit flush against trailer roof.*

- Ensure Mounting Plate can slide with firm pressure. DO NOT tighten pre-assembled bolts on Mounting Plate.

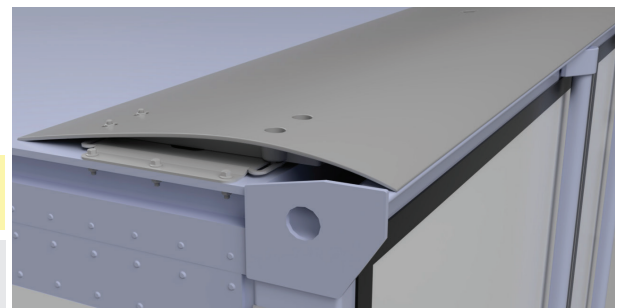


**⚠ Mounting Plates need to slide to allow for thermal expansion/contraction. DO NOT OVERTIGHTEN.**



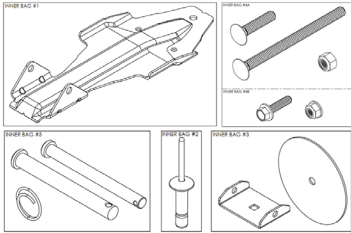
- Align Top Element with back of trailer frame and center on trailer - DO NOT extend over the back of the trailer frame.
- Slide Mounting Plates so that they are aligned with edge of trailer flange.
- Use Mounting Plates as guide to drill holes through flange using an F drill bit.
- Loosly attach Mounting Plates to trailer flange using provided hardware - 3 bolts per side, evenly distributed.
- Once the Top Element is positioned correctly, clean just below the leading edge of the Top Element with acetone or similar.
- Once acetone is dry, remove backing of VHB tape on leading edge and press to trailer with 15lbs force for proper adhesion.
- Fully tighten bolts to trailer with 6 ft-lbs torque.

**⚠ Ensure trailer ride height does not exceed 13'6" with Top Element.**

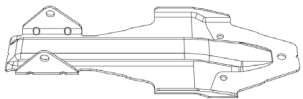






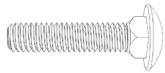


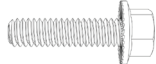

Tools & Materials: 7/16 and 3/8 wrench, (6) 1" 1/4-20 flanged hex screw, (6) 1/4-20 flanged lock nut, acetone



## Rocketail Parts List

QUANTITY	PART NAME	PART NUMBER	DESCRIPTION	IMAGE
2	Wing	601100	Wing Assembly	
1	Top Element	601200	Top Element Assembly	
1	Hardware Bag	601112	Brackets and hardware for installation	

### Hardware Bag - 601112

ITEM #	PART NO.	DESCRIPTION	QTY	IMAGE
1	601102	Base Plate	4	
2	601103	Door Bracket	4	
3	601104	Oversized Washer	4	
4	601111	1/4" stainless steel structural rivet	13*	
5		2.75" 5/16 clevis pin, SS	4	
6		2.75" 1/4 clevis pin, SS	4	
7		circle cotter, SS	10*	
8		1.5" 5/16-18 carriage bolt [Dry Van]	4	
9		4.5" 5/16-18 carriage bolt [Reefer]	4	
10		5/16-18 hex nut, nylon lock	5*	
11		1" 1/4-20 flanged serrated hex screw	7*	
12		1/4-20 hex nylon lock, nonmarring flanged	7*	

\* INDICATES EXTRA PART