V-Lectric™ VFR

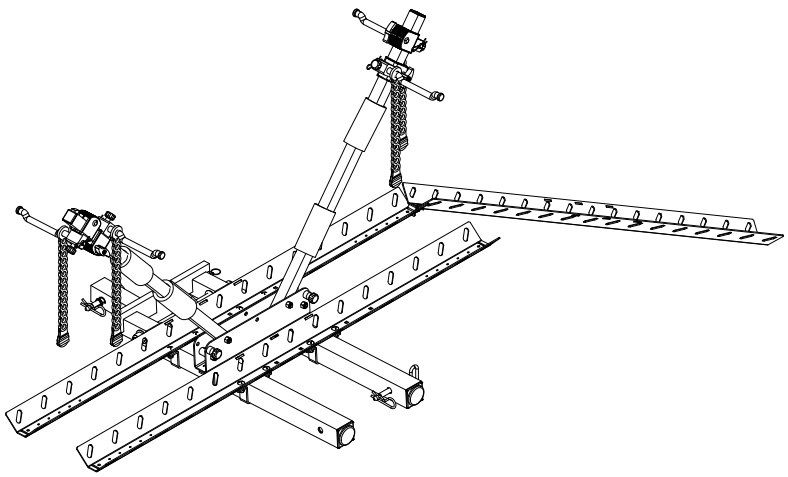
Folding 2-Bike E-Bike Carrier

#B02394

PRODUCT MANUAL

Installation & Safe Use Operation

Maximum Weight Rating: 80 lbs per bike; Max Tire Size: 4.5in. Rated for Motorized Vehicle and Trailer use. 2in Receiver Hitch with Class II Minimum Tow Rating Required.



***(8) 5/16 x 1" & (4) 5/16 x 4"
Discard extra 1" Carriage Bolts

For More Information & Accessories,
Visit our Website - www.LetsGoAero.com
For Technical Support & Product Questions Contact Us at
877-464-2376 or 719- 630-3800
Email: Support@LetsGoAero.com

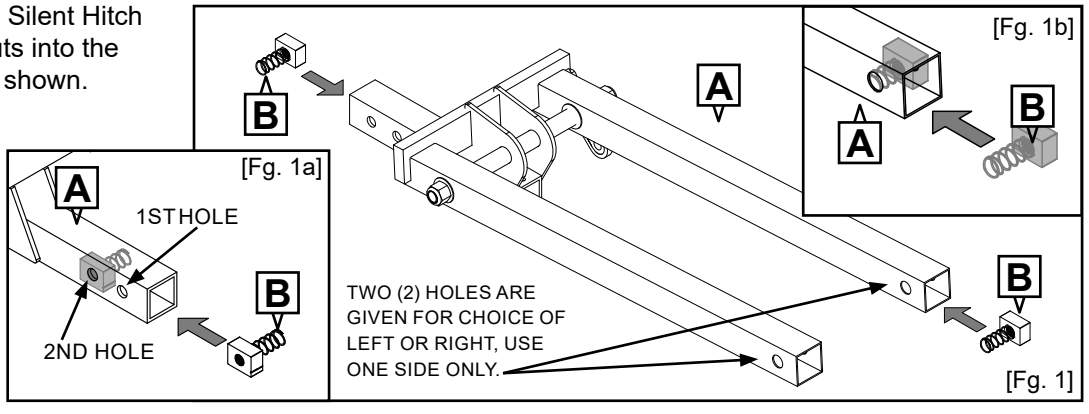
PARTS

QTY.		DESCRIPTION
A	1	TILTING TWINTUBE
B	2	SPRING NUT
C	1	SILENT HITCH PIN
D	1	5/8IN LOCK WASHER
E	1	5/8IN FLAT WASHER
F	2	RETAINER CLIP
G	1	WAX
H	2	SLIDE TUBES
I	1	WING BRACKET
J	4	HAT BRACKETS
K	12	5/16 CARRIAGE BOLT***
L	12	5/16 WASHER
M	12	5/16 NYLOCK NUT
N	1	SAFETY CABLE
O	3	STEEL TRAY
P	1	SILENT HITCH PIN WITH HANDLE
Q	1	NYLON BUSHING
R	2	REFLECTOR END CAPS
S	2	TEX SCREWS
T	1	RAMP BRACKET
U	1	1/4-20 BUTTON HEAD BOLT
V	1	1/4-20 NYLOCK NUT
W	9	CAM BUCKLE STRAP
X	4	UPPER WHEEL CRADLE
Y	4	RUBBER STRAP
Z	4	CRADLE HOUSING
AA	4	SMALL RETAINER CLIP
BB	2	PRESS-ON LOCK
CC	1	LOCKING CABLE
DD	2	PULL PIN
EE	2	JAM NUT
FF	1	16IN BAR

STEP 1

Remove Spring Nuts **[B]** from Silent Hitch Pins and install two Spring Nuts into the Tilting TwinTube Spine **[A]** as shown. [Fg.1-1b]

The Spine **[A]** shank end contains two mounting holes. [Fg.2] Use the second hole in from the end. If more clearance is needed, you may use the first hole in from the end.



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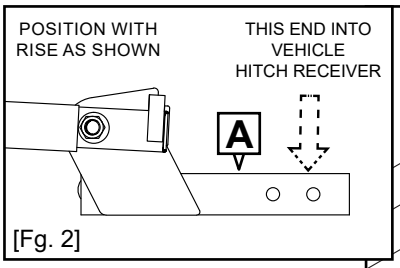
Patent Protected.

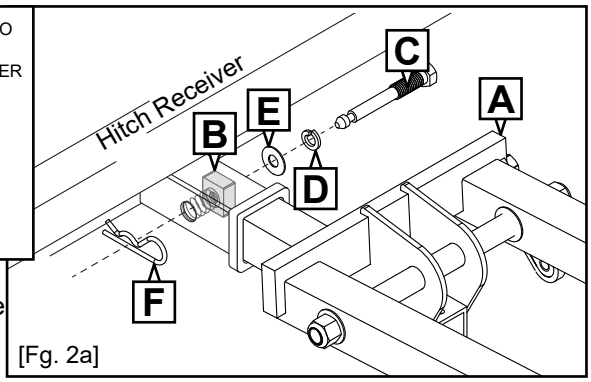
STEP 2 REQUIRED TOOL: 7/8” WRENCH

Slide the TwinTube **[A]** shank into the receiver with the 3 inch rise positioned above the hitch as shown. Align the mounting hole with Spring Nut **[B]** in the receiver hitch. [Fg.2]



[Fg. 2]

Insert the Silent Hitch Pin **[C]** with a 5/8in Lock Washer **[D]** & 5/8in Flat Washer **[E]** into the receiver hole and thread through the Spring Nut **[B]**. Tighten firmly with wrench and secure with Retainer Clip **[F]** or Press-on Lock **[BB]** (retainer clip shown). [Fg. 2a]



[Fg. 2a]

CAUTION: Be sure to review **LOAD FORCE GUIDELINES** for load weight parameters and reduction factors associated with distance of carrier from hitch.

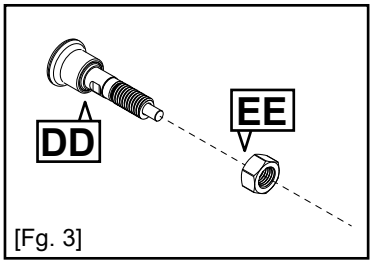
STEP 3 REQUIRED TOOL: ADJUSTABLE WRENCH OR 3/4” WRENCH

Thread one (1) Jam Nut **[EE]** onto each Pull Pin **[DD]**. [Fg. 3]

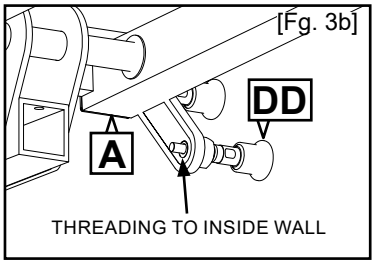
Insert both Pull Pins **[DD]** into the TwinTube **[A]** as shown. [Fg. 3a]

IMPORTANT!: The Threading on the Pull Pin **[DD]** should align with the inside of the wall of the Twintube **[A]** when fully secured. Do not thread further. [Fg. 3b]

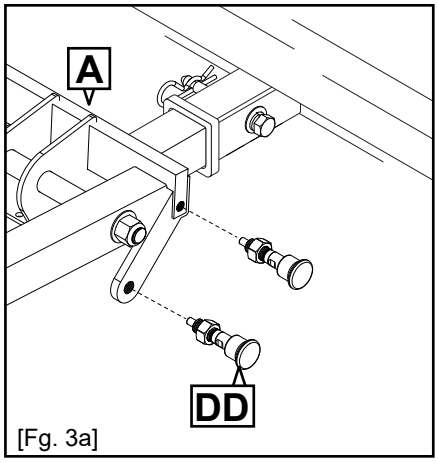
Tighten the Jam Nut **[EE]** into the side of the Twintube Platform to secure the Pull Pin in place.



[Fg. 3]



[Fg. 3b]



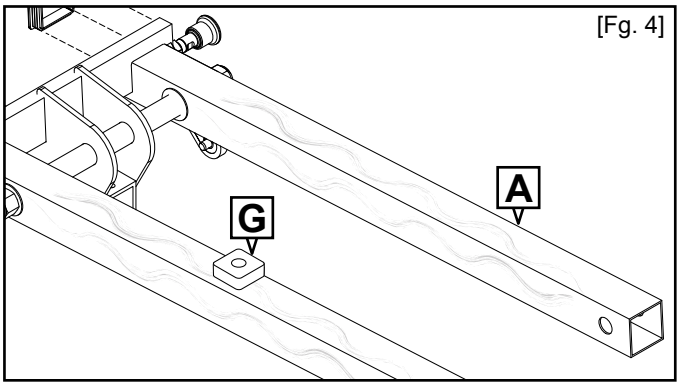
[Fg. 3a]

WATCH THE PULL PIN TIPS & TRICKS VIDEO

STEP 4

Rub all four sides of the TwinTube **[A]** Spine with Wax **[G]**. [Fg. 4]

Periodically reapply Wax to the Twintube Spine as needed.

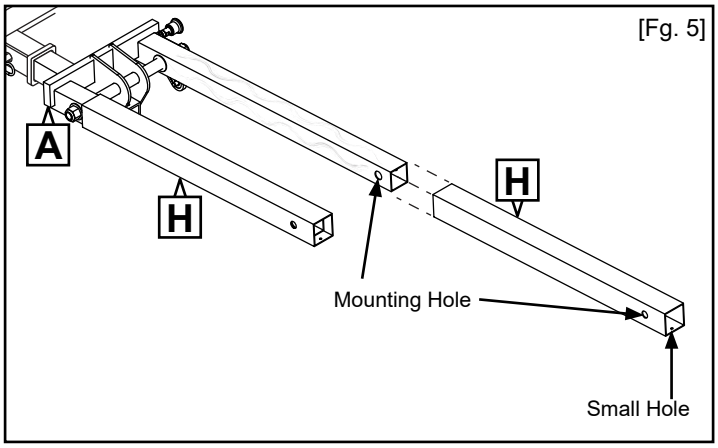


[Fg. 4]

STEP 5

Insert the Slide Tubes **[H]** all the way onto the fixed tubes of the TwinTube **[A]** Spine. [Fg. 5]

Be sure that the mounting holes on the TwinTube **[A]** and Slide Tubes **[H]** align and that the small holes at the end of the tubes are facing down.



STEP 6 REQUIRED TOOL: 1/2" WRENCH

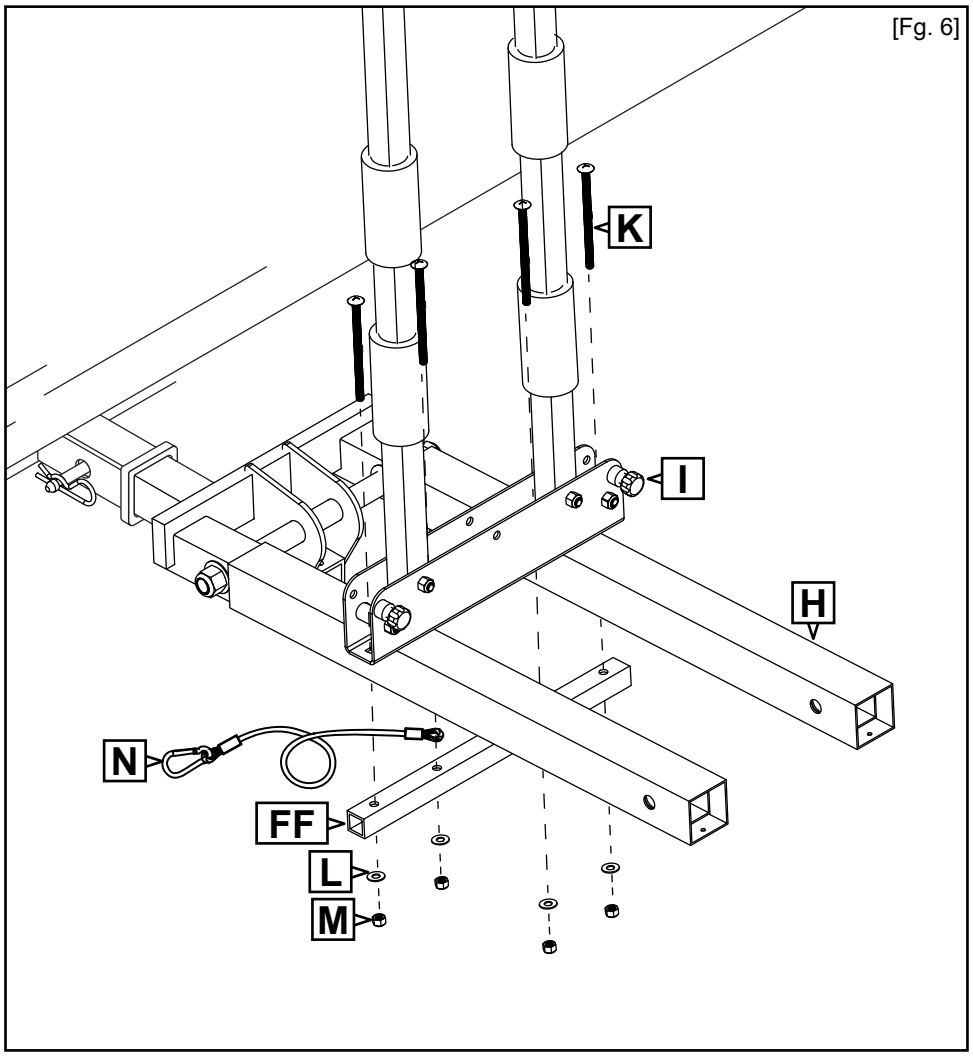
Set the Wing Bracket **[I]** on top of the Slide Tubes **[H]**.

Place the 16in Bar **[FF]** underneath the Slide Tubes **[H]** and align with the square holes located along the Wing Bracket **[I]** as shown.

Using four (4) 5/16in x 4" Carriage Bolts **[K]**, four (2) 5/16in Washers **[L]**, and four (2) 5/16in Nylock Nuts **[M]** to connect the 16in Bar **[FF]** to the Wing Bracket **[I]**. Include the Safety Cable **[N]** on one connectionas shown. [Fg. 6]

NOTICE: The Safety Cable **[N]** must be placed on the interior of the Slide Tube **[H]** as shown.

TIP!: The Wings are on the Wing Bracket **[I]** are friction fit and can moved up and down for better access to bolt locations.



IMPORTANT!

Periodically Check and re-tighten Carriage Bolts.

STEP 7 REQUIRED TOOL: 1/2” WRENCH

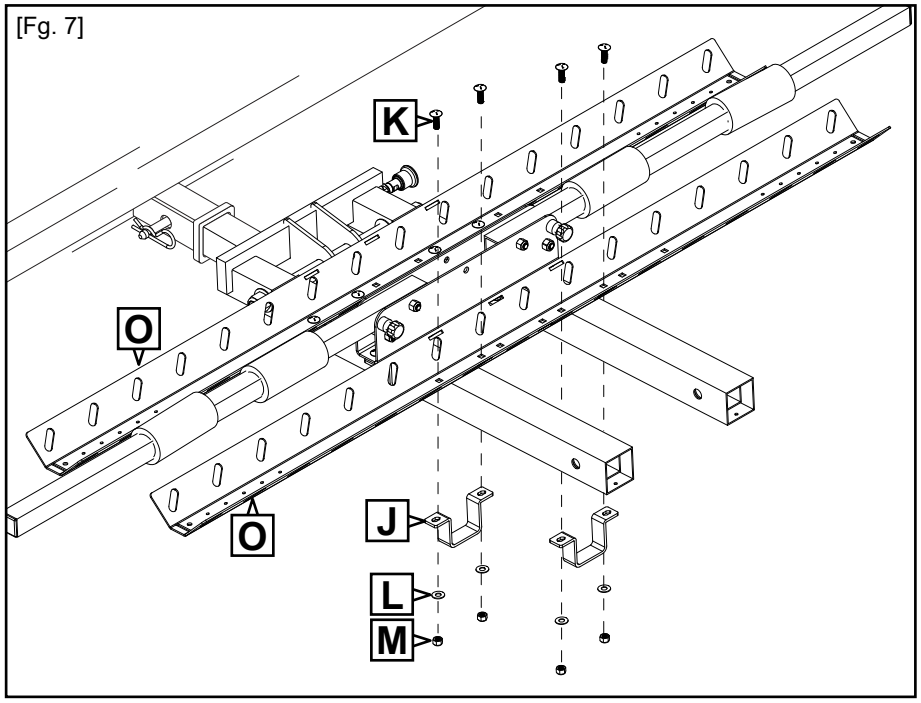
Place one (1) Tray **[O]** on either side of the Wing Bracket **[I]**.
[Fg. 7]

Two sets of square holes are provided so the Trays can be placed either centered on the Slide Tubes or offset if needed for greater bike fit (user choice). [Fg. 7a-7b]. The offset position is best when carrying two bikes of same size.

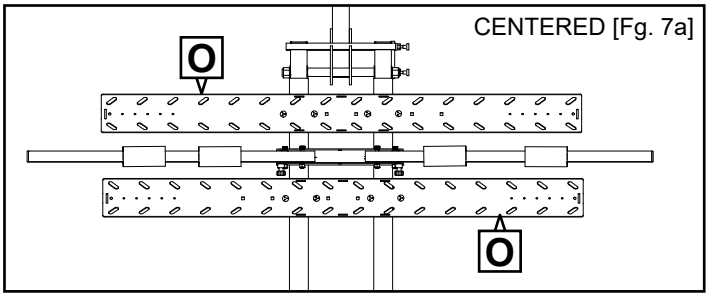
In the same manner as STEP 5, use two (2) 5/16” x .5” Carriage Bolts **[K]**, two (2) 5/16in Washers **[L]**, and two (2) 5/16in Nylock Nuts **[M]** per Hat Bracket **[J]** to connect each of the two Trays **[O]** to the Slide Tubes **[H]**.

Hand tighten only at this time, further adjustment will be required before final assembly.

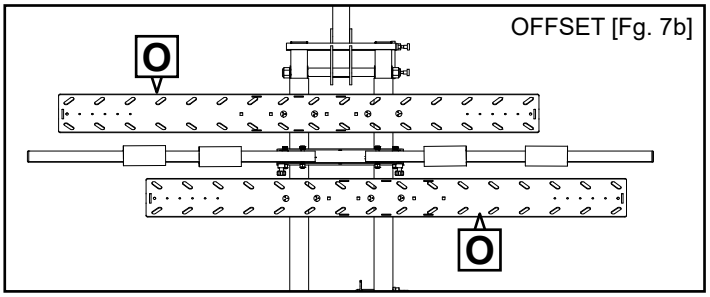
[Fg. 7]



CENTERED [Fg. 7a]



OFFSET [Fg. 7b]

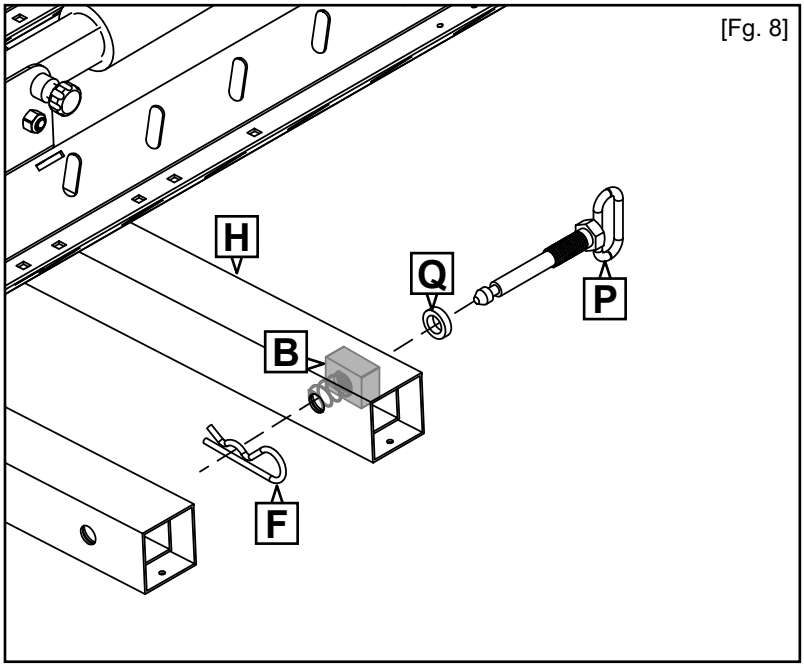


STEP 8

Insert the Silent Hitch Pin with Handle **[P]** and Nylon Bushing **[Q]** through the end with Spring Nut **[B]** installed in STEP 1, engage threads,tighten firmly and secure with Retainer Clip **[F]** or Press-on Lock **[BB]**. [Fg. 8]

IMPORTANT!: The Silent Hitch Pin with Handle **[P]** controls the slide-out function of the platform. Once installation is complete, the Silent Hitch Pin with Handle may be removed in order to slide the carrier rearward for rear hatch access when vehicle is stationary.

[Fg. 8]

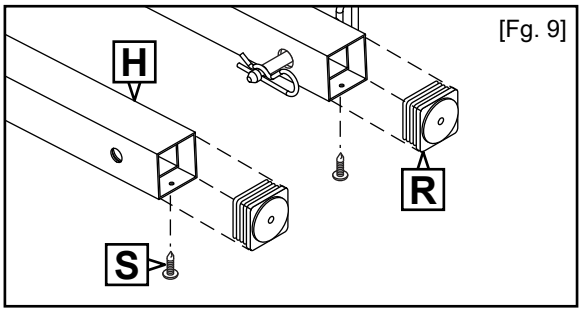


STEP 9

This step may already be completed by the factory.

Install the Reflector End Caps **[R]** over both ends of each Slide Tube **[H]** and secure with one (1) Tex Screw **[S]** each. [Fg.9]

TIP: Reflector End Caps **[R]** are a tight fit. Tap corners (away from reflectors to avoid damage) if needed.



[Fg. 9]

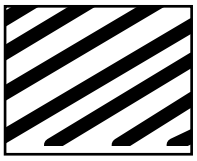
STEP 10

From underneath the carrier, connect the quick-link end of the Safety Cable **[N]** to the hole in the top of shank of the TwinTube **[A]**. [Fg.10]

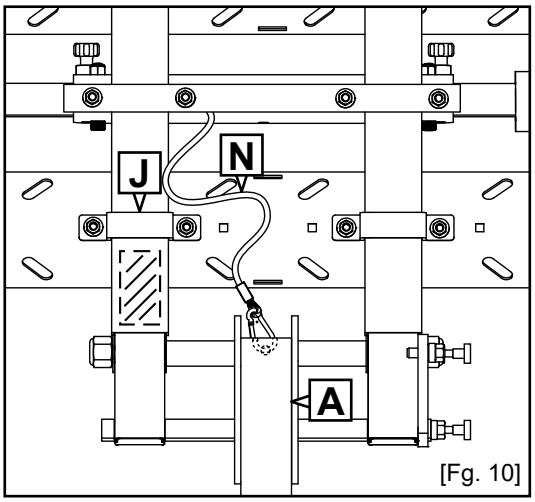
⚠ WARNING:

Never operate the carrier's slide-out function without confirming the Safety Cable **[R]** is fully secured. Failure to follow proper procedures may result in bodily injury and property damage.

⚠ WARNING:



DO NOT ALLOW HAT BRACKETS [J] TO OVERLAP THE WARNING LABEL LOCATED ON THE SLIDE TUBE. Failure to do so may permit over-extension of the Safety Cable allowing the Slide Tubes to come off and cause damage or personal injury.



[Fg. 10]

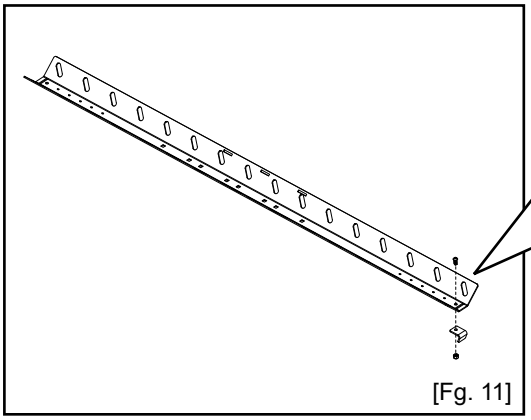
With the Hat Brackets **[J]** from STEP 5 & 6 still loosely secured, adjust the Wing Bracket **[I]** and Steel Trays **[O]** back and forth along the Slide Tubes **[H]** to adjust for required bike application(s) and vehicle clearances. **Tighten the bolts on the Hat Brackets [J] firmly once determined.**

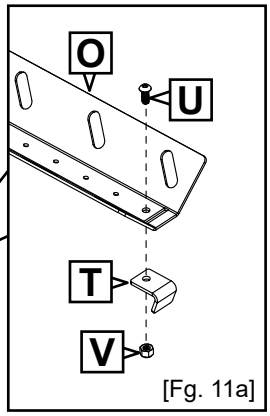
IMPORTANT: Position Trays **[O]** to allow bikes to lean inwards slightly.

IMPORTANT: The Wing Bracket **[I]** and Trays **[O]** must be positioned forward of the Handle Silent Hitch Pin location (close to vehicle). Be sure to allow room for the Pin handle to turn and operate as required.

STEP 11

To make the Ramp, secure the Ramp Bracket **[T]** to the bottom of the remaining Tray **[O]** using (1) 1/4-20 Button head Bolt **[U]** and (1) Nylock Nut **[V]** as shown. [Fg. 11-11a]


[Fg. 11]

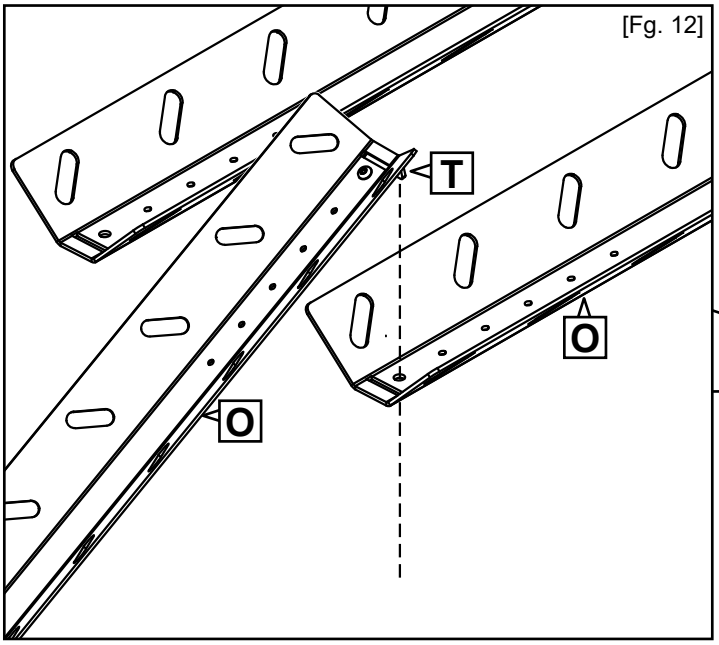


[Fg. 11a]

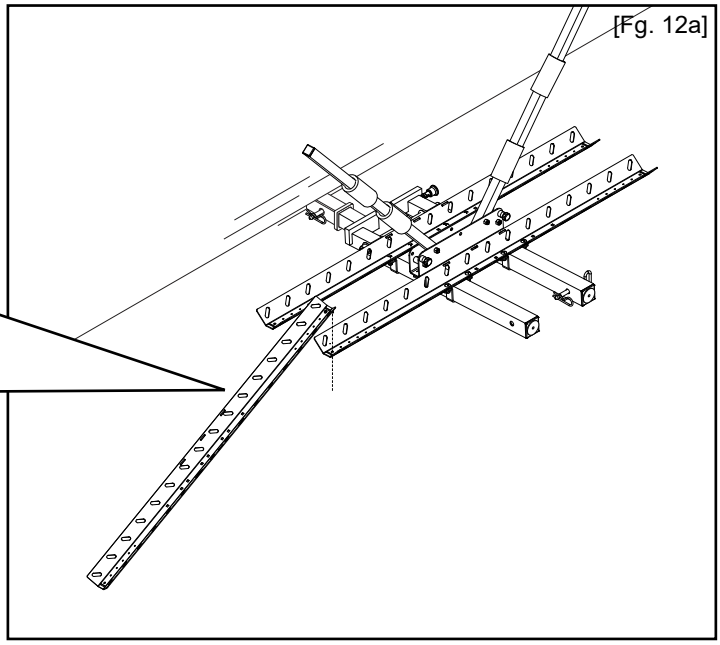
RAMP USE & STORAGE

RAMP USE

For bicycle loading & unloading, install the Ramp by hooking the Ramp Bracket **[T]** end onto the slotted end of the chosen Tray **[O]** in use. [Fg. 12-12a]



[Fg. 12]


[Fg. 12a]

RAMP STORAGE

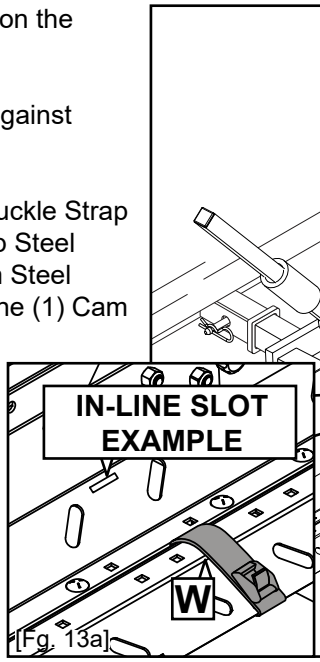
When not in use, the Ramp Tray **[O]** may be stored on the TwinTube Platform.

Place the Ramp Tray **[A]** upside-down and nested against either Platform Tray.

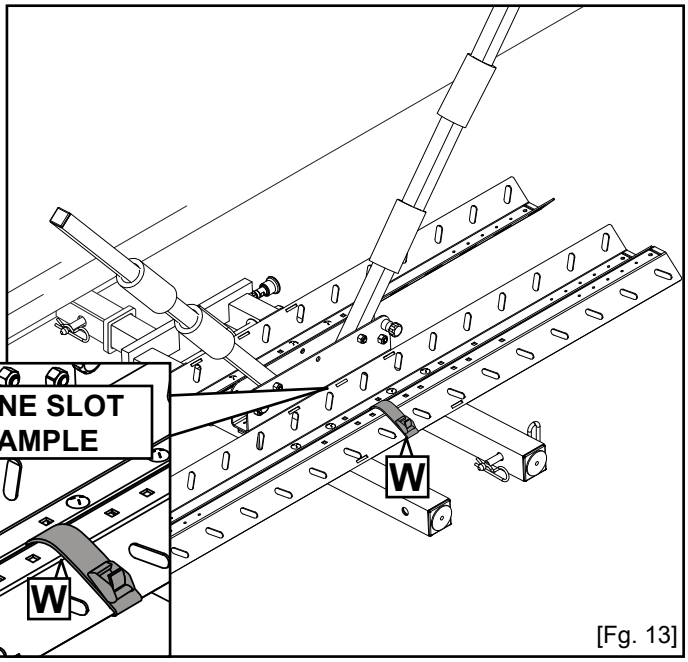
SCAN ME

Watch video for proper CAM Buckle Strap installation.

Using one (1) Cam Buckle Strap **[W]**, secure the Ramp Steel Tray **[O]** to a Platform Steel Tray **[O]** by looping one (1) Cam Buckle through the in-line slots on the Platform Tray and around the Ramp Tray as shown. [Fg. 13-13a]



[Fg. 13a]



[Fg. 13]

The VFR offers TWO different bike security options. Choose any attachment combination that works best for each bike to be mounted.

CAM BUCKLE STRAP ATTACHMENT

BICYCLE MOUNTING - CAM BUCKLE SECURITY

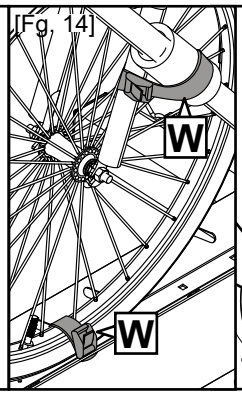
Roll the bicycle up the Ramp Tray and onto the platform.

Secure the front and rear forks of the bicycle to the VFR Wings wrapping the Cam Buckle Straps **[W]** around the foam bumpers of the Wings as shown.

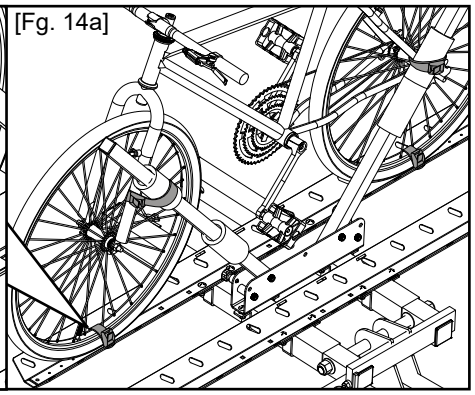
NOTE: The Wings must be at an angle that places them above the bikes axles. The Wing angle is adjustable and can be changed to match bikes of varying sizes.

Watch video for proper CAM Buckle Strap installation.

[Fg. 14]



[Fg. 14a]



Secure the bottom of each tire using the Cam Buckle Straps **[W]** as shown. [Fg. 14-14a]

Secure using four straps per bike, or four points of connection using both straps and wheel cradles.

NOTE: The lower Straps **[W]** can be run either through the slots on the Tray or wrapped all the way around the Tray depending on the bicycle tire width.

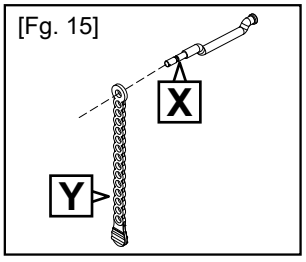
CRADLE INSTALLATION & MOUNTING

CRADLE INSTALL: STEP 1

Slide the round end of one (1) Rubber Strap **[Y]** onto each Upper Wheel Cradle **[X]**. [Fg. 15]

NOTE: Be sure to slide the Rubber Straps **[Y]** all the way onto the cradles so that it tightly rests *over* the plastic coating of the Wheel Cradle **[X]**.

[Fg. 15]



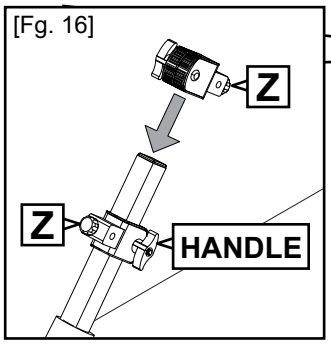
CRADLE INSTALL: STEP 2

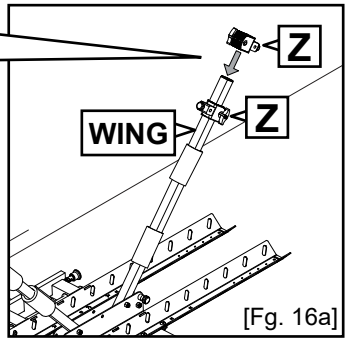
Loosen handles on each Cradle Housing **[Z]**. Slide one (1) Cradle Housings **[Z]** per bike onto each 'Wing' above the foam bumpers (setup for two bikes shown). [Fg. 16]

NOTE: The Handle Tightener located on each Cradle Housing **[Z] MUST** rest along the wing pointed either forward or backward of the vehicle (not to the side). [Fg. 16a]

NOTE: For easier adjust-ability with two bike setups, position the Cradle Housing so the Handles alternate direction as shown

[Fg. 16]





[Fg. 16a]

Re-tighten each Cradle Housing handle to secure in place on the Wing. [Fg. 16] Repeat this step for the second Wing.

CRADLE INSTALL: STEP 3

Apply Wax **[G]** to the metal ends of the Upper Wheel Cradles **[W]**.

Pull outward the Knobs **(don't twist)** located on the Cradle Housing **[Z]** installed and insert one (1) Upper Wheel Cradle **[W]** with Rubber Strap **[Y]** assembly. [Fg. 17-17a]

For two bikes, face the Upper Wheel Cradles in opposite directions as shown.

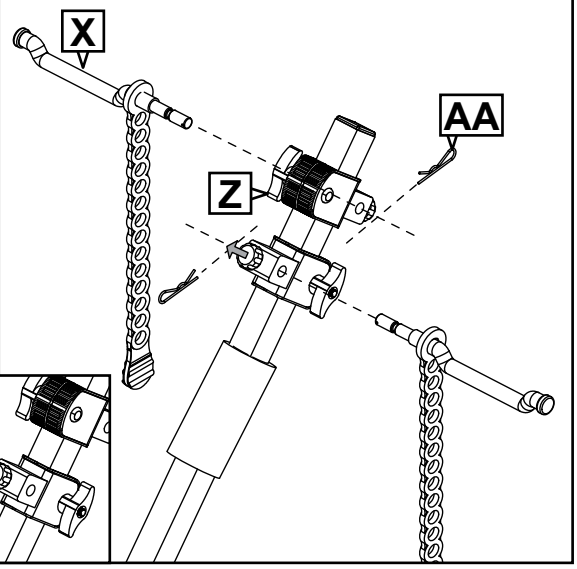
NOTE: Be sure the groove in the Cradle **[W]** is fully seated in the Housing **[Z]** by giving each one a light 'tug'.

Secure the end of each Upper Wheel Cradle **[W]** with one (1) Small Retainer Clip **[AA]** through the hole at the end of each Cradle.

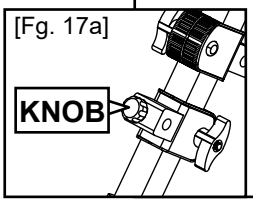
SCAN ME

Watch video for more information on proper cradle installation.

[Fg. 17]



[Fg. 17a]



OPERATION: BICYCLE MOUNTING WITH CRADLES

Roll the bike up the Ramp Tray and onto the platform.

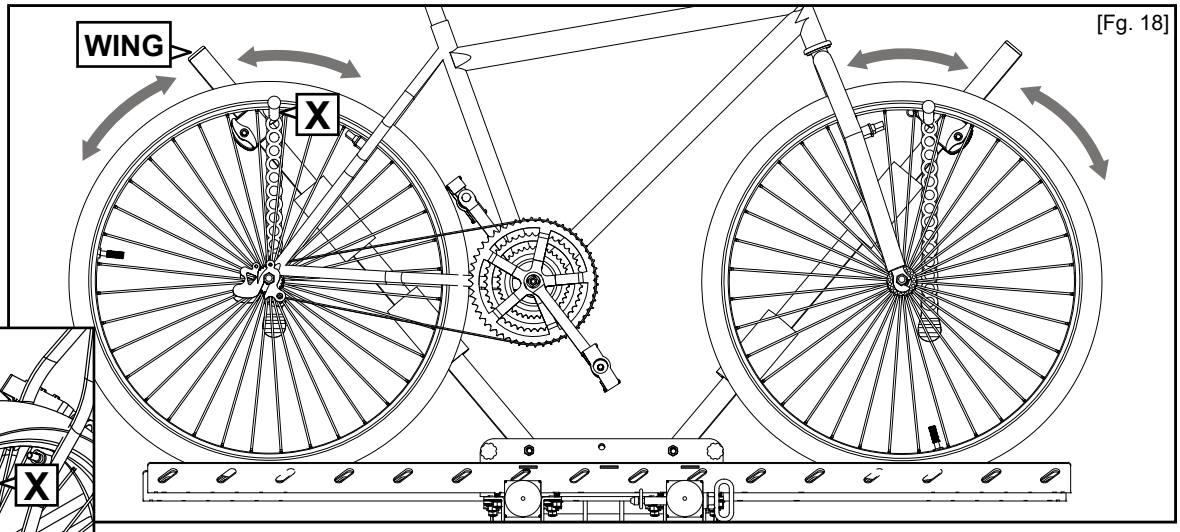
Adjust the angle of the Wings to point towards the apex of the bicycle tire (this does not need to be exact).

NOTE: When using the Upper Wheel Cradles it is easier to first lean the bicycle slightly away from the 'Wings' as the bicycle moves up the Ramp. Once the bike is fully centered on the platform, lean the bike back onto the Upper Wheel Cradles **[W]** with the chain rings to the outside. [Fg. 18 & 18a]

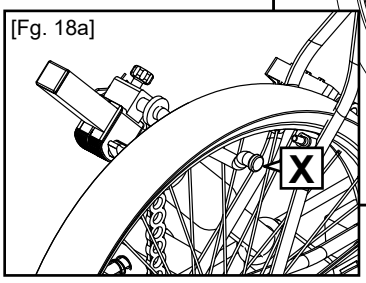
Adjust the Foam Bumpers located on the Wings to protect the frame of the bicycle.

IMPORTANT: For two bicycles, position the bicycles facing in opposite directions (front-to-back/back-to-front) **with the chain ring to the outside**.

[Fg. 18]



[Fg. 18a]

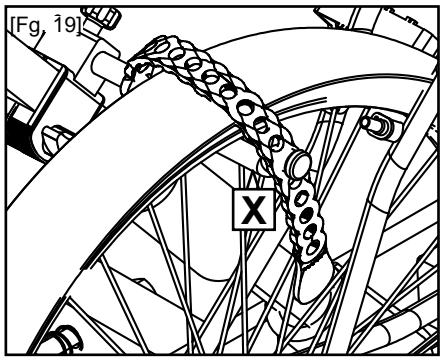


Secure Rubber Straps **[Y]** onto Upper Wheel Cradles **[X]** using the tightest hole available. [Fg. 19a]

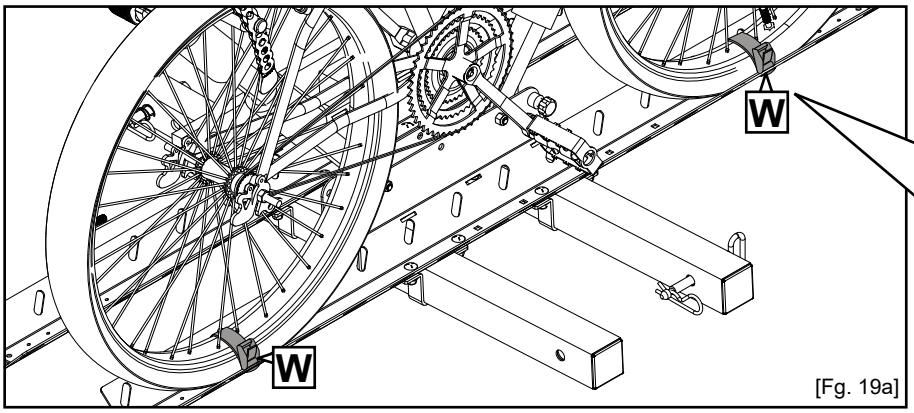
Secure the bottom of each tire using the supplied Cam Buckle Straps **[G]** as shown. [Fg. 19-19b]

IMPORTANT!: Each bike must be secured with four points of connection using Wheel Cradles **[X]** and Cam Buckle Straps **[W]**.

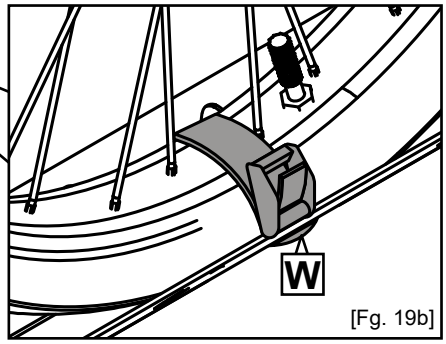
NOTE: The lower Straps **[G]** can be run either through the slots on the Tray or wrapped all the way around the tray depending on the bicycle tire width.



[Fg. 19]



[Fg. 19a]



[Fg. 19b]

OPERATION - FOLDING WINGS & CARRIER

With bikes removed, fold the VFR Wings down and lock in to place by pulling the 'Knob' on the Wing Bracket **[I]** outward. Give the Wings a 'tug' to confirm they are locked into place.

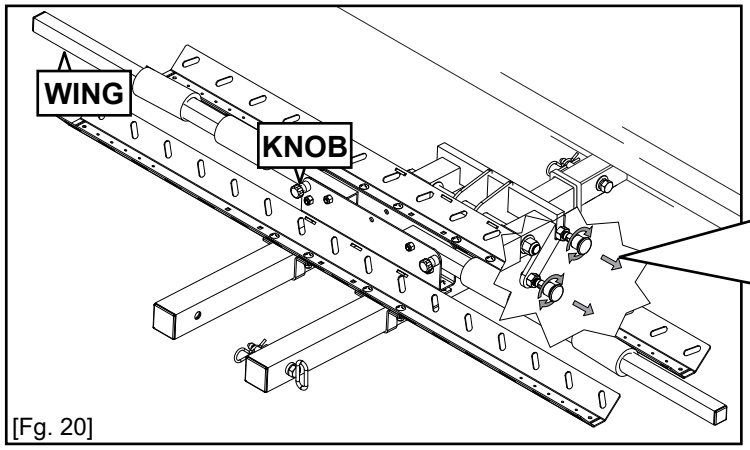
Pull the upper 'Pull Pin' out and tilt the rack up towards the vehicle. [Fg. 20-20a]

With the VFR tilted, pull the lower 'Pull Pin' out and lock the VFR into place. [Fg. 20b-20c]

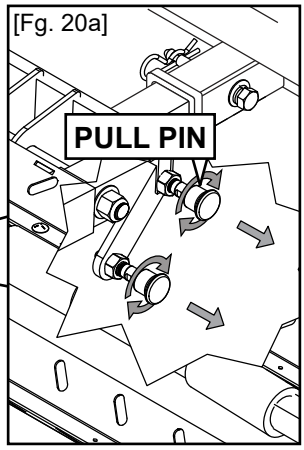
IMPORTANT!: Always give the rack a 'tug' to confirm it is fully locked into place.

Reverse the above process to fold the VFR down.

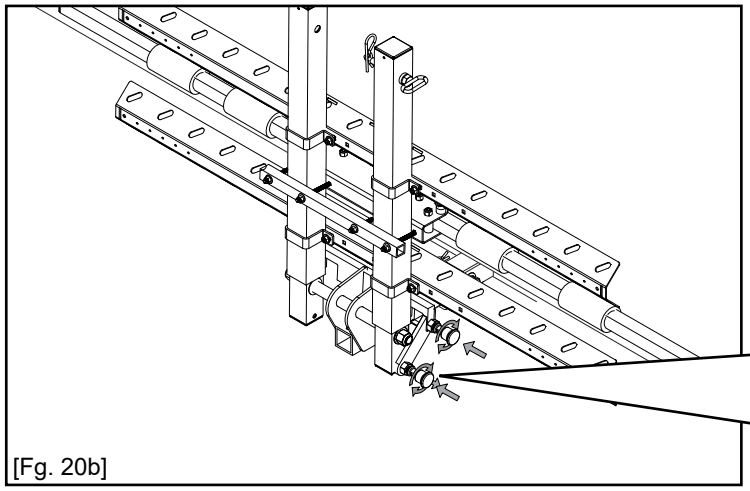
WATCH THE PULL PIN TIPS & TRICKS VIDEO

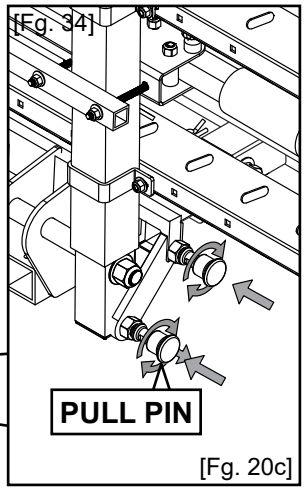


[Fg. 20]



[Fg. 20a]


[Fg. 20b]

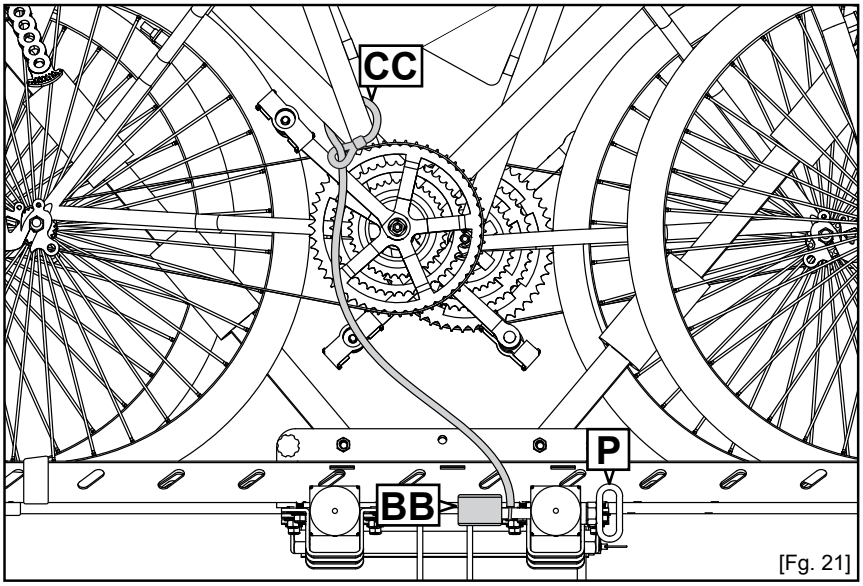


[Fg. 34]
[Fg. 20c]

LOCKING BICYCLES

Wrap the Locking Cable **[CC]** around the bicycle(s) frame and slide the small loop through the large loop on the Cable to create a closed loop around the bicycle.

Secure the small loop of Cable **[CC]** onto the Silent Hitch Pin with Handle **[P]** and apply the Press-on Lock **[BB]**. [Fg. 21]



[Fg. 21]

CARRIER MAINTENANCE

- If over time the Wings loosen, re-tension by tightening the bolts on the Wings.

- Periodically apply WD40 or another similar lubricating product to the round inside of the Cradle Housing and actuate the Knobs 3-4 times allow the lubricating product to reach down into the interior of the Knob assembly [Fg. 28] (approximately once a year depending on use).

NOTICE: All Manual information is subject to change without notice. Revised editions will be available for free download at LetsGoAero.com. Manual information is considered factual until made obsolete by a revised version.

Follow this QR-Code or visit
LetsGoAero.com/manuals to check for an updated version

⚠ WARNING:

Be sure the Silent Hitch Pin is full tightened on the hitch and that the Silent Hitch Pin with Handle is snug before transit. Always check and confirm all bolts and connections are tight and fully secure before each transit. Always confirm the 'Pull Pins' used for the tilt operation are fully seated and the rack is locked in place in either down or up position. Failure to follow proper installation and equipment checks before transit may result in damage to carrier, damage to property, bodily injury or death.

⚠ WARNING:

Always secure each bicycle with all four connections points (two Upper Wheel Cradles and/or Cam Buckle Straps). Do not operate the vehicle unless all connection points are tight and secured. Failure to follow bicycle mounting procedure may result in damage to carrier, damage to property, bodily injury or death.

SLIDE-OUT OPERATION

To telescope the V-Lectric VFR, remove the Silent Hitch Pin with Handle **[P]** from the Slide Tube's **[H]** safety pin hole. Verify that the Safety Cable is secured and then slide the frame to the rear. Operate slide-out only when stationary.

Let’s Go Aero Enclosed Carrier, Cargo & Bike Rack Guidelines

Use of third party accessories with Let’s Go Aero cargo carriers will lead to the lapsing of Let’s Go Aero’s warranty and liability for any material damage or accidents. This includes, but not limited to, the use of hitch adaptors and extensions, wheel covers or full bike covers.

Let’s Go Aero carrier accessories are warrantied for use only with Let’s Go Aero products.

Do not use Let’s Go Aero carriers and accessories for purposes other than those for which they were designed.

Let’s Go Aero products are rated for use with vehicle frame-based receiver style hitches only; other surfaces (ie bumper mount) constitutes improper use and will void Let’s Go Aero warranty.

Carriers with slide-out function may only be operated with vehicle is parked.

Periodically wash all surfaces of your carrier to clean, removal when not in use is recommended to help preserve metal surface finishes.

Locks should be removed and lubricated periodically to ensure smooth operation. Use graphite or dry lubricant to facilitate.

Secure all loads using the provided straps.

Carry the heaviest gear/bike nearest to the vehicle; center load near its center of gravity.

Check bolts, fittings, and straps before each use and during travel.

Do not position cargo carrier and/or bicycle tires directly in back of your vehicle’s hot exhaust; keep gear away from vehicle exhaust trajectory.

Permitted roadways entail highway and improved roads (forest service access roads or other non-technical terrains) only. Moderate speeds when on improved roads.

Do not exceed the maximum load specified in the assembly instructions; however, this limit is always subordinate to the maximum load recommended by the manufacturer of the vehicle itself. Your hauling weight may be limited by your vehicle’s capacity to carry a load and your vehicle’s suspension. In addition, load forces may minimize the payload capacity to keep in mind. Be sure to refer to the information regarding your specific vehicle, and Load Force Guidelines.

Let’s Go Aero One-Year Limited Warranty

For warranty coverage and limitations details, review manual guidelines and visit LetsGoAero.com/pages/lets-go-aero-warranty.

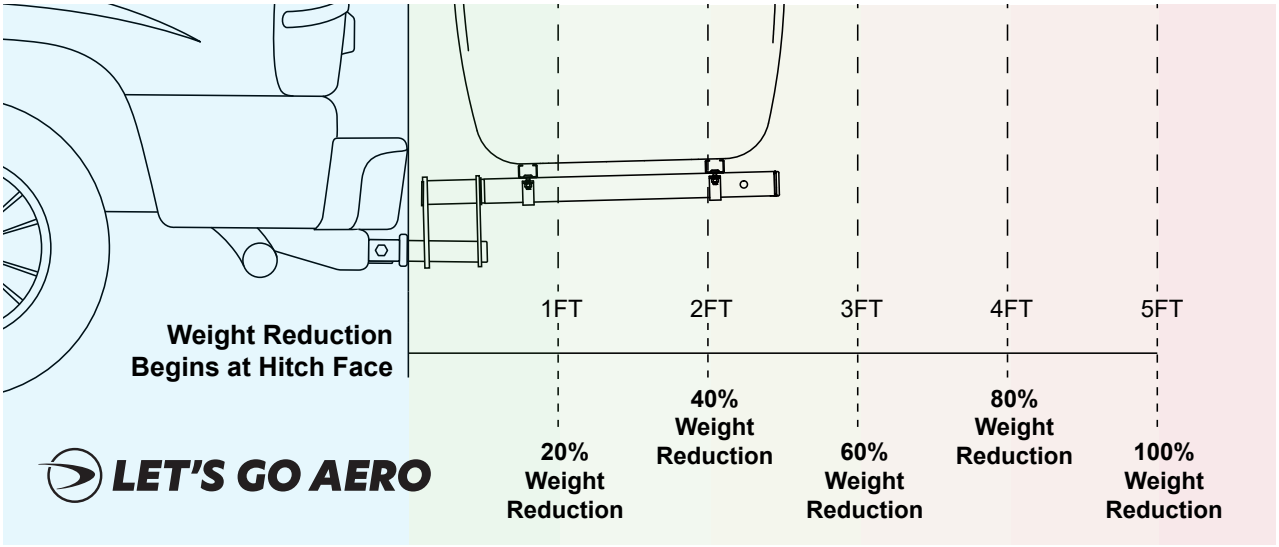
LOAD FORCE GUIDELINES FOR HITCH RACKS

Let's Go Aero hitch racks carry a maximum payload as published in their product manuals. Furthermore, there are other factors for consideration including the vehicle's load weight rating and load forces that may minimize the user's payload capacity to keep in mind.

Let's Go Aero racks are only intended for use with 2 inch receiver style hitches mounted to a vehicle frame. Use of hitch adaptors or extensions will change the load forces affecting the carrier, hitch and vehicle. Review the LOAD FORCE GUIDE below for weight carrying guidance.

A hitch rack attached to a hitch receiver applies a leveraged load force to the hitch and vehicle frame. The leveraged load force increases as the carrier and its load shifts rearward from the hitch face. Let's Go Aero's hitch racks position this load approximately 18" rearward of the hitch face. When Let's Go Aero's cargo carriers are used with hitches that have load carrying limits of less than 750 pounds, the full 300 pound load rating may not be useable.

Center of Gravity 20% Rule
For each one foot rearward of the hitch face, the loading carrying ability of the hitch is reduced 20%.



The chart below is a hitch load carrying recommendation for each of Let's Go Aero's four enclosed cargo carrier models on 2 inch hitches having load carrying ratings of 350, 500, and 750 (based on an estimated load center of gravity at 18in from the hitch face):

	Max Payload Weight (Net Weight Capacity)		
Carrier Empty Weight	**Class II 350lbs Max**	**Class III 500lbs Max**	**Class IV 750lbs Max**
GearCage - 90 Lbs	155 lbs	260 lbs	300 lbs
V-Lectric VFR - 85 Lbs	80 lbs per bike	80 lbs per bike	80 lbs per bike
V-Lectric 3.0 - 80 Lbs	60 lbs per bike	60 lbs per bike	60 lbs per bike
TriQuad - 77 Lbs	75 lbs per bike	75 lbs per bike	75 lbs per bike

About Slide-Out Functionality
Ease of slide out diminishes if load is off center, and the closer to maximum weight capacity use.