



**Alpaca Carriers, Inc. manufactures multi-purpose carriers or racks in Kimball, Minnesota. The carriers feature a patented system of pins that can be easily relocated on a frame along with our patented Alpaca Cinch™, a fastening system that self adjusts to articles of any shape or size, making our carriers very versatile, and easy to use.**



**Alpaca Carriers, Inc.**  
14087 State Hwy 15  
Kimball, MN 55353

**Carry bicycles, skis, snowboards and more.**

**Alpaca 1700 Long Haul Adventure Rack™**

**Protected by US Patent  
#6,772,929 B1**

**John Stein                      Ed Stein**  
**E-mail: alpaca2@msn.com   edstein2@meltel.net**  
**Business: 320-398-2497 or 877-350-3361**  
**<http://www.alpacarriers.com>**

## Selecting a Vehicle, Hitch and Adapter for the Alpaca 1700 Long Haul Adventure Rack.



These companies make a dual hitch adapter that will work with the Alpaca 1700 Long Haul Adventure Rack; Ultra Tow, Buyers, Haul Master, DRH-1, Rage Powersports, Prolinemax, and MaxxHaul 70070. These adapters have a TW rating of 400 pounds.

Considering the warning on the dual hitch adapters that are necessary to use this rack to reduce the capacity of the hitch to 65% of the hitch tongue weight (TW) rating, using these adapters to capacity would require a vehicle with a 600 pound tongue weight rated, 2 inch hitch.

**Class III  
600+ LB TW  
2" Hitch**



We provide reasonable vehicle and hitch suggestions for our racks. We are not testing any hitches or adapters, but using the information available from the manufactures. For the Alpaca 1700 Long Haul Adventure Rack we suggest a 600 pound tongue weight (TW), 2 inch hitch. We also suggest not using this rack with a motorhome, trailer or other towed vehicle.

Google to find hitches available for your vehicle use vehicle; year, make, model, hitch for search words. The load a rack can carry will not get close to the hitch towing capacity (GTW). For racks hitch size and tongue weight (TW) are the important variables. The capacity of the hitch can exceed the capacity of the vehicle. It is necessary to stay within the limits of the weakest component.

For this example we Google 2016 Ford Escape Hitch and find the many hitch choices below. Notice the information with every hitch. For most bike racks if the vehicle has a 2 inch hitch it is adequate. The Alpaca 1700 Long Haul Adventure Rack requires a stronger hitch. Reducing the hitch choice for this rack with this vehicle to one. It is necessary to make sure the vehicle is equipped with the correct hitch, the information is on the hitch.

**Hitch Size:**  
1.25 Inch Hitch  
350 Pound Tongue Weight (TW)  
3500 Pound Tow Weight (GTW)

**Hitch Size:**  
2 Inch Hitch  
**Tow Weight:**  
350 Pound Tongue Weight (TW)  
3500 Pound Tow Weight (GTW)  
**Weight Distribution Tow Weight:**  
500 WD TW Pound Tongue Weight  
5000 WD GTW Pound Gross Tow Weight

**Hitch Size:**  
2 Inch Hitch  
350 Pound Tongue Weight (TW)  
3500 Pound Tow Weight (GTW)

**Hitch Size:**  
2 Inch Hitch  
**Tow Weight:**  
525 Pound Tongue Weight (TW)  
3500 Pound Tow Weight (GTW)  
**Weight Distribution Tow Weight:**  
525 WD TW Pound Tongue Weight  
5000 WD GTW Pound Gross Tow Weight

**Hitch Size:**  
**2 Inch Hitch**  
**Tow Weight:**



**675 Pound Tongue Weight (TW)**  
4500 Pound Tow Weight (GTW)  
**Weight Distribution Tow Weight:**  
675 WD TW Pound Tongue Weight  
5000 WD GTW Pound Gross Tow Weight



The 1700 Long Haul Adventure Rack extends more than 4 feet behind the vehicle so it includes an attachment for a tail light. The tail light and dual hitch adapter are not included with the rack. They can be purchased from the hitch manufacture. It is the users responsibility to provide the necessary lights, reflectors or flags to make their rack and load visible. The light pictured is multifunction; brake light, running light, hazard lamps and turn signals.



## Assembling Components for Alpaca 1700 Long Haul Adventure Rack

Wet inside of vinyl sleeves with water and slide them to the desired locations on the long haul top. If sleeve needs to be moved get water between sleeve and frame then slide sleeve to desired position.



Optional Locks



Use the 3/8-16 X 3.25 inch grade 5 bolts, a 3/8 washer, a 3/8 fender washer and a steel spacer on each bolt as shown for the ring holders, insert bolts in holes on the long haul top, use the 3/8 washers & nylon lock nuts provided and tighten.



Attach Decal

Insert a spring loaded nut from the silent hitch pins into each tube as shown, align nut with hole. The video Options to Prevent Side to Side Movement on our website [www.alpacacarriers.com](http://www.alpacacarriers.com) shows how to do this.



Bolt the Light Connector to the Long Haul Load Support Tube as shown. Use the 3/8-16 X 5 inch grade 5 bolt, a washer on each side & nylon lock nut provided.

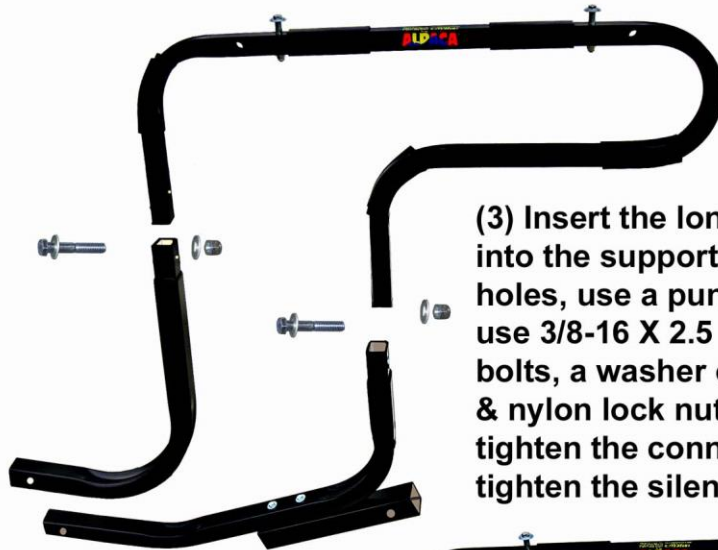
## Assembling Alpaca 1700 Long Haul Adventure Rack



(1) Insert dual hitch riser into hitch, align holes, insert silent hitch pin into hole and tighten. Attach hitch pin clip or optional hitch pin lock.



(2) Insert Support Tubes into Dual Hitch Riser as shown, align holes, insert silent hitch pins into holes, start bolts but do not tighten. Attach hitch pin clips or optional Hitch Pin Locks. The video Options to Prevent Side to Side Movement on our website [www.alpacacarriers.com](http://www.alpacacarriers.com) shows how to do this.



(3) Insert the long haul top into the support tubes, align holes, use a punch if needed, use 3/8-16 X 2.5 inch grade 5 bolts, a washer on each side & nylon lock nuts provided, tighten the connections. Then tighten the silent hitch pins.



## Attaching pins to Alpaca 1700 Long Haul Adventure Rack

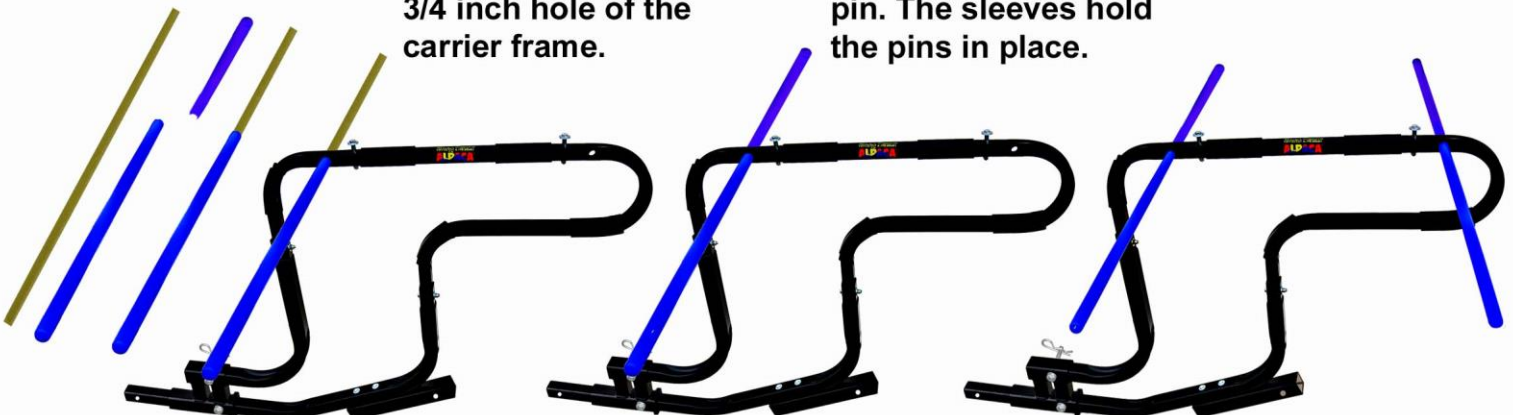
Go to [www.alpacacarriers.com](http://www.alpacacarriers.com) and watch the videos. The frames and some components on Alpaca Racks will differ to accommodate different items, hitches and vehicles, but the racks are based on the same system of pins and cinches. The combination of videos will help understand how to use the Alpaca Racks. The video Attaching Pins & Cinches to the Alpaca 1700 Road Trip Adventure Rack demonstrates how to attach a through pin and a cinch to a rack with no strap clip. The videos featuring the 1500 Trike & Bike Racks demonstrate how to use the ring holders. Information from other videos can be applied to the Alpaca 1700 Long Haul Adventure Racks.

Slide a blue sleeve onto the steel pin.

Insert the end of the pin without the sleeve into a 3/4 inch hole of the carrier frame.

Slide a blue sleeve onto the other end of the steel pin. The sleeves hold the pins in place.

Repeat for the other pin.





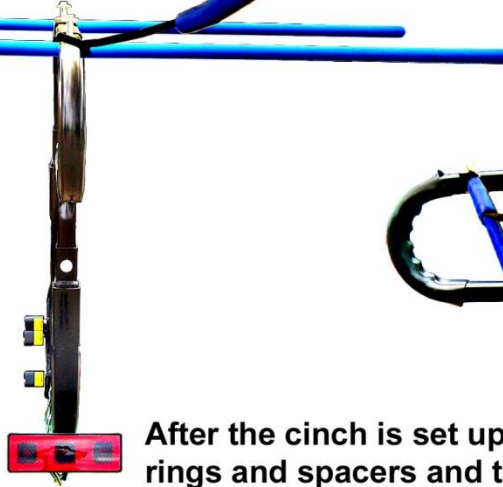
# Attaching cinches to Alpaca 1700 Long Haul Adventure Rack

Slide the loop on the end of the strap over the pin and against the carrier frame, run the other end of the strap around the carrier frame from the bottom so the strap is on the side of the pin toward the center of the rack. Take the end without the loop, run it through the loop and pull it tight.

Slide the desired number of rings or spacers onto the cinch strap for the intended load.



Press the clasp on the cam-buckle, slide the end of the strap through the opening from the bottom as shown and let go of the clasp. Repeat the process for the other cinches.

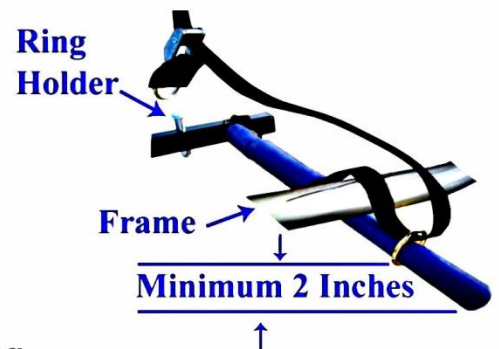


After the cinch is set up with the desired number of rings and spacers and the buckle is attached to the strap as shown, the carrier is ready to load.

## Using Alpaca Cinch™ with Alpaca 1700 Long Haul Rack

The Alpaca 1700 Long Haul Rack is similar of the Alpaca 1700 Road Trip Adventure Rack. The videos on the website [www.alpaca-carriers.com](http://www.alpaca-carriers.com) featuring the 1700 Road Trip Adventure Rack will teach how to use this rack. The videos featuring the 1500 Trike & Bike Racks demonstrate how to use the ring holders.

The cinch is quick and easy to use. Load the item, run the strap over the item, slide a ring or spacer over the end of the pin to the item and pull the strap tight, repeat for the other cinch, load the next item, repeat the process for each item loaded, after the last item is loaded run the strap back over all items, hook the ring on the short strap with the cambuckle over the ring holder and tighten the strap. Repeat for the other cinch. This method of cinching will hold the item secure to the pin. The pin must extend at least 2- inches past the last ring and the strap must be tight enough so the last ring or spacer cannot slide off the end of the pin for the item to be secure.





# Limit load by weight with Alpaca 1700 Long Haul Adventure Rack.



When weight is added to the hitch on the vehicle, weight is removed from the front of the vehicle.

The rear axles, the location the hitch attaches to the vehicle, the hitch, and the adapter are the locations with the most stress. These components must be very strong for this rack.

As the distance the load is carried from the vehicle increases, the amount of weight that can be carried quickly approaches zero because of leverage. This rack was intended to provide room to space the bikes. The load must be limited by weight 200 lbs maximum if the vehicle hitch and adapter are adequate.

## Real life example of leverage, limit load by weight



A 675 TW rated hitch is available for this vehicle. The vehicle to the left is loaded with 600 pounds at the position of the ball mount, the location where the hitch is rated. The weights show how much this changed the weight of the vehicle at each axle.

Notice how the axle weights change with the same vehicle with an Alpaca 1700 Road Trip Adventure Rack at 90 pounds, loaded with 200 pounds of bicycles. This load is about 50% less weight than the above load but is carried farther from the vehicle. The amount of weight removed from the front axle is very close to the amount removed above because of leverage.



90 pounds Alpaca 1700 Road Trip Adventure Rack, loaded with 200 pounds of bicycles.



As the distance from the vehicle increases the load that can be carried quickly approaches 0 pounds. The lights would need to be extended for a long wheelbase recumbent. It is the users responsibility to make the rack and load visible.

The actual load that can be carried is dependent on many factors including road conditions, the length of the load, along with weight and position of the load on the rack and in the vehicle. It is the users responsibility to make sure their vehicle, hitch, adapter and rack are adequate for the load and conditions.

**ALPACA CARRIERS WARRANTY IS LIMITED TO THE RACK.**

## CAUTIONS ON LOADING

1. Load larger, heavier items first.
2. It is best to carry the bicycles as close to the vehicle as possible. This will reduce stress on the hitch and vehicle.
3. Tighten strap securely, so the last ring cannot slide off the end of pin.
4. Fasten articles securely to the carrier.
5. Taillights must be visible.
6. Ensure the necessary clearance is given from the load to the ground.
7. Keep tires and articles away from vehicle exhaust.
8. This rack must be used with 2 inch, 600 pound tongue weight (TW) hitches limit the load to 200 lbs.
9. Do not use with motor homes, 5<sup>th</sup> wheel trailers, campers, trailers or other towed vehicles.
10. Do not overload vehicle, hitch or carrier.

**Warning:** This carrier has been designed to carry many diverse articles on vehicle receiver hitches. User must inspect components for tightness, wear, deformation, cracks or elongation before each use. It is the user's responsibility to attach the carrier correctly to the vehicle, and secure the articles to the carrier. The manufacturer and seller expressly disclaim any and all liability for personal injury, property damage, or loss whether direct, indirect or incidental, resulting from the incorrect attachment, improper use, inadequate maintenance, or neglect of the carrier.

### **Alpaca Carriers, Inc.**

14087 State Hwy 15  
Kimball, MN 55353

**Toll free: 1-877-350-3361**

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## LIMITED WARRANTY

Alpaca Carriers, Inc. warrants this product to the first consumer to be free from defects in material and workmanship under normal use for a period of twelve (12) months from the date of purchase. Alpaca Carriers, Inc.'s sole responsibility under this warranty is limited to the repair or replacement of any defective part of such product. The cost of such replacement, including labor and parts, but excluding shipping, is the responsibility of Alpaca Carriers, Inc. This warranty is void if this product has been subject to any unauthorized modification, use with any unauthorized attachment, device or feature, accident, neglect, misuse, or any event other than ordinary use. Consumer must provide proof of purchase to validate warranty.

Alpaca Carriers, Inc. does not warrant the products of any third party manufacturer, which may be supplied with this product, and the purchaser agrees to look only to such third party for any warranty claim relating to such product. ALPACA CARRIERS, INC. LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.