CycleSimplex Assembly Instructions, Maintenance Instructions, Warrantee Information and Liability Agreement

2” Receiver Insert

One Tandem Bike Rack v5.0

Material List One Tandem Bike Vertical Rack v5.0

	Item	Tn1 Qty		Item (Items of the same color will be packed together)	Tn1 Qty
	Baggie 6 x 6, 4ml	1		Box 5 Panel Folder-One Tandem	1
	Hex Head Armor 1/2-13 x 1 1/2	2		FTS-200 PG H2 36 Tn1 Btm Strut	1
	Lock Washer 1/2" Yellow Zinc	2		FS-200 PG LS 36 Tn1 Top Strut	1
	Channel Nut 1/2"	2		RI 2 x 32-5 Tn1	1
	Flg Head Grade 8 3/8-16 x 1 1/4	1		J-Bolt Assembly - 7"	2
	Flg Head Grade 8 3/8-16 x 2 3/4	2		FS-400 PG LS 18"	1
	Flg Head Grade 8 3/8-16 x 3	2		FS-200 PL LS 12 Tn1 Welded Nut	1
	Flat Washer 3/8 Armor Coat	3		Rubber Pad	5
	Lock Washer 3/8" Yellow Zinc	1		Wheel Stop Long	2
	Flat Washer 3/8 Nylon	2		Wheel Tray 60 Degree Regular	1
	Channel Nut 3/8	1		Hand Knob	2
	Nut 3/8-16 SS Self-Lock	3		Flat Bracket SP-601 PLTD	2
	Hex Head Armor 1/4-20 x 1	3		Z-Bracket (ZE-611 PLTD)	2
	Lock Washer 1/4 Yellow Zinc	3		Cam Buckle Strap 12"	1
	Flat Washer 1/4 Armor Coat	3		Cam Buckle Strap 16"	1
	Channel Nut 1/4	3		Cam Buckle Strap 23"	1
	Sq. Washer SW-619 3/8 PLTD	1			

Precautionary and Maintenance Information:

Each wheel and Wheel Stop must be secured with the straps.

When you are not carrying trike(s)/bike(s), you can either leave the straps attached through the slots or remove them. If you leave the straps on the rack, they should be connected just as they would with the trike or bike on the rack, otherwise they may be lost.

There is always some flex in metal. Because of this you should check and tighten bolts before each use.

You should check the straps for wear before each use and replace if they show any wear.

This trike or bike rack will extend quite a distance behind your vehicle. Caution must be used not to "bottom out" on sharp dips or rises in your path. Your rack or trike(s)/bike(s) may also extend beyond the sides of your vehicle so caution is required not to hit the rack or your trike(s)/bike(s) on other objects.

Liability Information

CycleSimplex, LLC's liability from all causes is limited to the purchase price of the trike or bike rack.

Warrantee Information

This trike or bike rack may be returned unused for any reason by the purchaser to CycleSimplex, LLC within 15 days of its receipt by the purchaser. For full refund, returns must be packaged so that no damage occurs to the rack in shipment and the trike or bike rack is received by CycleSimplex in like new condition.

CycleSimplex, LLC warrantees the trike or bike rack from defects in material or workmanship for 90 days from the date the purchaser receives the product. During that 90 day period, CycleSimplex, LLC will at its sole discretion either replace defective components or refund the full purchase price of the trike or bike rack upon return of the trike or bike rack in like new condition.

Material List Two Inch – One Tandem – v5.0

Where is the material used	Hex Head Bolts	Flange Head Bolts	Metal Washer	Plastic Washer	Lock Washer	Self Lock Nut	Channel Nut
To Attach Z-Bracket and Straight Bracket to Tower	(2) – ½" x 1 ½ Hex Head"				2		2
½" Totals					2		2
To Attach Tower Bottom Strut to Receiver Insert	**L-Bolt with Welded Nut**	**(2) – 3/8" x 3" Flange Head**	1	2		1	
To Attach Tower Top Strut Inside Tower Bottom Strut		**(1) – 3/8" x 1 ¼" Flange Head**	Square Washer 3/8"		1		1
To Attach Slide to Receiver Insert		**(2) – 3/8" x 2 ¾" Flange Head**	2			2	
3/8" Totals			**3+1**	**2**	**1**	**3**	**1**
To Attach 2 Wheel Stops to Slide	2 - 1/4" x 1" Hex Head		2		2		2
To Attach 1 Wheel Tray to Slide	1 - 1/4" x 1" Hex Head		1		1		1
1/4" Totals			**3**		**3**		**3**

Component Description

J-Bolt (7" Long)
- Spacer (1" long) (2)
- Self-Locking Nut (2)
- 3/8" Flat Washer (4)
- 3/8" Lock Washer (2)

Cam Buckle Strap 12"
Cam Buckle Strap 16"
Cam Buckle Strap 23"
Hand Knobs
Rubber Pads
Tn1 Tower Bottom Strut (36" x 1 7/8" x 1 7/8" Strut Channel)
Tn1 Tower Top Strut (36" x 1 5/8" x 1 5/8" Strut Channel)
Slide (18" x 1" x 1 5/8" Strut Channel)
Insert with Welded Nut (12" x 1 5/8" x 1 5/8" Strut Channel)
Wheel Trays-Regular
Wheel Stops – Long
Receiver Insert (2" x 2" x 30", 50 lbs.)
Z Brackets
Flat Brackets
Box (36 ½ x 6 ¾" x 2 3/8")

We package the nuts and bolts for many models, so you may have pieces left over.

COMPONENTS

One Tandem Tower Bottom Strut (36” x 1 7/8” x 1 7/8”).

One Tandem Tower Top Strut (36” x 1 5/8” x 1 5/8”)

One Tandem Insert with Welded Nut (12” x 1 5/8” x 1 5/8”)

Slide 18” long

Wheel Tray with Cam Buckle Strap

Wheel Stop - Long

Z-Bracket for One Tandem

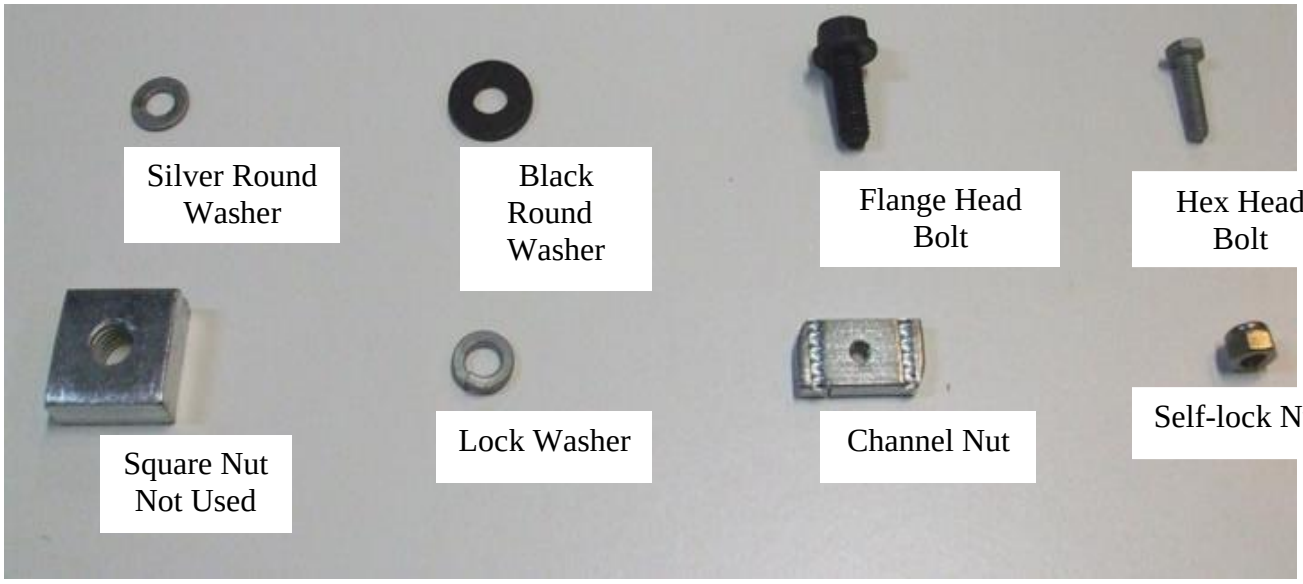
Flat Bracket One Tandem

J-Bolt for One Tandem

WARNING

The use of a 1.25” to 2” adaptor is not recommended. If you use one in spite of this warning, only do so with anti-rattle bolts at each joint.

NUTS and Bolts



The above is a picture of the various components we use in many of our racks. Your rack may not use all of them.

Assembly Instructions 2” Receiver Insert for
One Tandem Bike Rack v5

Figure 1: All Bolts requiring a Channel or Square Nut must be assembled in the following fashion. This is a Bolt and Channel Nut or Bolt and Square Nut Assembly. The various kinds are shown below. Each may have either a square nut or a channel nut in accordance with the instructions

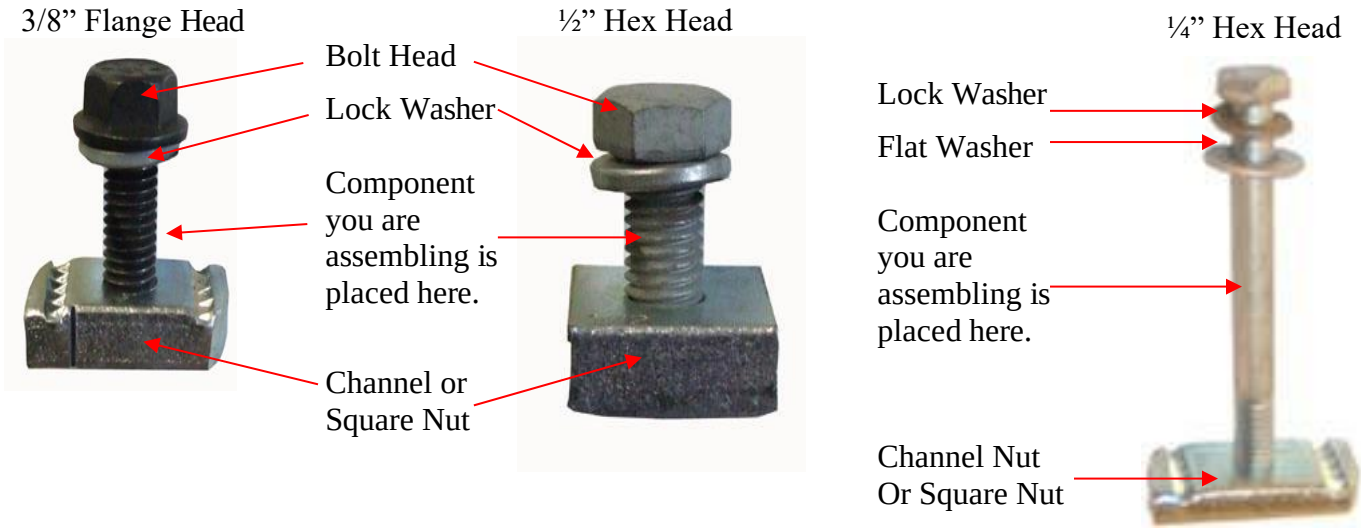
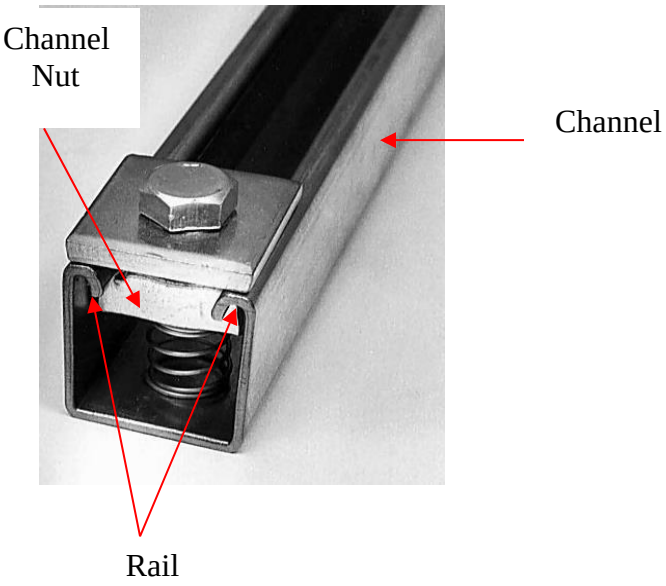
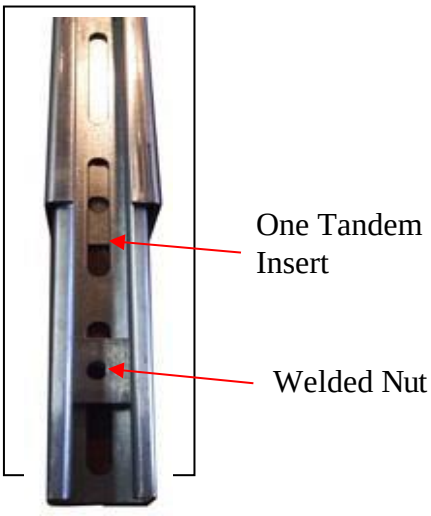


Figure 2: All Bolt and Nut Assemblies must be tightened with the nut under the rail of the channel as shown below. The grooves in the channel nut must be up and under the rail of the channel. Your channel or square nut will not have a spring under it as shown below.

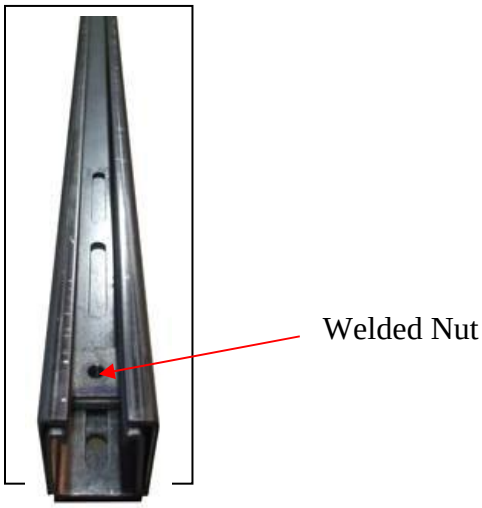


Step 1: Place the One Tandem Insert with the welded nut inside the Tower Bottom Strut as shown in Picture A. Slide the Insert inside the Tower Bottom Strut until the hole in the nut aligns with the 3/8" hole that is furthest from the end of the Bottom Strut (Picture B)

Picture A

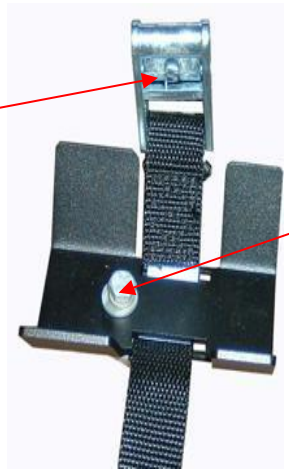


Picture B



Step 2. Complete the 1 Wheel Tray Assembly as follows:

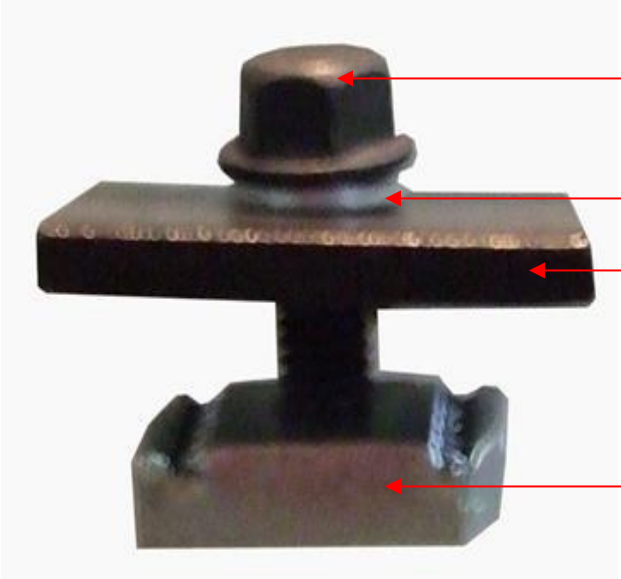
Cam Buckle Strap



Wheel Tray with Cam Buckle Strap

¼" x 1" Bolt and Channel Nut Assembly as shown in Figure 1. Te larger hole in the Wheel Tray is not used.

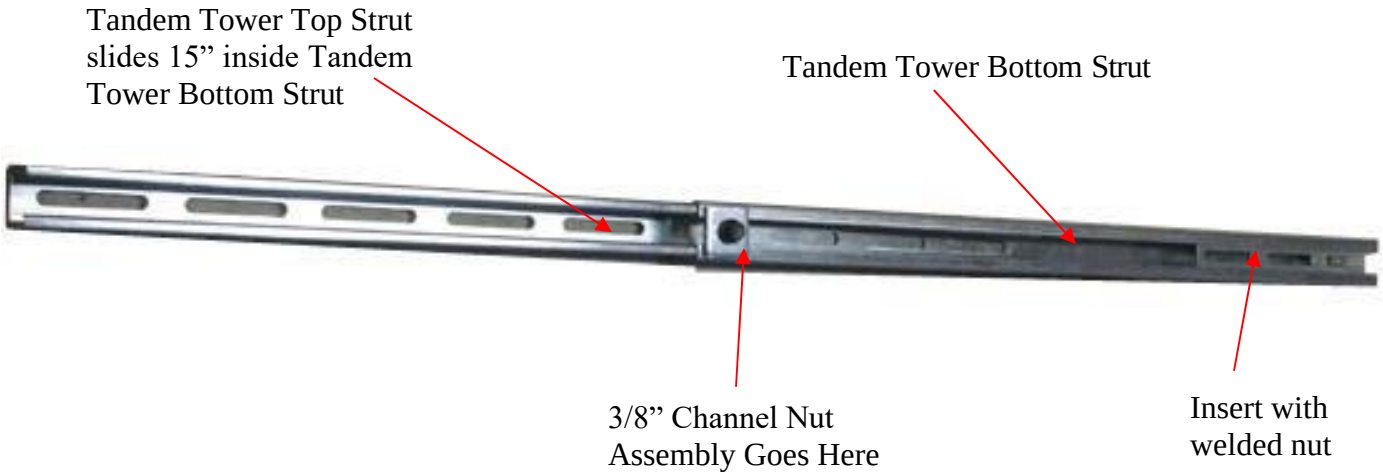
Step 3: Create one 3/8" x 1" Channel Nut Assemblies: Place a lock washer then a 1 5/8" square silver washer under the heads of the bolts. Put 3/8" channel nuts on the end of the bolts. This is a 3/8" Channel Nut Assembly



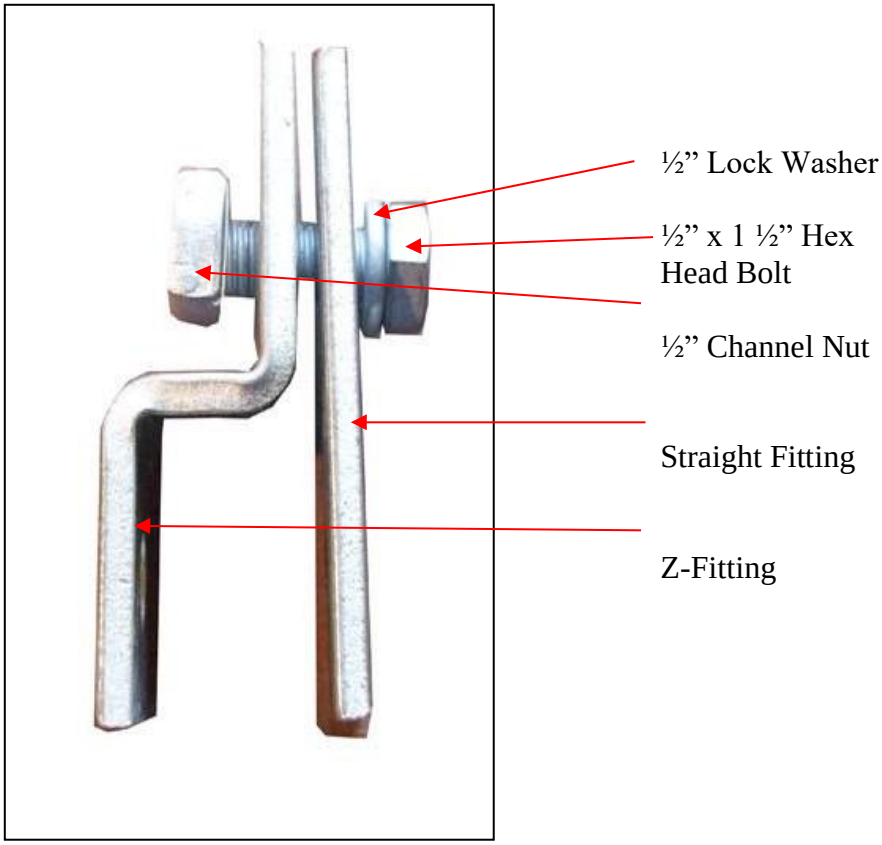
Step 4. Create the Tandem Tower Assembly: Slide the Tandem Tower Top Strut inside the Tandem Tower Bottom Strut approximately 15". NOTE: One end of the Tandem Tower Bottom Strut may slide inside easier than the other end.

Place the 3/8" Channel Nut Assembly made in the previous step inside the two Tower struts. It should be placed 2" from the top of the Tandem Tower Bottom Strut. Turn the channel nut so that it is under the rails of the Tandem Tower Top Strut (as previously shown in the Figure 1 example) and tighten the bolt.

The completed Tandem Tower Assembly is shown below.

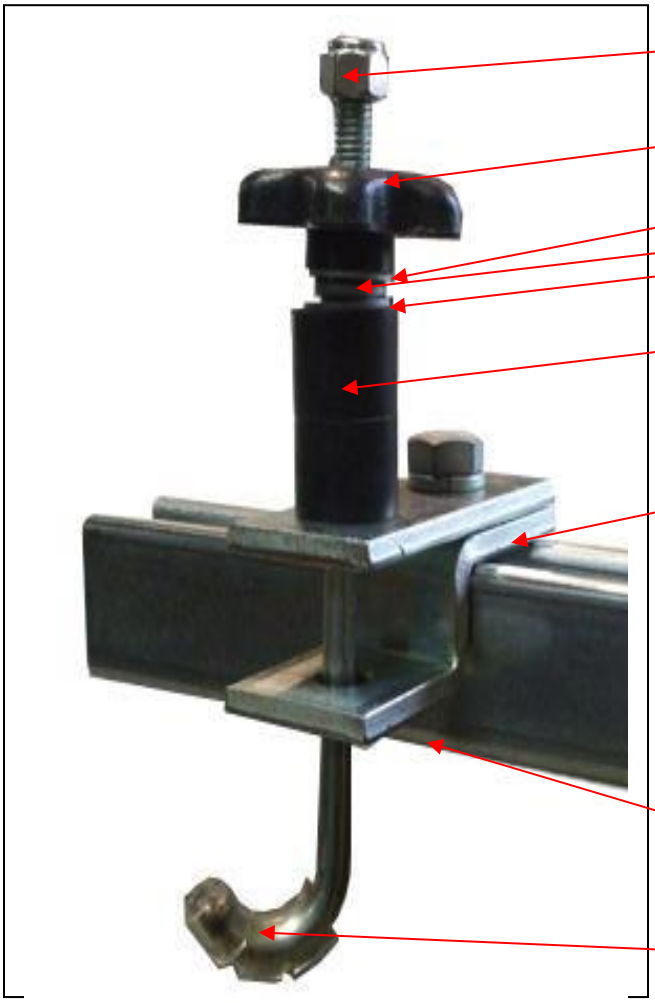


Step 5: Make two J-Bolt Brackets as shown below



Step 6: Complete and Attach the J-Bolt Bracket Assembly to the Tower Struts: Measure from the back of the back tire to each seat post tube on your tandem. Add 4" to each measurement. These will be the approximate Rear Seat Tube and Front Seat Tube Measurement from the very bottom of the tower.

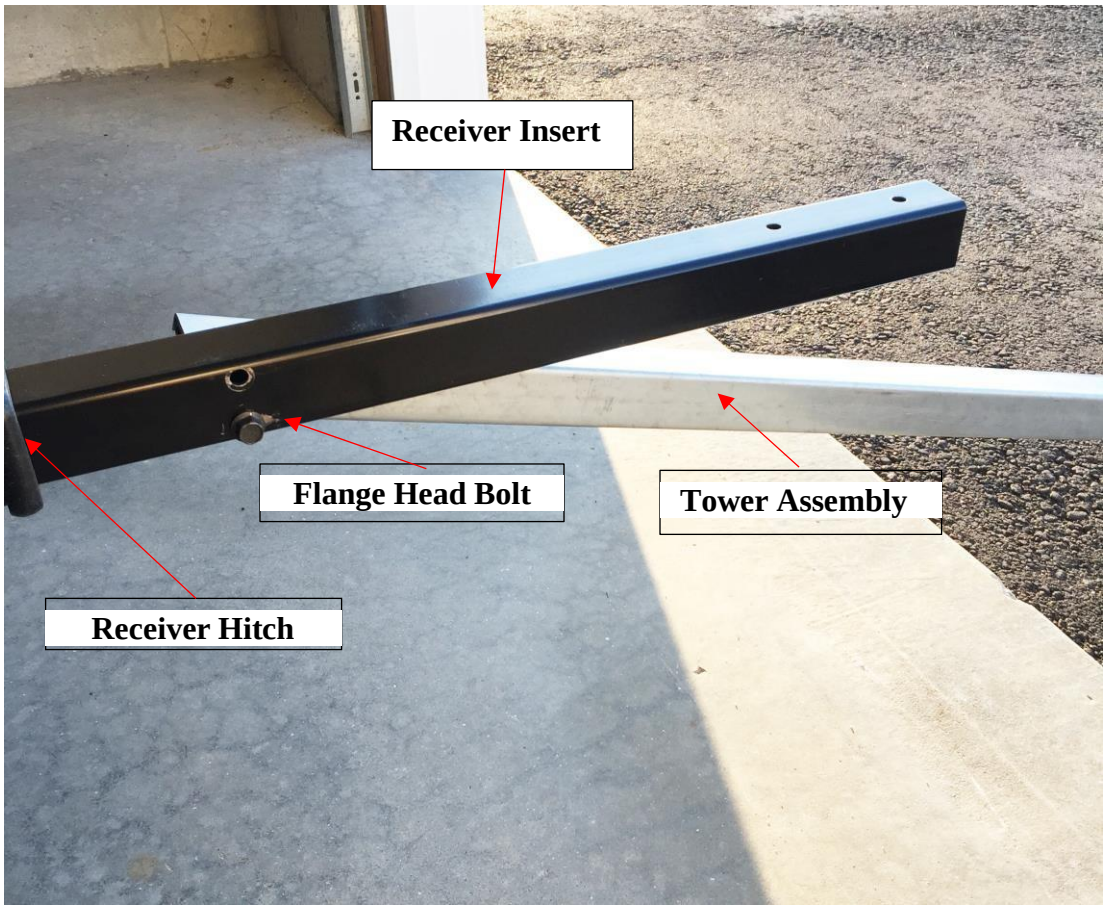
Place a J-Bolt and J-Bolt Bracket Assembly on the Tandem Tower as shown in the picture below on the Tandem Tower so that the center of the holes is equal to each Seat Tube Measurement from the bottom of the Tandem Tower Assembly



Step 7: Attach the Tandem Tower Assembly to the Receiver Insert: It is easiest to attach the Tower Assembly to the Receiver Insert if you slide the Receiver Insert into the receiver hitch on your vehicle.

1. Place the Receiver Insert into the receiver hitch with the large holes in the Receiver Insert aligning with the holes in your receiver hitch as shown in Picture C below.
2. Slide a 3/8" x 3" black flange head bolt through the bottom hole in the Receiver Insert as shown in Picture C. Place a 3/8" nylon washer on the bolt and then place the flange head bolt through the hole closest to the end of the Tower Assembly. The solid side of the Tower Assembly should be against the passenger side of the Receiver Insert. Place a nylon washer, a flat silver washer and then a self-locking nut on the end of the flange head bolt and finger tighten

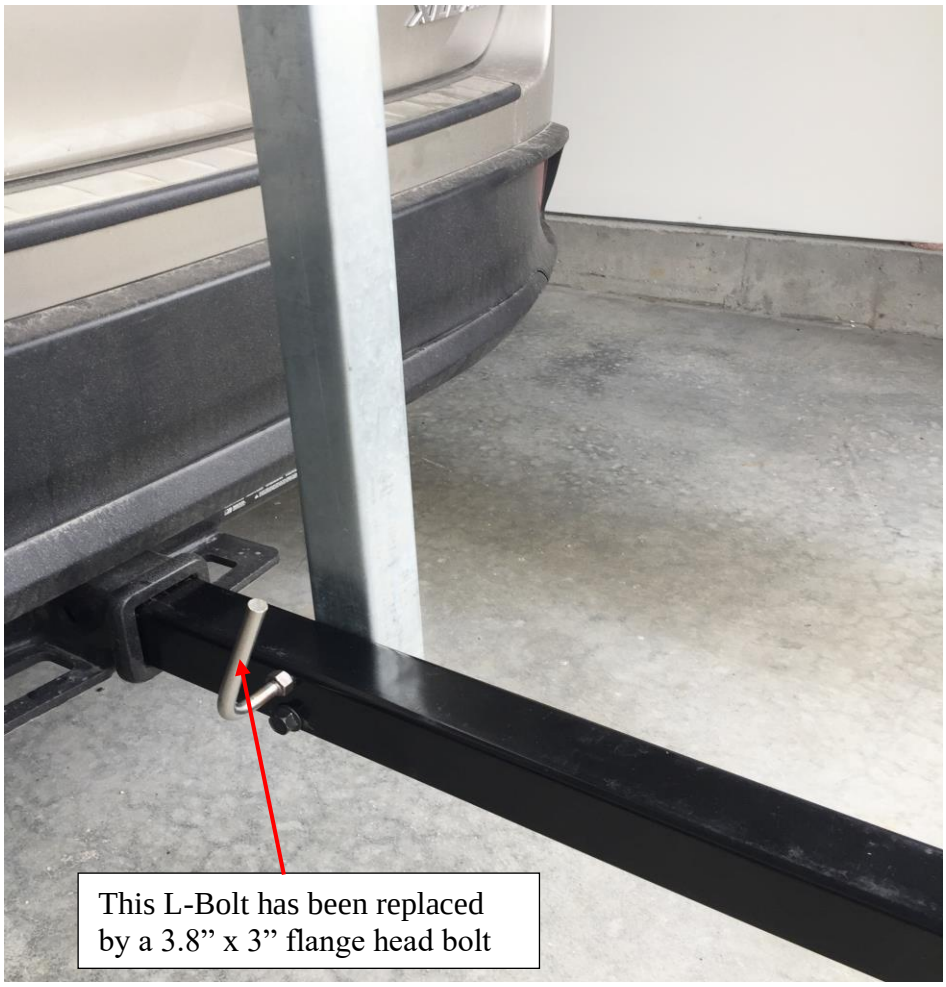
Picture C



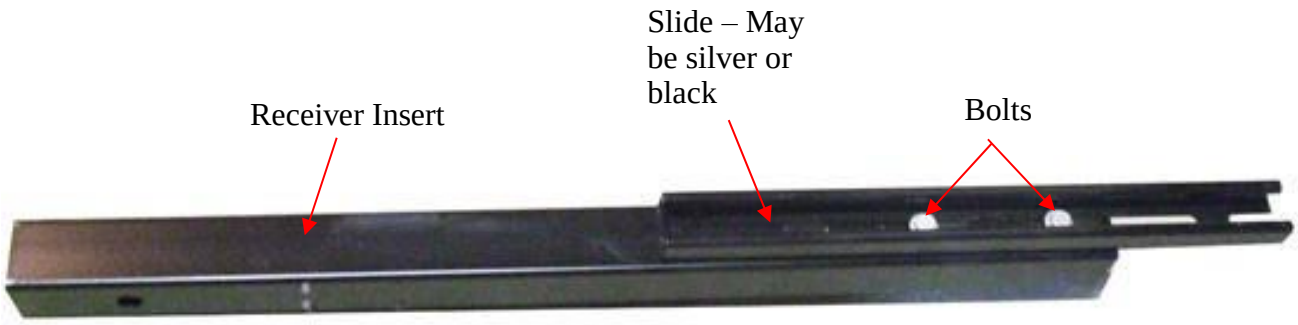
Step 8: Swivel The Tower Assembly into the upright position. Make certain the welded nut is still over the upper hole in the Tower Assembly. Place a 3/8” lock washer next to the head of a 3/8” x 3” flange Head Bolt and place into the Tower Assembly as shown in Picture D below. This bolt will replace the L-Bolt shown in the drawing

NOTE: You will remove the Flange Head Bolt to tip the Tandem Tower Assembly down to open your tailgate.

Picture D



Step 9: Attach the Slide to the Receiver Insert: Set the Slide on the Receiver Insert so that it overhangs 5" or more inches as shown in the picture below. Place two 3/8" x 2 ¾" flange head bolts through the slots in the Slide and the holes in the Receiver Insert. Place a 3/8" flat metal washer self-locking nut on each bolt and tighten.

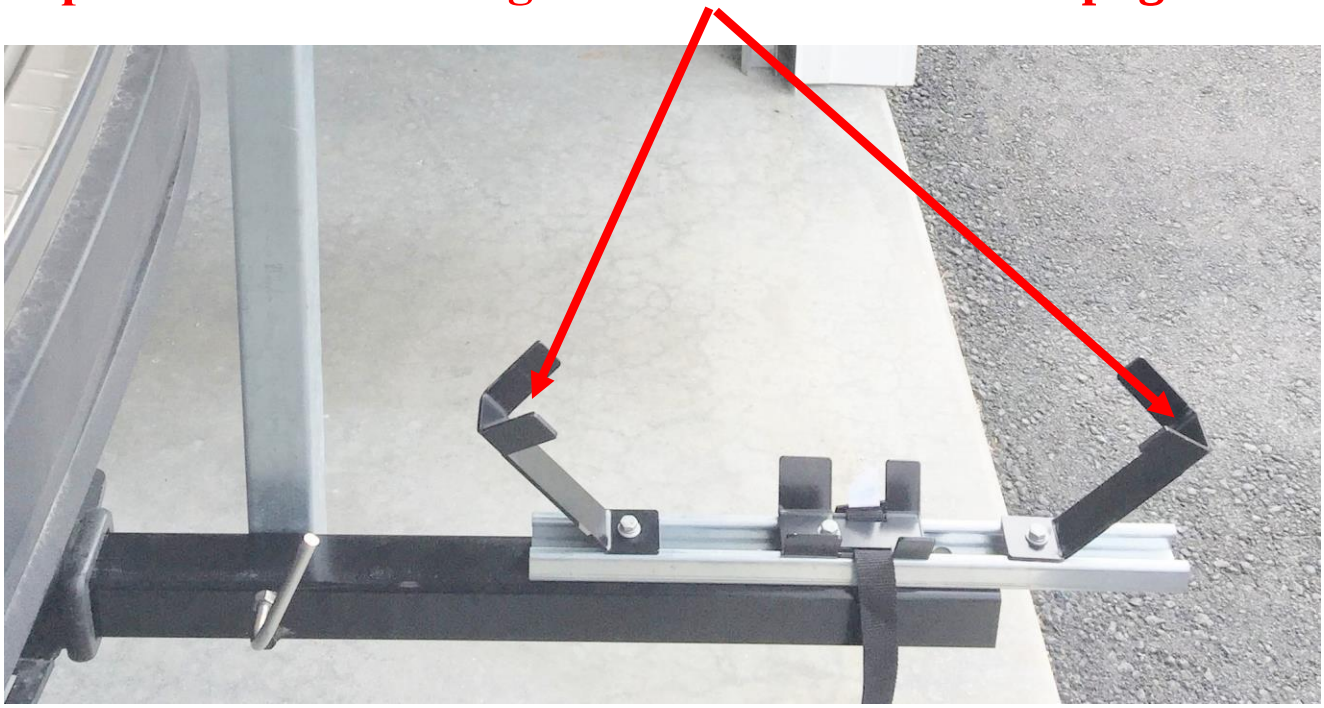


Step 10: Attach the Wheel Tray and Wheel Stops to the Slide and then attach the Slide to the Receiverm Insert.

1. Place the Wheel Tray from Step 2 on the Slide. Make certain the channel nut is turned so that it engages the rails of the Slide. Tighten the ¼" hex head bolt.
2. Place a ¼" lock washer and then a flat washer on two ¼" hex head bolts. Pass the bolts through the Wheel Stops and place a ¼" channel nut on each. Place the Wheel Stops on the Slide as shown below. Make certain the channel nut is turned so that it engages the rails of the Slide. Tighten the ¼" hex head bolt.

NOTE: The Slide Assembly should be placed such that the tandem stands parallel to the Tower.

The wheel stops shown have been replaced by two longer wheel stops without the "wings" on them as shown on page 5



Your completed rack should look like the picture below. The 12” strap goes in the rear wheel and wheel tray. The 16” strap holds the front wheel to the frame. The 23” strap should go around the tandem’s frame and the vertical post on the rack as a safety precaution. The 16” and 23” may be interchanged as needed.

Step 11: Adjust Rack to Fit Your Tandem:

1. When you first stand your tandem on the rack you will need to adjust the position of the Wheel Tray so the tandem stands straight up and the top of the tubes for the seat posts are each equidistant from the tower
2. The Wheel Stops should be slide so that they are very tight against the tire
3. The J-Bolt and J-Bolt Bracket Assemblies should be placed so that the lower J-Bolt is under your rear seat post and the top J-Bolt is above the front seat post

WARNING: Your Seat Posts Must Fit Tight Into The Seat Post Tube. If This Is Not the Case, Do Not Use the Bike Rack

There may be some movement of the Tower from front to back. This is normal