

ASSEMBLY INSTRUCTIONS FOR SAS Consulting  
LLC(www.motorcyclercracks.net;www.carriers4cycles.com)  
C & CD, and CE Dual STYLE STEEL CYCLE CARRIERS

Note: The carrier structure includes a 2 yr. limited warranty for the original purchaser.

Warning: The warranty may be voided if you substitute inferior fasteners, modify the carrier structure or misuse by overloading it. Doing this may also create a hazardous condition.

**Package contents and legend:**

- **A- Receiver Assembly**(picture)
- **B- Hitch Locking Bolt**(1) 1/2-13 x 1" hex bolt w/lock washer, grade 5
- **C- Hitch Locking Bolt Through pin** 1/2-13 special x 2.5" grade 5 w/lock washer and clevis pin
- **D- Side supports** (2)
- **D-1 Hex Bolts**(4) 1/2-13 x2.5" with Hex Nut and Lock Washers, grade 5
- **E- Main carrying tray**
- **F- Horizontal Stabilizer bar**(Sta-Bar)(HSB)
- **G-Button Head Socket Caps screws**(2) 5/16-18 x 1.5" long
- **H- Vertical Sta-bar** (1) or (2) 2 required for bikes over 450 lbs
- **J- Hex Bolt Ass'y**, 1/2-13 x 1.75" w/full nut and jamb nut
- **K- Loading Ramp and 3/8-16 Wing nut**
- **L- Vertical Sta-Bar** (1) for C style (2) for CD style
- **M- Vertical Sta-Bar adaptor** for outside attachment and larger road bikes CD only
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**Tools required:**

- **Wire brush**    **Wooden blocks**, 2x4, 2x6, etc.    **Drywall screws** x 2" long
- **File**            1/2" pipe insulation or swimming noodles x 6' long
- **Scraper**
- **(2) 3/4",(1) 1/2" boxed in wrench**    **Adjustable Wrench** 8" min.
- **5/16" 3/16" Allen/hex wrench**
- **Torque wrench and matching sockets up to 75 ft-lbs**

**Make sure you have read and comprehend these instructions before attempting to assemble product.**

*Note: If the hitch is rusted or has debris present on the inside of the receiver, clean the square opening with a file, wire brush and or scrapper. Hitch opening must be clean to begin assembly.*

**Caution:** Do not force or hammer receiver assembly into hitch as this damages the paint and removal will be very difficult.

Step 1: Insert receiver assembly (A) into vehicle hitch and align holes.

Hint: a Philips screwdriver, 5/8" hitch pin or tapered tool can be used to better align the holes by inserting into hitch opening when receiver assembly hole is close to hitch hole opening. Work tool back and forth for proper alignment. Take Care to not damage threads.

Step 2: After receiver assembly and hitch receiver holes are aligned insert B or C Hex torque to 50 ft- lbs (**DO NOT OVER TIGHTEN!**)

**Step 3:** Install side supports (CD Style only) onto receiver assembly and install ½” bolts (D-1) with nuts and lock-washers loose, Do not tighten until main tray is mounted and all fasteners attached, See photo.

**Step 4:** Mount Main Carrying Tray (E) to one or more available patterns: Front to back of vehicle and left to right. Note: Multiple bolt patterns are available on the receiver and on the main tray. Try to install the tray closest to vehicle if possible to create the least load on the vehicle’s suspension and best drive-ability of the hauling vehicle.

Start with the mid position on the carrying tray (left to right). The main tray with the motorcycle loaded and in position should not put excessive twist on the receiver assembly. It may be necessary to move the tray to the left or right to properly balance the load. Tighten (4) for C style or (6) for CD ½” nuts on the main tray to 60 ft lbs while securing the button head cap screw with the 5/16” allen wrench.

**Note:** Scooters and some motorcycles are inherently balanced toward the rear which means moving the tray to the left might be required. To test for excessive twist (torsion) on the receiver assembly, stand in the back of the carrier approx. 10’ and observe any leaning or twisting on the assembly. A quick test is to pull up or push down on the end of the tray to find the balance point. Approx. 10-15 lbs of force to move it past the balance point is normal. Moving the carry tray to another L to R position within the available bolt pattern or using the adjustable front wheel chocks (AFC option) are available to better balance the cycle.

**Step 5:** Install Horizontal Sta-Bar (H) on to the main tray. Notice a bolt pattern on the HSB for selecting the best position front to back. Other length HSB’s and within bolt-on tail lights are available. Install HSB under the tray and install the (2) (G) Button head screws and tighten the flange nut to 13 ft-lbs.

**Step 6** Install Vertical Sta-Bars onto receiver assembly:

***Hint: It is quite often more expedient to find the best vertical sta-bar location and required spacer blocks with the assembled carrier laying in the grass/on the ground and the motorcycle loaded in position in the tray. In this situation, you are not fighting the height of the hitch and have easy access to BOTH sides of the vertical bar area and assembly to configure the assembly.***

**Step 6a:** Install Inside Vertical Sta Bar H for “C” style

This step consists of assembling the angle iron end of the vertical bar (L) to the 2” angle iron on the receiver assembly (A) It can assemble on either side of the angle iron on the “C” style and therefore pivot in either direction, based on which way it is assembled.

**Step 6b:** Install Inside Vertical Sta Bar H for “CD” style. The Outside vertical sta-bar comes later and can be moved into place after the cycle is loaded,

This step consists of assembling the angle iron end of the vertical bar (L) to the 2” angle iron on the receiver assembly (A) It can assemble on either side of the angle iron on the “CD” style but only pivot when it is assembled on the inside, based on assembly (when assembled on the outside, the bolt interfere and it can only be assembled vertically).

After installing the vertical bar, snug the nut on the ½” hex screw and load the motorcycle examining clearances and loading access. The bar must rest against a part on the bike ie foot pegs, exhaust, seat or side plates. A wooden block can be screwed into the vertical bar with the available

Hole pattern that exist on the bar. Padding ie foam, rubber or carpet, can be stapled or screwed into the wooden block to protect from scratches. Install ¾" pipe insulation or a swimming noodle onto the 1" tubing of the vertical bar to protect. Use zip ties to secure the pipe insulation/foam to the vertical bar.

Step 7: Install a 10' minimum ratcheting tie down with hooks on the ends. The object here is to provide clamping of the bike against the inside vertical sta-bar. This is done by taking the ratcheting end and hooking it on the 1" washer on the top of the vertical bar. Next take the loose end and hook it on the washer and route the tie down around the bike and under the tray and back up to the ratcheting end to tighten. While tightening, be sure the tie down strap stays straight and doesn't rub against or catch any sharp surfaces on the motorcycle ie foot pegs or screws that could damage the fabric on the tie-down.

Step 8 CD style only: Assemble Outside vertical bar(L) to Adaptor (M) Usually on the CD style only.

Assemble L to M using the ½" hex bolt. This can assemble inside or outside. Inside is preferred if there is no clearance issue. Snug the nut on, install the jamb nut and tighten firmly so the bar remains snug. Next install this new assembly into the Receiver Assembly(A) by inserting inside the 2" tubing. Snug the 5/8" hex bolt to hold it in position. It can be adjusted in and out to suit. When best the position is found, tighten to 55-65 ft-lbs.

### **CE dual style carrier with pinned small companion tray.**

The parts you should have received are:

- 1.) (1) drawbar assembly 2" square tubing x 24" long with a hex bolt in the hitch end and a class 2 receiver on the end for the smaller tray.
- 2.) (1) Tray for the big bike 6" wide x 78" long
- 3.) (1) C/E adaptor that bolts to the tray above and slides onto the drawbar
- 4.) (1) smaller tray w/class 2 receiver on it or the ttr.
- 5.) (1) loading ramp 4.5" wide x 60" long, the wheel slot and hooks on the front(washer) is for securing the bike left to right.
- 6.) (2) vertical sta-bars adaptor assemblies: angle iron w/u-bolts to slide on the draw bar
- 7.) (1) vertical stabilizer bar x 34" long for the WR
- 8.) (1) vertical sta-bar for the ttr,  
Both of these mount on the sta-bar adaptors above.
- 9.) (1) U bolt/plate w/studs for mounting the loading ramp onto the draw bar, if room allows it.
- 10.) horizontal stabilizer bar, see photo mounts on bottom of the main tray, part no. 2

Assembly Instructions:

- 1.) Slide tray adaptor part 3 onto part 1 with the plate facing up.
- 2) Install draw bar, part 1, into hitch with the 5/8 hex nut facing up. Snug 1/2-13 x 1" hex bolt until snug. Do not overtighten. This is not a lug nut!
- 3.) Install long tray, part 2 centered onto the part 3 with the wheel chock end on the hauling vehicles drivers side **Install the button head screw into the tray and flange nuts on the bottom plate, the photos are in error.**  
Tighten 4 hex nuts using a 3/4 wrench and use a hex key wrench to secure the button head socket cap screws inside the tray.
- 3a) Install horizontal stabar, part 10 to the bottom of the tray, part 2 and tighten the nut while holding the button head secure with a 3/16" hex key wrench.
- 4.) Install smaller tray into end of part 2(draw bar) and install 1/2" pin into lower hole. There might be two holes in the small tray, select the one that is best for clearance.
- 5) Tighten 5/8 hex bolt until snug
- 6) Arrange the trays in such away as to allow installation of the two bikes and vertical stabilizer bars.  
See additional instruction sheet enclosed.

LOADING BIKES.:

Load the large first using the loading ramp. Tie front horizontal stabar to the handlebars using tie downs with hooks and secure the bike to the vertical stabar, see additional "assembly instructions.

Make sure the trays are staggered so the handlebars are on opposite ends of each other.  
Load smaller bike, place front tire in wheel slot and tie handlebars to the tie down washer using cam lock or ratcheting tie downs

Arrange vertical stabilizer bar to smaller bike, see assembly instructions.

Use cam lock ties to thread thru the wheels and secure both wheels to the tray, see separate instructions.

Take a short test drive and examine the bikes for any strap loosening or chaffing.



