

INSTRUCTIONS for HAWAIIAN SAWHORSE RACK

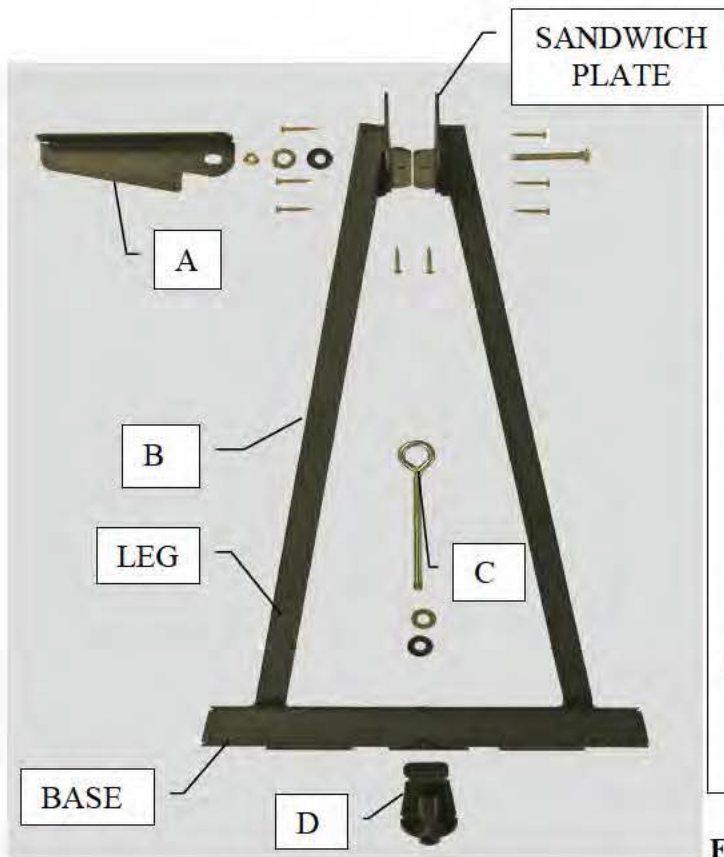
WARNING: Do NOT attempt to install or use this rack without following all instructions.

SPECIFICATIONS and SAFE LOADING REQUIREMENTS

The Sawhorse Rack is intended for use only upon pick-ups with standard fleet side beds measuring 54" to 66" wide between the insides of the top rail of the cargo bed. It is designed to carry ladders, kayaks, lumber, or other items not exceeding the strength of the lumber used for the spanner or 300 lbs, whichever is LESS.

This rack is designed to carry loads, which are spread across the width of the spanners and shared evenly between the front and rear spanners. It is not designed to carry loads where a force of over 100 lbs. is concentrated on any space less than 12 inches wide along either spanner, where over 125 lbs is concentrated on either end of a spanner or where a force of over 150 lbs overall is loaded on either spanner. This product is not warranted for use off-road or on unimproved or poorly maintained or bumpy roads. All loads must be tied down securely to the rack to prevent them from vibrating or sliding forward, backward, laterally or being blown off or broken by wind. Loads extending beyond the rear bumper of the vehicle must be designated with a red flag during daylight or red light during darkness in accordance with the state vehicle code. Do not install this rack on any truck where it interferes with required lighting devices. The manufacturer of this product does NOT warranty any automotive product and does not warranty truck bed rails against damage caused by the weight of excessive loads being applied to them when the rack is installed on a vehicle. The manufacturer is not responsible for injury or property damage resulting from this rack being improperly installed or loaded, nor is it responsible for injury or property damage resulting from loads falling or being blown from vehicle.

BE SAFE: Carrying any load can be hazardous. Make sure all parts of all loads are securely tied down against unexpected winds and vibrations caused by road hazards such as potholes. Check each time you install the rack, load the rack, as well as daily to ensure that all connections, including carriage bolts, nuts, and wood screws are tight and in good condition. Avoid roll over by ensuring that loads are not top-heavy. Loads should be placed so the center of mass of the load is no closer than 18 inches from the sides of rack. Transport high loads with GREAT CAUTION to prevent them from striking low overhead objects or tipping during turns, abrupt stops, or high winds.



The Sawhorse Rack has 6 principal parts:

- A. Cargo Bumper (x4)
- B. Frame (x4)
- C. Eye-bolt (x4)
- D. Clamp Bottom (x4)

Additional Hardware:

- A. Metal washers (x8)
- B. Nylon Washers (x8)
- C. 5/16-18 x 2.5" Carriage bolts (x4)
- D. 5/16-18" Nylon locknuts (x4)
- E. Wood screws (x32)

NOTE THAT SCREWS AND SMALL PARTS MAY BE FASTENED TO OTHER PARTS.

Fig. 1

INVENTORY

Your safety is paramount. Before assembling the rack, inventory and inspect all parts. Visually check each part to ensure it corresponds to the inventory list and check all welds for signs of cracking or weakness. **If you do not have all the correct parts, or if any parts appear to be defective, STOP; do NOT install the rack.**

ASSEMBLY and INSTALLATION

You will need a tape measure, pencil, carpenters level, #2 Phillips screw driver or an electric drill with a #2 Phillips drive head, and a 3/8-inch drill bit

READ THROUGH ALL INSTRUCTIONS ONCE BEFORE YOU DO ANYTHING!



IMPORTANT: ALL Stainless Steel Screws have been DIPPED IN A GRAY COATING to help prevent threaded parts from sticking together. However, you should have also received a small tube of grease. Coat the threads of ALL SCREWS with grease BEFORE ASSEMBLY TO MAKE ASSEMBLY EASIER AND TO PREVENT THEM FROM SEIZING-UP DURING DISASSEMBLY.

It is necessary to inventory all parts first and then assemble a few of the parts before installing the rack on the truck. Refer to the photos as you assemble this rack.

1. **Select lumber.** Select either a 2 x 4 or 2 x 6 piece of construction grade lumber for the crossbar of your rack. Using a 2 x 4 will make the top of the rack about 26-1/2" above the top of your bedrail. Using a 2 x 6 will make it two inches taller. Measure the width of your truck bed, where you intend to place the rack. Measure near the front of your bed from the INSIDE edge of the bedrail on one side to the INSIDE edge on the opposite side. After measuring the width of the bed, select a piece of lumber that is at least 4 inches longer than the width of your bed. Cut the lumber to this length or longer, if you have need of a longer crossbar.

2. **Pre-Thread the Clamp Bottoms.** Examine part D, the Clamp Bottom and notice that it is U-shaped, and that one side has a tube at the top and a threaded lock nut at the bottom. Put some grease on the last several threads of an eyebolt (part C) and insert it down through the top of the tube and twist it into the threads at the bottom. When the bolt reaches the nylon ring at the very bottom there will be a lot of resistance the first time you thread it in, but screw it all the way in until the end of the eyebolt passes through the bottom of the ring. Perform the same procedure on all of the Clamp Bottoms and then disassemble them. Park your truck in a safe and level location.
3. **Install Leg Frames on Bedrails.** Examine part B, the Leg Frame. It is a weldment that consists of three parts, the Base, the Legs, and the Sandwich Plates. Notice that there is a hole in the center of the base of the Frame. Place one of the Leg Frames on top of the Bedrail on the passenger side of your truck so that the hole hangs over the edge of the bedrail. Place a metal washer on one of the eyebolts then add a nylon washer. As shown in Figs. 2 and 3 insert the eye bolt down through the hole so that it hangs down into the bed. Then as shown in Fig. 4 insert the end of the eye bolt down into the hole in the top of the Clamp Bottom, while at the same time placing the other side of the Clamp Bottom up under the bottom of the bedrail.



Fig. 2



Fig. 3

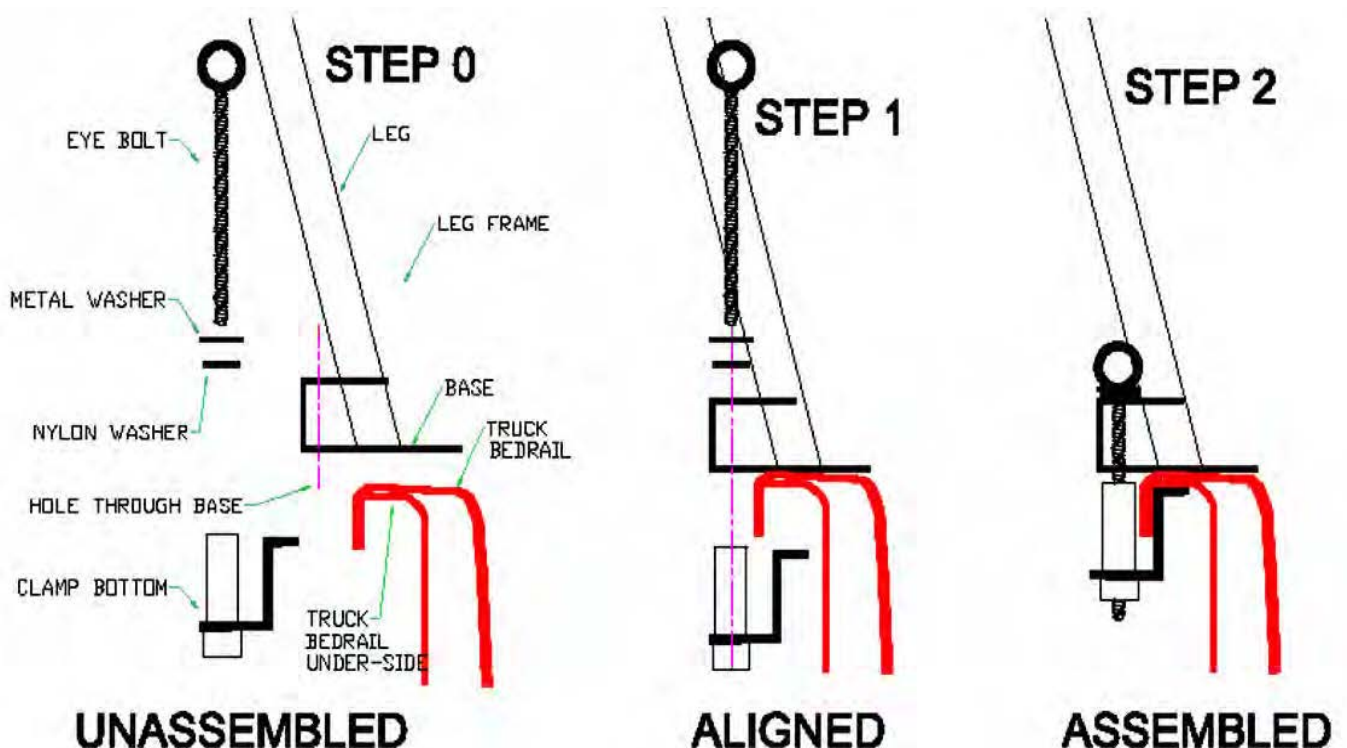


Fig. 4

As shown in Figs. 5 and 6, in the same way that you pre-threaded the Clamp Bottom in Paragraph 2, thread the eyebolt all the way into the Clamp Bottom and tighten it until the Leg Frame can sit on the bedrail without falling off the truck. Ensure that you do not over-tighten so much that you damage the threads of the eyebolt. When completed, install a second Leg Frame on the driver side bedrail opposite the first one.



Fig. 5



Fig.6

NOTE: If you have an older style over-the-rail bedliner, you may have to cut a hole in your bedliner to allow the clamp to pass under the bedrail. If you have purchased a bedliner kit, mark your bedliner adjacent to where the eye-bolt hangs down. Use the hole-saw to drill a hole with its center 2-1/2" below the top of your bedliner. When you remove your rack, use the round plastic caps to plug the holes. **Warning:** Be careful that you cut very gently. Drilling through too hard will cause you to scratch your bedrail. Pull back your bedliner to inspect before cutting to ensure there are no obstructions under the bedrail.

4. **Place the wooden crossbar to the Leg Frames.** Step up into the truck bed with your tools and your wooden crossbar. Notice that the Sandwich Plates at the top of the Leg Frames have a number of holes in them and the bottom of the plates are bent toward each other at right angles. Place the crossbar down between the two opposing plates like a piece of meat in a sandwich, so that the bottom of the wood rests on the bottom of the bent plates. Adjust the Frames so that the bottoms of all plates are parallel to both the ground and the bottom of the crossbar. Measure to ensure the crossbar is spaced evenly between the Leg Frames. As shown in Fig. 7, you may use a carpenter's level to ensure that the crossbar is parallel to the ground. **Note: Make sure your truck is also level by first putting your level on your head rail at the front of your truck bed.**



Fig.7



Fig.8

5. **Bolt the wooden crossbar to the Leg Frames.** Step back and look a look at your Leg Frames and crossbar to ensure they form symmetrical angles. When satisfied use a pencil to mark the crossbar through the large hole

in the center of each plate. Remove the crossbars from the truck to a work space and using an electric drill with a 3/8" bit, drill a hole straight through the wood at the marks. Then place the wood back into position and align the holes in the plates with the holes in the wood. **NOTE: Please do NOT drill the crossbar without removing it from the truck; see Fig.8. This could bind up the drill and cause injury or damage the powder coating.** As shown in Figs. 9 thru 12, insert a carriage bolt into each hole until the square portion of the bolt shank seats in the square hole of each plate. On the opposite side place a nylon washer (as a spacer), then place part A the Cargo Bumper on the end of the bolt, with the flat side toward the midline of the truck when flipped up. Add a metal washer, and then thread a nylon lock nut onto the bolt and tighten firmly. You should be able to rotate the Cargo bumper in a way so that when it rotates up it stops against the top of the Leg in a vertical position. If the angle is not quite correct, you can loosen the nut and adjust the positioning of the oval hole around screw and then re-tighten. Remember this cargo bumper only provides modest support in one direction to prevent loads from sliding off the end of the crossbar. Do not use it to anchor straps or ropes.



Fig. 9



Fig. 10



Fig. 11



Fig. 12

- 6. Complete with wood screws.** After you have firmly attached the crossbar to the Leg Frame, loosen the clamping system and re-check the angle of the legs to make sure that everything is right. Now re-tighten the clamping system. Then using either a manual or electric screw driver with a Phillips #2 head, drive a wood screw into each of the small holes in the Sandwich plates. Complete the back portion of the truck rack in the same manner as the front. When completed, the crossbar and Leg Frame should be securely connected.



Fig. 13



Fig. 14

7. **Use rack.** Tie all cargo down securely with ropes or ratchet straps to the eye-bolts as well as to other secure tie-down locations in your truck bed to ensure that the rack cannot be lifted up off of your bedrails. To ensure that your bedrails are not stressed and damaged, pull straps and ropes down nearly vertically to the eyes-bolts, so when they are tightened they pull up on the eye-bolts rather than pulling toward the midline of the truck.
8. **Sawhorse.** Fold down the cargo bumper if desired, and especially when using your rack as two sawhorses or as storage stands. **Mahalo and Aloha.**



Fig. 15



Fig. 16



Fig. 17