



SMITH™

MULTI-SPORT TRAILER

Assembly Instructions for Models 48810 48815 48820



C. E. Smith Co. Greensboro, NC USA



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Thanks for purchasing a **SMITH Multi-Sport Trailer**,
the best value in a small craft trailer on the market today!

Before you begin assembling the trailer, take a few minutes and read these instructions. Familiarize yourself with the step by step assembly process and make sure you have the necessary tools.

Models 48810 and 48820 are packaged in three (3) cartons. Model 48815 is packaged in one (1) large carton. Take the time now to open the cartons and sort the contents into 7 groups as pictured in the following pages.

We will then assemble each group in order.

Model 48820 comes with additional lamps. Add these to the trailer as an 8th group, after the trailer is fully assembled. Instructions for installing the lamps are packaged in with the lamps.

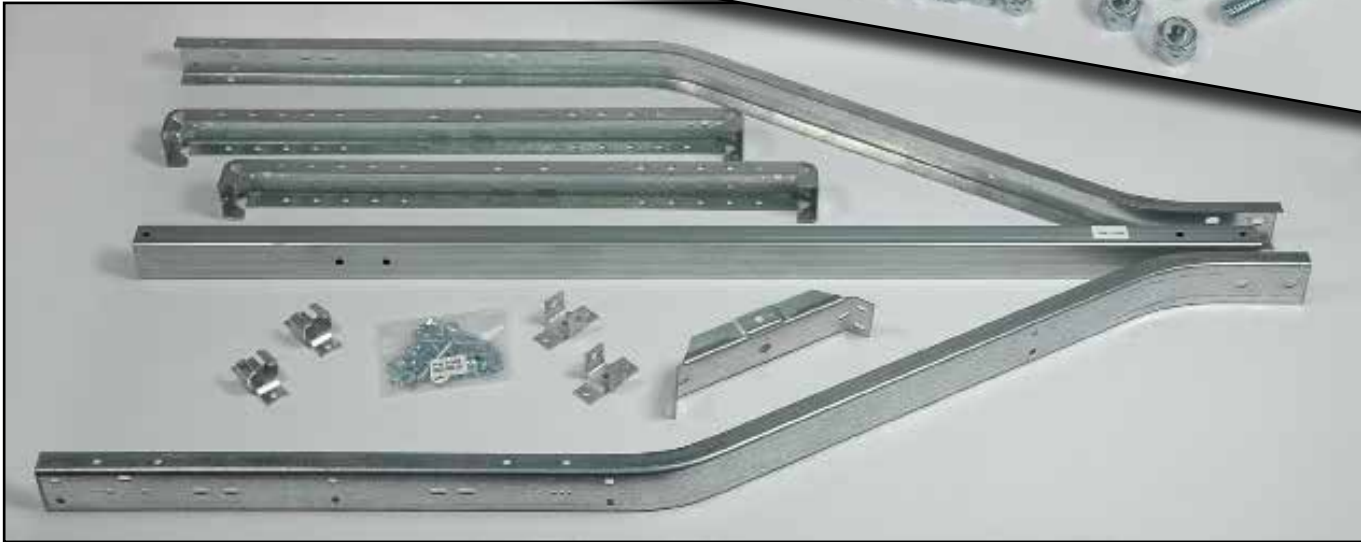
Required Tools

- 3/4" wrenches (2)
- 9/16" wrenches (2) (a 9/16" deep socket is very handy)
- 5/8" wrenches (2)
- 10 mm wrench (1)
- #3 Phillips screwdriver (a variable speed hand drill with a #3 bit works great!)
- Large flat blade screwdriver
- Medium size C-clamps (2) (not required, but helpful during bunk assembly)
- Lug wrench

*Visit us at **www.cesmith.com**
for more fine products and accessories.*

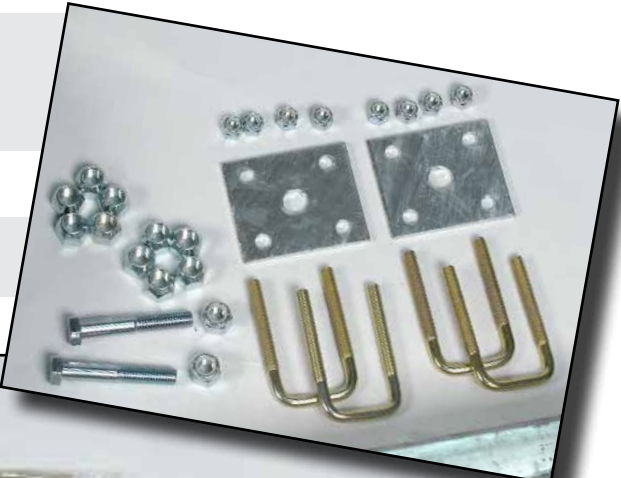
Group 1: Frame Components

Bag 11463



Group 2: Axle / Spring Components

Bag 11467



Group 3: Fender Components

Bag 11464



Group 4: Lighting Components

Bag 11468



Group 5: Coupler Components

Bag 11494



Group 6:
Winch Stand Components

Bag 11490



Group 7: Bunk Board Components

Bag 11469

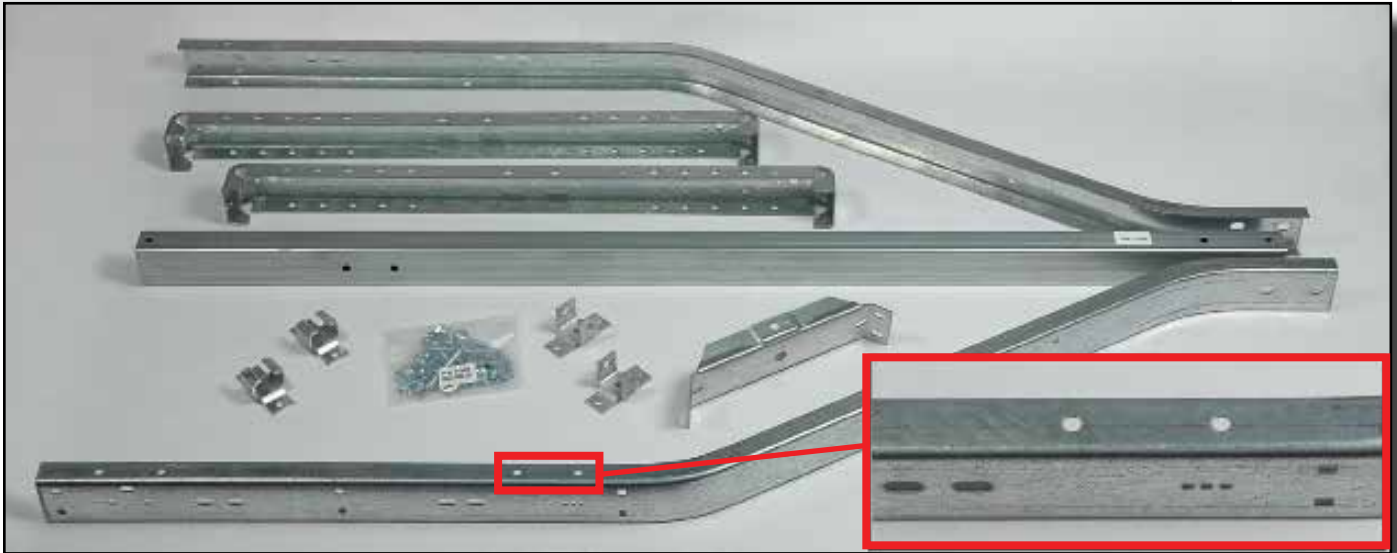


FRAME ASSEMBLY (Group 1)

We start by assembling the basic frame.

We build the frame upside down, wheels up, so we will turn all parts “bottom side up” as we assemble the frame, then we will flip it over onto its wheels later to complete the assembly.

1. Layout the frame rails with the 8 spring bracket mounting holes facing up as shown.



2. Attach the 4 spring brackets to the frame with the C shaped “slipper” brackets to the rear and the U shaped shackle bolt brackets to the front. Use 3/8” x 1” bolts and nuts. Assemble with the nuts on the inside of the frame rails. Fully tighten all 8 bolts now.



3. Identify the hitch end of the tongue. It has 2 holes on the bottom for the tongue skid as shown. Lay the tongue on the ground with the two skid holes facing up. (don’t attach the skid just yet.)



4. Identify the hitch end of the tongue by the 3 holes on the driver's side (left side).



5. Pass the tongue wiring harness (with the end that is the male connector and 3 female connectors) into the opening end of the tongue, leaving enough excess at the front to reach the vehicle. **NOTE: MAKE SURE YOUR PLUG MATCHES THE VEHICLE CONNECTION. (3 Male connectors and 1 female connector.)**

Male Connector
(1)



Female Connectors (3)





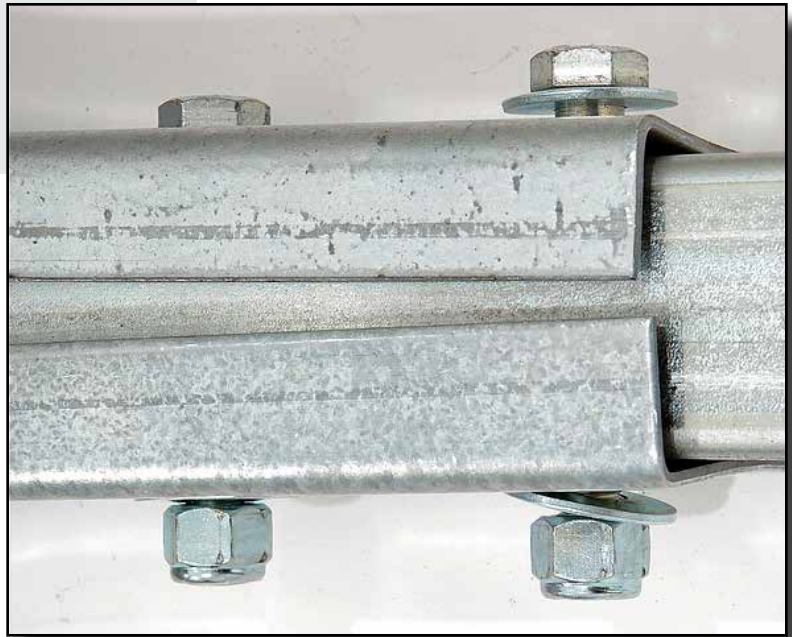
7. Position the tongue between the rails as shown. (make sure your skid stand

holes are facing up) Pass the wires through the tongue support, then install the 4-1/2" long x 1/2" bolt up through the tongue support and tongue from the bottom. Be careful not to pinch the wires. Add a washer and nut. Hand tighten only.

8. Bolt the tongue support to the frame rails using 3/8" x 1" carriage head bolts. Note the square heads go on the outside thru the square holes in the frame. Assemble with washers and nuts on the inside. Hand tighten only.



9. Attach the frame rails to the tongue using two 1/2" x 3-1/4" bolts. Use a washer on both sides. Assemble HAND TIGHT only.

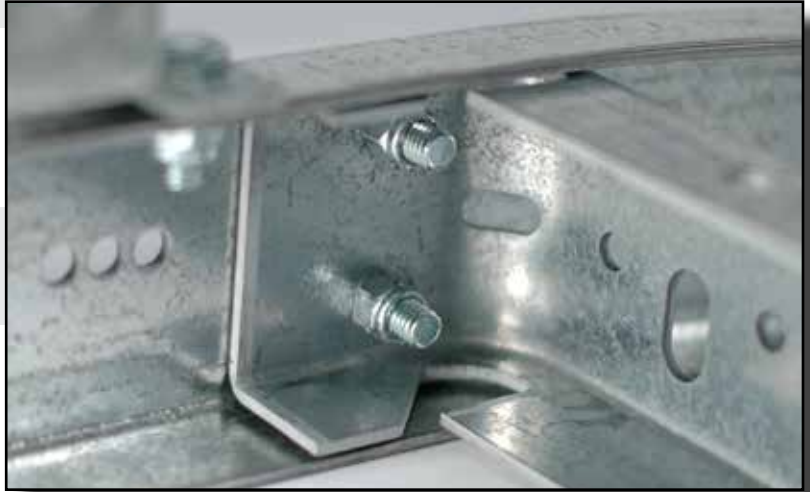


10. Lay the two frame cross members in between the frame rails with the two holes in the middle facing DOWN as shown in the inset. Bolt the frame rails to the cross members using 3/8" x 1" carriage bolts and nuts, (no washers). The square carriage heads go to the outside with the square holes in the frame rails. Assemble HAND TIGHT only.



11. ***TIME TO TIGHTEN FRAME BOLTS:*** Its *very important* to follow this tightening sequence in order to insure the tongue will be straight with the frame after everything is tight.

A) Tighten the 8 nuts holding the ends of the two cross members.



B) Tighten the rear tongue support bracket. Check that you installed washers under the 4 nuts as shown. Evenly tighten the 4 nuts.



C) Tighten the two tongue bolts snug to the frame rails.

DON'T overtighten, you will just crush the tongue.





D) Tighten the big bolt thru the rear of the tongue and tongue support. Not too tight, don't crush the tongue.

Your frame assembly is now complete and should look like this.



SPRING AND AXLE ASSEMBLY (Group 2)

1. Set the envelope containing the manufacturer's certificate of origin (MCO) and VIN labels aside in a safe place.



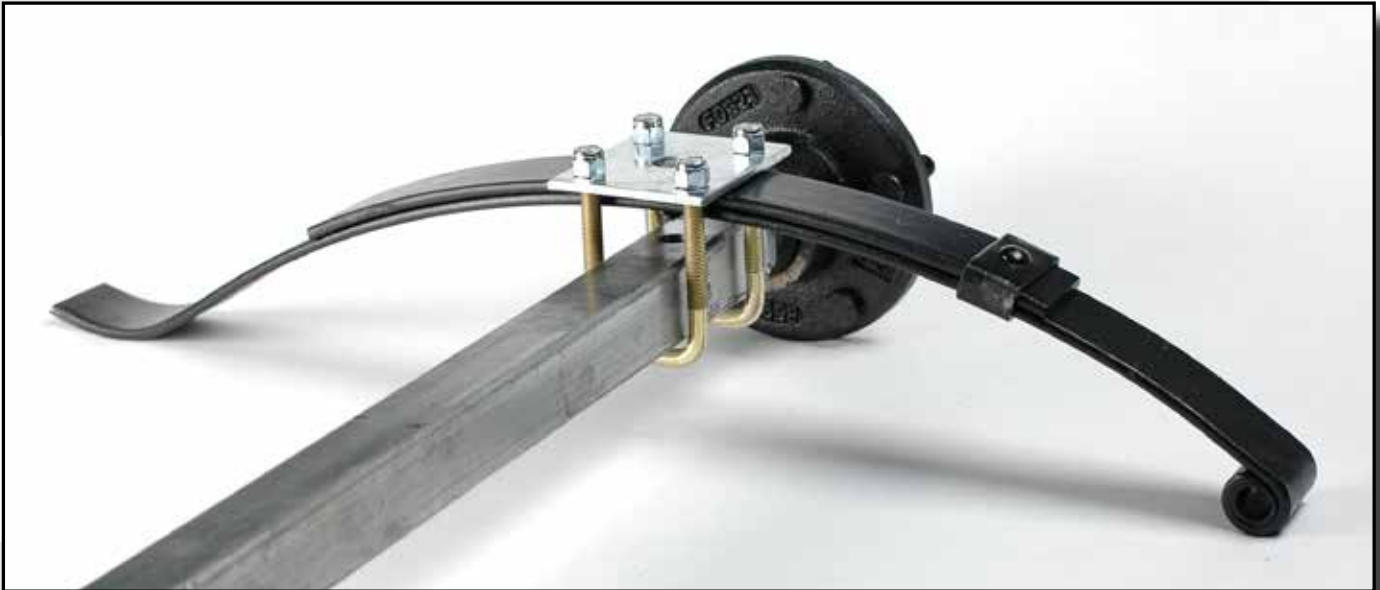
2. Spin the axle until the spring centering holes are facing up as shown.



3. We will attach one spring at a time to the axle. Lay 1 spring, 2 U-bolts, 4 nuts and 1 tie plate out as shown.

Note the spring center stud fits into the spring centering hole in the axle.

4. Fit the U-bolts under the axle and up thru the tie plate as shown. Note the second side of the spring centering stud fits into the center hole of the tie plate.



5. Tighten each nut a few turns at a time evenly drawing the axle up to the spring. As the assembly closes, be sure and guide the spring centering stud into the hole in the axle and plate. **DO NOT TIGHTEN FULLY AT THIS TIME.** We will tighten these nuts after installing the axle spring assembly onto the frame.

6. Repeat the assembly process for the other side. **MAKE SURE BOTH SPRINGS ARE TURNED THE SAME WAY !**

7. Lift the axle/spring assembly to the trailer frame and slide the slipper spring ends into the slipper spring brackets as shown



8. Insert the spring eyes into the front hanger brackets and bolt in place using 1/2" x 3" bolts and self locking nuts.

***** IMPORTANT *****

Tighten the shackle bolts ONLY until they touch the sides of the brackets. This is a hinge. The spring needs room to move.



9. Now that the axle / spring assembly is attached to the frame, we can return to the U-bolts and tighten evenly until there is a slight bend in the tie plates.

10. Mount the tires onto the hubs and hand tighten the lug nuts. Install the lug nuts with tapered side facing towards the wheel, flat side outward.



11. Flip the trailer over onto the tires.

ALWAYS BEND FROM YOUR KNEES WHEN LIFTING. IF THE TRAILER IS TOO HEAVY FOR YOU TO FLIP SAFELY FIND FRIENDS TO ASSIST YOU.



12. Tighten the lug firmly to 75 to 85 foot pounds of torque.



FENDER ASSEMBLY (Group 3)



Bag 11468



1. Attach the tail lamp brackets to the frame with the holes towards the bottom as shown. Use $3/8"$ x $1"$ carriage head bolts and nuts. No washers are needed.



2. Connect all 4 fender brackets to the fenders using 3/8" x 3/4" slot head screws and nuts. Assemble with the nuts to the inside of the fenders as shown. No washers here. Fully tighten all 8 screws and nuts.



3. **Note** that fenders are symmetrical and will fit on either side of the trailer.

4. **Note** that when bolting the mounting brackets to the frame you will install a washer on both sides, under the head of each bolt and under each nut.

5. Using 3/8" x 1" bolts, washers and nuts, attach the fender brackets to the slotted holes in the frame as shown.

6. Tighten both bolts fully and repeat for other side.



LIGHT ASSEMBLY (Group 4)

LED Reference: Trailer Wiring Color Code

Brown = Running Lights

Yellow = Left Turn/ Left Brake

Green = Right Turn/ Right Brake

White = Ground

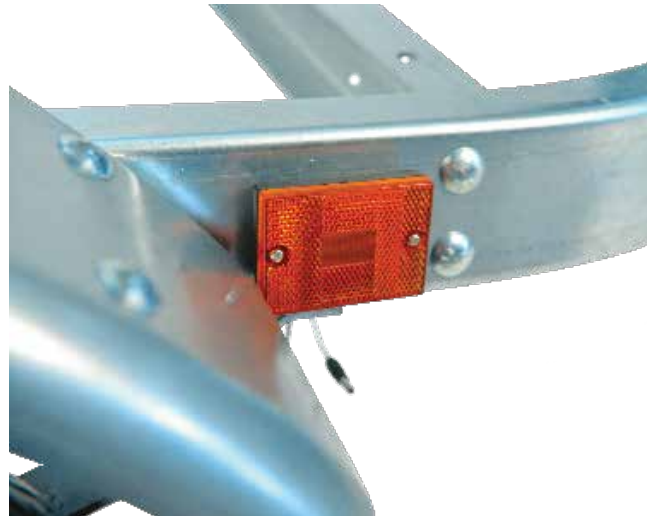
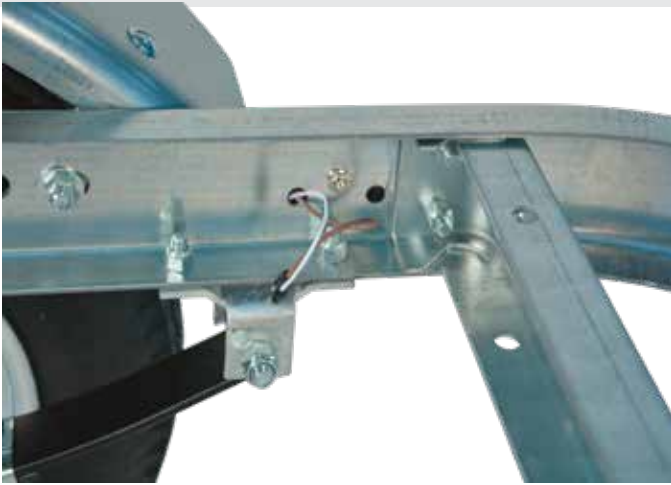


1. Mount the driver's side lamp (this lamp has a clear bottom to illuminate the license plate) to the tail lamp bracket with the license plate holder between the tail lamp and bracket. Secure the tail light using the nuts provided with the lamp. Then mount the passenger's side tail light.



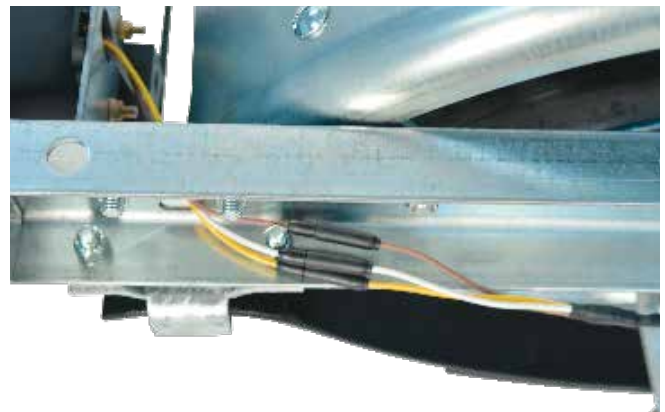
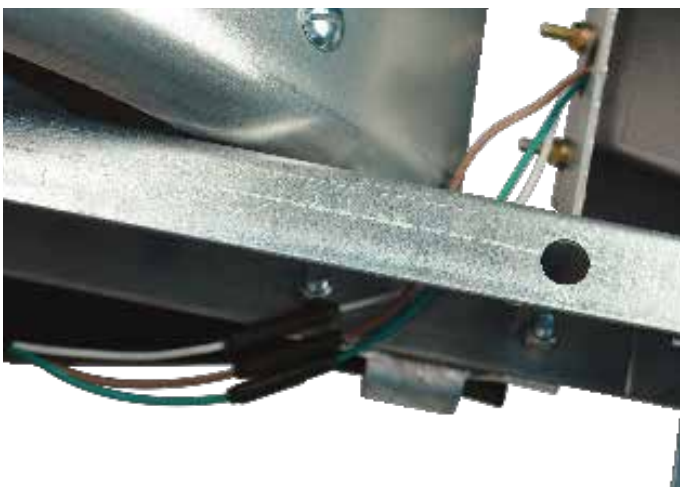
2. Use the holes just behind the second cross member to mount the amber side lights. First push the wire leads through the bottom left hole and the lamp stud through the center hole.

3. Secure the lamp with the stud nut using a 10 mm wrench.



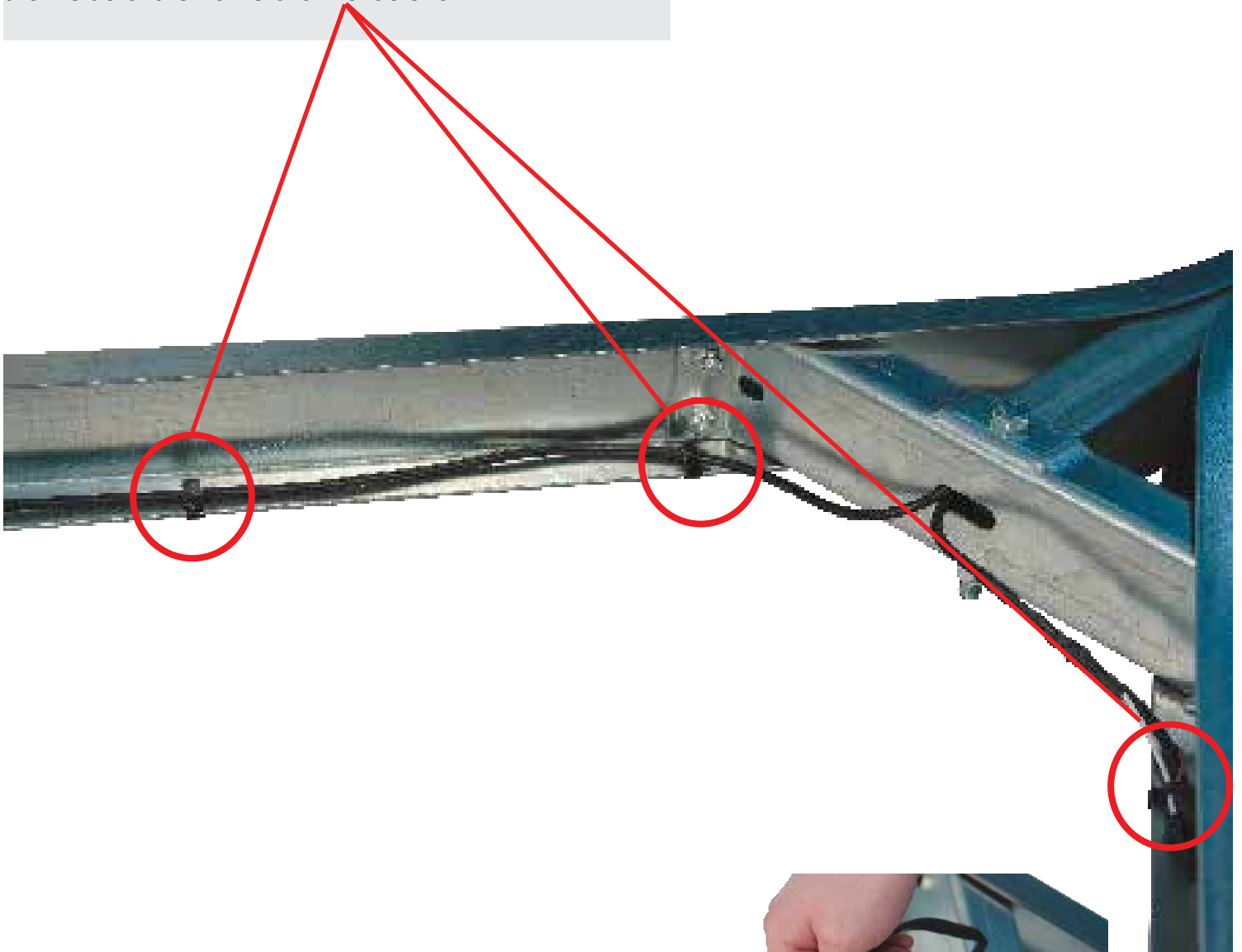
4. Plug the frame wiring harness into the connection behind the tongue.

5. Looking at the end connections, route the YELLOW/BROWN/WHITE along the drivers side as shown.

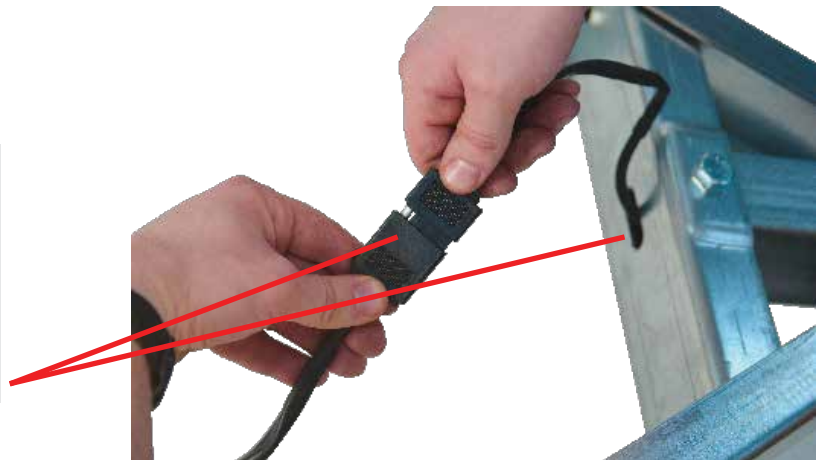


6. With the wires routed all the way to the tail lights, firmly grasp the wiring connections and plug in matching colored leads/wires. Repeat with all remaining lights.

7. Use the clips provided to secure the wire to the inside of the frame channel as shown.



8. Push the connector back through the hole near the tongue of the trailer. NOTE: If your connector does not fit through you may need to loosen and retighten the bolt.



Coupler Assembly (Group 5)



1. Assemble the tongue skid and safety chain assembly with a 3/8" x 1-1/2" bolt as shown. Use washers above and below the chain ends.

2. Place the skid and chain assembly under the tongue and insert the bolt up through the skid bolt hole on the bottom of the tongue as shown.

3. Check that the rear end of the skid is still in its hole in the bottom of the tongue. Tighten the bolt while holding the nut stationary.

4. Install the coupler on the tongue and fully tighten as shown. Tighten until the coupler is tight onto the tongue. Don't crush the coupler and tongue by excessive tightening.



WINCH STAND ASSEMBLY (Group 6)

The best winch stand setup for each style and size craft is a little different. In this step we will assemble the stand generically, then later, after you have mounted and fitted your bunks to your craft, return and make adjustments to the winch stand to best suit your application or craft.

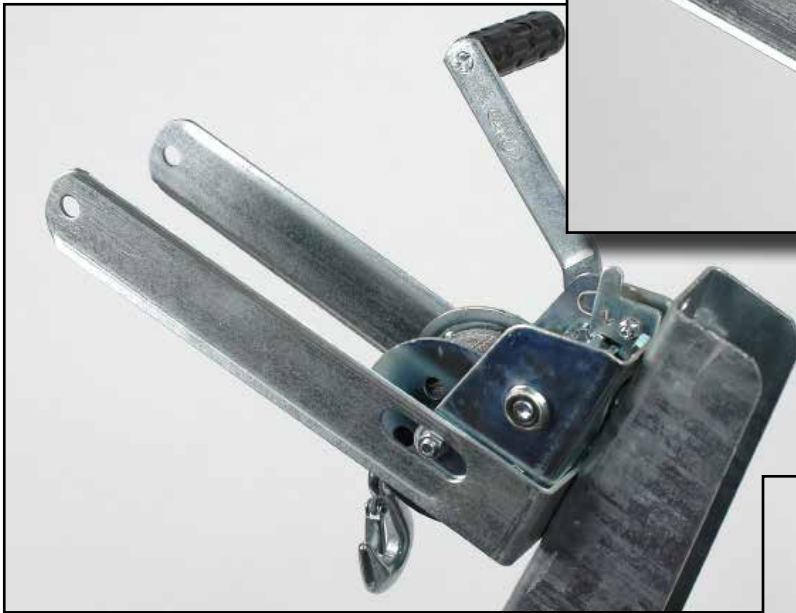


No matter what you are trailering, remember, the winch stand assembly has 3 purposes. 1) To provide a fixed point for the winch to pull the craft up onto the trailer. 2) To set the most forward position the craft may rest on the trailer which in turn sets the tongue weight on the hitch ball. (Tongue weight should be about 10% of the combined weight of the trailer and craft) and 3) To resist the craft's tendency to slide forward during hard breaking while trailering over the road. Consider all these purposes as you choose which set of holes in the stand to use to mount the winch and bow stop and how far along the tongue to clamp the stand.

1. Attach the winch stand to tongue as shown using 3/8" x 3" bolts and nuts. The flat side of the stand should face to the rear. Just snug the bolts for now. You will be moving the stand forward or back, to get the right amount of tongue weight for your load, so don't fully tighten until later.



2. The winch may be mounted inside the bow stop bracket as shown here, or it may be mounted independently above or below the winch, whichever works better for your craft. Mount hand tight for now where you think may be best. Use 3/8" x 1" bolts washers and nuts to attach. The washers are used over the slotted holes. They are not needed when the hole used is round.



3. Attach the bow stop of your choice. Just tighten till all the slack is out of the bolt, don't over tighten.

BUNK ASSEMBLY (Group 7)

In this step we will go over generic bunk mounting. For your craft the width, spacing, height and angle of the bunks will be unique to best support your hull for trailering over the road.



Included with your trailer are 4 short and 4 long brackets shown above. Use 4, the other 4 will be left over. Choose the length brackets that best hold your craft as low as possible over the frame without risk of bumping it on the fenders. Unnecessary height only makes the craft more difficult to get on and off the trailer.

1. Study the example bunk setup photos in the back of this manual and choose the photo most similar to your craft. Note which bracket lengths are used and about where the brackets are clamped onto the frame cross members and how high they are mounted in their adjustment slots.

With an idea of what will work for your craft in mind, now we can begin.

2. After choosing which length brackets to use, attach the swivel brackets to each as shown using 7/16" x 1" bolts and nuts. Tighten snug only as you will want to be able to swivel the brackets when screwing the bunk boards on later.



3. Attach the brackets to the frame cross members at the approximate best positions. Attach using U-bolts, washers and nuts. The dimple side of the brackets engages the open edge of the frame C channel. Attach all 4 brackets leaving loose enough to slide on the frame.

4. Lay a carpeted bunk board on the swivel brackets with the stapled side down to the brackets and choose how much overhang you like off the front and back ends.

5. One bunk at the time, clamp the bunk to its swivel brackets making sure the bracket is well centered then clamp the board and flip it over as shown to expose the holes.



6. Screw in the wood screws as shown.

7. Repeat for the other side.



8. With both bunks in place, tighten the swivel brackets at the desired angle, width and height to best fit your craft.

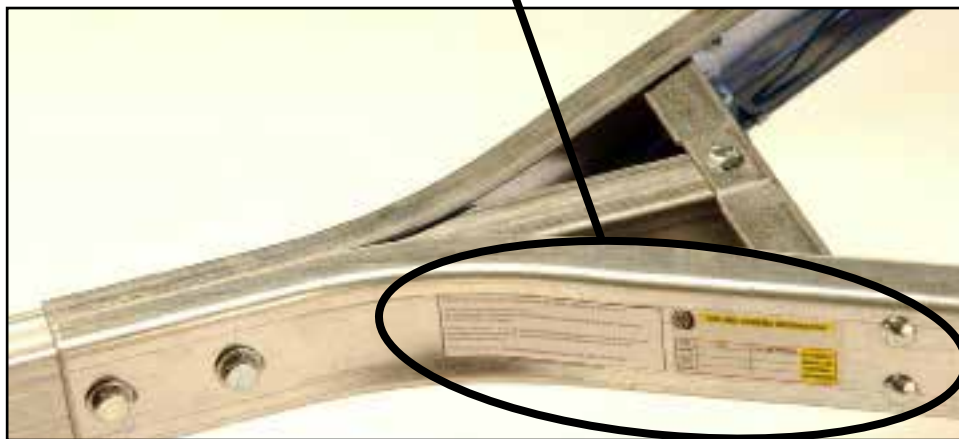
9. Set your craft on the trailer and make fit adjustments as needed.

10. With your craft on the trailer, lift your tongue. You should have a tongue weight of about 10% of the weight of the combined load. Slide the craft forward or back on the trailer until the tongue weight feels good, then move the winch stand assembly to meet the bow of the craft at this position and tighten everything down.



11. Double check that all bolts are now fully tight and secure.

Apply the VIN Decal and TIRE LOADING Decal as shown below to the left side of the frame close to the two carriage bolt heads. Be sure to clean the frame well before applying the decals.



**Your Multi Sport Trailer is now complete and ready to register and title !
Contact your local DMV office for specific procedures in your State.**

SAMPLE SETUPS FOR A VARIETY OF CRAFT:



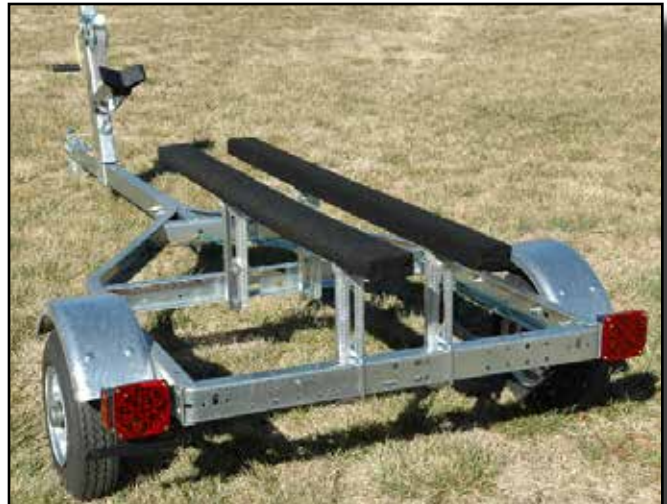
Jon Boats and Inflatables.

Bunks Mounted
Low and Flat.



Twin Troller

Bunks Mounted High and Narrow up in the Tunnel

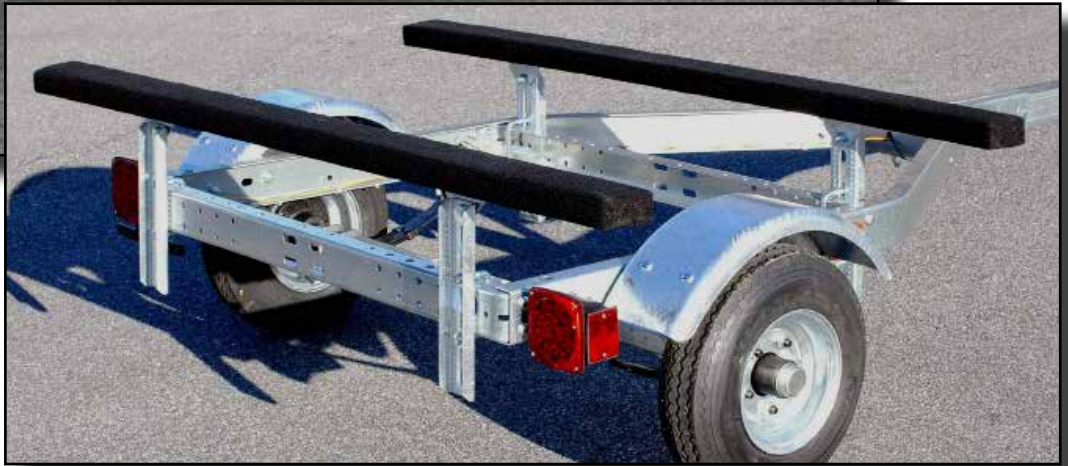




Canoes and Dingies

Bunks Mounted
Angled
To Match Hull





Kayaks

Bunks Mounted Perpendicular to Frame

