



## MALONE AUTORACKS

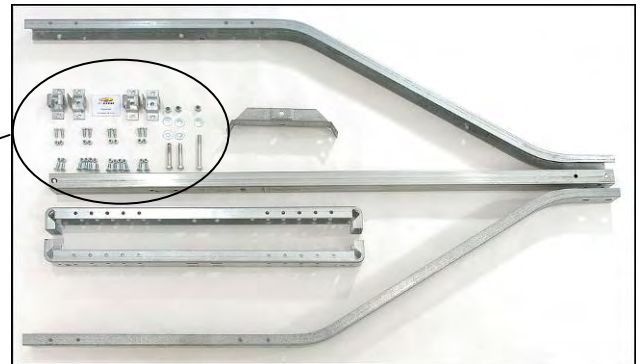
### Micro Sport Trailer Assembly Instructions

## Unpacking of the Trailer Components

The Trailer will come to you in (3) three separate boxes and (1) one towing tongue.

- 1) Remove packing material from inside the boxes
- 2) Locate and secure trailer documentation provided for registration and title which includes:
  - Manufacturers Certificate of Origin (MCO)
  - Vehicle Identification Number (VIN) label
  - Tire and load certification label
- 3) Separate the components into the following (6) categories.

#### a. Frame Components and Hardware



#### b. Running Gear and Hardware



c. Fenders and Fender Hardware Kit



d. Load Bars, Brackets and Hardware kit.



- e. Light Kit, including Brackets and all Wiring.

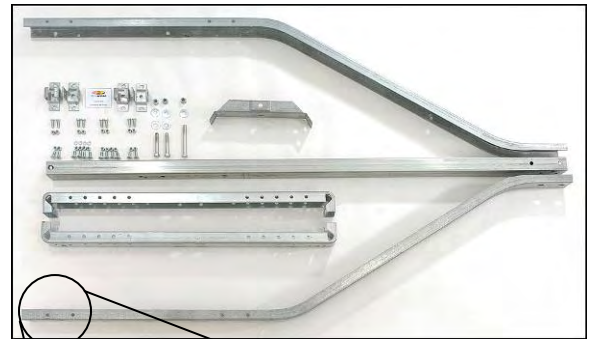


- f. Coupler, Safety Chains, Tongue Stand and Hardware Kit

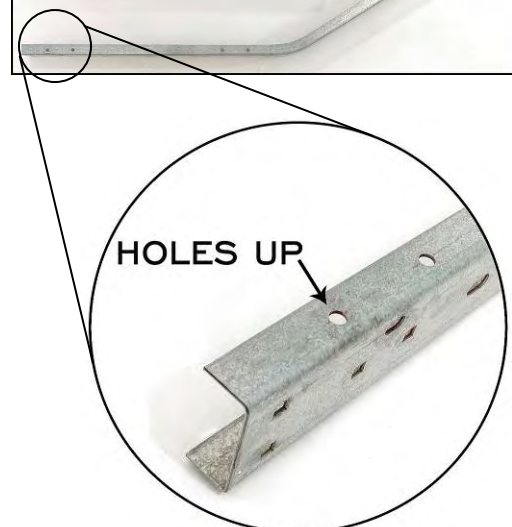


## FRAME ASSEMBLY

1. Find the Frame Assembly Hardware Kit and Parts.



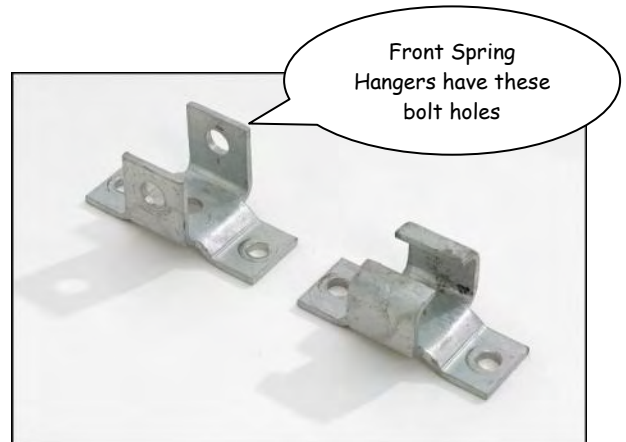
2. Lay the left and right side rails on ground, bottom side up, as shown.



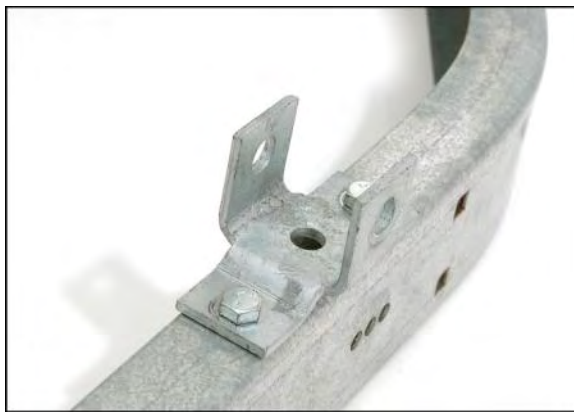
3. Unpack the Frame Assembly Hardware Kit.



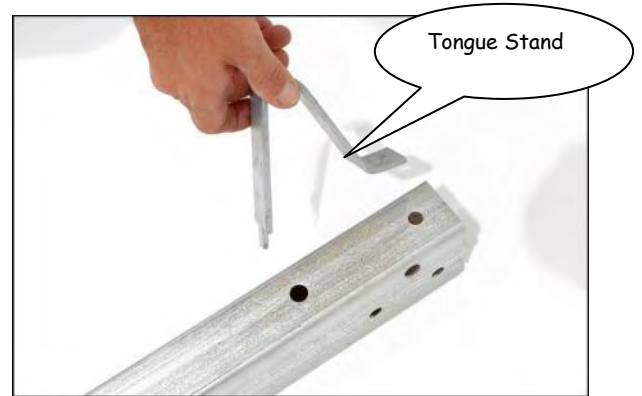
4. Locate your 4 spring brackets. 2 have holes and will bolt to the spring. 2 have spring slipper channels. The brackets with holes go to the front. The slipper brackets go to the back. Lay each in place on the frame rails.



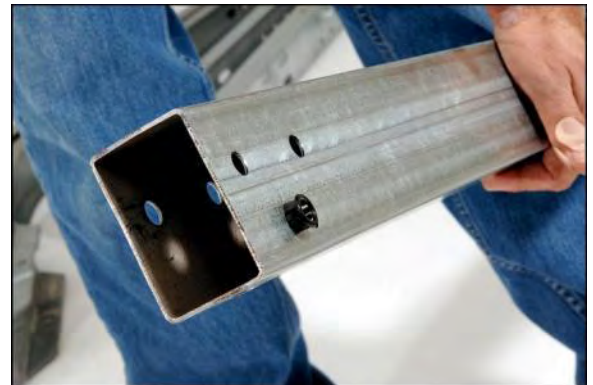
5. Use 3/8" x 1" hex bolts with 3/8" self locking nuts to connect each spring hanger bracket to the frame side rails with the nut on the inside of the rail channel. Tighten all 8 bolts.



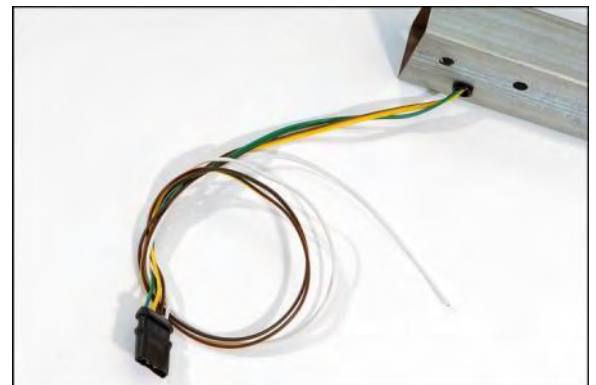
6. Locate the towing tongue. Identify the bottom of the tongue by locating the Tongue Stand mounting holes. Lay the towing tongue down with the two Tongue Stand mounting holes in the up position as shown at right!



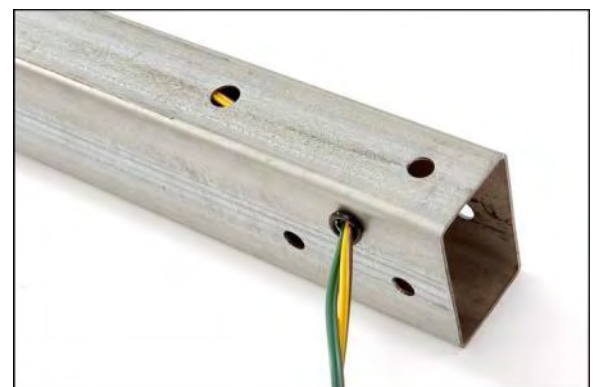
7. Open the wiring hardware Kit and remove the wire harness and the black 9/16" wire grommet.
8. Install wire protection grommet into the 9/16" hole near the coupler end of the tongue.



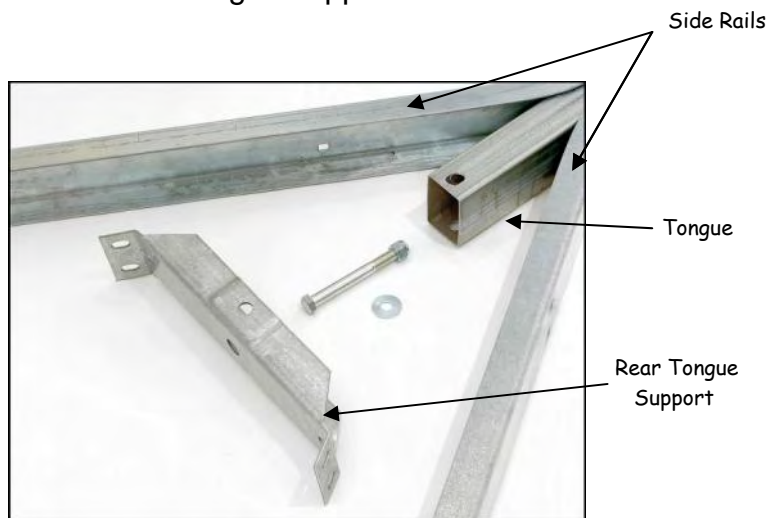
9. Pass the bare wire ends through the grommet and down thru the tongue. This is much easier than trying to fish the wire down the completed trailer tongue later.



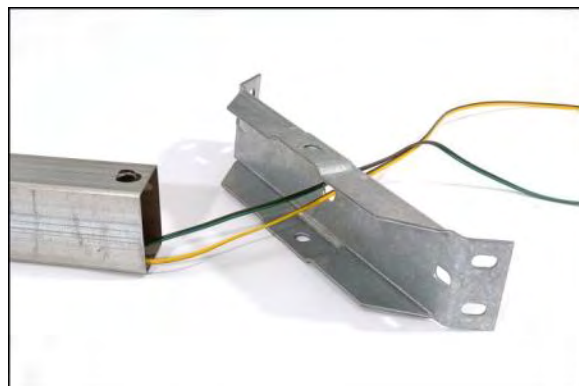
10. Lay the tongue on the floor between the side rails with the holes for the Tongue Stand facing UP.



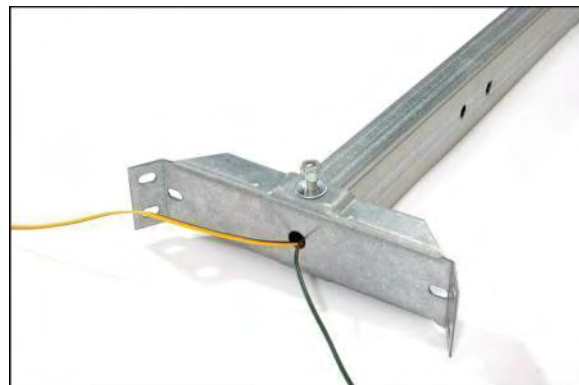
Locate the rear tongue support and hardware.



11. Pass the wires through the rear tongue support.



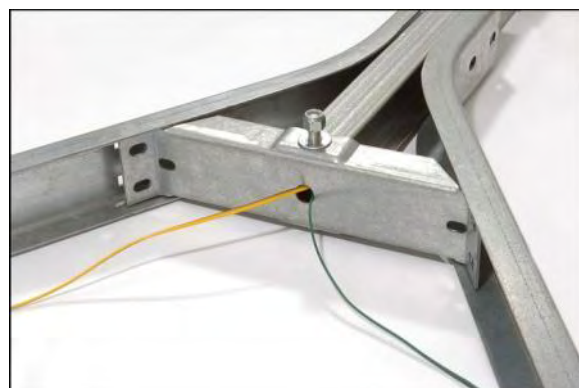
12. Use (1) 1/2" x 4-1/2" bolt, (1) flat washer and (1) 1/2" self locking nut to connect the tongue and tongue rear support. Watch not to damage the wires while inserting the bolt thru the rear tongue support. Assemble loosely with the nut and washer on top as the frame lies. **Do not tighten the bolt yet!**



**\*\*\*Note\*\*\* Wiring will be completed at a later stage!**

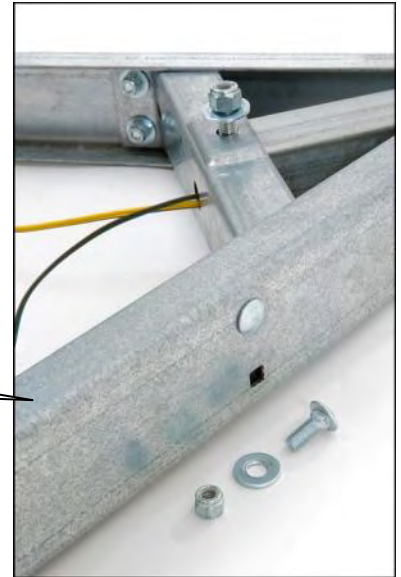
13. Bring the two side rails together with the tongue and rear tongue support.

14. Slide the tongue forward until the rear tongue support mates with side rails and bolt holes align.



15. Use (4) carriage head bolts (3/8" x 1"), and (4) - 3/8" self locking nuts to connect the side rails to the rear tongue support. Assemble loosely with carriage heads to the outside, washers and nuts to the inside. **Do not tighten at this point!**

Assembly Tip!  
Square Holes are for Carriage Bolts  
Oval Slots require Washers be installed!



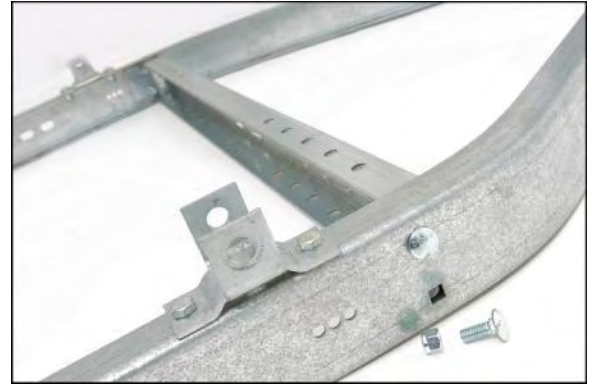
16. Use (2) 1/2" x 3-1/4" hex bolts, (4) 1/2" flat washers and (2) 1/2" Self Locking nuts to connect the side rails to the tongue. Assemble loosely with a washer under each bolt head and under each nut. **Do not tighten at this point!**



17. Locate the 2 cross member channels.



18. Lay them as shown between the side rails with inside openings facing each other, with the two most center holes down. (see picture below)

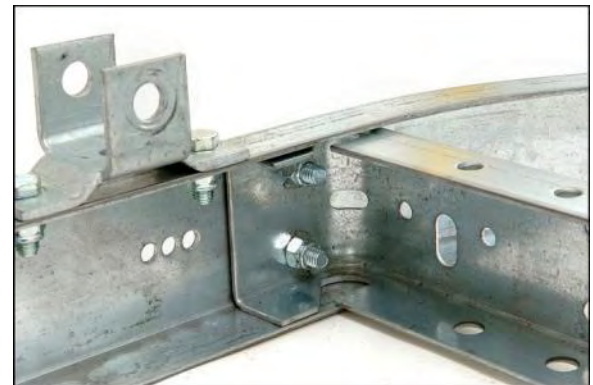


19. Use (8) 3/8" x 1" carriage bolts and (8) 3/8" self locking nuts to connect cross members to side rails. Assemble loosely with carriage heads to the outside and nuts to the inside. **Do not tighten at this point!**

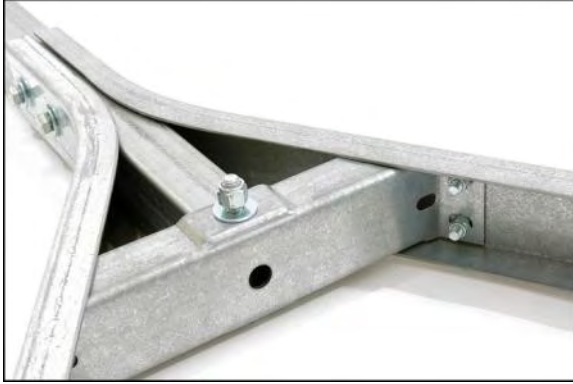


20. It is very important to follow this tightening sequence.

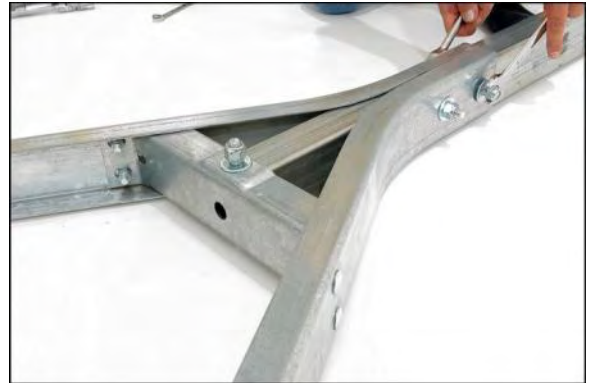
a. Tighten nuts on cross members; front and rear.



- b. Tighten nuts on tongue rear support sides.



- c. Tighten the two (2) nuts and bolts through tongue and side rails.



- d. Tighten nut and bolt through tongue and tongue rear support.



## RUNNING GEAR ASSEMBLY

To assemble the axle to the springs follow the steps below.

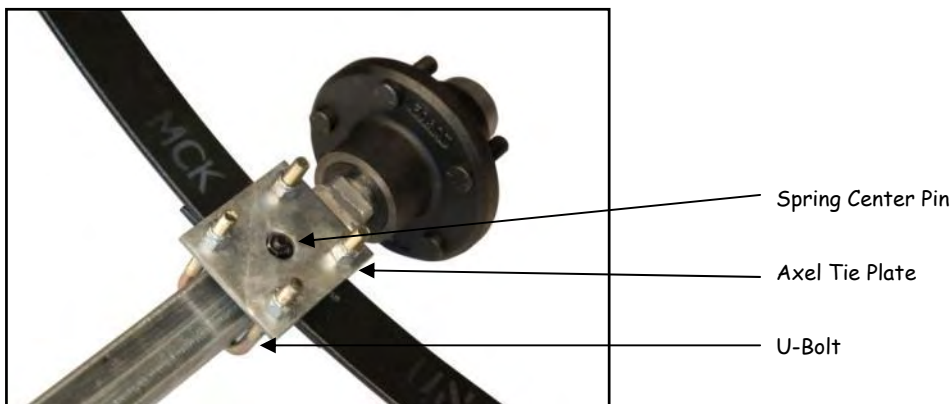
1. Find the (2) springs, axle with hubs, wheel and tire assemblies and running gear hardware kit.



2. Lay the axle on the ground. Spin the axle until the spring locating holes, near each end, are facing up.



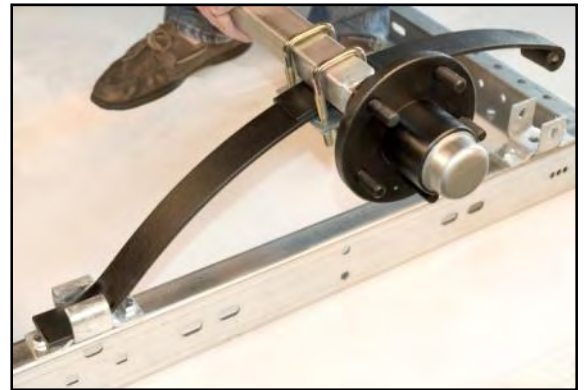
3. Lay one spring on the axle with ARC up making certain the spring center pin engages with spring locating hole in the axle. Do the same with one Tie Plate, placing it over the spring making sure it's locating hole fits with the spring center pin. Fit two (2) U-Bolts around the axel and up through the tie plate. Complete the assembly using four (4) self locking nuts, but do not fully tighten at this time.



- Repeat step # 3 with the remaining spring.



- Lift axle/spring assembly to the trailer frame. Slide the flat ends of the springs into the rear "slipper" spring brackets.



- Insert the spring eyes into the front hanger brackets.



7. Attach springs with  $\frac{1}{2}$ " x 3" axle bolts and  $\frac{1}{2}$ " self locking nuts.

**\*\*\*Note\*\*\***

Tighten only until nut and bolt contact the hanger bracket. This is a hinge joint so you want it snug but not tight.



8. Evenly tighten the four (4) U-bolt nuts on each spring.



9. Insert the center cap through the center hole from the inside of the wheel.



10. Align wheel bolt holes with wheel hub studs.



11. Attach the tire and wheel assemblies to the hubs and hand tighten the lug nuts.



12. Turn the trailer over onto the tires.



13. Tighten the Acorn Lug Nuts using a “star” pattern to ensure the wheel is seated to the hub face squarely.



14. Snap in the Center Cap “Plug” carefully by hand



## FENDER INSTALLATION

1. With Trailer on its wheels, carefully torque all Wheel Acorn Nuts to **75-85** ft. lbs.



2. Locate the fenders and fender hardware kit.



3. Connect fender brackets to the fenders using four (4) 3/8" x 3/4" slotted truss head bolts and four (4) 3/8" self locking nuts. Tighten securely with nuts to the inside of the fenders.



Insert the 3/8" x 1" hex bolts  
in Fender Bracket CENTER  
HOLE!

4. Connect fender brackets to the frame using the slotted holes in the frame and one (1) 3/8" x 1" hex bolt, 3/8" washer and 3/8" self locking nut per bracket. Place a washer under the head of each bolt and under each nut.



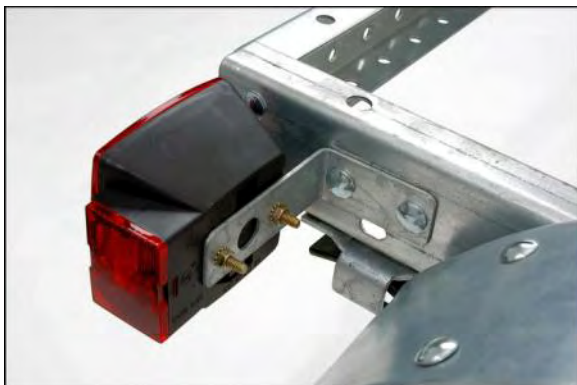
5. Carefully tighten all nuts.
6. Repeat for the other side.

## LIGHTS AND WIRING INSTRUCTIONS

1. Wiring is as follows:
  - a. Brown = Running Lights
  - b. Yellow = Left Signal and Left Brake
  - c. Green = Right Signal and Right Brake
  - d. White = Ground/Common
  
2. Attach the brackets to the tail lights using the hardware provided with the light kit. Sandwich the license plate frame between the left light and the galvanized bracket.

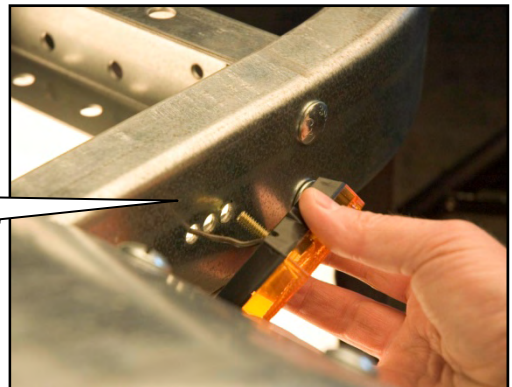


3. Attach the tail light and bracket assemblies to each side of the frame. Use two (2) 3/8" x 1" carriage bolts and two (2) 3/8" self locking nuts to connect to frame and tighten in place.

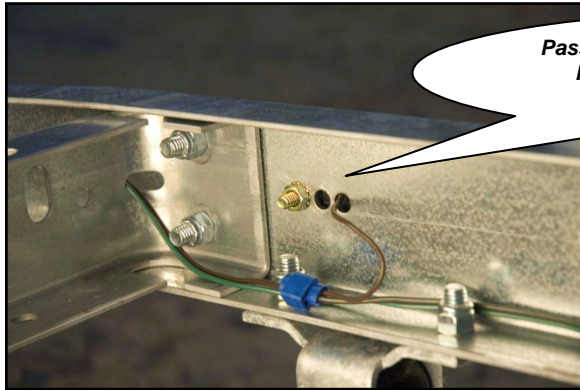


4. Attach side marker indicator lights to the frame just forward of the fenders. Attach using hardware provided with the lighting kit as shown in photo.

*Pass the mounting bolt through the most forward hole for best side marker light position.*

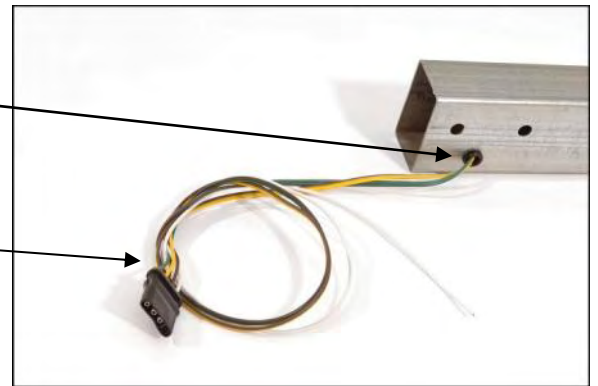


5. Repeat step for with the remaining side marker light.



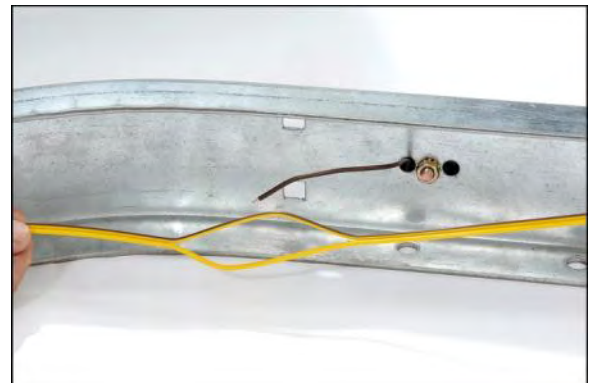
*Pass the mounting bolt through the most forward hole for best side marker light positioning.*

6. Insert the plastic electrical bushing into the coupler end of the towing tongue as shown at right.
7. Thread the raw end of the wiring harness through the bushing and down the tongue, leaving approximately 30" of slack with the trailer connector.

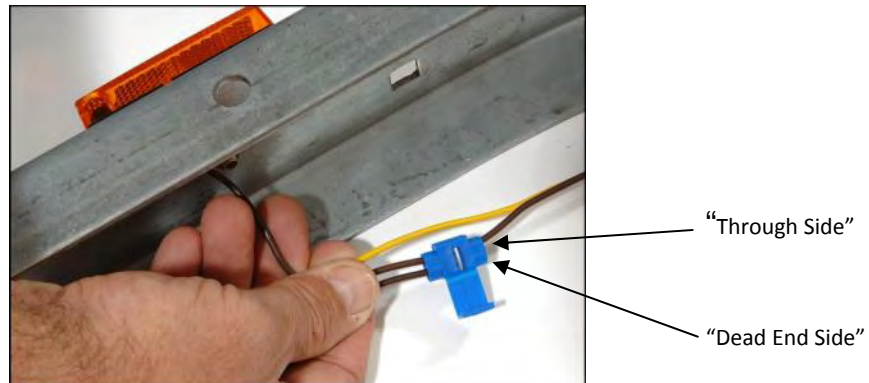


8. Run the **GREEN** and **BROWN** wires down the Right side of the trailer, passing it through the cross member and on past to the rear right light.
9. Run the **Yellow** and **BROWN** wires down the LEFT side of the trailer, passing it through the cross member and on past to the rear right light.

10. Adjacent and near the Running lights; **Carefully** separate the Brown wire near the running light using an exacto knife or razor.



11. Insert the brown wire from the wiring harness into the blue Quick-Connect on the “through side” as shown below.



12. Insert the black wire from the running light into the “**dead end**” of the Blue Quick-Connect. Use Pliers to secure wiring tap into wires; fold over and close the blue protective cover until you hear a slight click.

13. Use 4 clips on each side of the lower rail to secure the wires securely headed back toward the rear of the trailer.

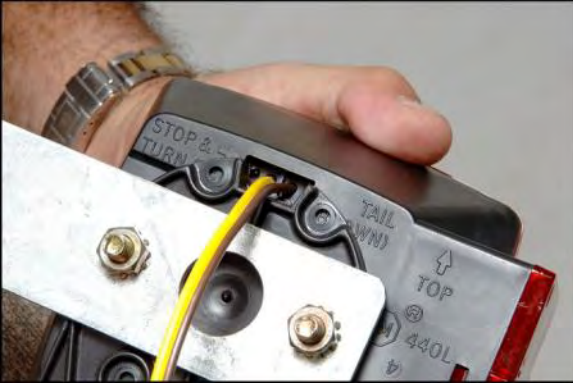


14. Route the wires to the left tail light and cut to length.

15. Strip ½” off the end of the wire exposing the copper strands.



16. Push the wires into the small holes on the back of the tail light corresponding to the wire color. You will feel when the wires are secured into the lights.



17. The remaining Lighting and Wiring steps will be completed in the Final Assembly Section.

## FINAL ASSEMBLY

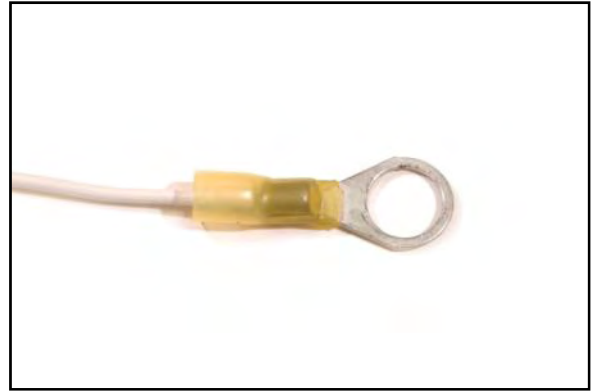
1. Tongue support skid and chains are secured to the tongue with one (1) bolt.
2. Place one (1) 3/8" flat washer on 3/8" x 1-1/2" hex bolt.
3. Slide bolt with washer through the end of both safety chains as pictured; place a second 3/8" flat washer onto the bolt and then through the tongue support skid.
4. Attach safety chains to tongue as shown using a 3/8" self locking nut inside the frame.



5. Strip 3/8" of insulation from WHITE ground wire.



6. Crimp 3/8" round electrical connector onto White wire.



7. Pass 3/8" x 3" hex bolt through the wire connector as shown. This bolt will be used to attach the rear of the coupler to the tongue.



8. Locate 3/8" spacer for the front of the tongue. This spacer inserts inside the tongue keeping the tongue from collapsing when the coupler bolts are tightened.



9. Hold spacer into place as you rest coupler onto the tongue and insert (1) 3/8" x 3" hex bolt through the coupler, spacer and tongue. Use 3/8" self locking nut to tighten.



10. Use the 2<sup>nd</sup> 3/8" x 3" bolt with WHITE ground wire to fasten the rear of the coupler. No spacer is used on the rear bolt. **Do not over tighten** as doing so could collapse the coupler and/or tongue tube.



11. The balance of the wire harness is used on the tow vehicle as necessary. (refer to your tow vehicle's owner's manual for instructions)



12. Find the extruded aluminum Load Bars and Load Bar Hardware Kit.

Front Load Bar Swivel Bracket

Rear Load Bar Swivel Bracket

Hardware is shown as it is used on the trailer - from bottom, the trailer frame attachments, to top the actual load bars.



13. Attach the FRONT swivel brackets to the Load Bar Support Brackets using one (1) 3/8" x 1" hex bolt and 3/8" self locking nut.



14. Using one (1) pair of u-bolts attach the assembled support brackets to the frame side rails with 3/8" locknuts and washers. Locate the support bracket approximately 7" – 15" forward of the mid cross bar to best support your desired load. Bunks can be adjusted forward and aft, up and down later as needed.

15. Attach the Rear swivel brackets to the Load Bar Support Brackets using one (1) 3/8" x 1" hex bolt and 3/8" self locking nut. Using the remaining pair of U-bolts attach the two (2) Rear Load Bar Support to the rear Cross member as shown below.



16. With the load bar upside down, slide (2) carriage bolts into the t-track section of each load bar.



17. Flip one load bar right side up and slide the carriage bolts in the track so that each bolt is aligned with the hole in the top of the two front load bar swivel brackets. Center the load bar over the trailer frame before securing with self locking nuts.



18. Repeat step #17 with the rear load bar, aligning the carriage bolts with the center hole in each rear swivel bracket. Center the load bar over the trailer frame before securing with self locking nuts.



*\*Completed trailer shown with available Kayak transport equipment.*

19. To register your trailer with your state's department of motor vehicles you must apply the supplied VIN sticker to the towing tongue near the coupler...



and apply the supplied Tire Certification and Load Capacity placard in a conspicuous location near a tire.



20. Your completed trailer is ready to register and title. Contact your local Department of Motor Vehicles office for specific procedures in your state.