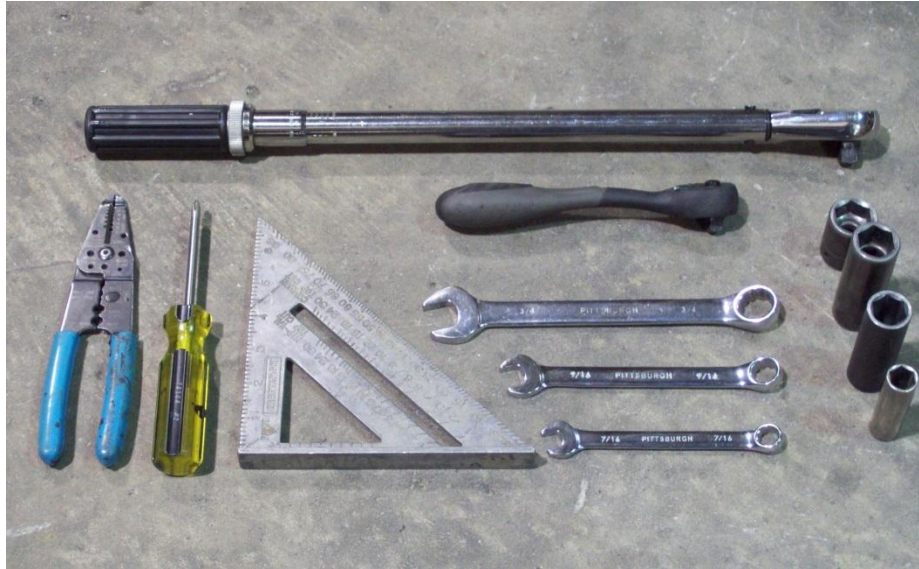


# SUT-220-SNC



Torque wrench, carpenters square, wire cutters, Phillips screwdriver, 7/16, 9/16, and 3/4" combination wrenches, ratchet, 9/16, 3/4, 13/16", and 7/8" sockets.

## **ASSEMBLY REQUIREMENTS**

**\*Torque all T-bolt nuts to 35-40 foot pounds.**

**\*Check all lights before towing.**

**\*Tire pressure not to exceed recommendation on serial tag.**

**\*Re-torque wheel nuts after first 25 miles to 80 ft. pounds and periodically thereafter.**

**Failure to follow the assembly instructions could result in serious injury or death.**

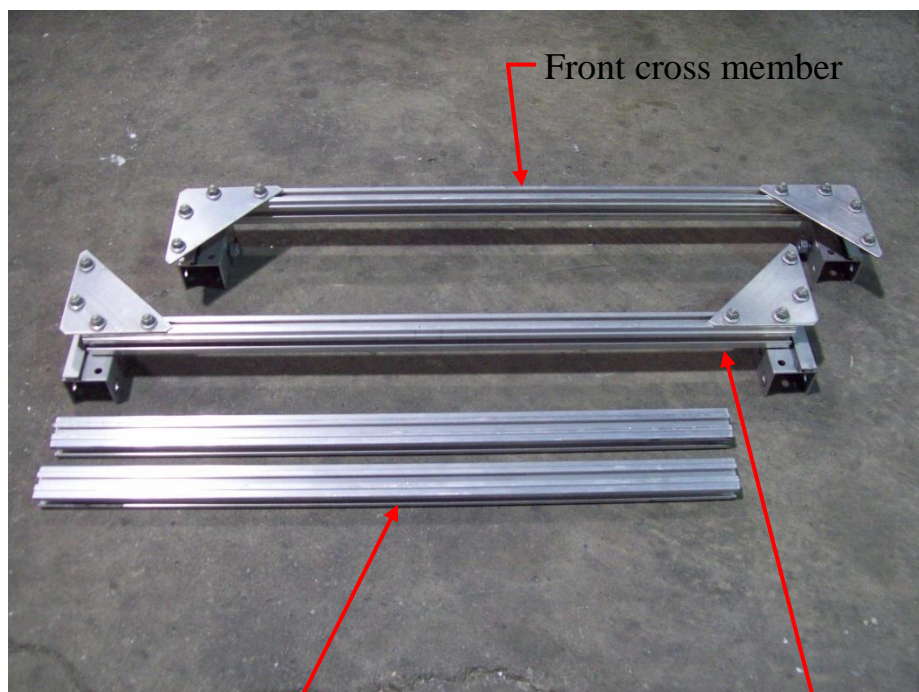
**Incorrect assembly or modifications to your trailer will void any specific or implied warranty.**

**For questions or assistance assembling your trailer call 800-282-5042.**

**UNPACK AND IDENTIFY THE FOLLOWING PARTS.**

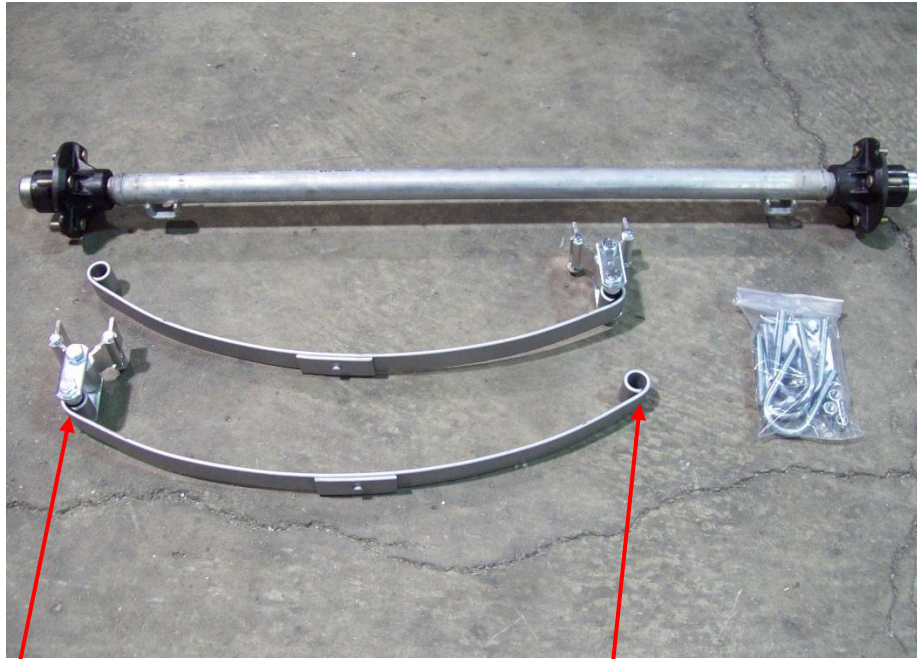


Tongue section



Side rails

Rear cross member



**Rear of spring**

**Front of spring**

**Axle, spring assemblies and U-bolt hardware.**



**Tires and fenders**





Light kit, marker light bracket, skid, harness, tail light brackets, 3) hardware bags and spare parts bag.



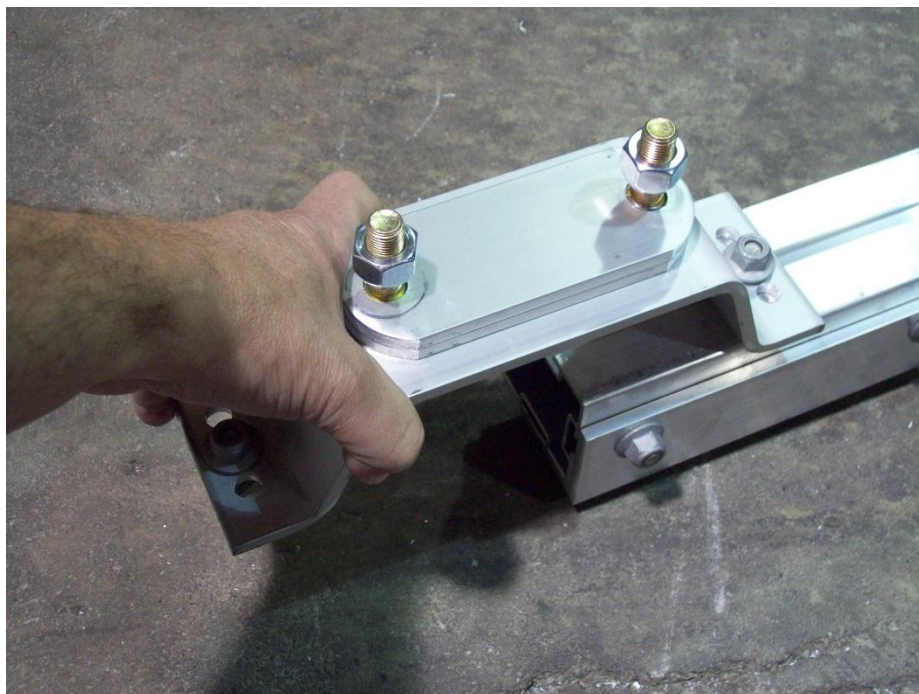
Guide rails, 10" padded cradles, front holder, and channel brackets.



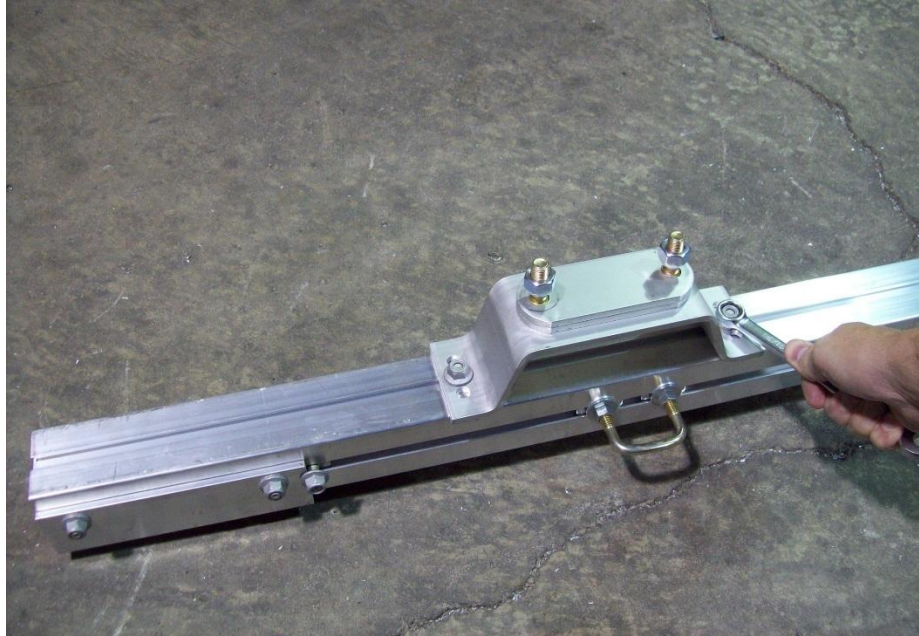
### Optional step for spare tire carrier



Spare tire carrier for SUT trailers.

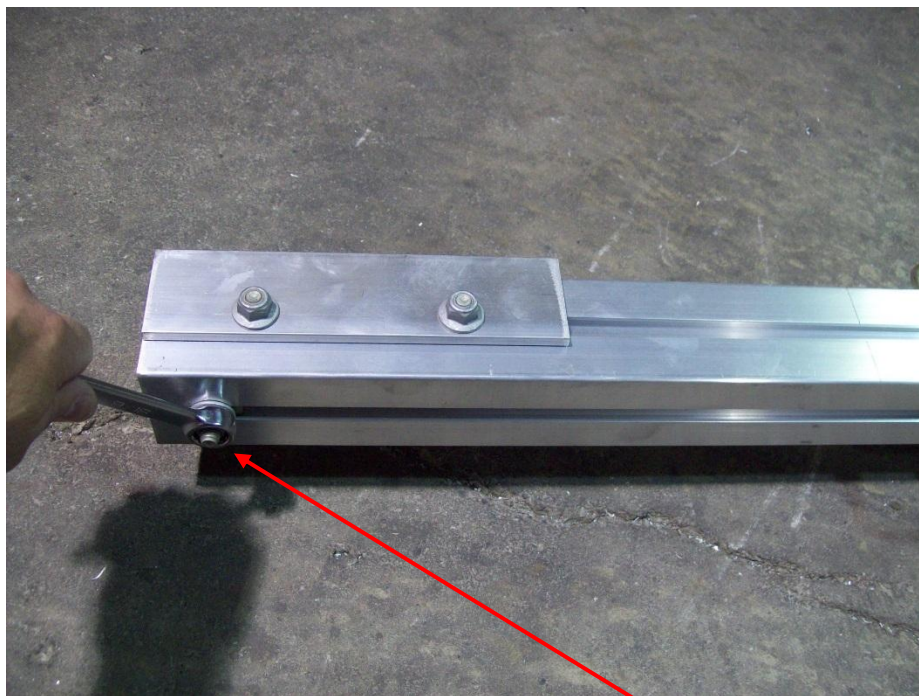


Loosen the T-bolts and nuts on spare tire carrier. Insert into the underside of the front tongue at the rear. Once T-bolts are in channel slide towards the coupler.



Position carrier about 18" away from the rear of the front tongue section then tighten nuts.

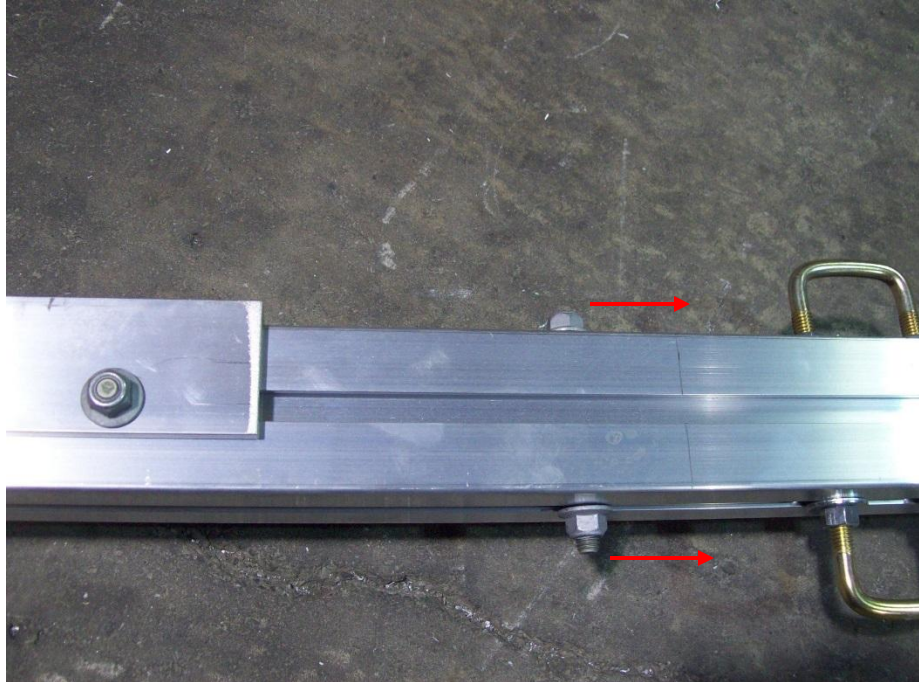
### **Tongue assembly**



**Rear of front tongue section** →

Loosen the 1 nut at the rear of the front tongue section.

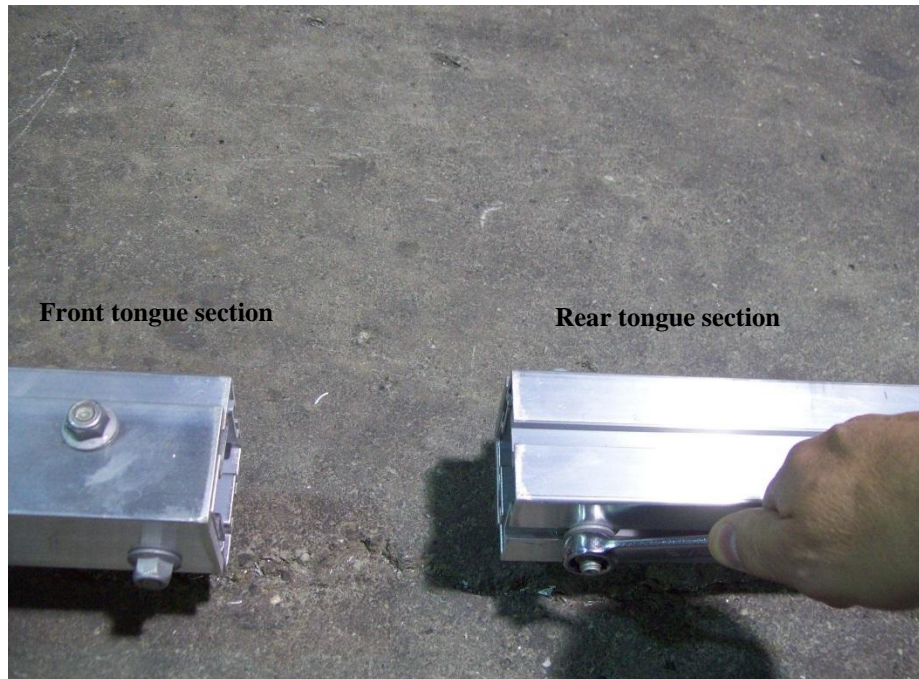




Slide 2 T-bolts forward on the tongue section. These will be used later to install the front cradle.



Lay the tongue sections end to end with the splice plates adjacent to each other.

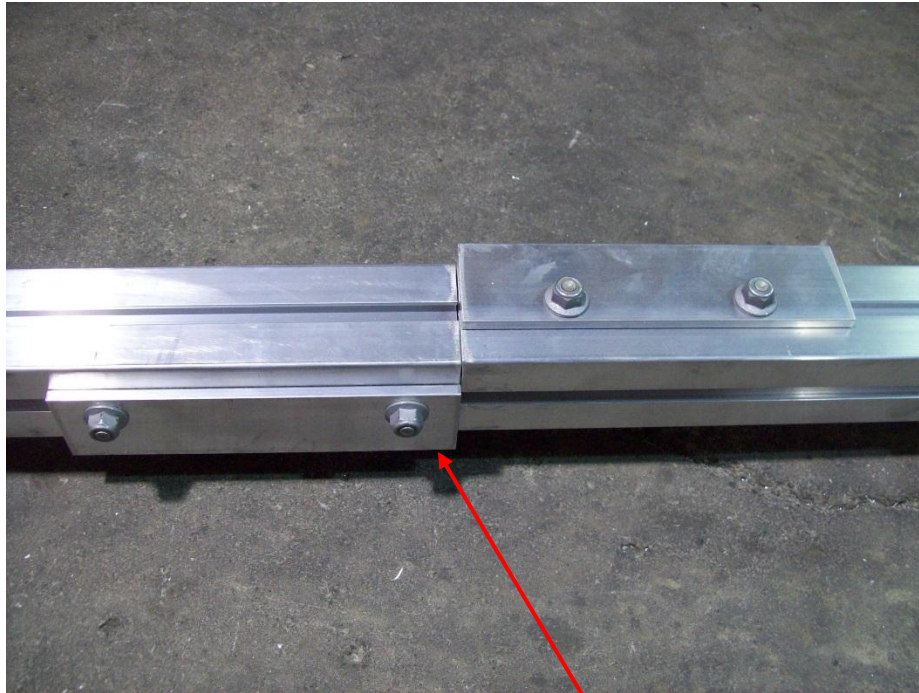


At the front of the rear tongue section loose the nut on the left side and slide toward the back of the trailer.



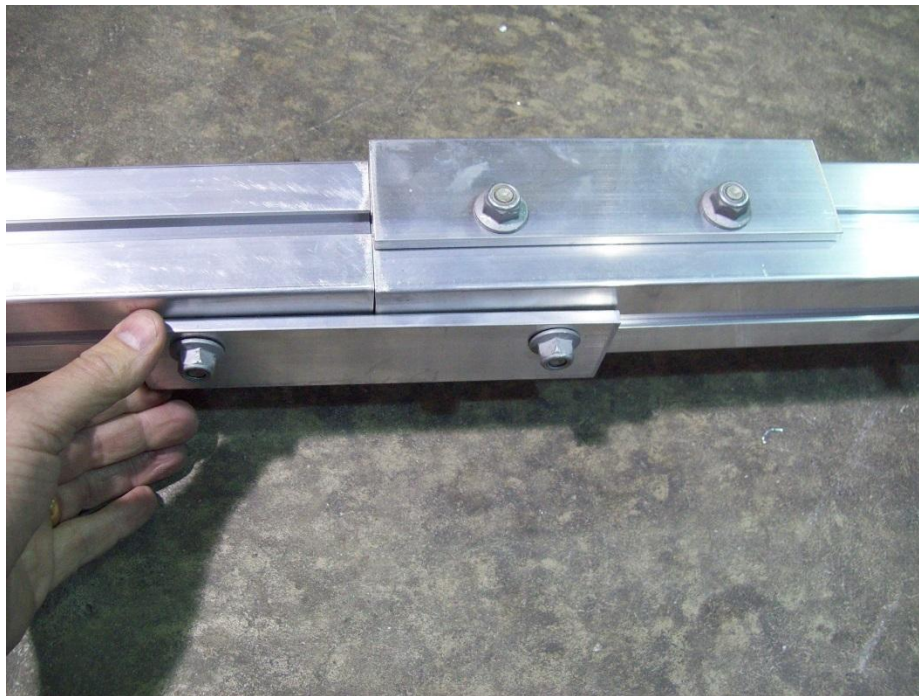
Helpful hint: Place a couple of 2 x 4 under each of the tongue section to make it level. This will help with alignment and sliding the splice plates into position.



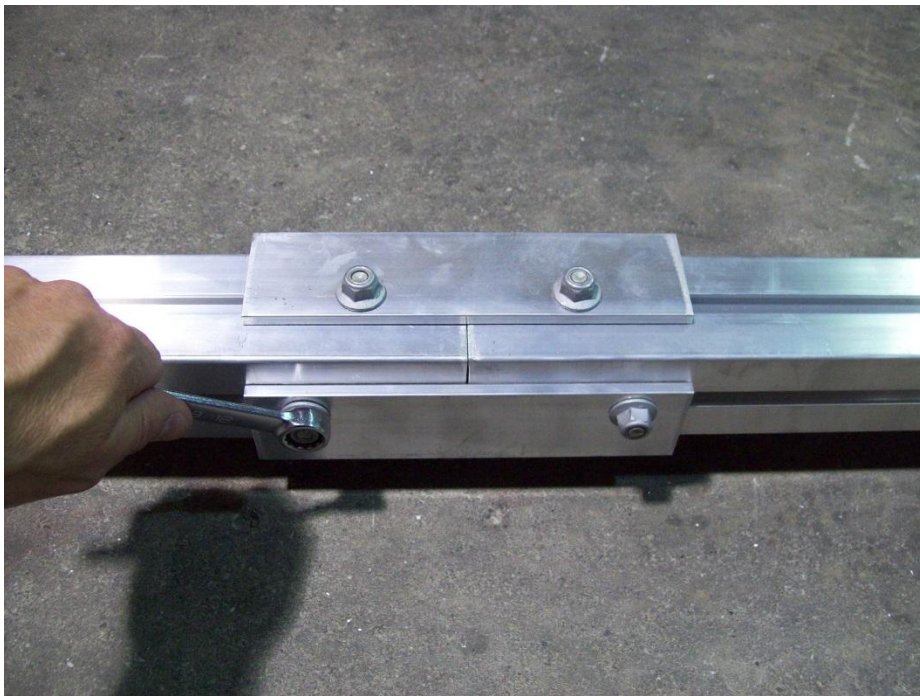
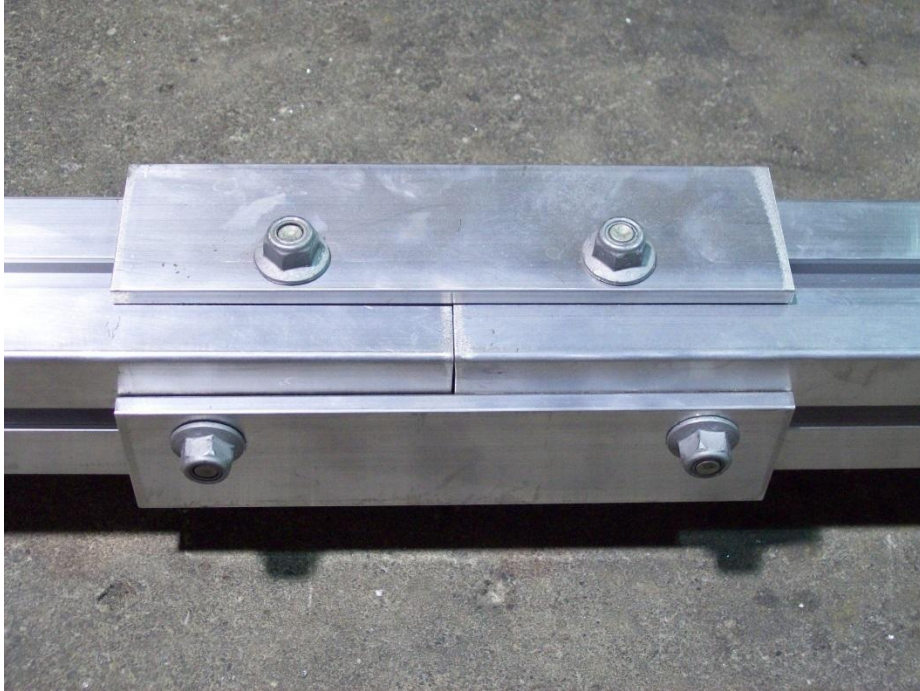


**Rear splice plate**

Loosen 4 nuts on the rear splice plates.



Slide each plate over the adjacent tongue section until the plates are centered over the gap between the tongue sections.



Tighten all 8 nuts, making sure that the tongue sections are as tight as possible to one another. Set the tongue aside.



## Frame assembly



Locate the side rails, rear cross member and front cross member.



Locate the hardware bag with the angle brackets.

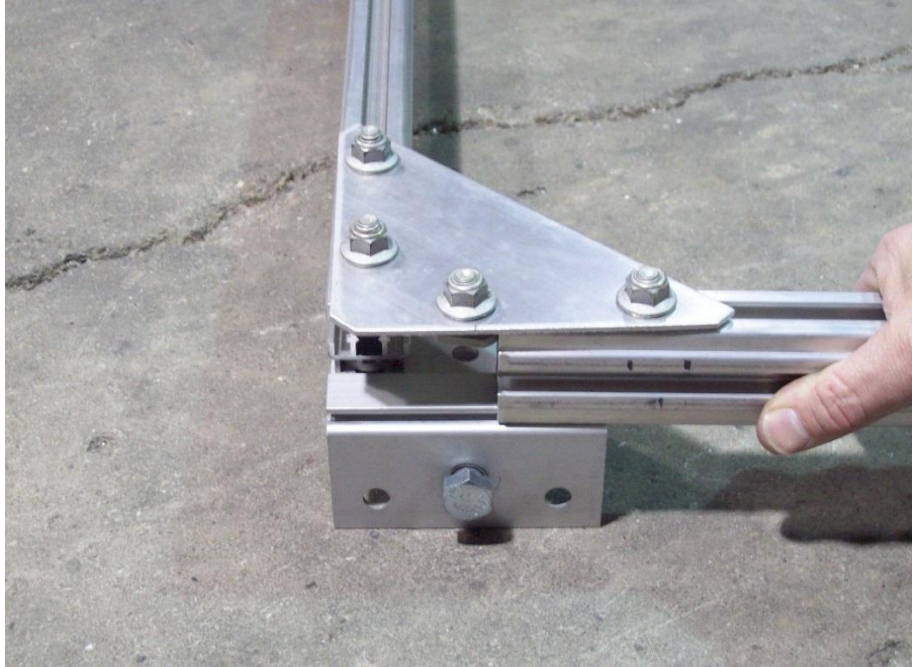


Remove 4 T-bolts from the hardware bag with the angle brackets.

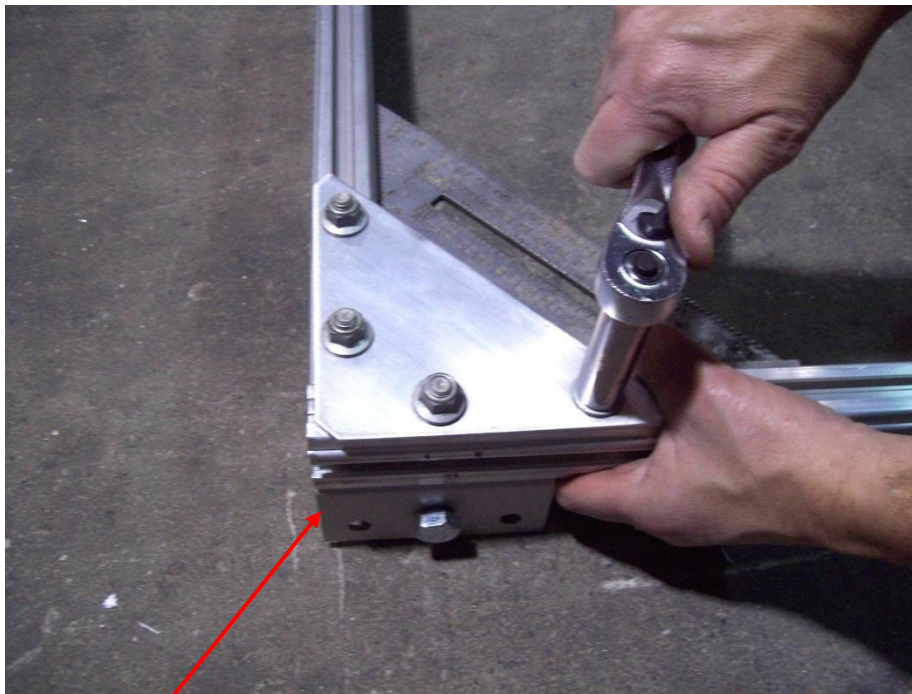


Install 2 T-bolts into the rear side of the front cross member as shown.



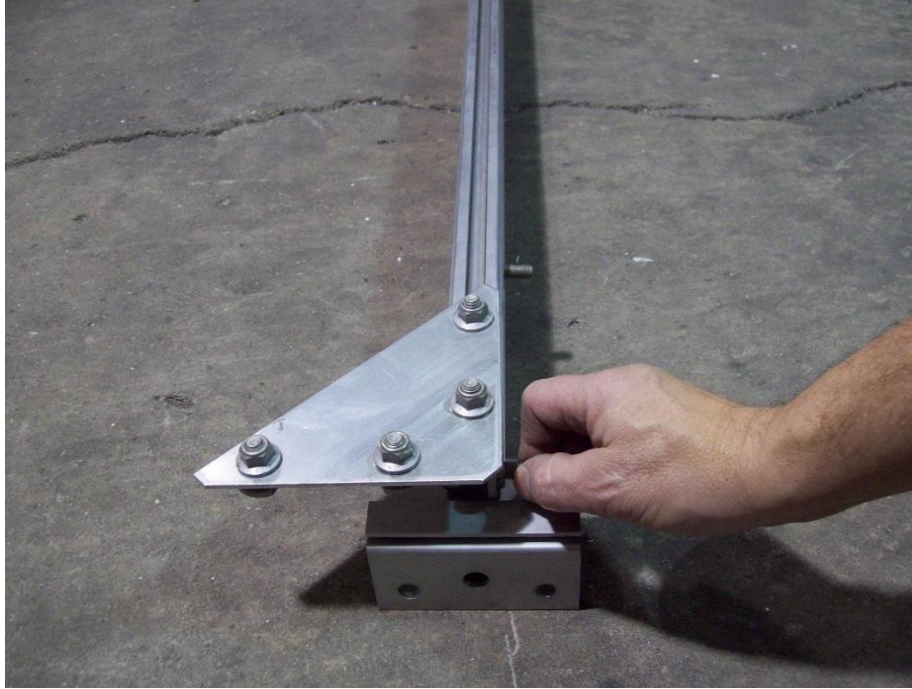


Insert the side rail into the front cross member.

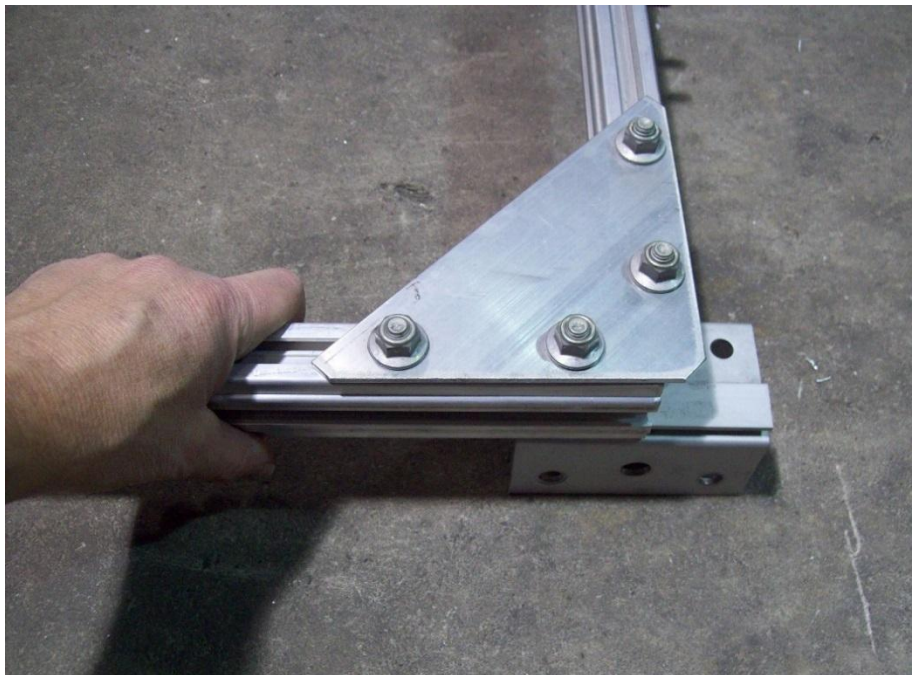


Sub rail clip

Slide the side rail all the way to the edge of the sub rail clip as shown. Square up assembly and tighten nuts.

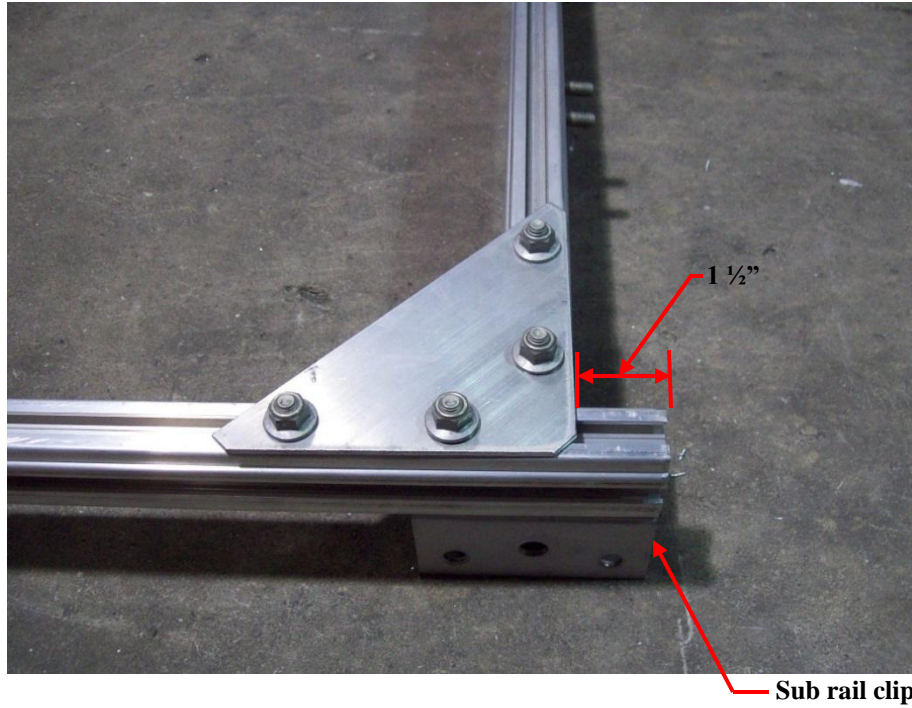


Install 2 T-bolts into the rear side of the rear cross member as shown.

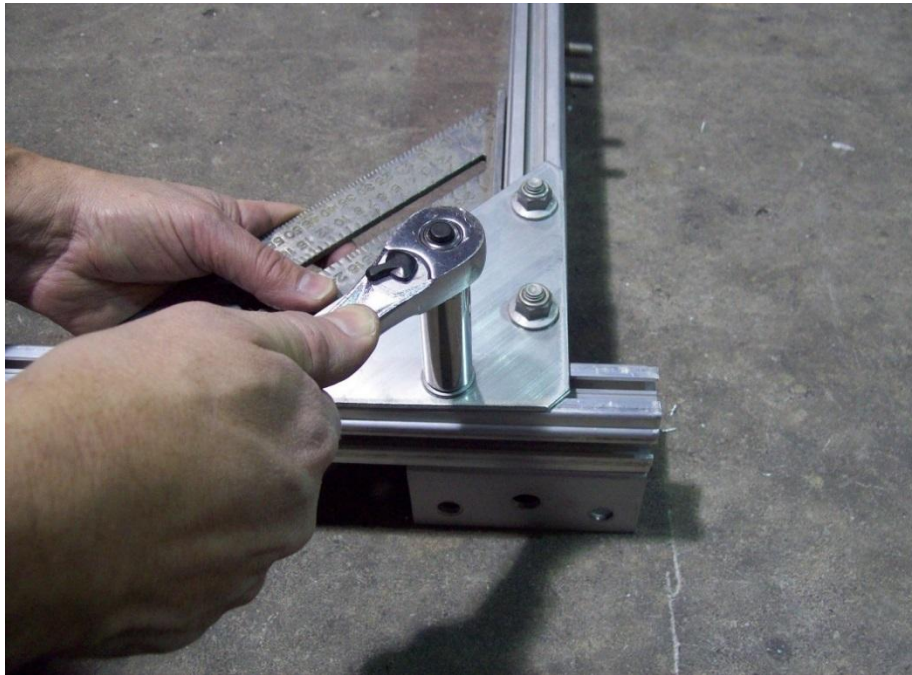


Insert the other end of the side rail into the rear cross member.





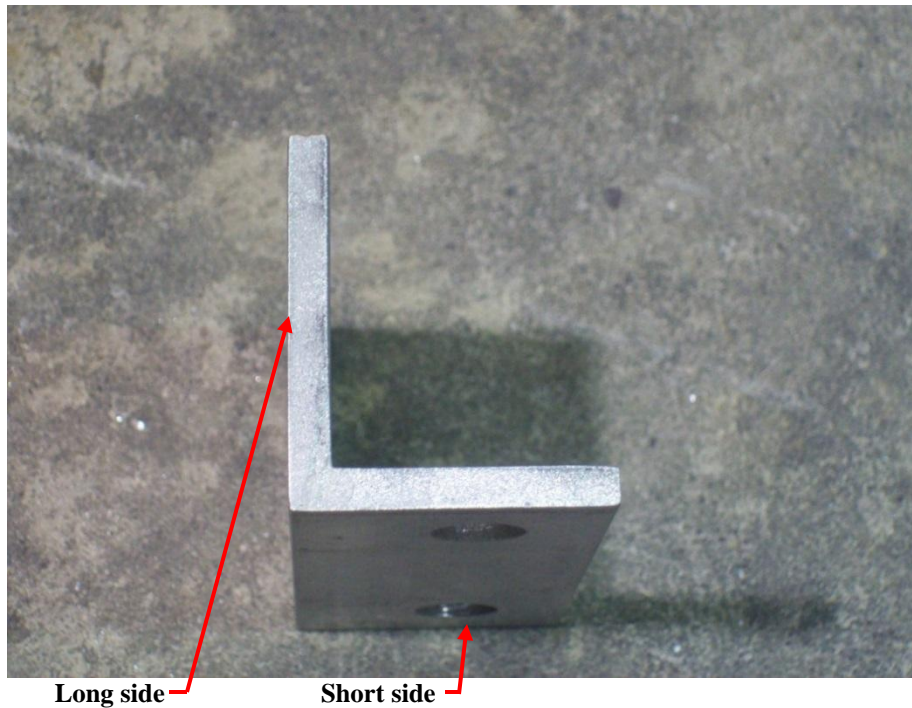
Slide the side rail all the way to the edge of the sub rail clip as shown. The side rail should be about 1 1/2" pass the rear cross member when in position.



Square up and tighten nuts. Repeat the process for the other side at this point.

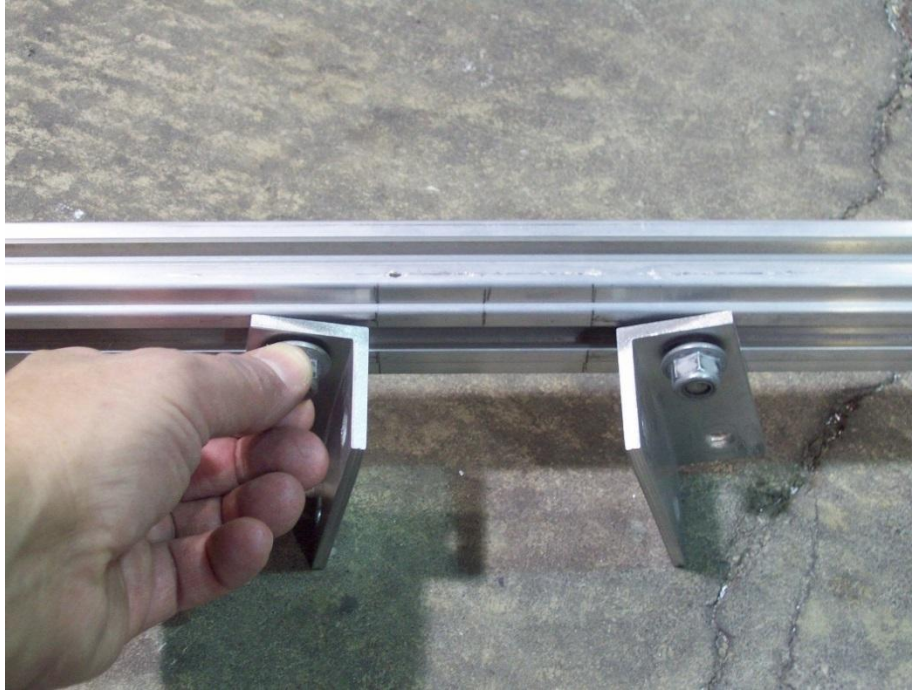


Your frame should look like this. Notice that the side rail extends past the rear cross member. If not assembled properly, the spring assembly will not have enough arch to work correctly.

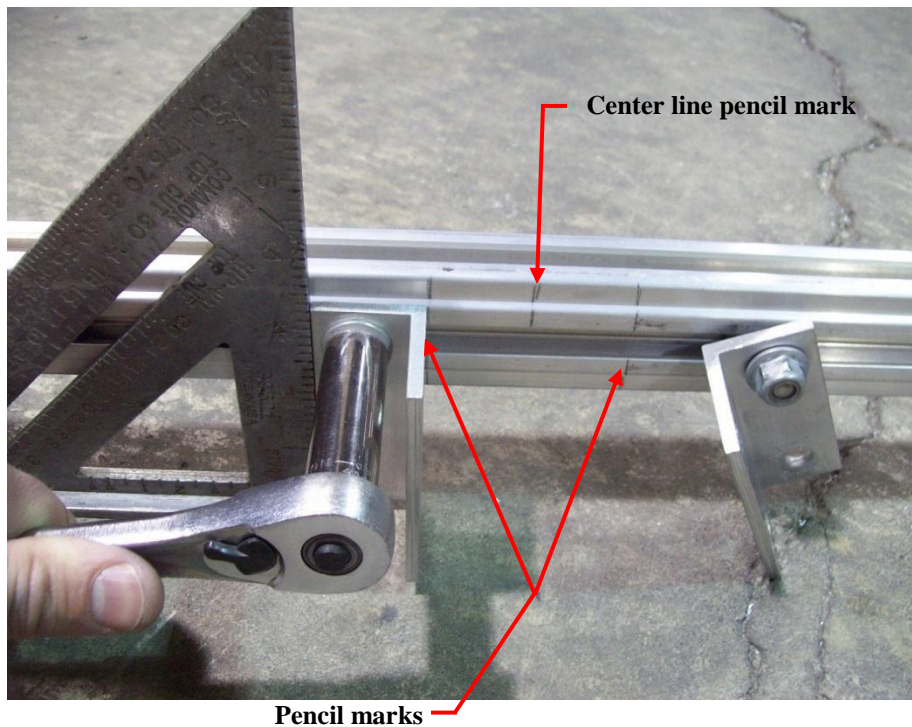


When attaching the angle brackets to the cross member, the short side should go against the cross member and the long side against the tongue section.





Install the angle brackets on the T-bolts, already in the cross members as shown.



Align the front and rear left side angle brackets with the pencil marks on the frame. Square up angle brackets and tighten nuts. Leave brackets on the other side loose at this point.

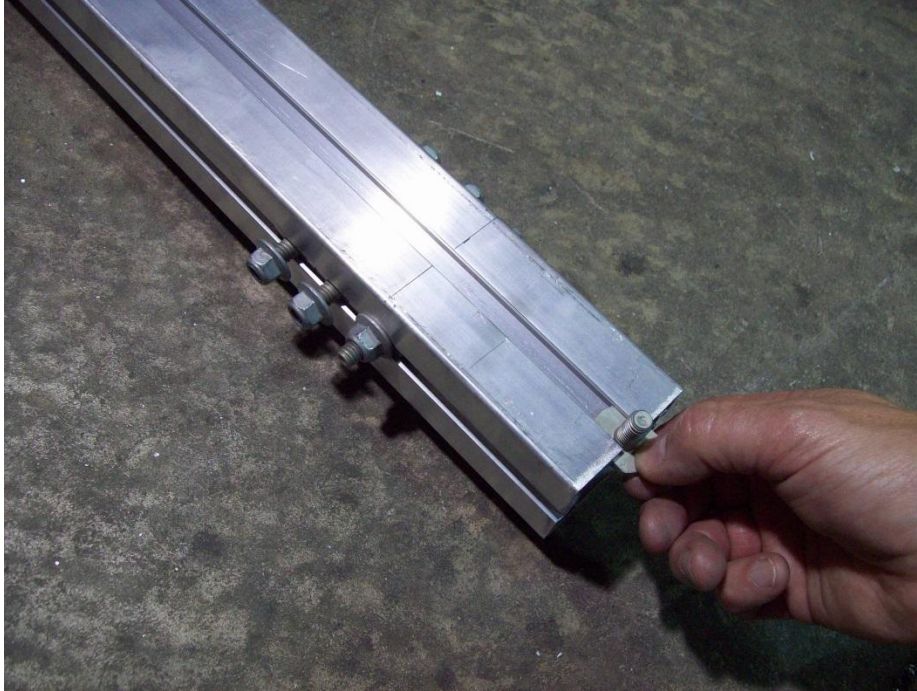


Your frame should look like this, with the angle brackets attached to the rear side of each cross members.



Locate one of the channel brackets. Remove the T-bolt and nut from the channel.

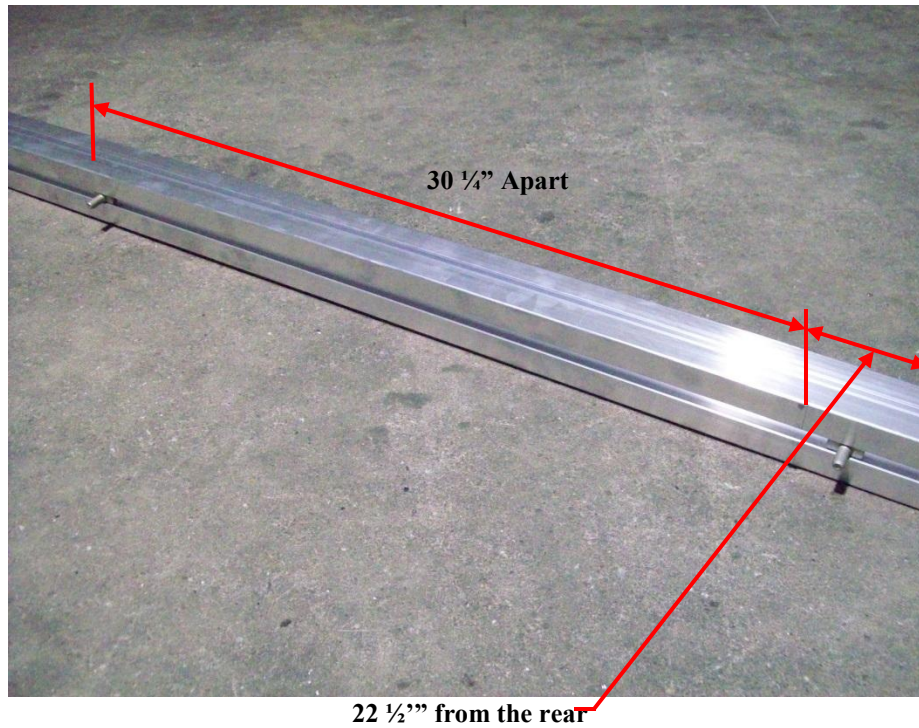




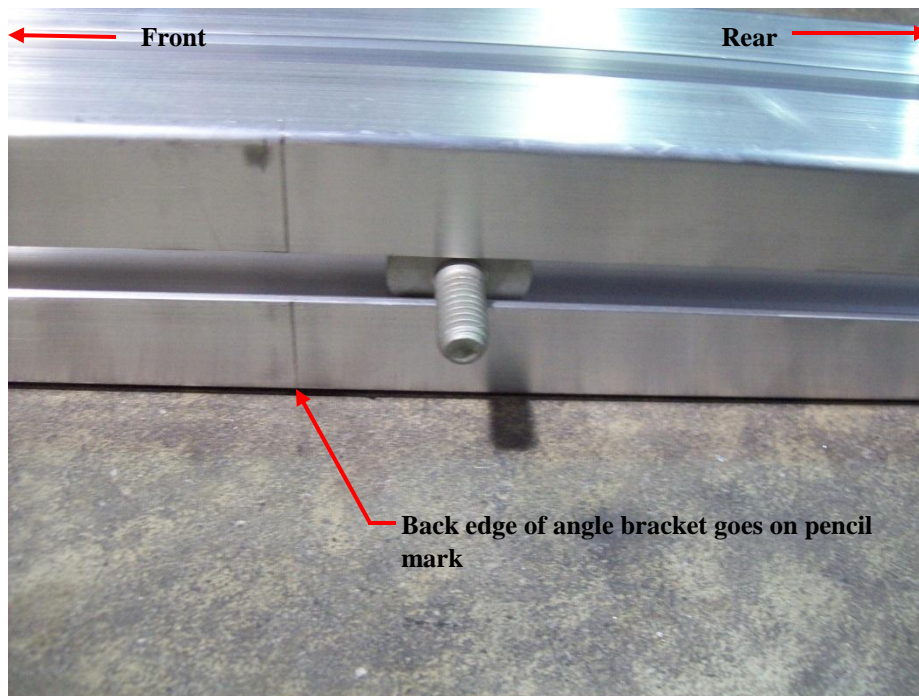
Insert the T-bolt in the rear of the tongue section. Slide all the way to the splice plates at the front of the trailer. This will be used later to attach the front channel bracket.



Slide the next two forward facing T-bolt on either side of the rear tongue section to the pencil marks.



From the rear of the tongue section to the first pencil mark is 22  $\frac{1}{2}$ " away, from there 30  $\frac{1}{4}$ " to the next pencil mark.

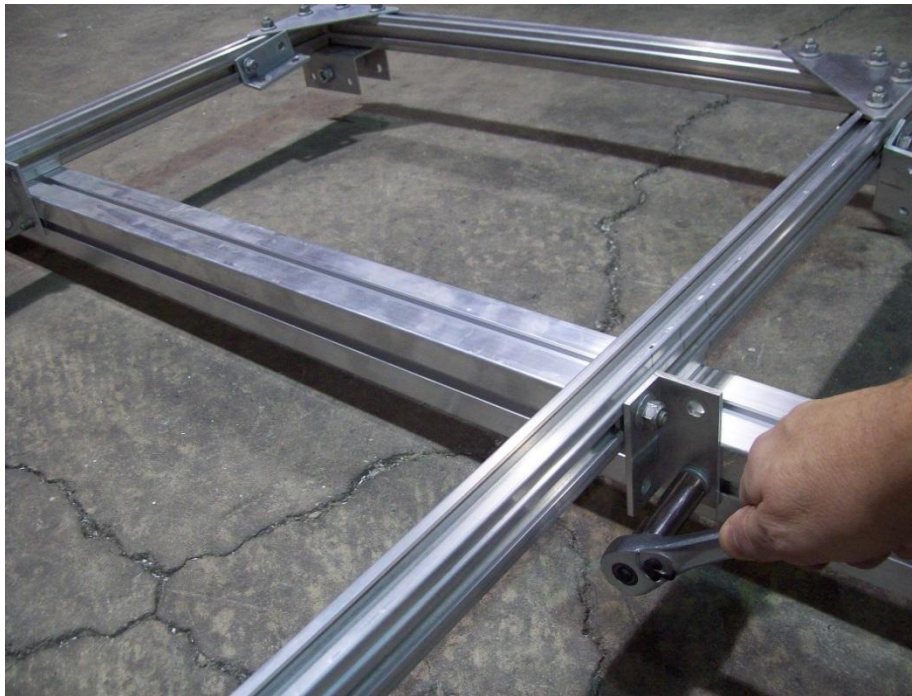


Make sure T-bolts are behind the pencil mark as shown facing the rear of the tongue section.

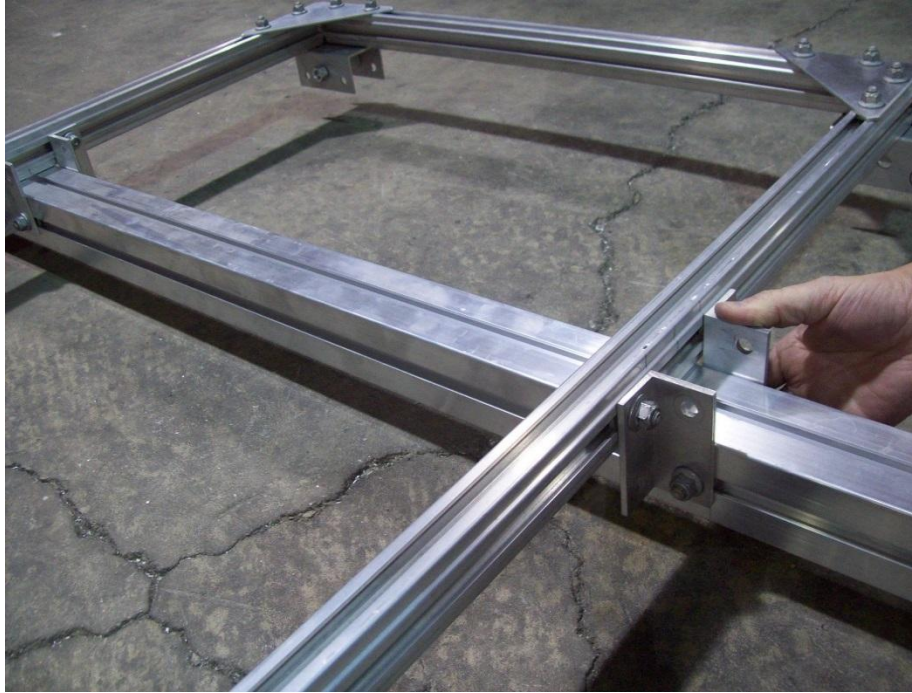




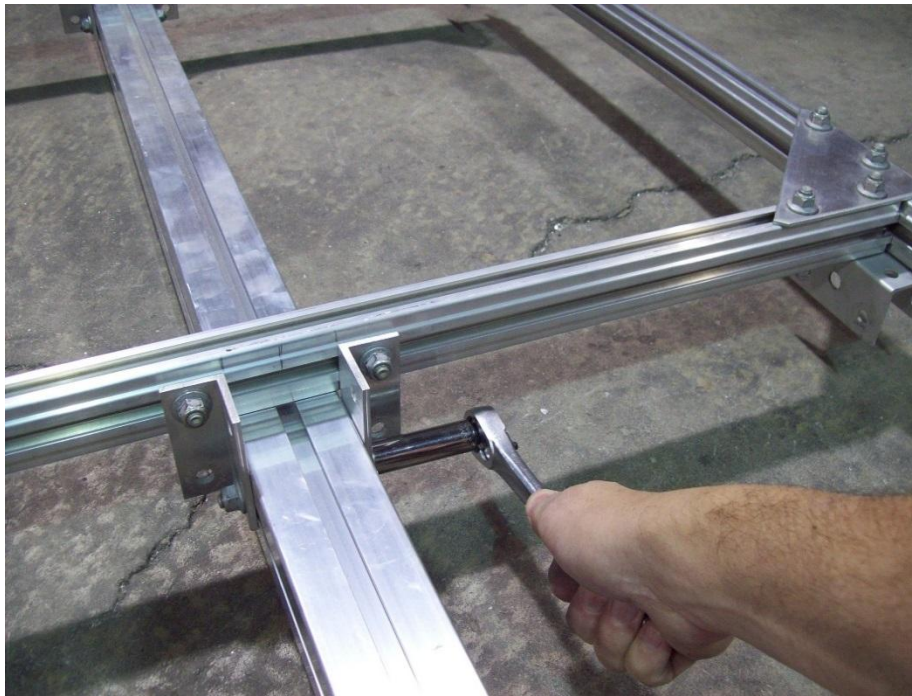
Install angle brackets over top of the T-bolts in the tongue.



Align the angle brackets inside the pencil marks on the tongue. Re-install nuts and tighten, once in position.



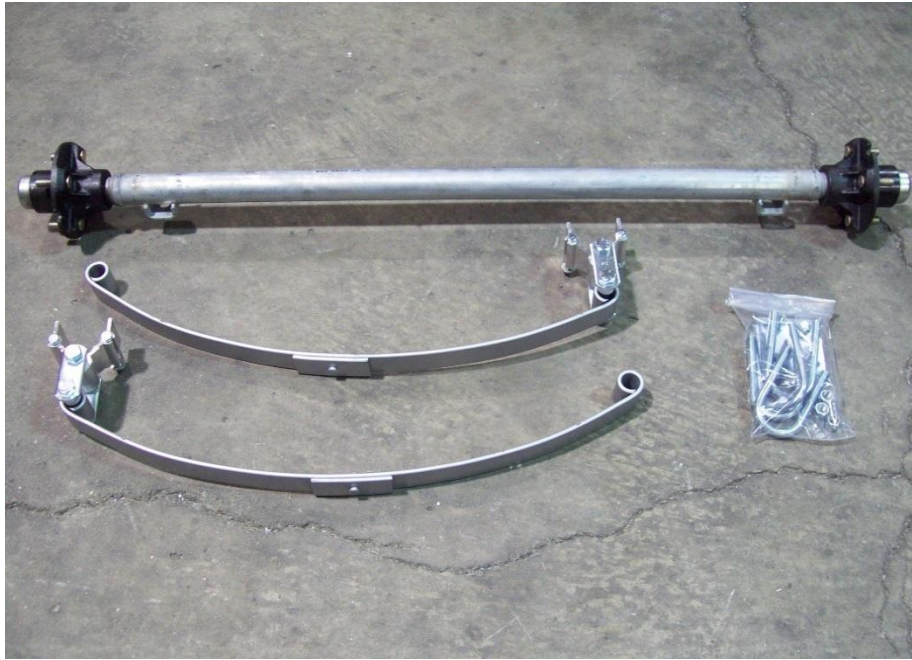
Slide the angle brackets from the right side over and install nuts.



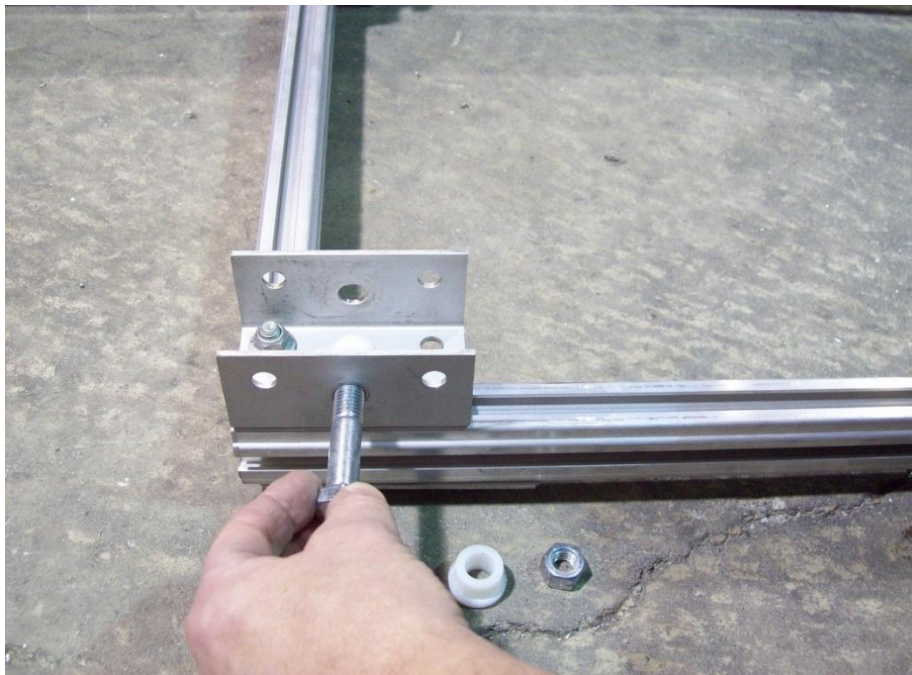
Once brackets are aligned with pencil marks tighten all nuts.



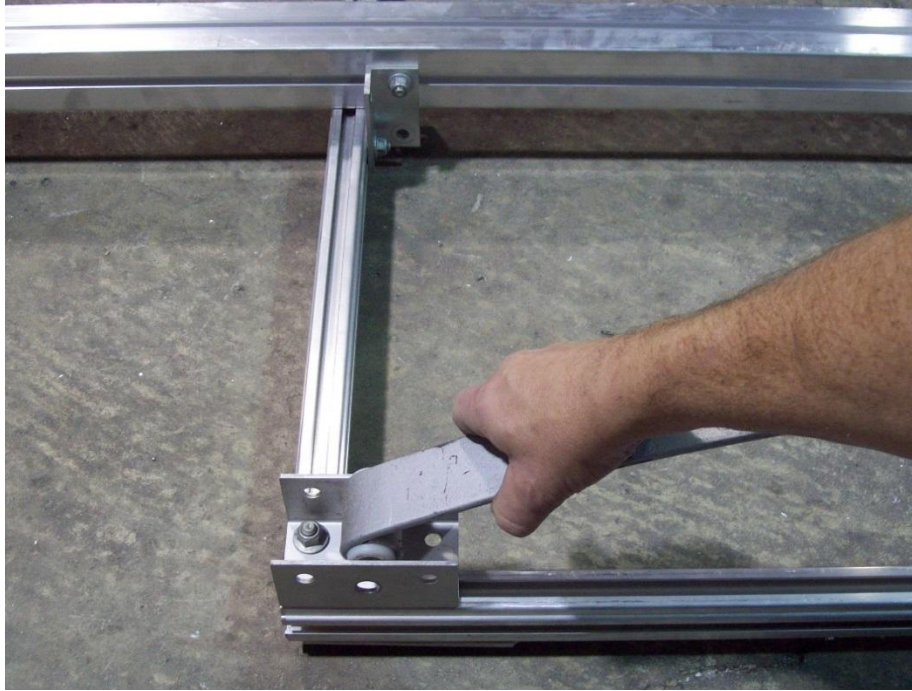
## Axle and spring assemblies



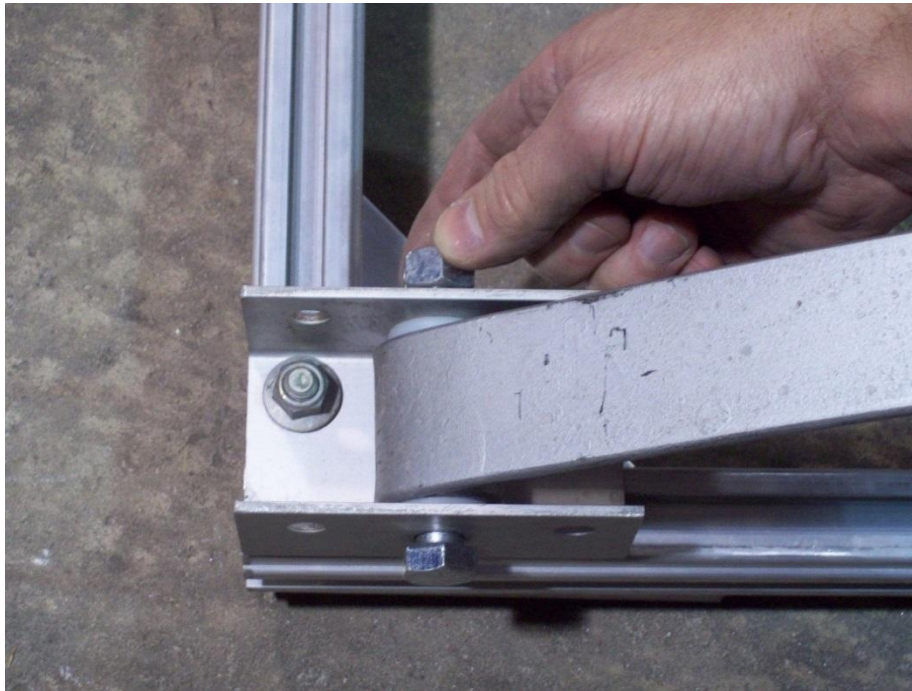
Locate the axle, spring assemblies and U-bolt kit.



Remove the bolt, bushings and nut from the front sub rail clip.

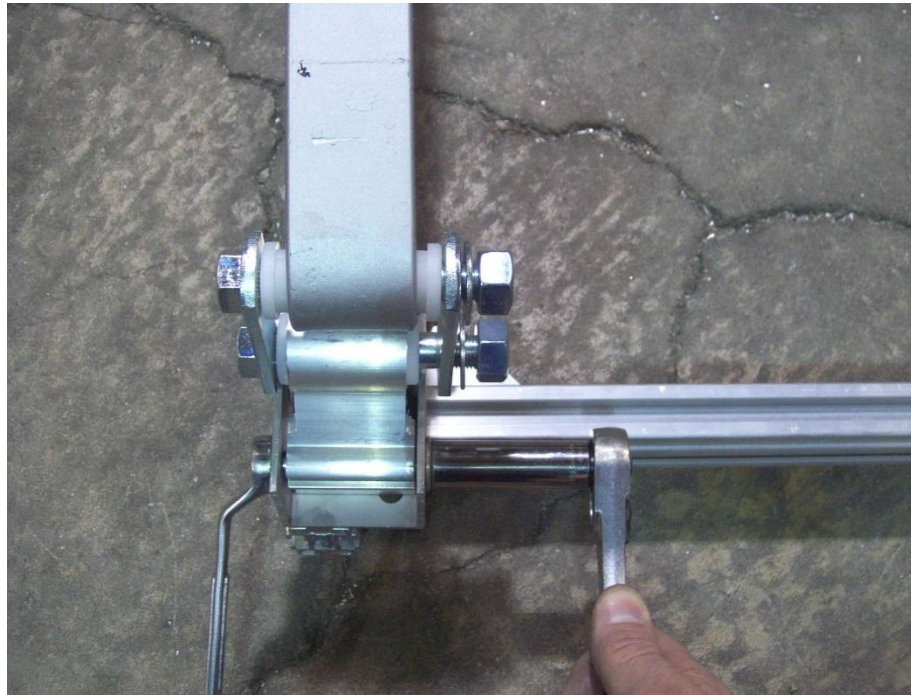
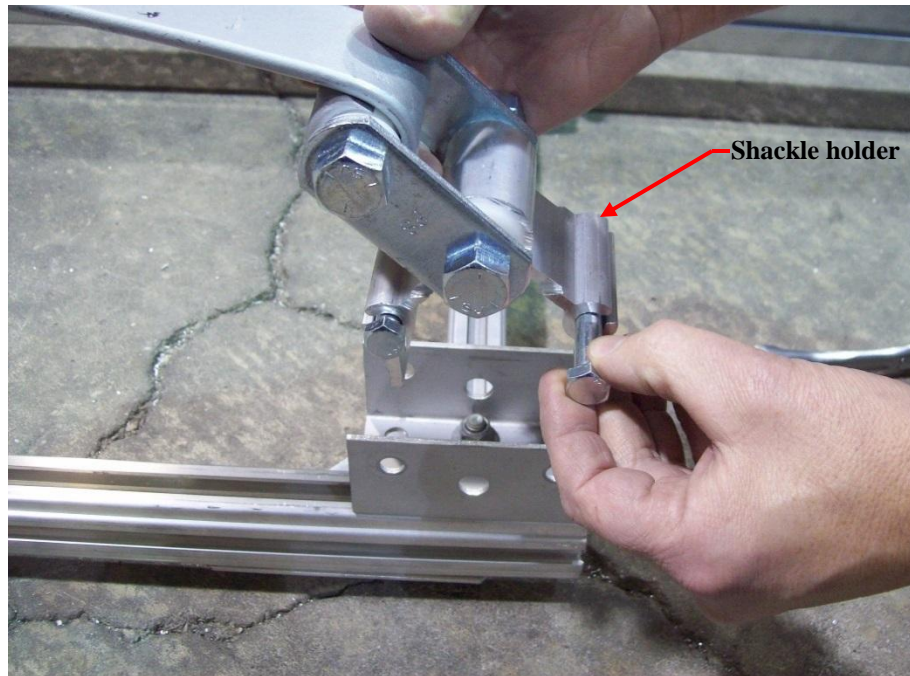


Install bushing into the front leaf spring and insert into the sub rail clip as shown.

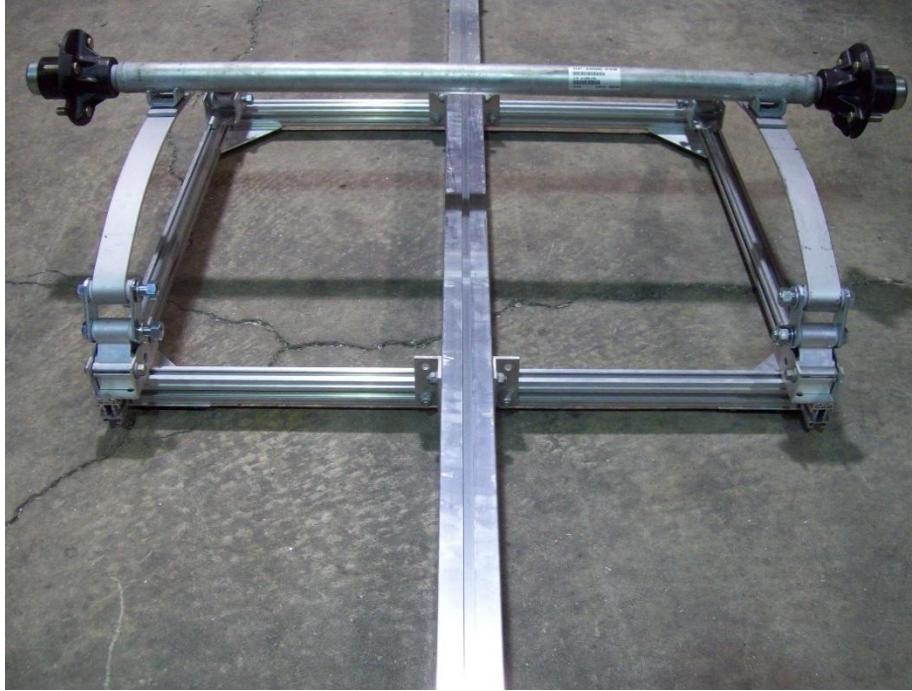


Reinstall nut and bolt, but leave loose for now.





Remove the two bolts from the shackle holder at the rear of the spring and install the shackle holder into the rear sub rail clip, with the nuts toward the inside of the trailer. These nuts can be tightened at this time.

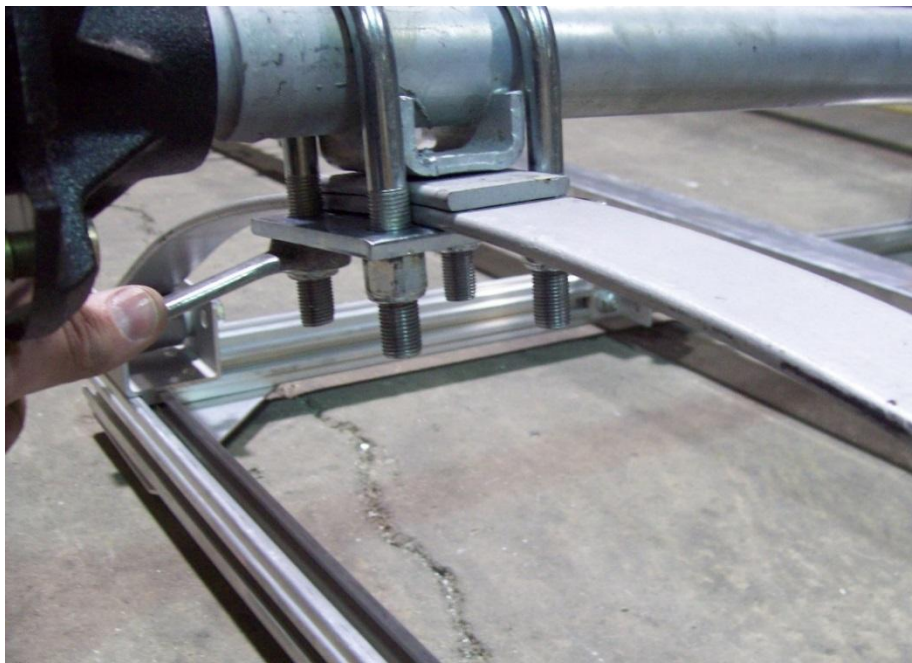
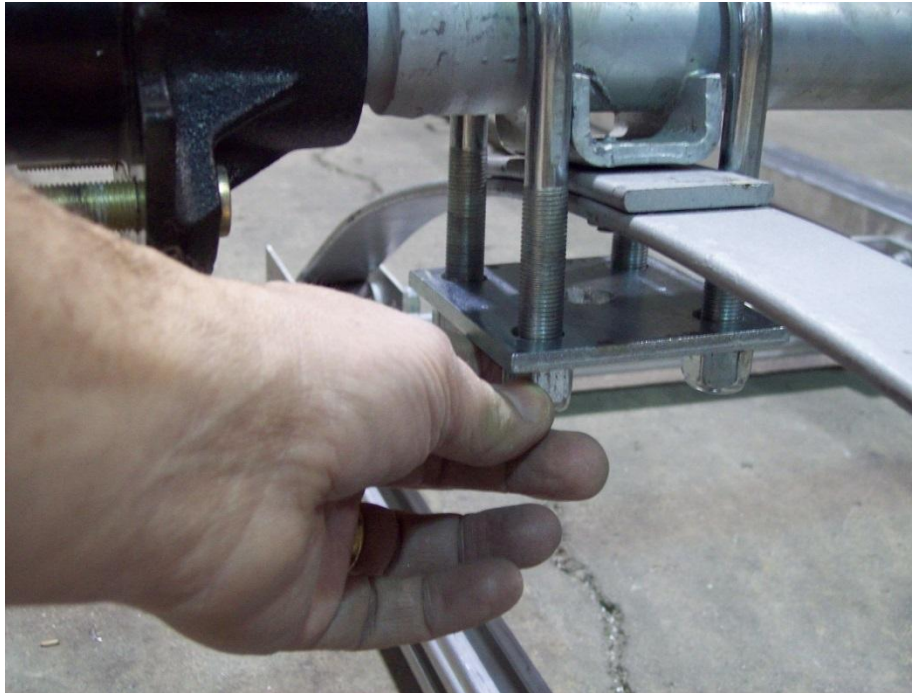


Locate the axle and install it on the springs as shown. Make sure the locating studs on the springs are in the holes on the axle's spring seat. Face the axle's serial plate toward the rear of the trailer to protect it from debris.

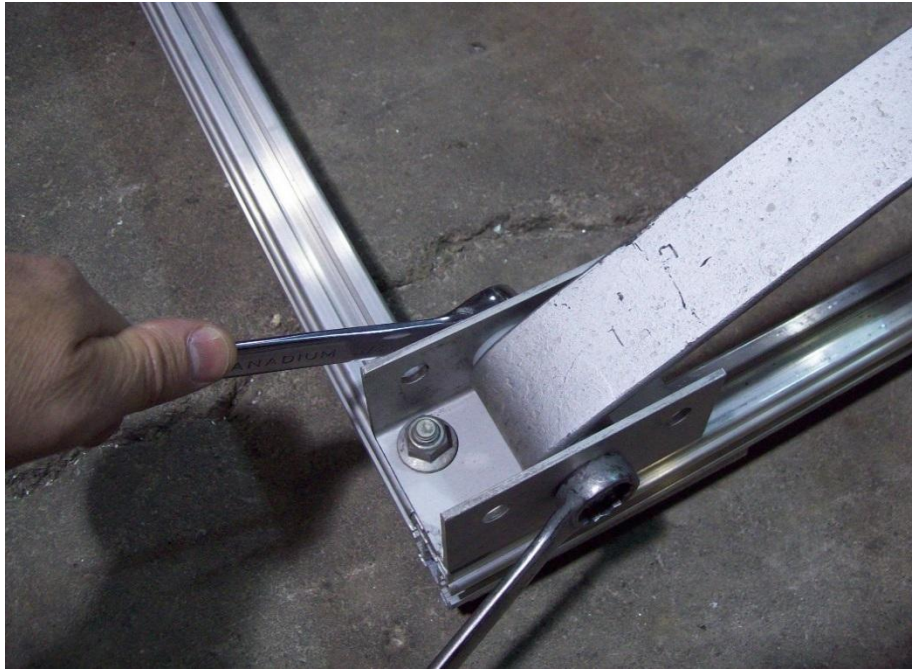


Locate the U-bolts, nuts and tie plates.

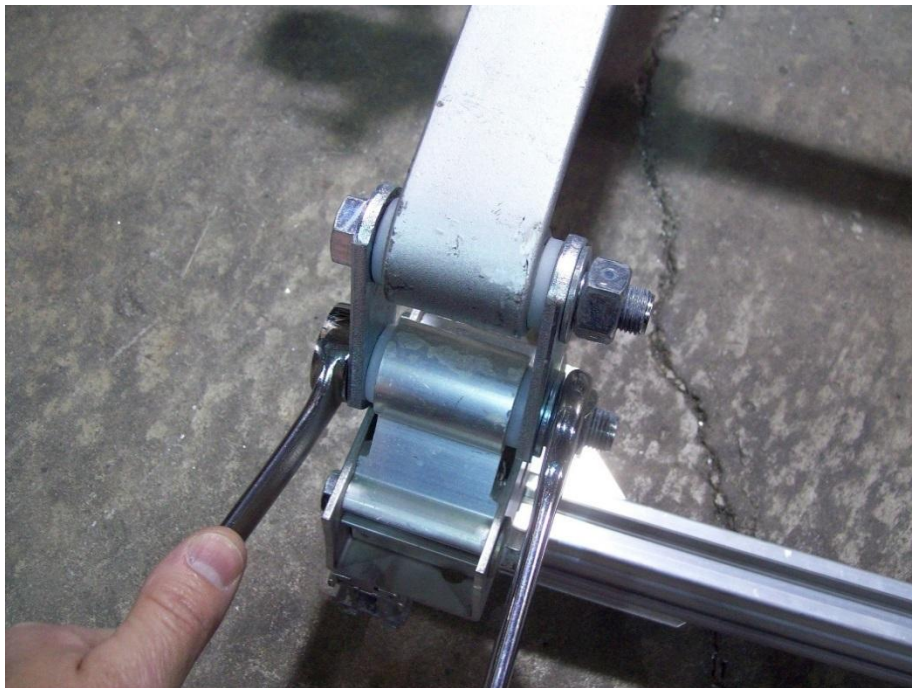




Install the U-bolts and tie plates and nuts. Tighten nuts evenly as shown.



Go back and tighten all the spring mounting nuts that were left loose previously.



On the rear shackle, do not over tighten as this will not allow the suspension to move properly.





Your trailer should look like this at this point.

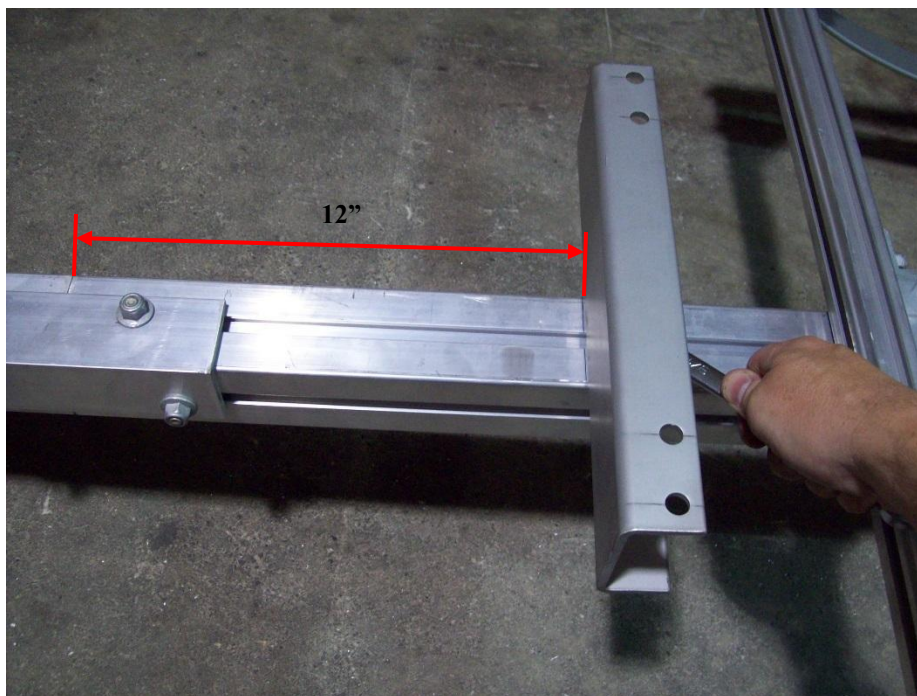
### **Guide rails and front cradle**



Locate the guide rails, channel brackets and the front cradle holder.



Install channel bracket over top of the T-bolt and slide it forward toward the pencil mark on the tongue.

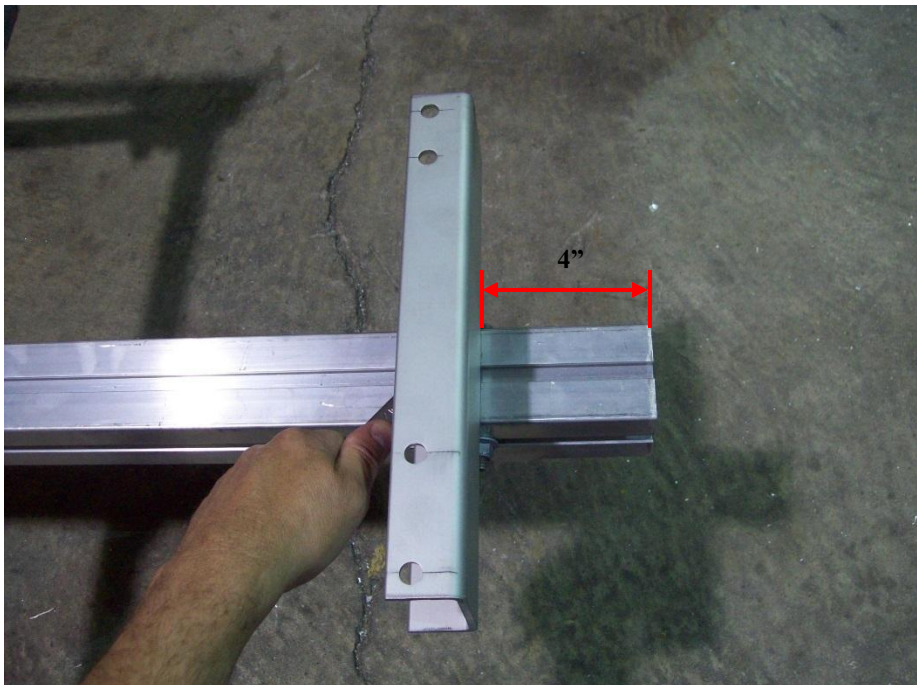


Align channel bracket with pencil mark on tongue section. Reinstall nut and make sure channel bracket is squared up before tighten. Pencil mark is 12" away from the front of the rear tongue section.

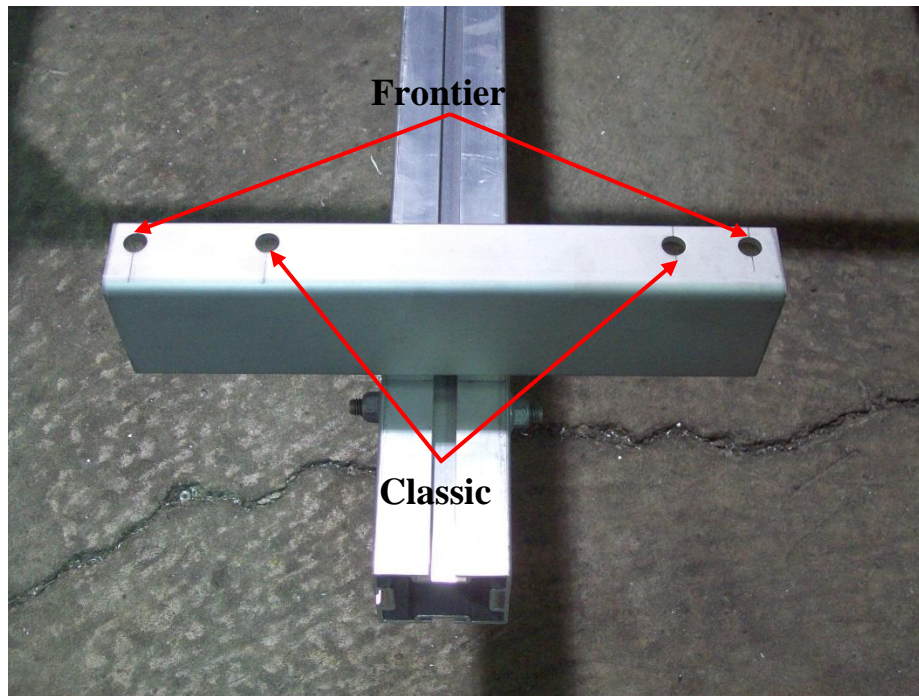




Insert the channel bracket into the rear tongue section and slide forward.



Align channel bracket with pencil mark on tongue section. Make sure channel bracket is squared up before tighten. Pencil mark is 4" away from the front of the rear tongue section.



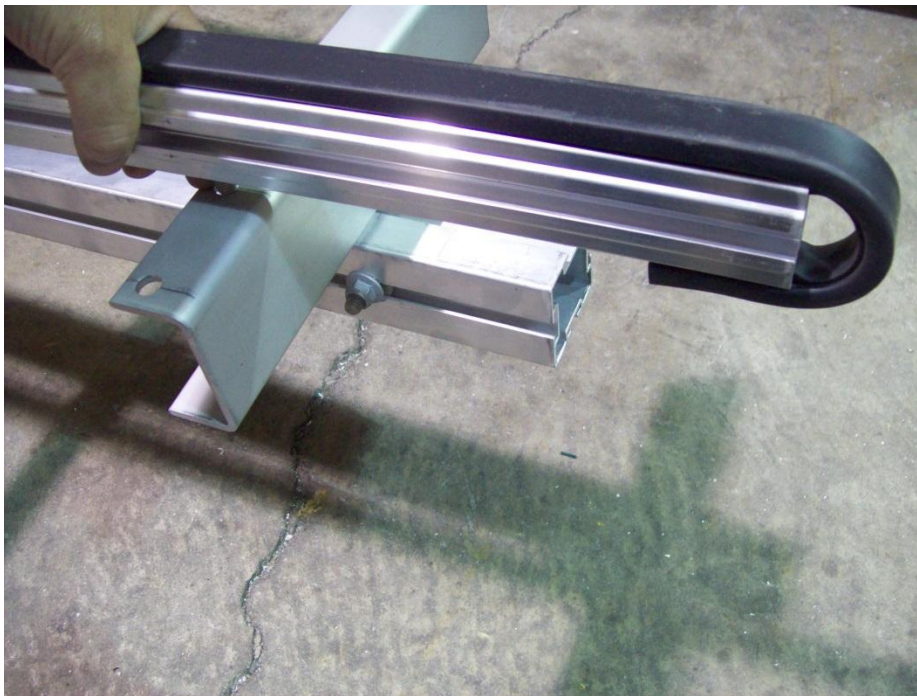
Depending on what boat you have will determine which holes to use on the channel brackets. The Frontier uses the two outer holes front and back. Classic uses the inner holes.



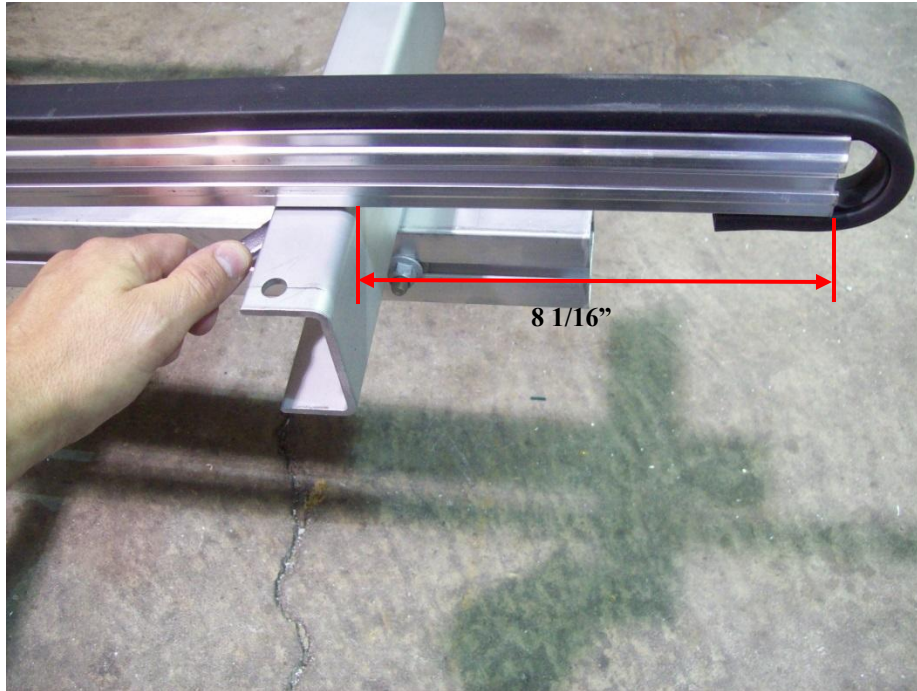
Remove the two nuts on the underside of the guide rail.



## Guide rail installation for the Classic

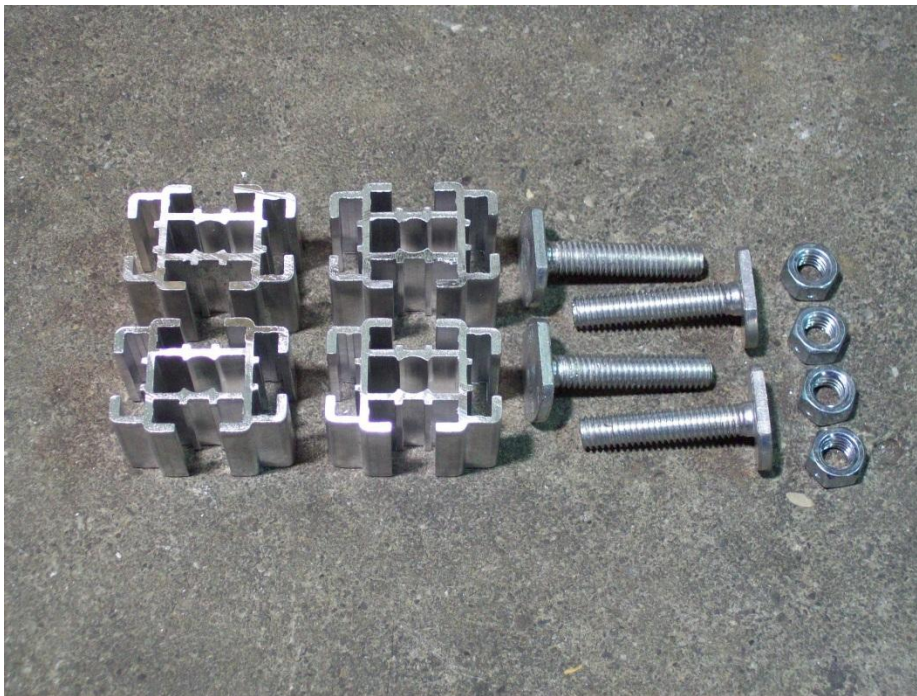


Insert the T-bolts from the guide rail into the inner hole on the front and rear channel brackets.



Position rear guide rail 8 1/16" away from the rear of the channel bracket. Once in rails are in place install nuts and tighten. Repeat the process for the other side.

### **Guide rail installation for the Frontier**



Locate the hardware bag with the 4) spacers, 4) 1 3/4" T-bolts and 4nuts.



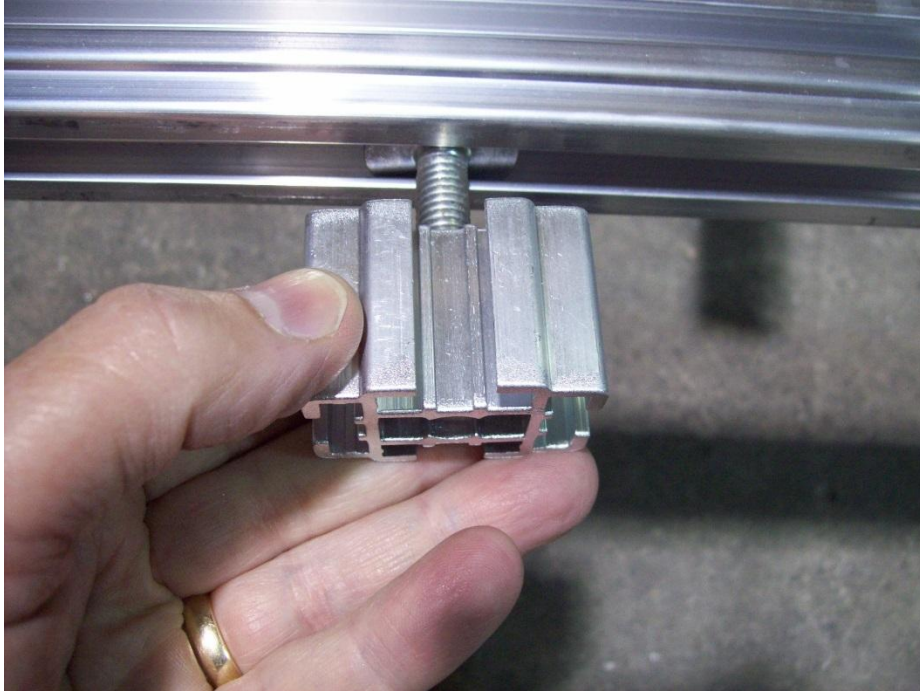


Remove the screw from the vinyl on the underside of the guide rail. Pull the rubber out of rail and remove both T-bolts. Repeat this process for the other rail.



Insert two 1  $\frac{3}{4}$ " T-bolts into the rails then reinstall rubber and screw.





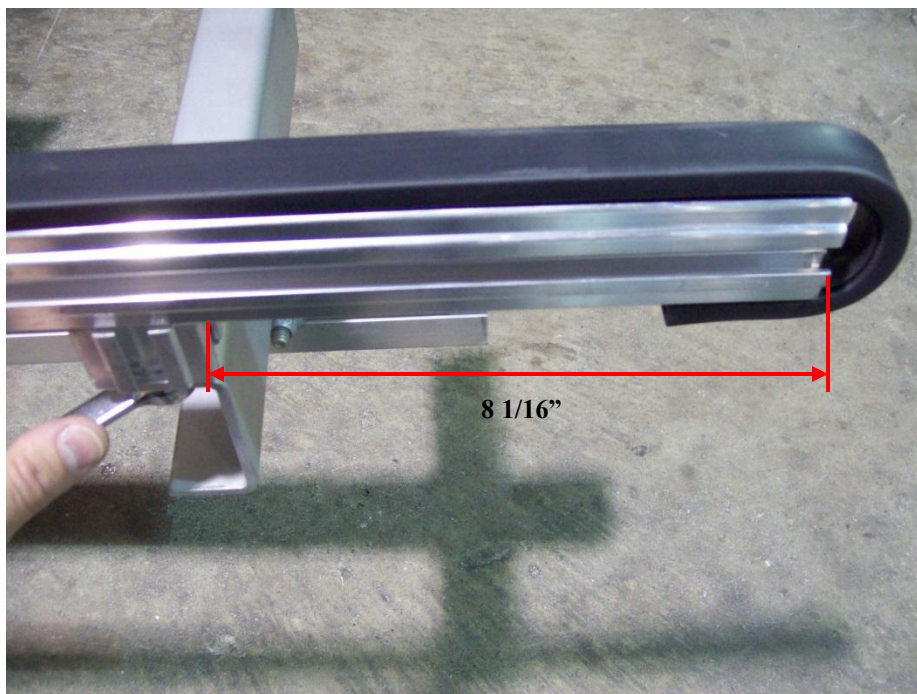
Insert T-bolt into spacer as shown.



Align T-bolt and spacer with outer hole on the front channel bracket.

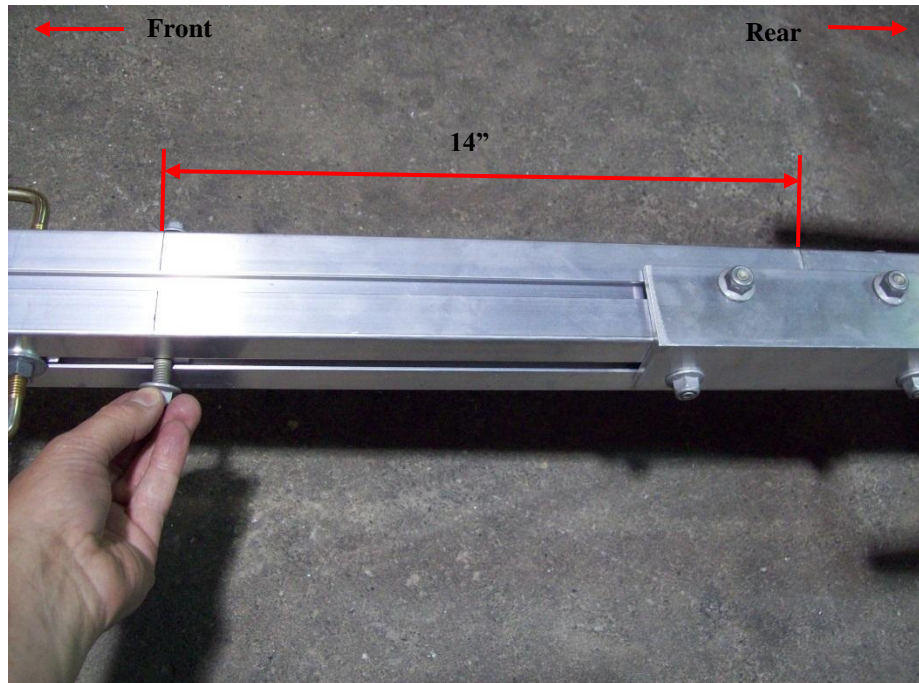


Do the same process for the rear channel bracket.

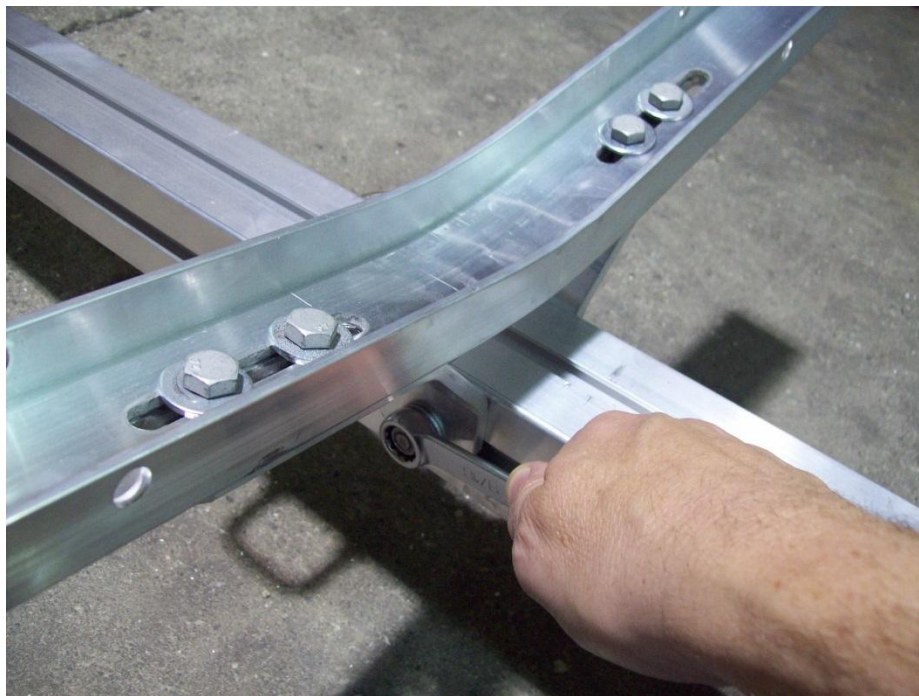


Position rear guide rail  $8 \frac{1}{16}$ " away from the rear of the channel bracket. Once in rails are in place install nuts and tighten. Repeat the process for the other side.

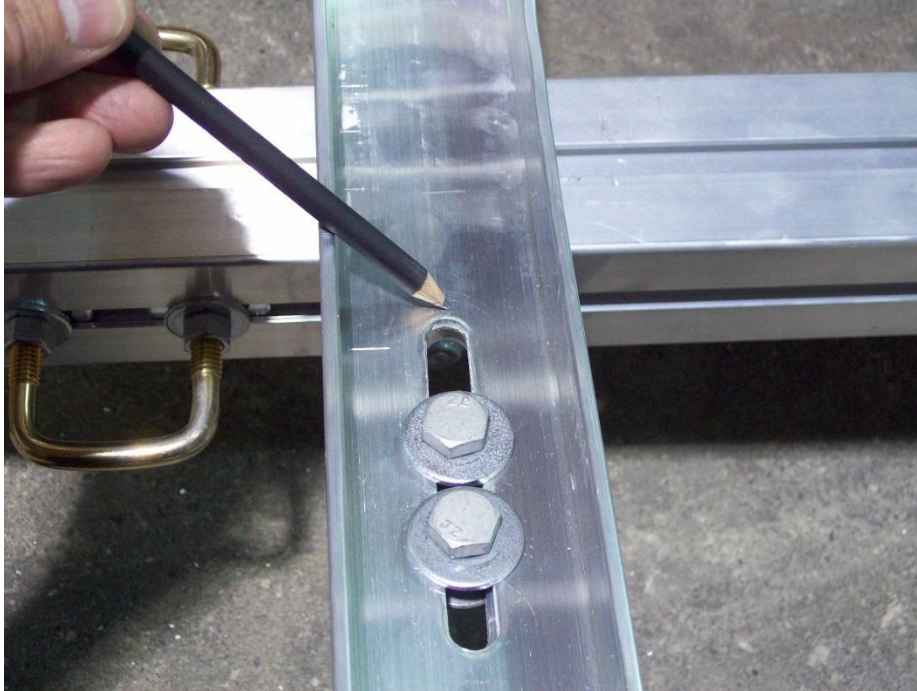




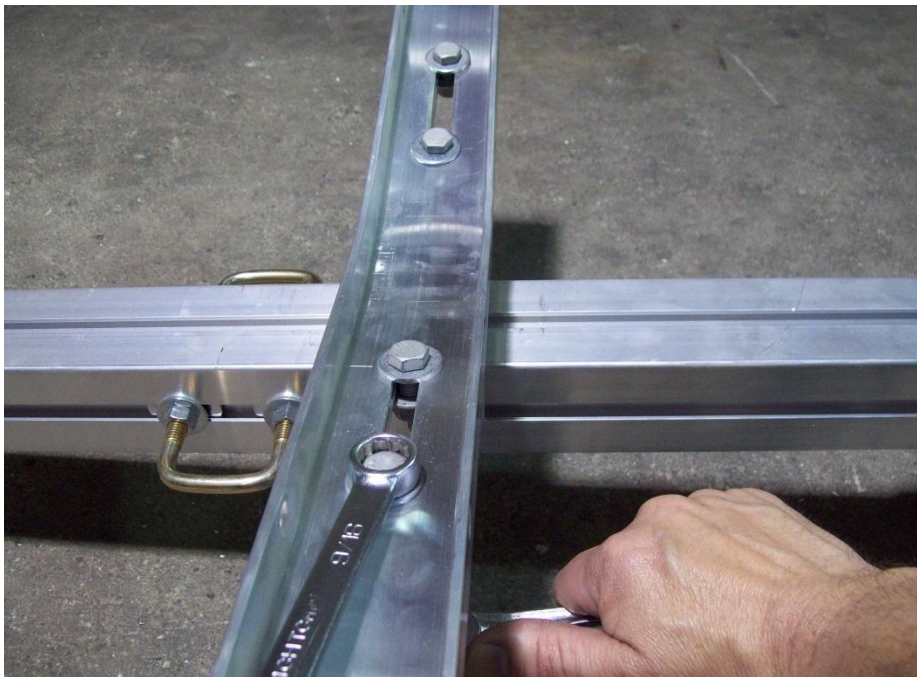
On the front tongue section slide the T-bolts to the pencil mark on top of the tongue. Pencil mark is 14" away from the rear of the front tongue section.



Attach the front cradle holder assembly at the pencil marks located 14" from the rear of the front tongue section. Tighten the nuts making sure the cradle holder brackets are perpendicular to the tongue.



Make sure the slots in the cradle holder line up with the slots in the holder bracket.



Slide the bolts out to the ends of the slots and tighten the nuts.





Install the paddle cradle and tighten nuts. Repeat process for the other side. Final adjustments will be made with boat on the trailer.

## Wiring and lights

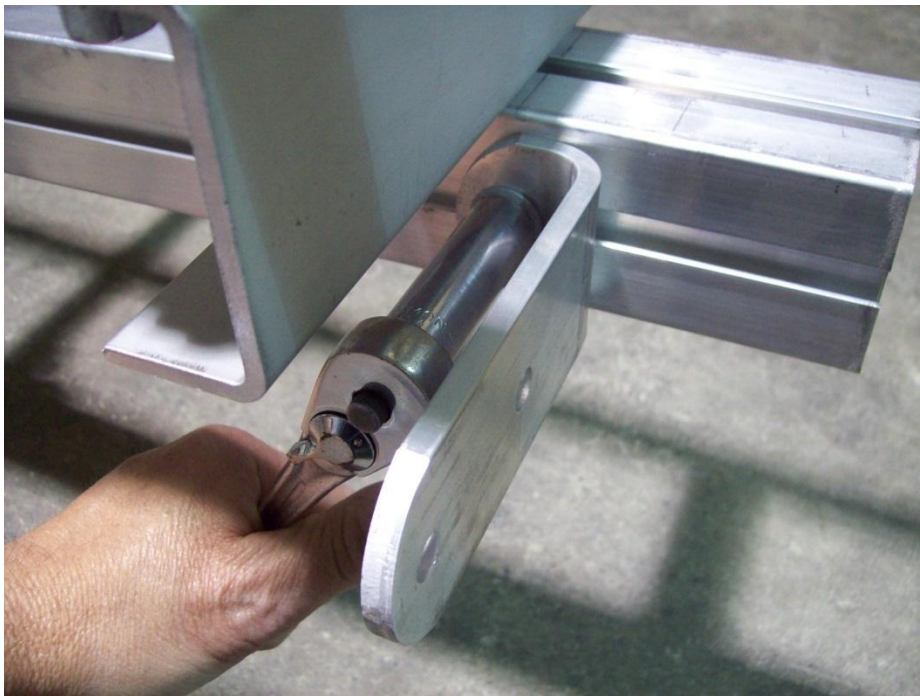
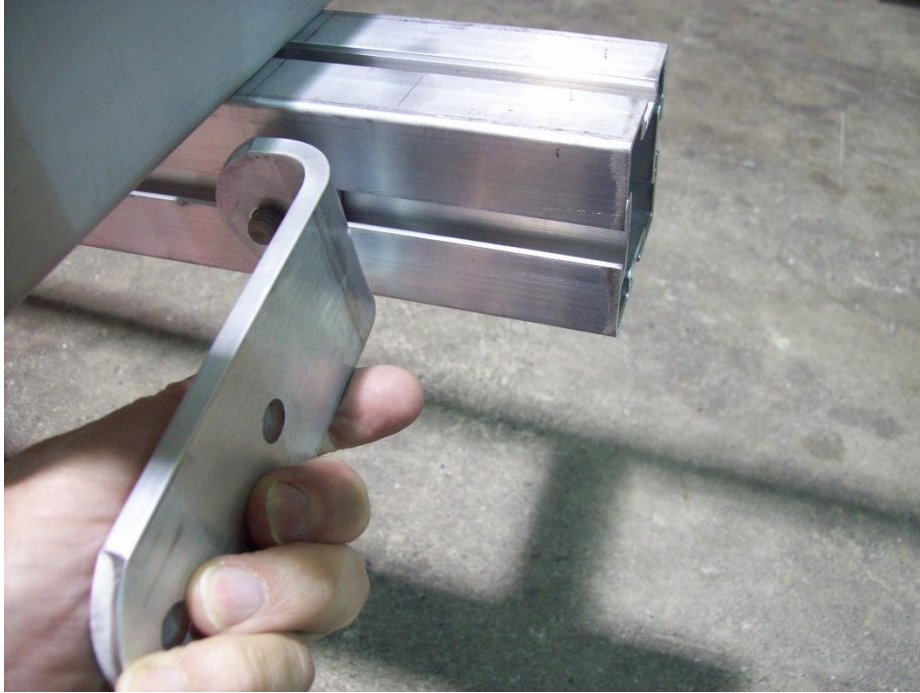


Locate the taillights, license plate bracket, 4) carriage bolts, 4) nuts and 2) taillight brackets.

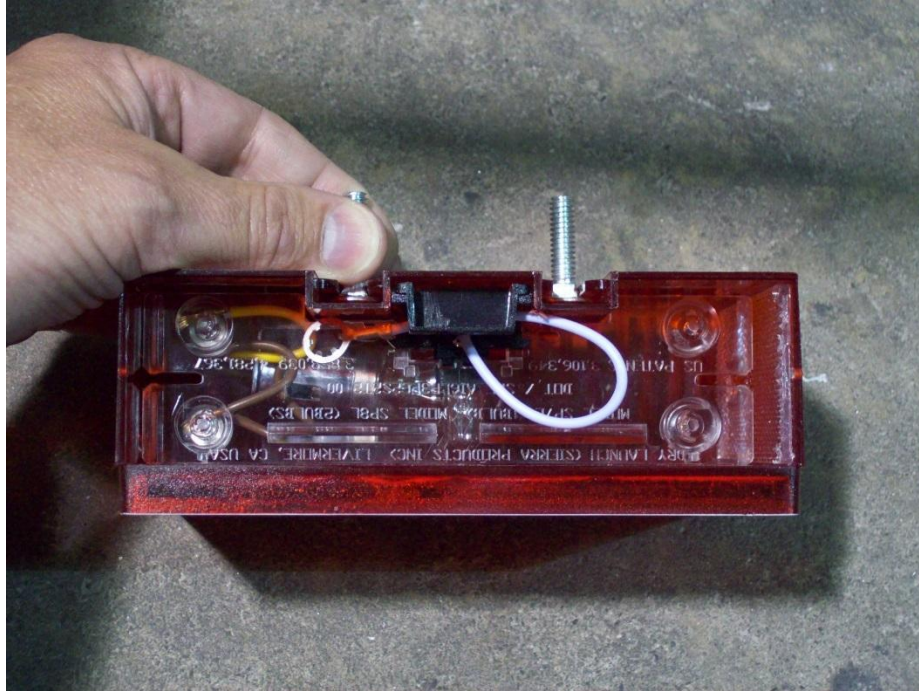


At the rear of the tongue section position the T-bolts on both sides 4" away from the rear tongue.





Install taillight bracket on T-bolt then install nut and tighten.

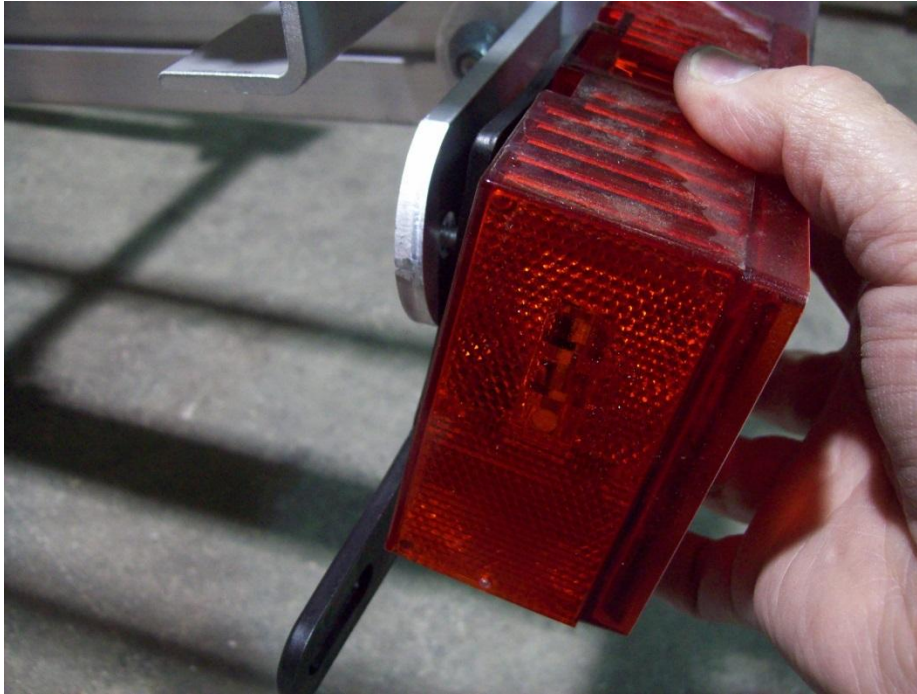


The light with the yellow wires is for the left (drive's side) of the trailer. Slide the carriage bolts into the slots in the back of the taillights.

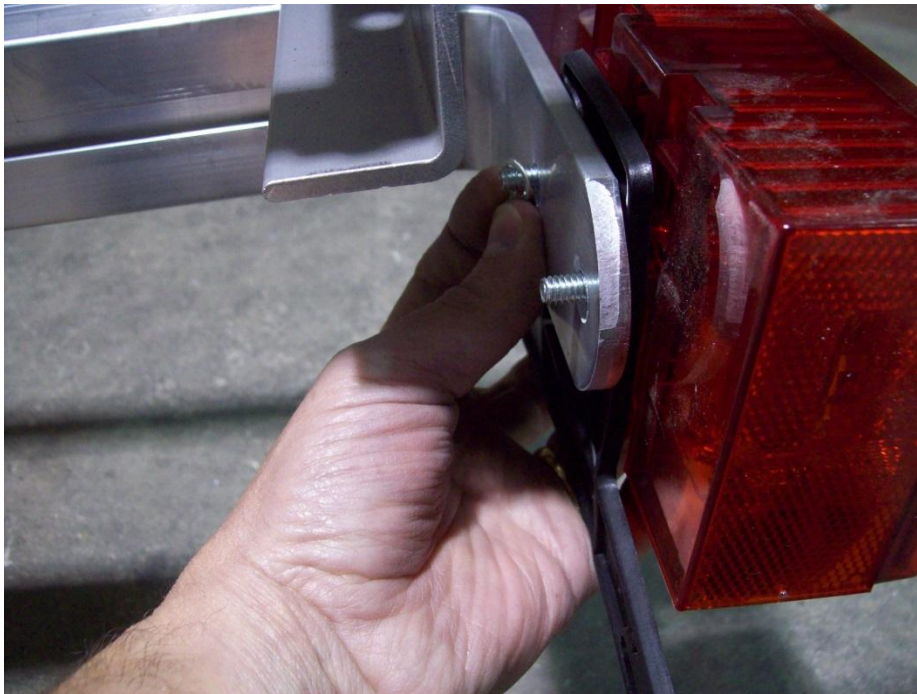


Install the license plate bracket onto the left taillight as shown.

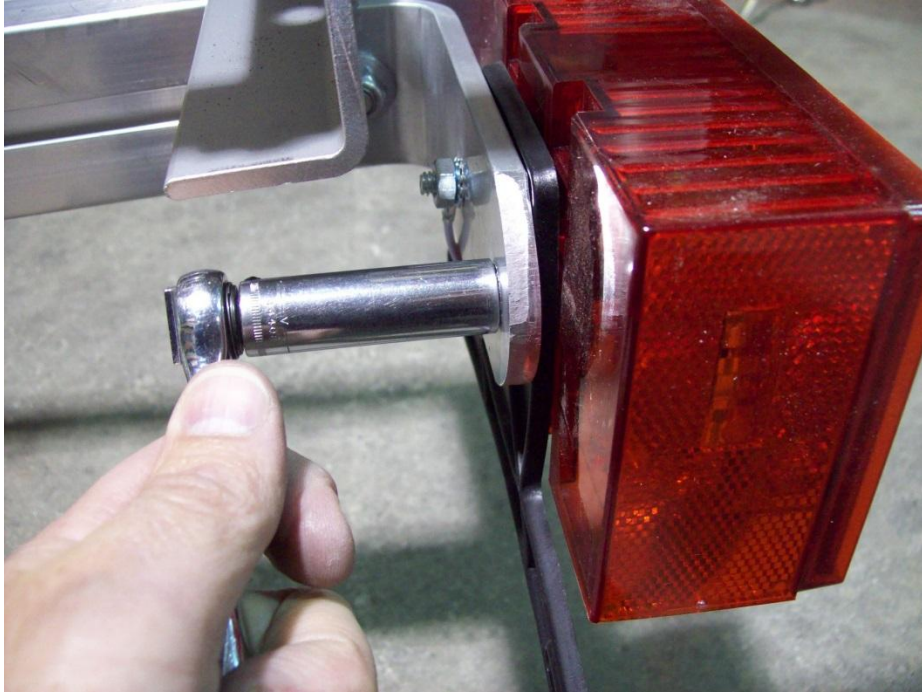




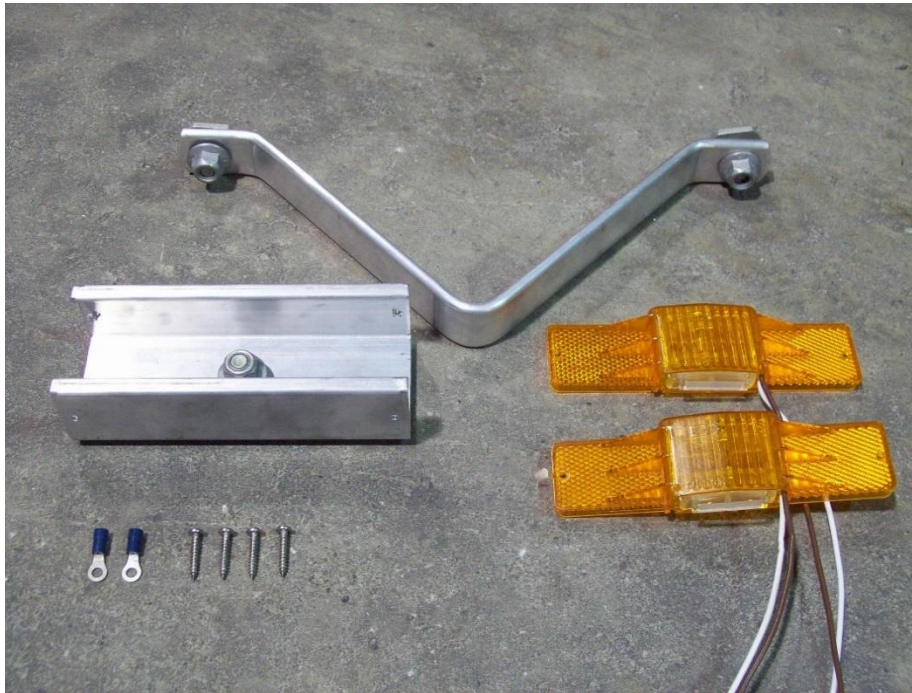
Install the license plate bracket and left tail light onto the tail light bracket.



Install the white ground wire from the tail light onto the carriage bolt.



Install nuts and tighten. Repeat this process for the right side tail light.

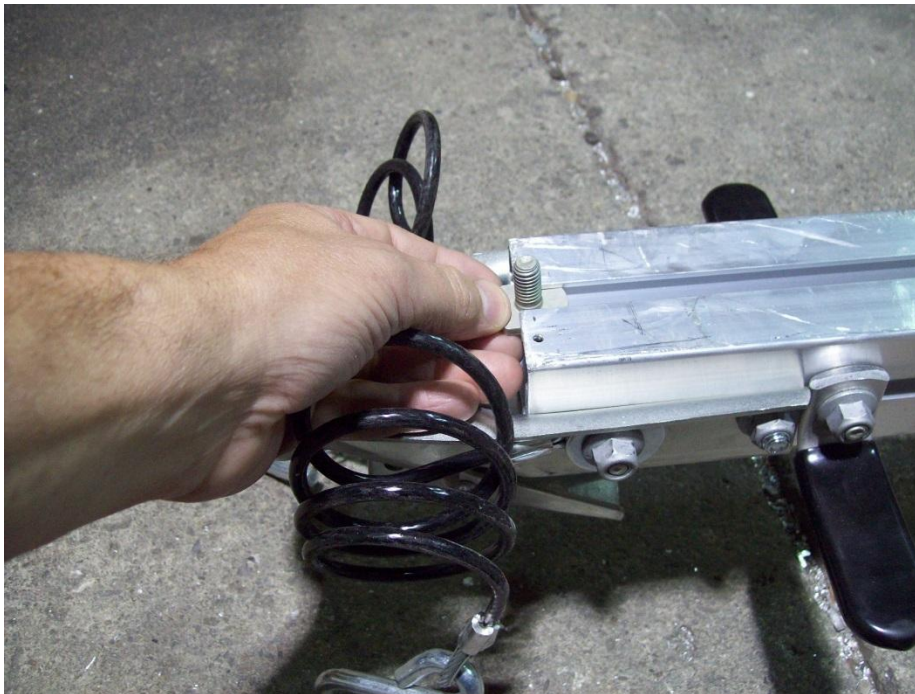


Locate the skid, running light bracket holder, 2) amber running lights, 4) small Philips screws and 2) ring terminals.



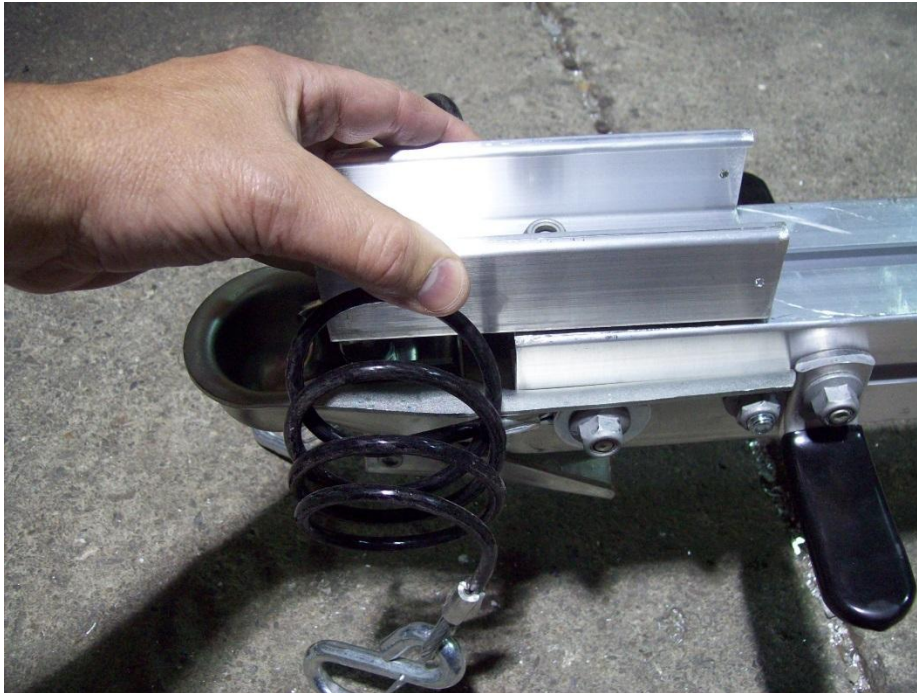


Remove one T-bolt from the skid as shown.

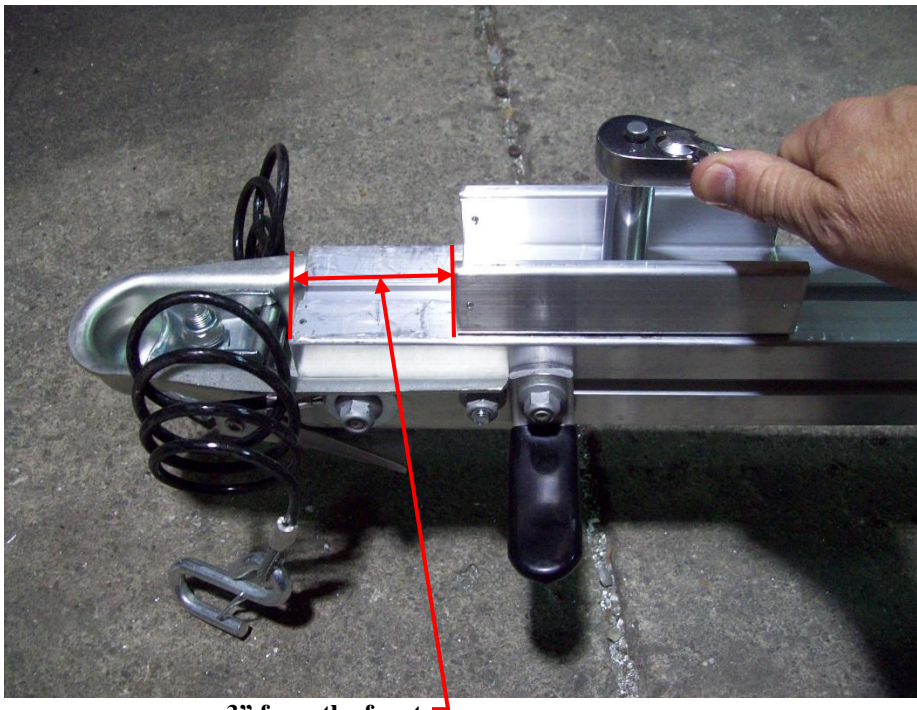


**Trailer shown upside down**

Insert the T-bolt into the slot at the front of the tongue section and slide out of the way. This will be used later to install the skid.



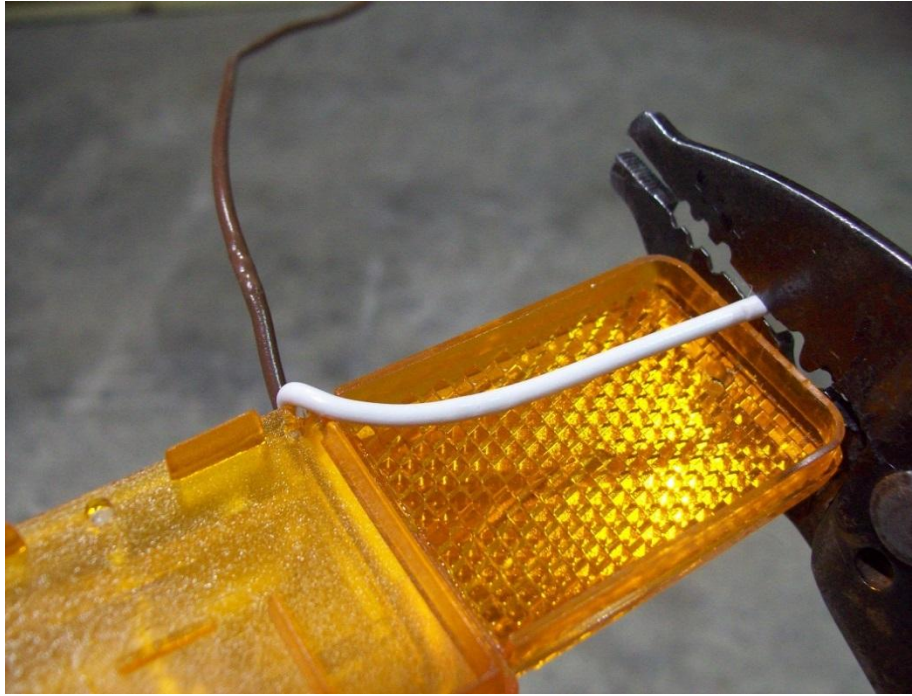
Slide the running light bracket into the slot in the front tongue section.



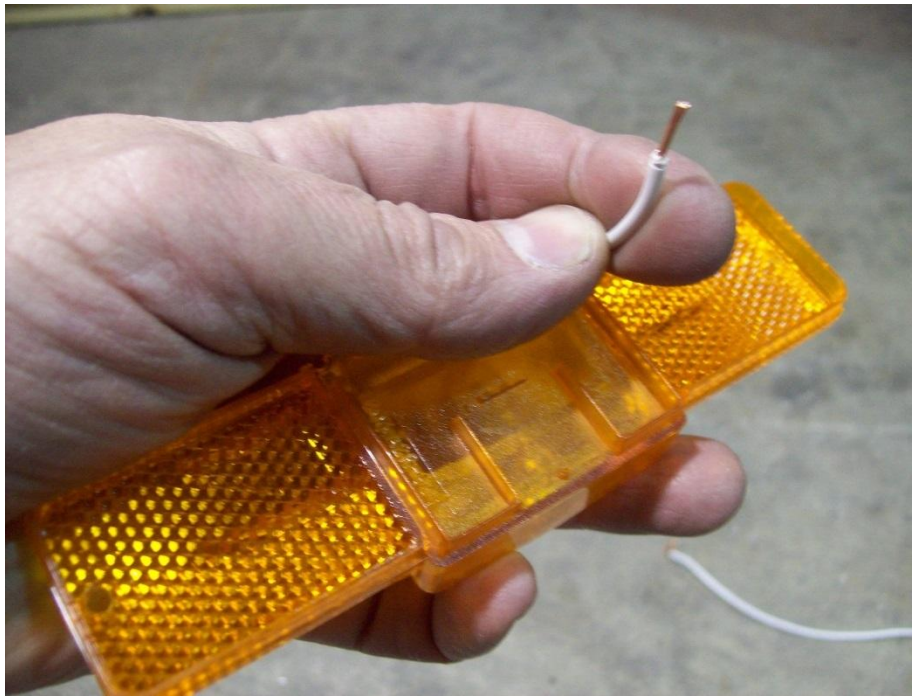
3" from the front

Position the running light bracket about 3" from the front of the tongue section and tighten the nut.

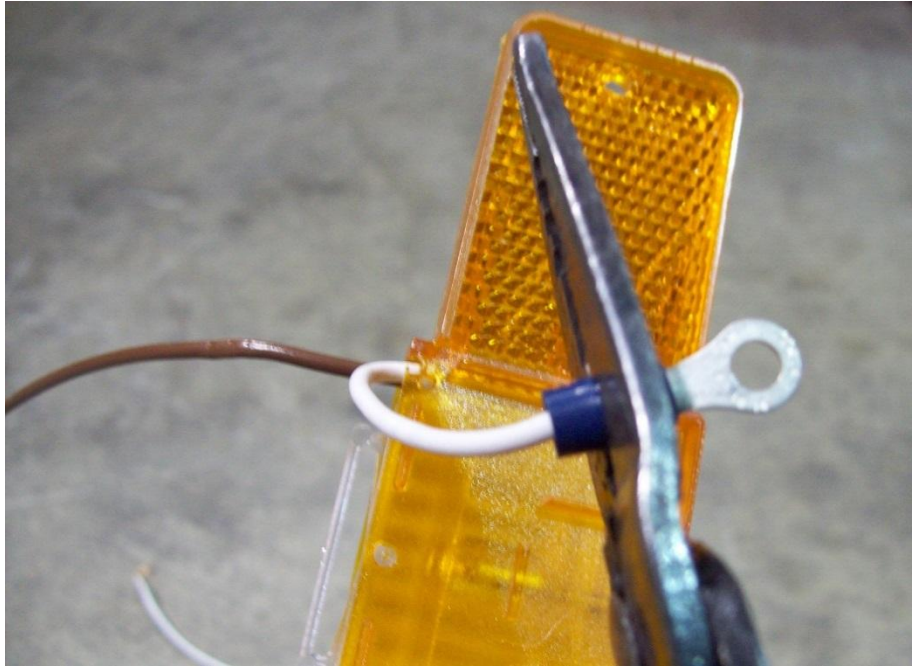




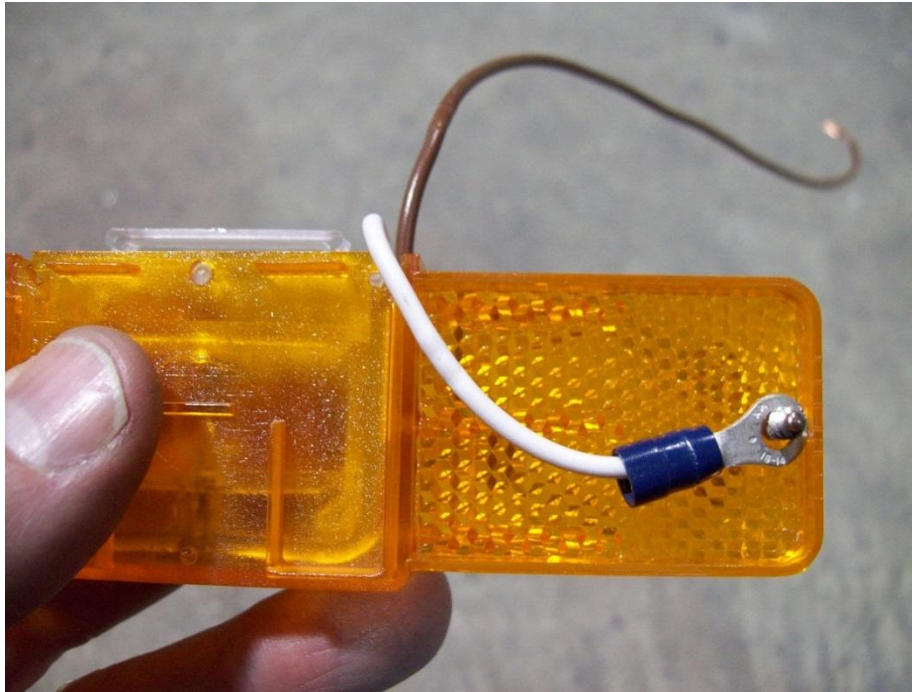
Cut approximately 8 ½" off of the white wires on both running lights.



Strip ¼" of insulation from the wire.

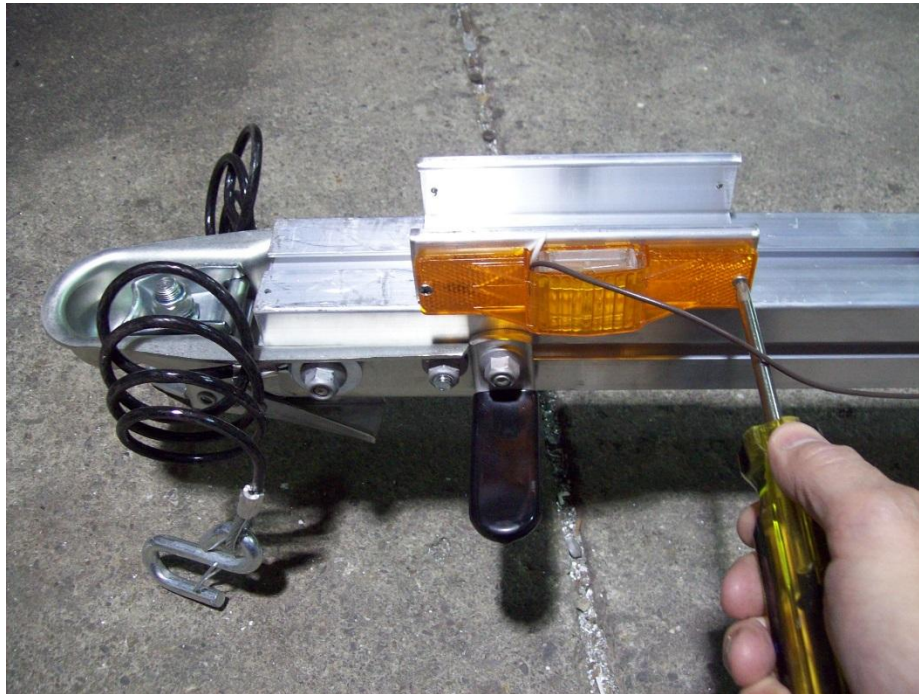


Install the ring terminals by crimping the terminal onto the bare wire.

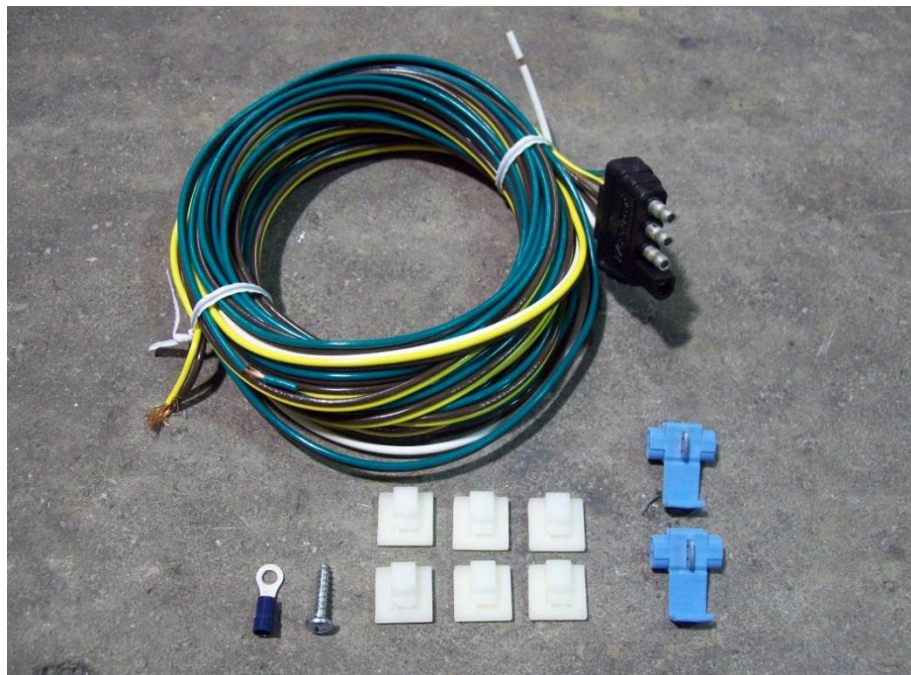


Align the ring terminals with the screw hole nearest the wire on the back of the running lights. Make sure the wire is routed through the gap on the back of the light so it does not become pinched when the light is installed.

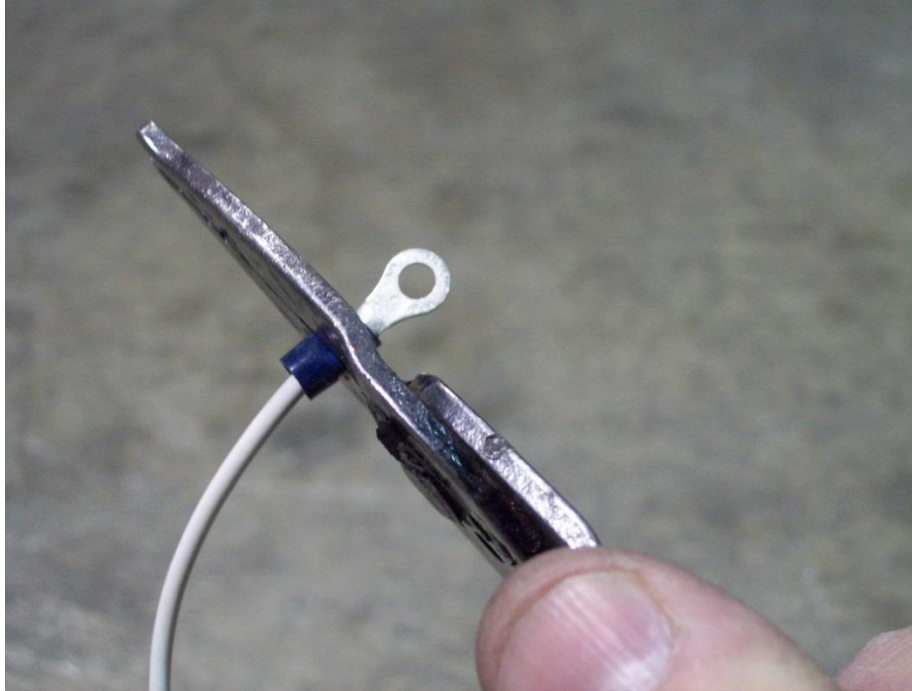




Install the running lights into the pre-drilled holes in the running light bracket using a Philips screwdriver. Be sure the screw is through the ring terminal on the back side of the lights. This will supply a ground to the lights.



Locate the wire harness, ring terminal, Philips screw, adhesive backed clamps, and two blue connectors.

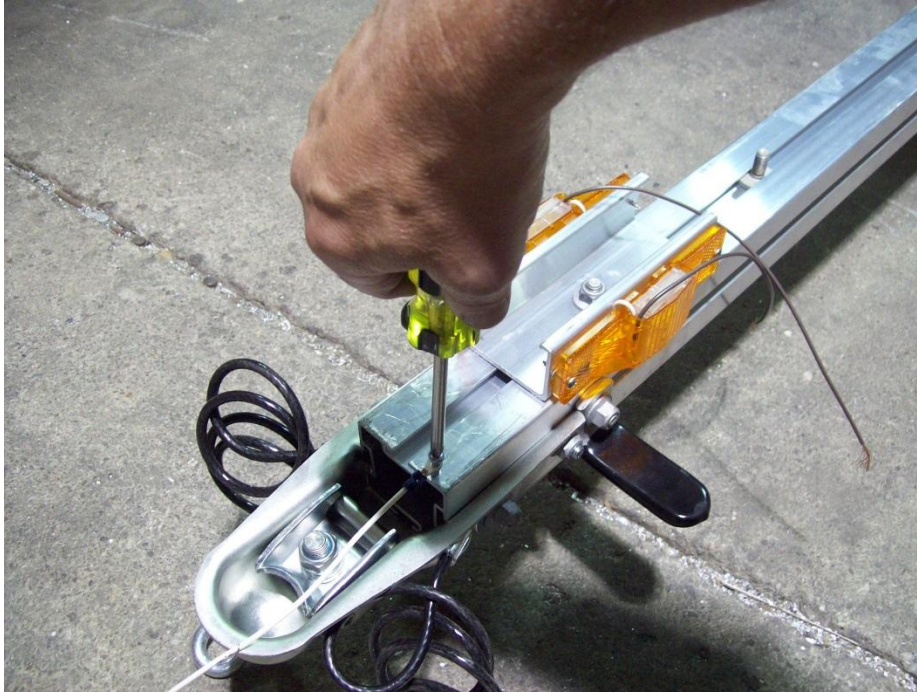


Take the white wire from the harness and strip a ¼” of the insulation from the wire. Install ring terminal by crimping it onto the bare wire.



Locate the ¾” long Philips screw.



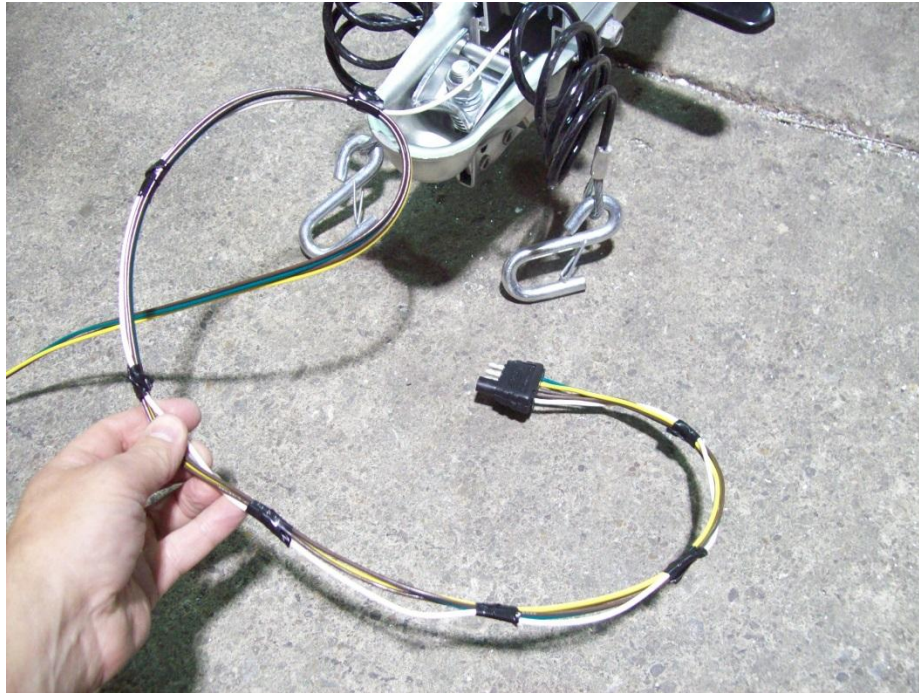


Install Philips screw through the ground wire into the pre-drilled hole located under the tongue just behind the coupler.

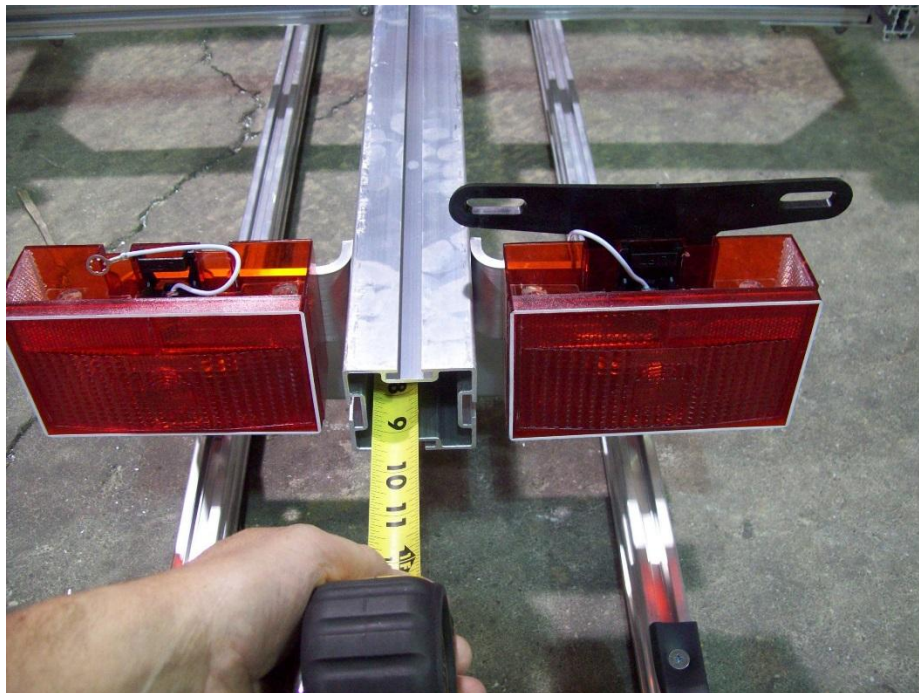


Start taping harness just past the four way connector with electrical tape and work your way down the ground wire to the tongue of the trailer. Usually space the tape about a hands length apart.



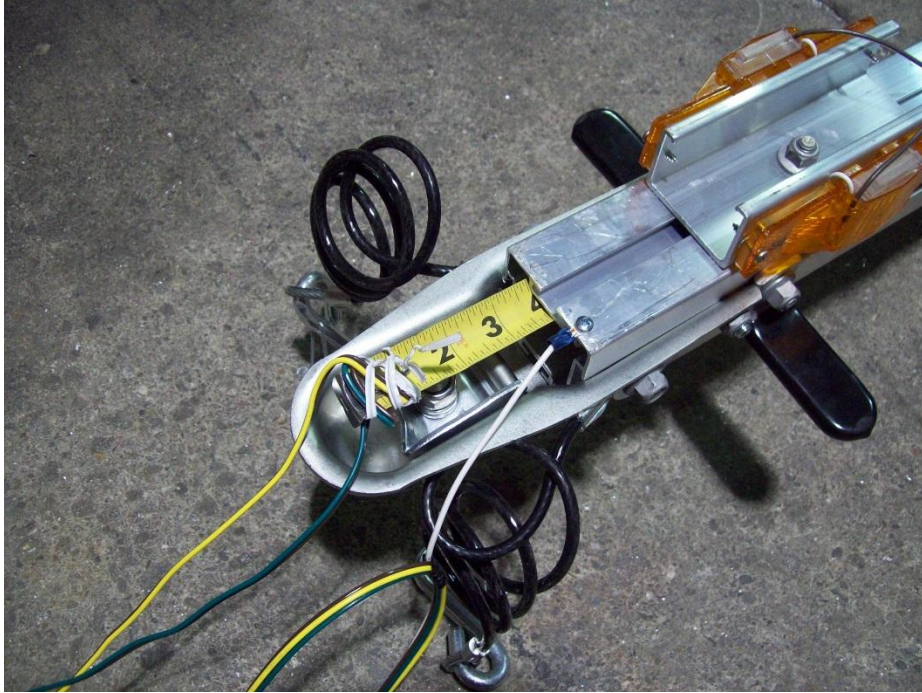


Your wiring harness should look like this when finished.

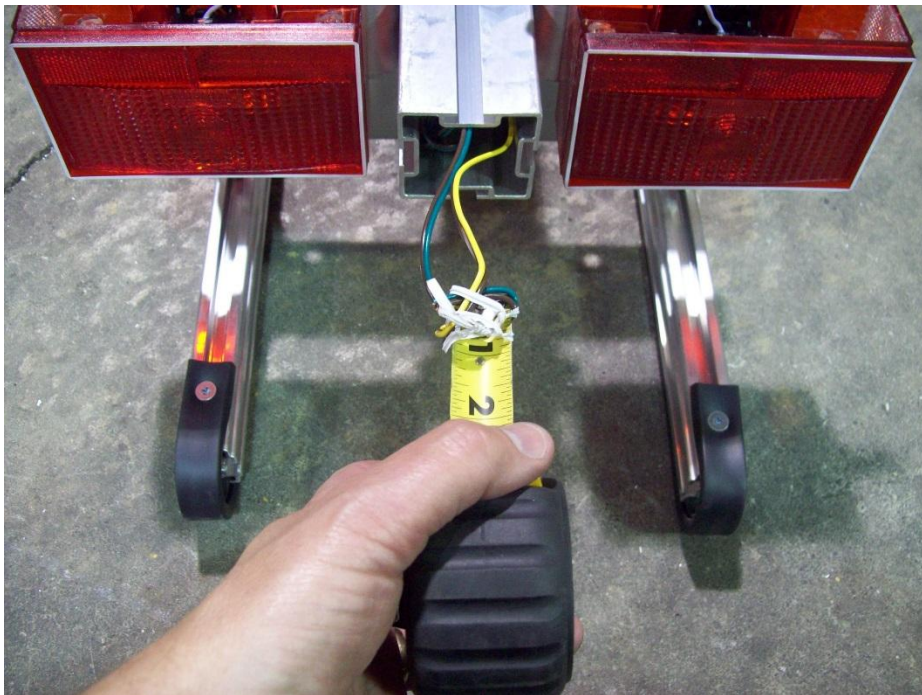


Extend a tape measure inside the tongue from the rear of the trailer until it protrudes at the front of the trailer under the coupler.





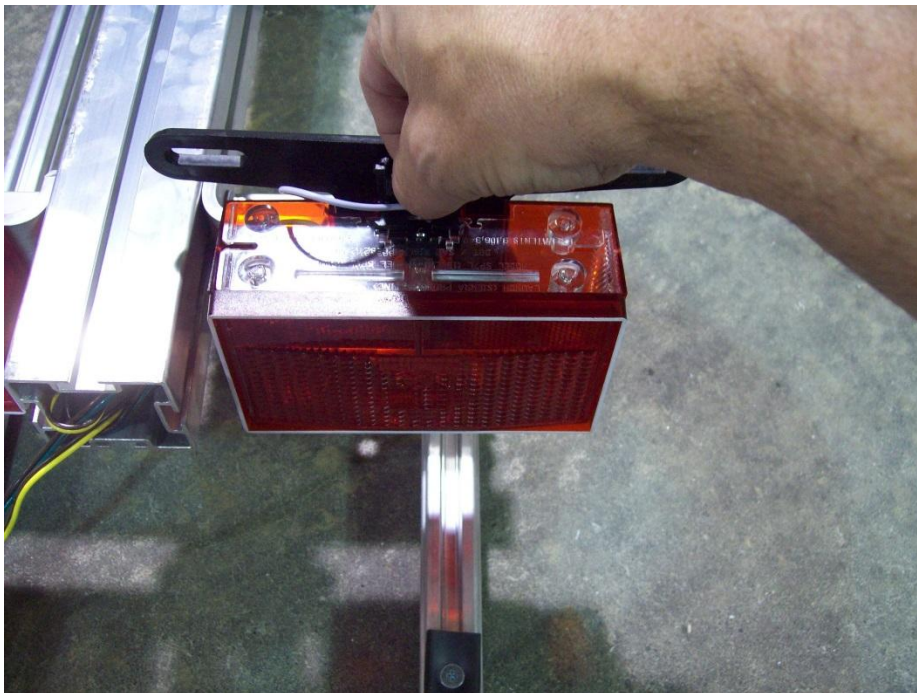
Attach both wires of the harness to the end of the tape measure with either tape or a tie.



Retract the tape measure until it comes out the back of the tongue with both wires attached.

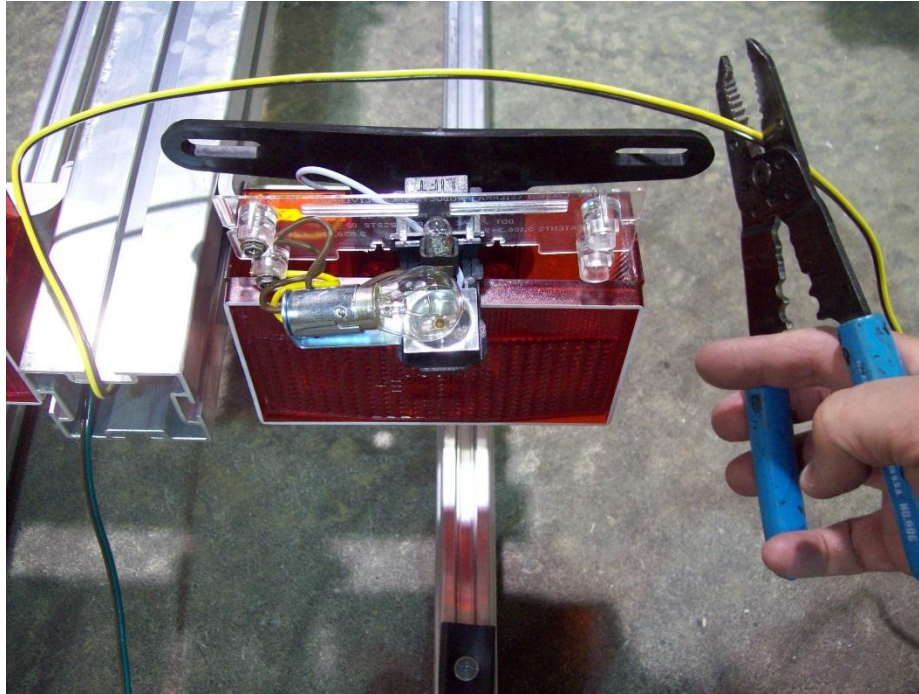


Locate the black tab at the bottom of the tail light.

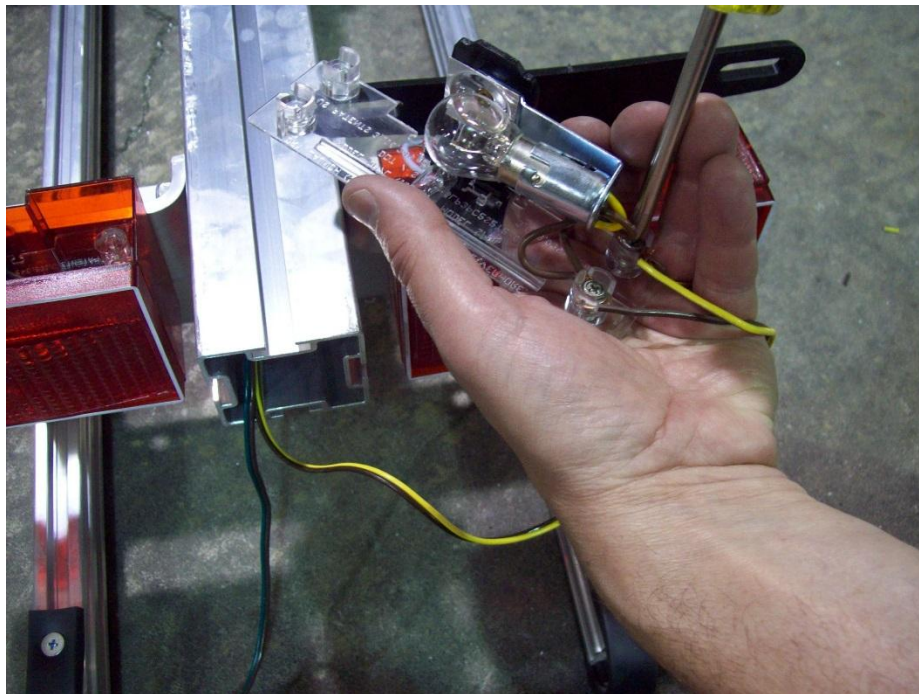


Move the tab toward the rear of the trailer and pull up, releasing the bulb assembly from the light housing.





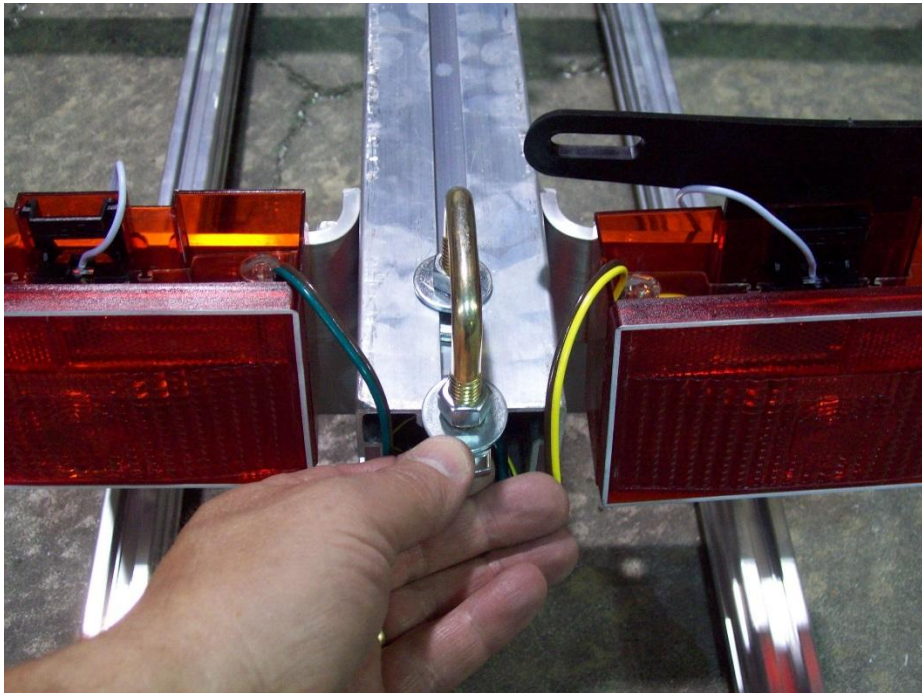
Trim off excess wire, leaving some for adjustment. Strip about a ½" of casing from the harness.



Loosen the retaining screws and install the color matching wires from the harness onto corresponding retaining screws. Tighten screws.

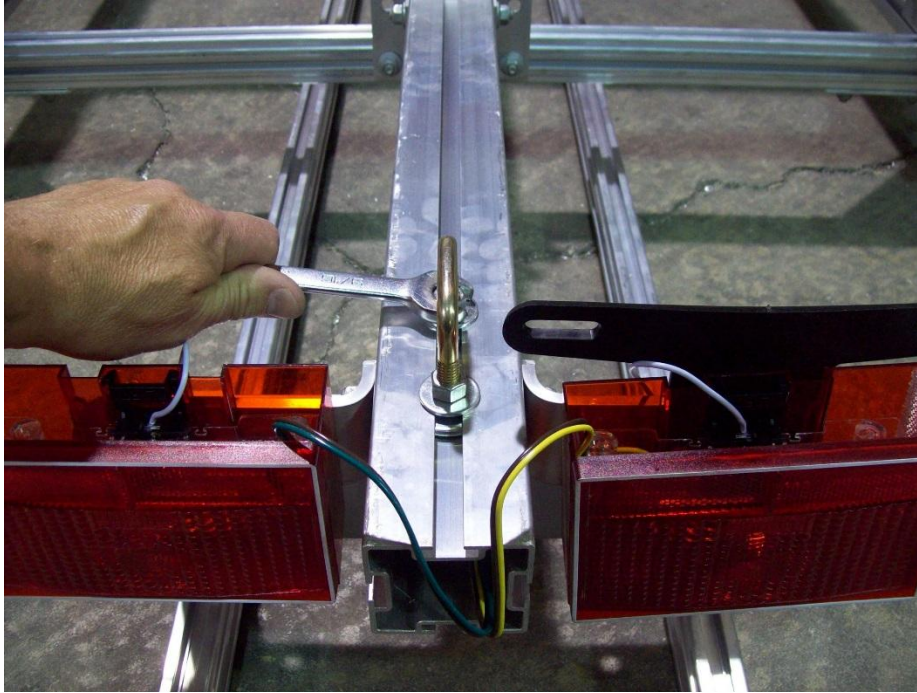


Locate one web strap clip.

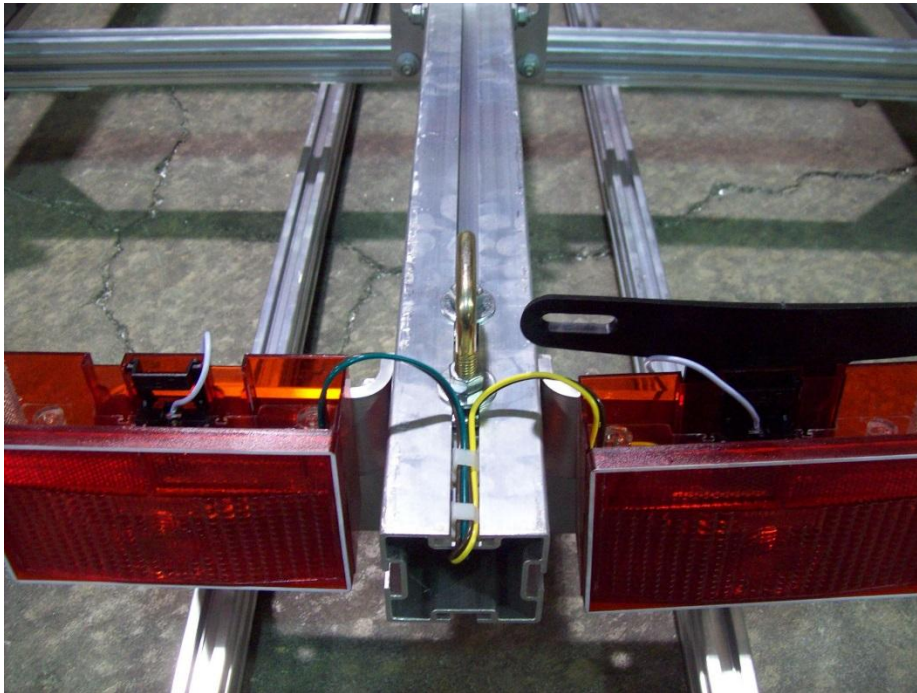


Install web strap into the rear of the tongue section and slide forward.

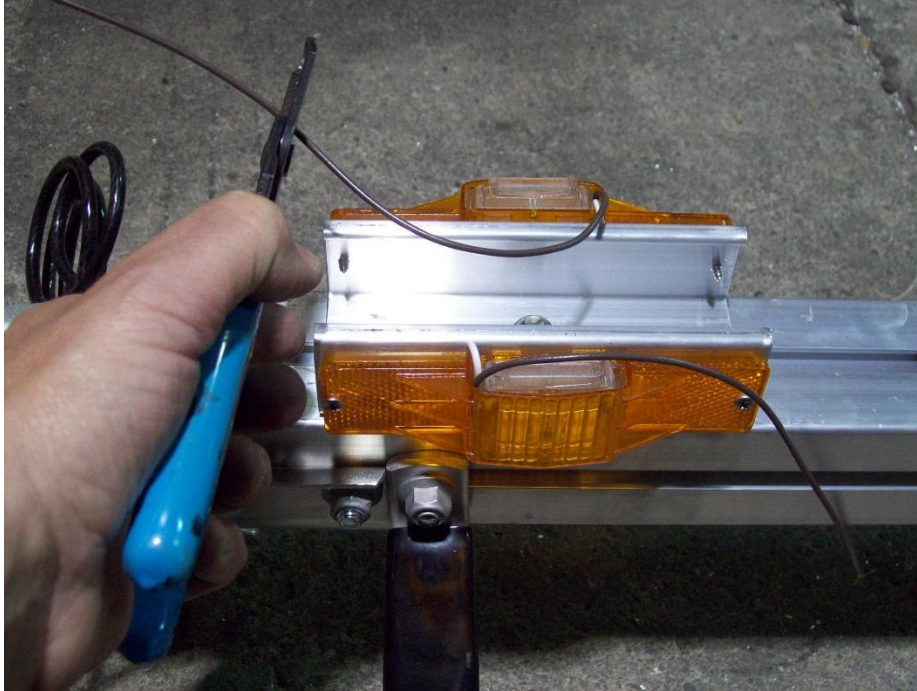




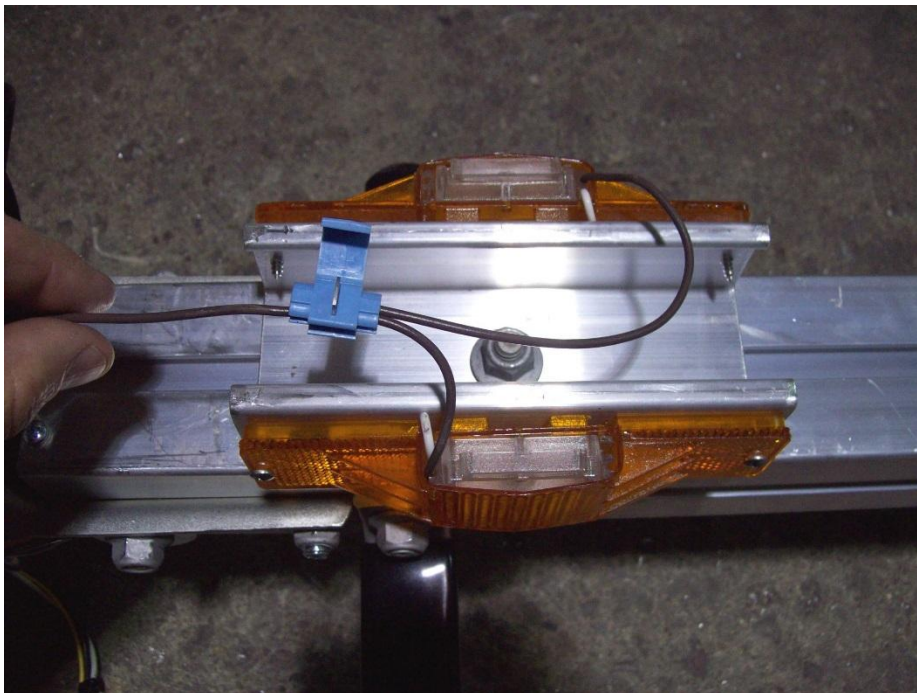
Position it in about 3" and tighten nuts.



Reinstall the bulb assembly into the light housing making sure to route the wires through the slot in the base of the bulb assembly. Install adhesive backed clamps in the locations shown and route the wires through them.



Cut about 2" off the brown wire on the left (driver's side) running light. Do not strip the wire.

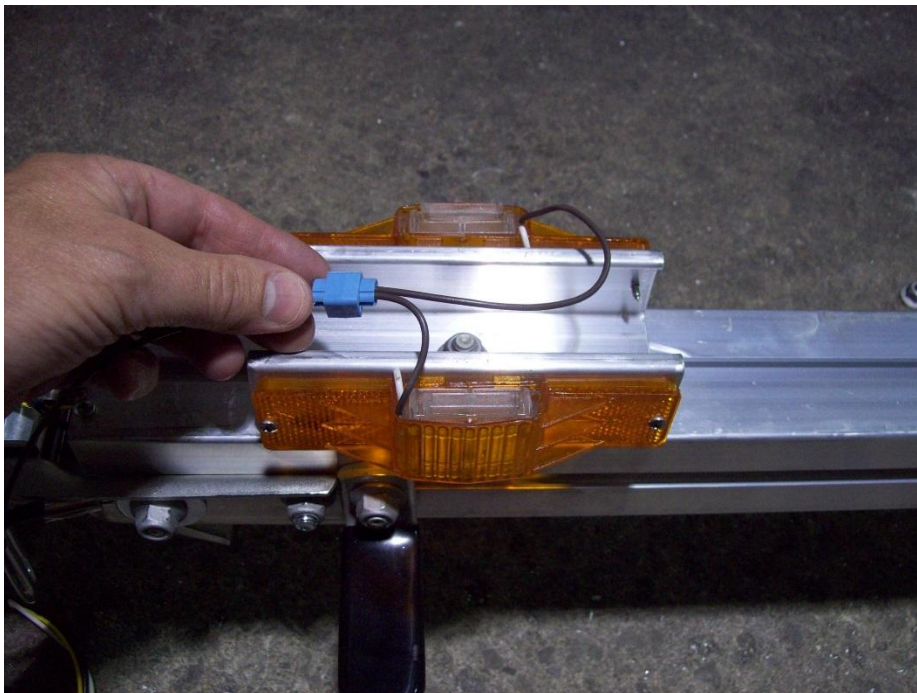


At a point close to the running lights, insert the brown wire that has been cut, into the hole in the blue connector closest to the hinge. This hole does not pass all the way through. The wire should go in about  $\frac{1}{2}$ ". Pass the other wire through the remaining open slot in the connector.

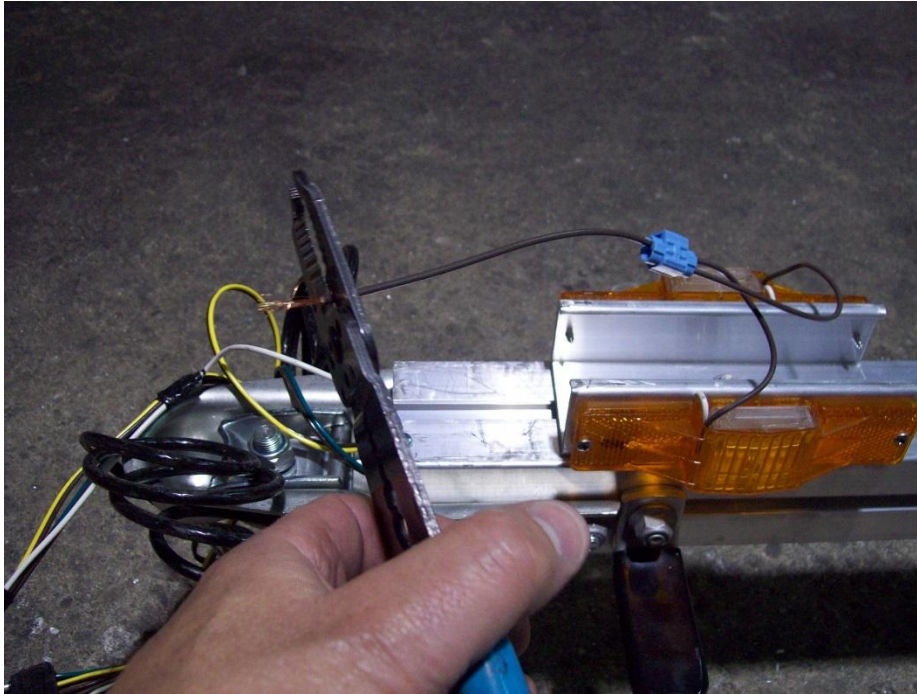




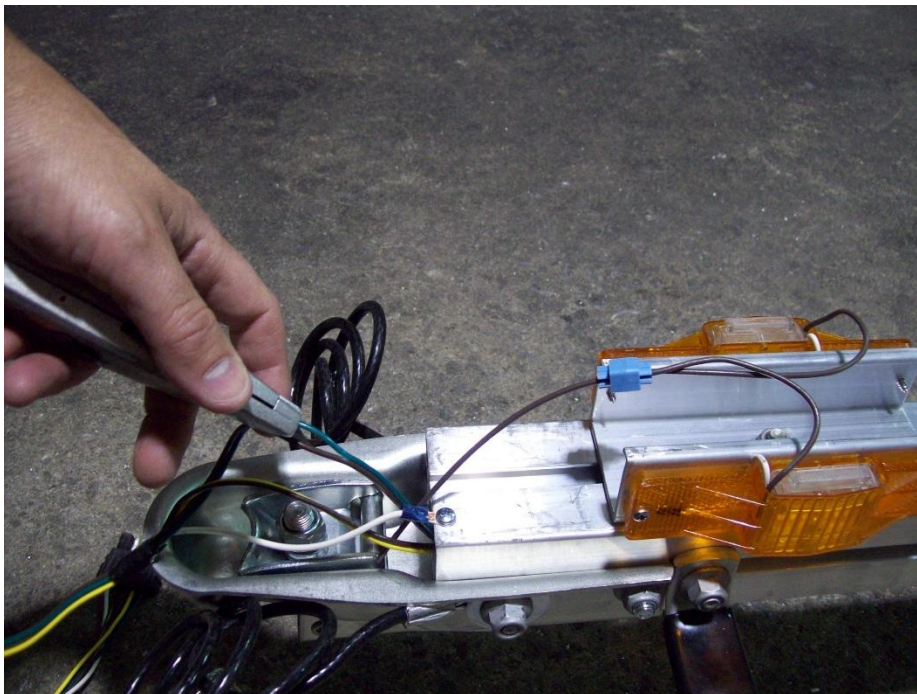
Use pliers to push the metal spade down until it is flush with the plastic. This is what makes the electrical connection between the two wires.



Close the plastic cover of the connector over the spade until it snaps into position.

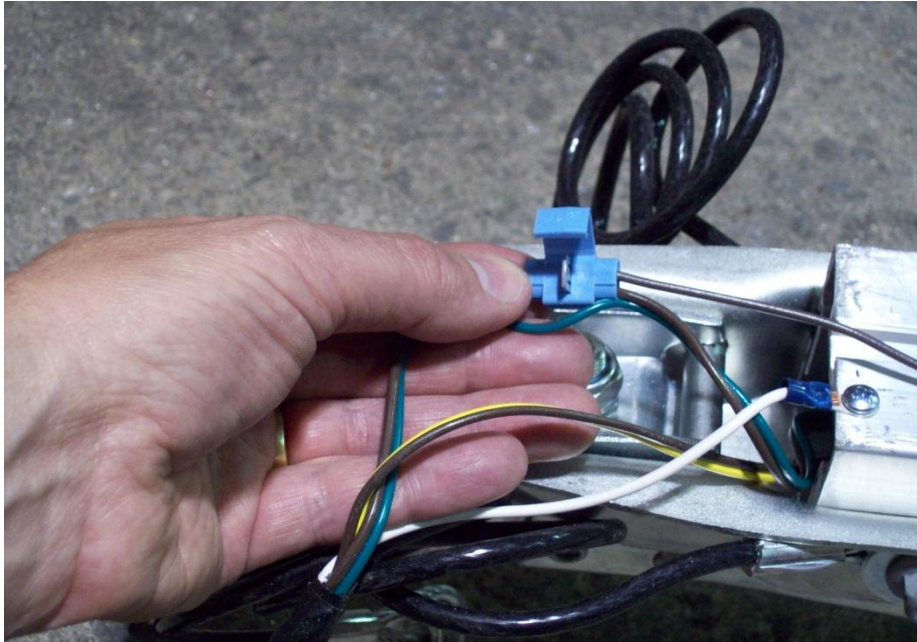


Cut the exposed strands of wire off of the end of the brown wire on the right (passenger side) running light.

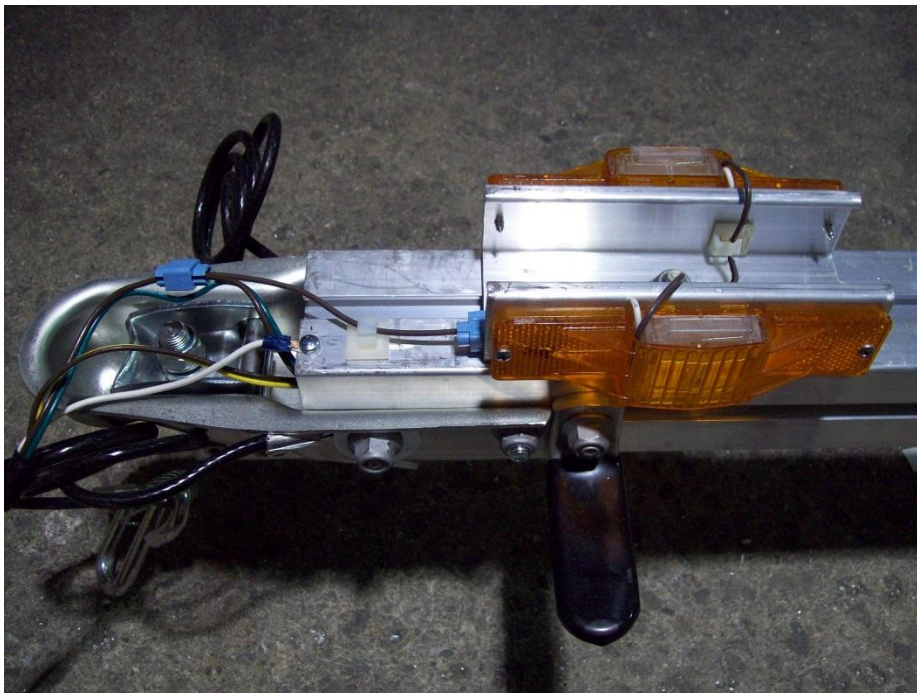


Measure 34" back from the front plug on the green/brown wire and separate the wires with a knife. Be sure not to cut through the casing.

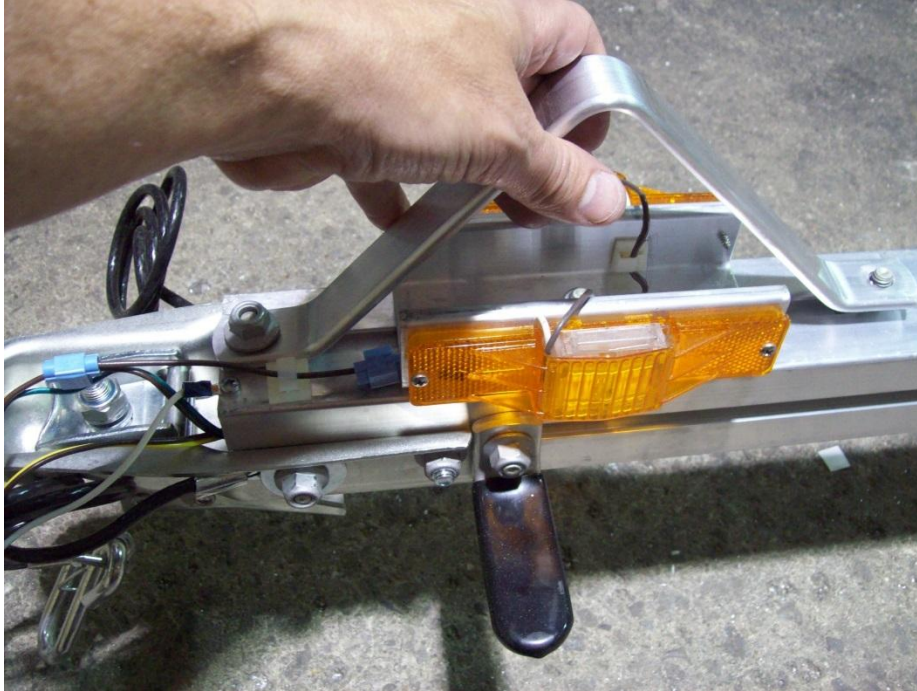




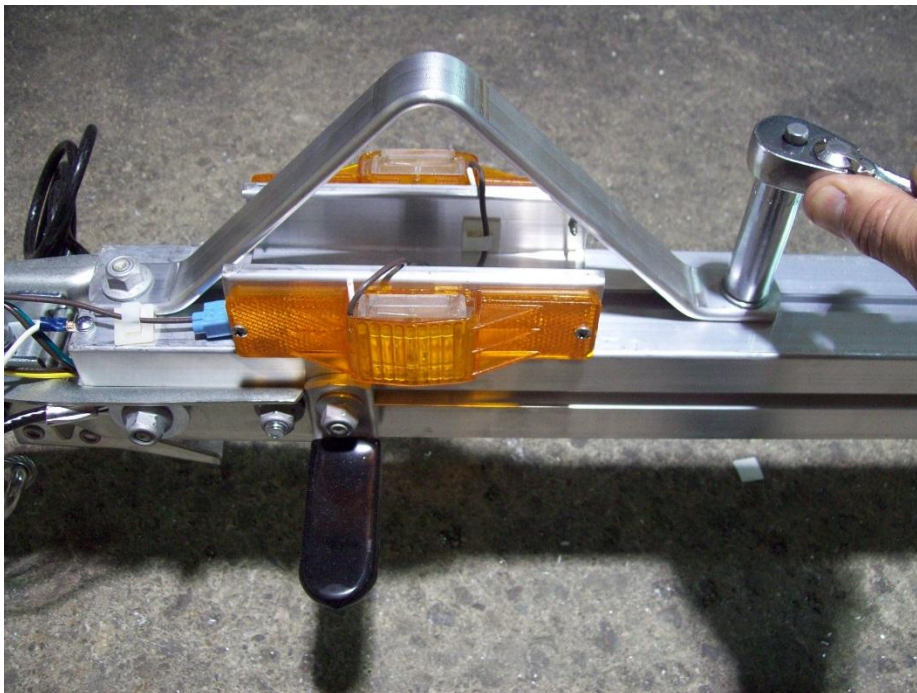
Pass the brown wire through the open slot in the second blue connector at this location. The green wire will rest just outside the connector. Insert the brown wire from the running lights into the closed side of the connector and push the spade down and close cover as previously described. This will make the connection from the main harness to both running light.



Locate the adhesive backed clamps. Install them as shown and run the brown wire from the running lights through them. Tuck the excess harness inside the tongue.



Insert skid with T-bolt into tongue section and over top of the other T-bolt already there.



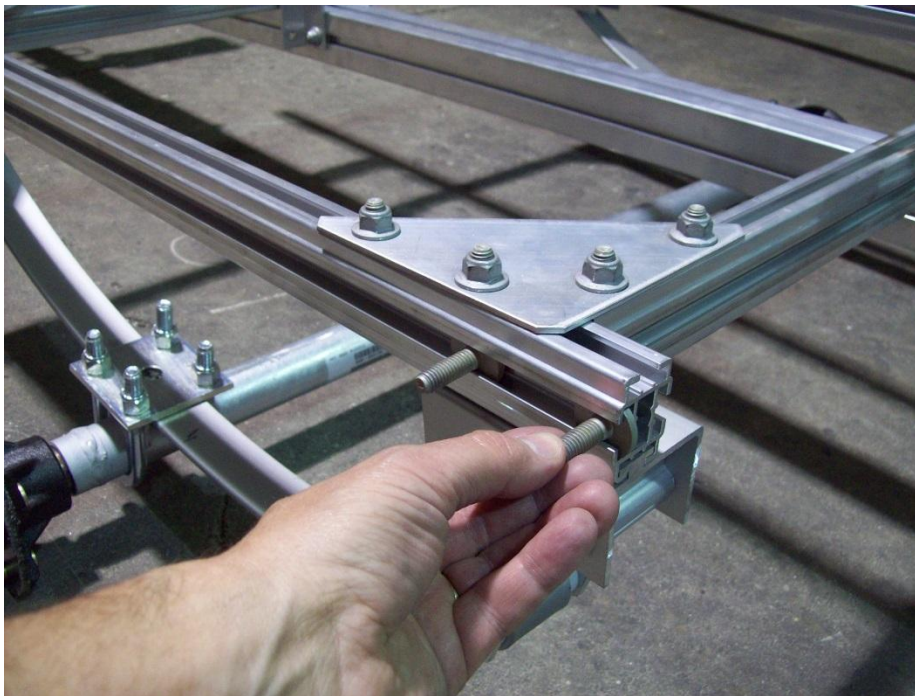
Re-install nut and tighten in position.



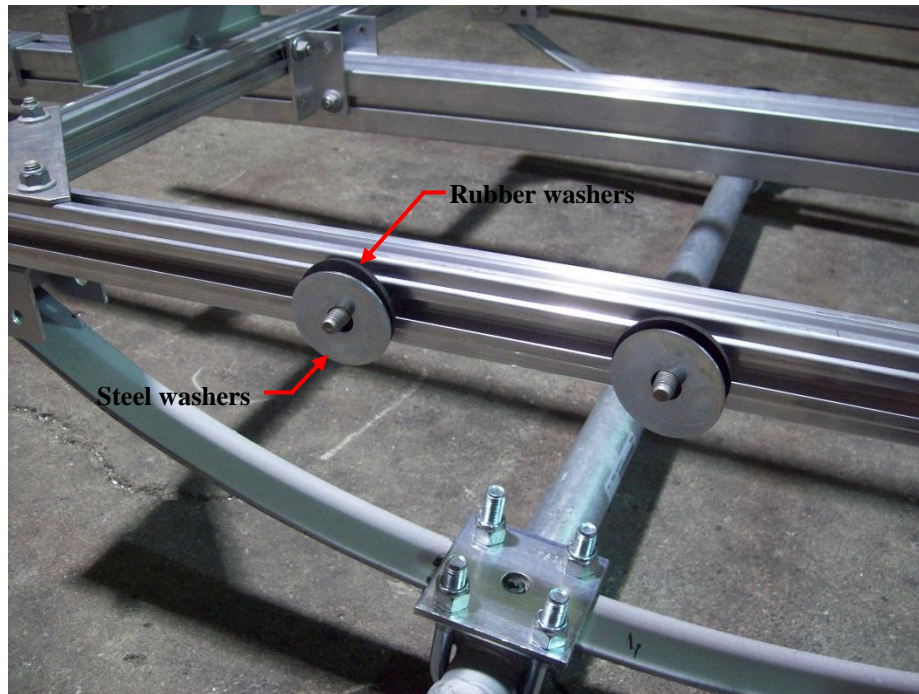
## Fenders



Locate the fenders, 8) large steel washers, 4) rubber washers, 4) 1 1/8" T-bolts and 4) nuts.



**Trailer shown right side up**  
Insert two 1 1/8" T-bolts into the side rail.



Slide the T-bolts into position over the tire and install two rubber washers and two steel washers as shown.



Install the fender, two more steel washers, and nuts, center the fender over the axle and tighten the nuts. Repeat for the other side.



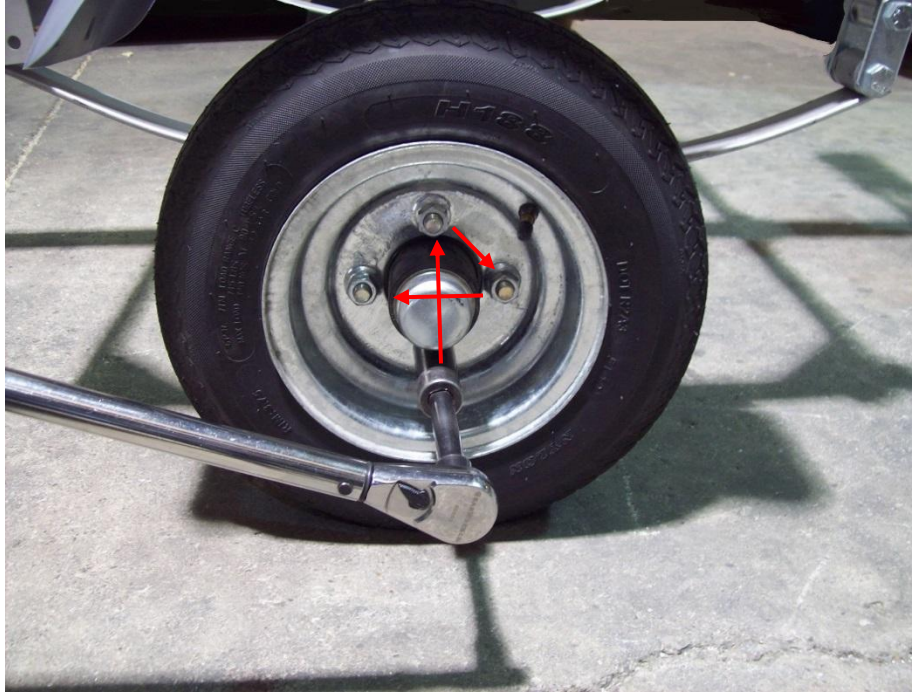
## Wheels



Locate the wheels and the 8) lug nuts.



Install the wheels with the valve stems facing out. Install the lug nuts with the tapered side facing the wheel.



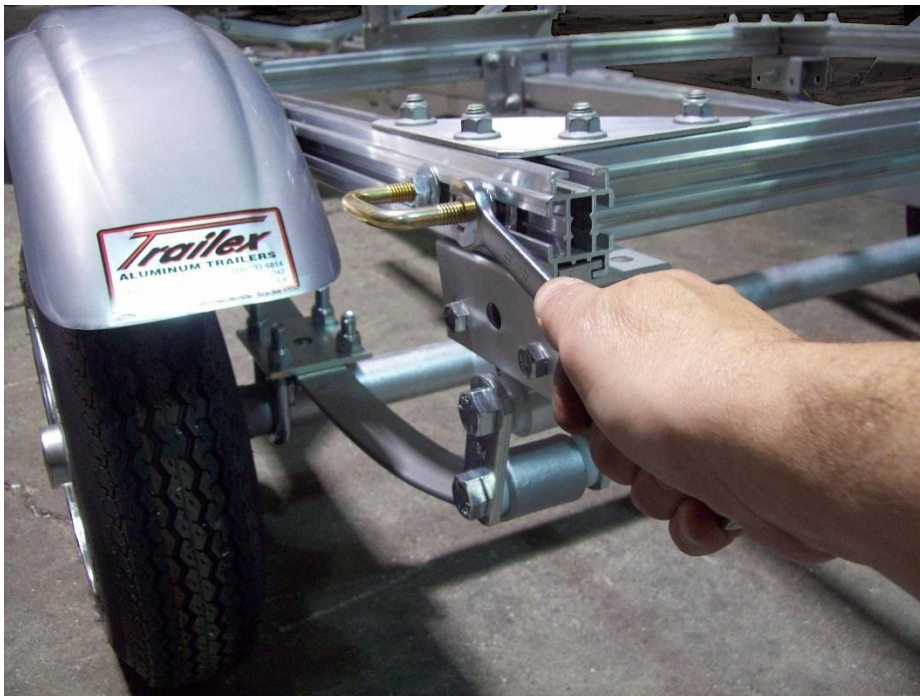
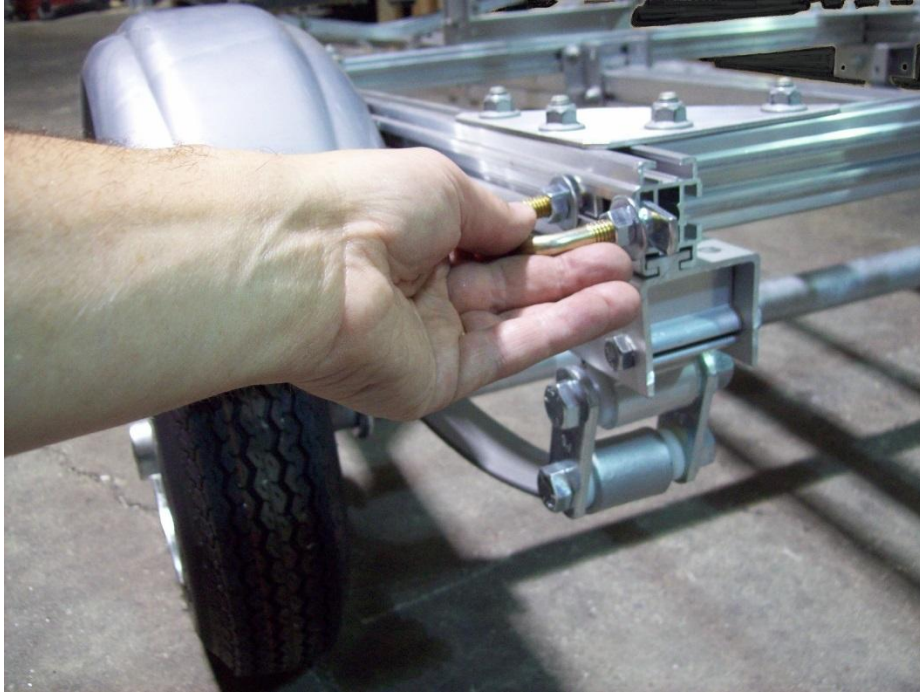
Tighten to 80 foot pounds in a crossing pattern. Re-tighten after 25 miles.

### **Web strap clips**



Locate the two web strap clips.



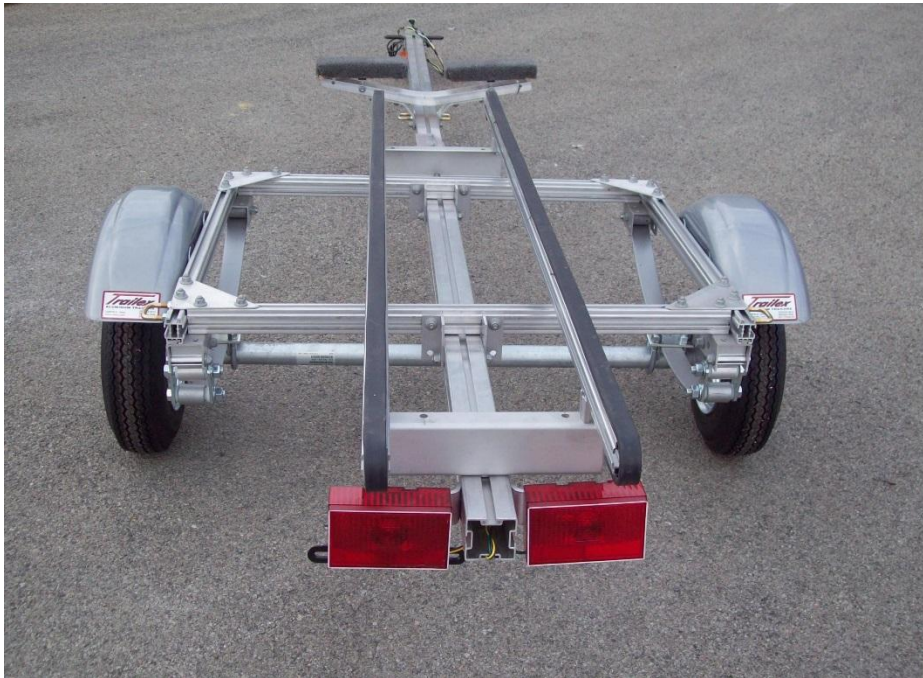
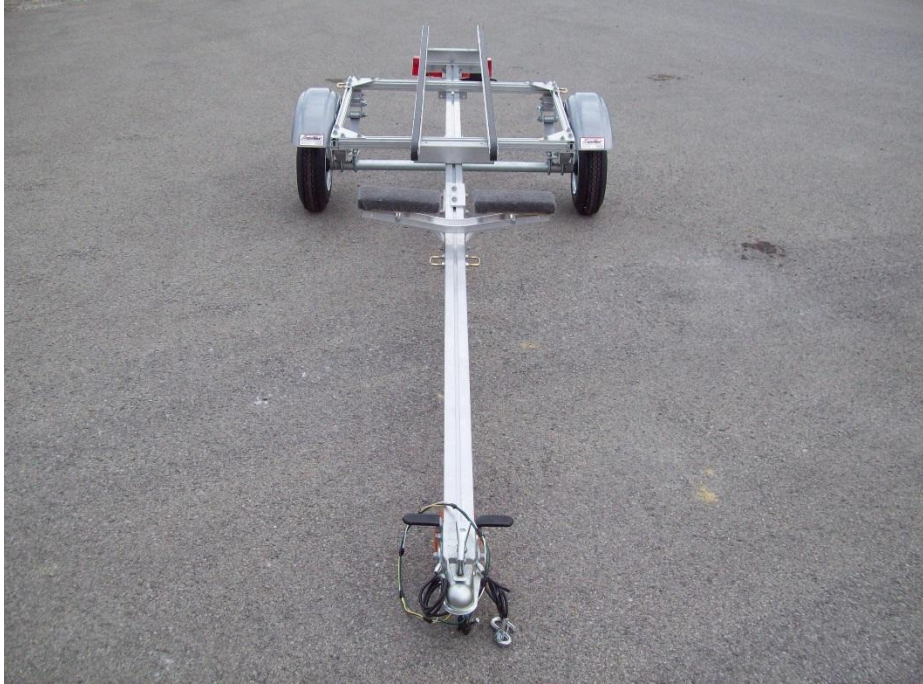


Install a web strap clip on each side rail at the back as shown. Then tighten nuts.

## Finished trailer







KJM 5/22/14