



111 W. Canyon Crest Rd.
 Alpine, UT 84004
 Ph: 801-772-0266
 Email: info@LinkLock.net
 Web: www.LinkLock.net

Bolted LinkLock™ Installation Guide

The patent pending LinkLock™ system is designed to make length adjustment of trailer safety chains a cinch. Once you have used LinkLock™ to adjust your trailer chains, you won't want to tow a trailer without them! On new steel trailers the LinkLock™ system should be welded to the tongue (see Welded LinkLock™ Installation Guide). As a retrofit the LinkLock™ can either be welded or bolted to the tongue. On aluminum tongue trailers, the LinkLock™ must be bolted. Whether welded or bolted, the LinkLock™ has been tested to hold over 10,000 pounds each with properly rated chain (grade 70) for a Class 4 rating. The bolt on LinkLock™ can be used on trailers with a tubular tongue of at least 3 inches high. If installing on a 3 inch high tubular tongue, the wall thickness must be 3/16" thick or less. There is no wall thickness limitation for tubular tongues of 3 ½ inches or more in height. Mounting to C-channel tongues requires a tongue height of 4 inches or more. This is so the mounting nut can sit flat on the back side of the channel and not on the radius.

⚠ DANGER

- The LinkLock™, when bolted on, shall not use the same bolts for attachment to the tongue as the coupler. Use 3/8-16 UNC Grade 8 bolts for mounting. Nuts shall be locking nuts. Using the same bolts as the coupler or the wrong bolts could cause the chains to become disengaged from the trailer causing death or serious injury.
- Never install LinkLock™ sleeves to the bottom of the tongue. In the event of a primary decoupling, they may get ground off which could cause the chains to disengage from the trailer causing death or serious injury.

Additional Information

LinkLock™, LLC has an online tool to aid in determining if your safety chains are appropriately configured to prevent the trailer tongue from touching the ground in a decoupling event. You may also check out state and federal laws regarding trailer chains. LinkLock™, LLC has also compiled state by state laws regarding safety chains. To access this information go to: <https://www.linkLock.net>. You can contact one of our safety chain specialists with any questions about installation at the phone number or email above.

Preparation for Mounting

LinkLock does not provide bolts for mounting as they will differ based on the frame rail being mounted to. If mounting to a C-channel tongue where there is access to the back side you will need 4 – ½"-20 by 2 ½ inch long grade 8 bolts and 4 – ½"-20 nylock nuts. You can tell a grade 8 bolt by the 6 radial markings on the head as below:



Grade 8
 Medium Carbon
 Alloy Steel,
 Quenched and
 Tempered

If you are mounting to a tubular tongue you will need 2 – ½"-20 by 2 ½ inch PLUS THE WIDTH ACROSS to tubular tongue long grade 8 bolts and 2 – ½"-20 nylock nuts. For instance, if the tongue is 3" across the top you will need 2 ½ + 3 = 5 ½ inch long bolts.

Positioning Instructions

While the LinkLock™ system will allow for adjustment of the chains when mounted anywhere along the tongue, mounting the front of the LinkLock™ sleeve as far forward as can be accommodated on the tongue is best. This usually ends up 4"-10" behind the center of the ball. Mounting the LinkLock™ this close to the ball provides the best opportunity for the chains, when crossed under the tongue and connected to the hitch, to cradle the tongue without the tongue hitting the ground in the event of a primary coupling failure. This is a state law in approximately 20 states. It gives the best chance of controlling the trailer, not grinding the chains off and keeping the trailer from running into and damaging the tow vehicle in the event of a primary coupling failure.

Make sure that the sleeves are even on both sides of the tongue. Use electrical tape to tape the LinkLock™ sleeve, or sleeves if to a tubular tongue, to the trailer tongue as shown below. Make sure they are centered on the tongue top to bottom:



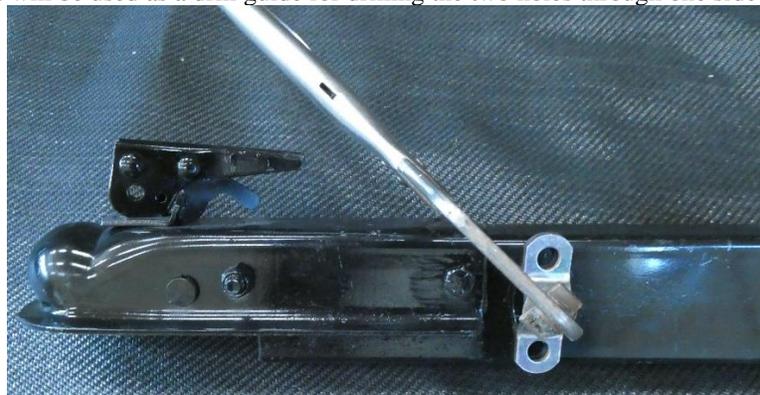
As shown below, insert the LinkLock™ pin into the hole in the sleeve to assure there is nothing blocking it from complete insertion. Do this on both sides as there may be interference on one side and not the other.



Next, insert the 5/16" safety chain with the chain link welds away from the tongue (it works better this way). Make sure the chain will slide smoothly back and forth through the LinkLock™ sleeve without anything blocking it.



Mark or measure the position of the LinkLock™ sleeve on the tongue. Now Clamp the LinkLock clamp plate to one side of the tongue with the front edge at the same position as the front of the LinkLock™ sleeve was positioned as shown below. This will be used as a drill guide for drilling the two holes through one side of the tongue.

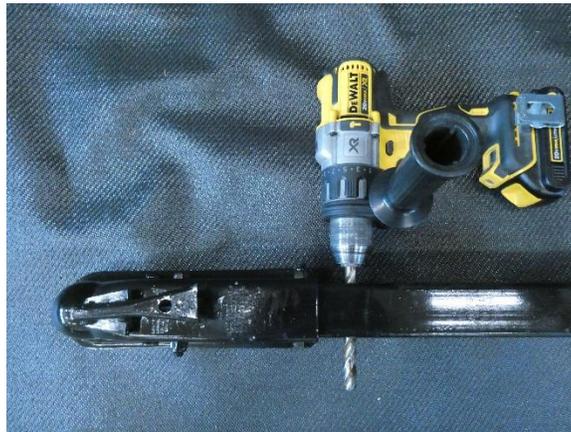


With the LinkLock™ sleeve and adapter plate clamped to the tongue in a position where the holes are to be drilled, first, check to assure that the drilling will not damage wiring or anything else running inside the tongue. Next, check that there is room between the top and bottom flanges of the tube or channel being drilled for the holes. See the limits for tubular and C-channel tongues above. Drill the first 1/2" diameter hole using the adapter plate as a guide.

If installing on opposite sides of a single tube, drill the matching hole using the other adapter plate as a guide making sure the holes are drilled directly across from each other.



If mounting to a single tubular tongue drill all the way through the hole on the other side as shown below to assure the holes will align:



Mounting a single sleeve to a single C-channel or tubular tongue

If you are doing the mounting yourself, you may want to tape the LinkLock™ sleeve into position or if you have a helper, they can hold it in the correct position. With the clamp plate positioned over the front end of the LinkLock™ sleeve, insert two of the properly sized ½ -20 UNC Grade 8 bolts (see above) through the clamp plate holes and through the channel or tube. Fasten the nylock nuts on the back side of the channel or tube. Tighten until secure. This size grade 8 bolt can be tightened up to 130 ft-lb, but you may find, especially on tubular tongue applications, that the tongue will be indented before that torque is reached. In such a case, tighten just until noticeable deformation occurs.



Mounting a 2 sleeves to a single tubular tongue

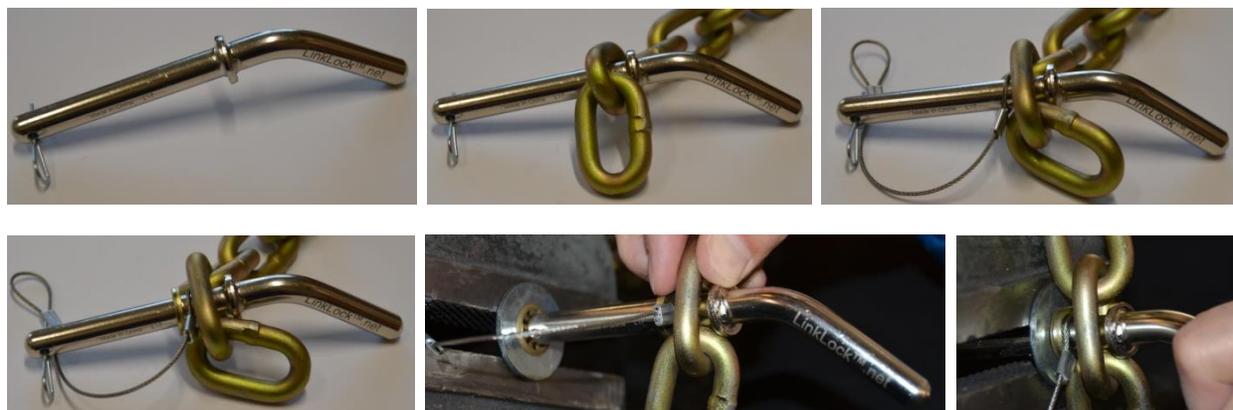
If you are doing the mounting yourself, you may want to tape the two LinkLock™ sleeves into position or if you have a helper, they can hold them in the correct position. With the clamp plate positioned over the front end of the one LinkLock™ sleeve, insert two of the properly sized ½ -20 UNC Grade 8 bolts (see above) through the clamp plate holes and through the channel or tube. Place the second LinkLock™ clamp plate over the bolts and the front

of the second LinkLock™ sleeve. Fasten the nylock nuts to the ends of the bolts. Tighten until secure. This size grade 8 bolt can be tightened up to 130 ft-lb, but you may find, especially on tubular tongue applications, that the tongue will be indented before that torque is reached. In such a case, tighten just until noticeable deformation occurs. Repeat for the second side.

Chain Installation Instructions

We suggest 5/16" Grade 43 High Test Chain or better for Class 1 (2,000 pound GVWR or less trailers), Class 2 (3,500 pound GVWR or less trailers) and Class 3 (5,000 pound GVWR or less trailers). We also suggest 5/16" Grade 70 Transport Chain for Class 4 (10,000 pound GVWR or less trailers). These chains will be embossed with a 4, 43, or 430 for Grade 43 and a 7, 70, or 700 for Grade 70 chain at least every foot along the chain. While we have tested many 5/16" chains with the LinkLock™, there is no standard for the width of grade 43 or 70 chain, so check to make sure the chain you would like to use slides easily through the LinkLock™ sleeve and that the pin will fit through the link when in the LinkLock™ sleeve. We also suggest gated hooks with the same or better rating as the class of trailer. While it will depend on the specific installation, 2 to 3 feet of safety chain is usually adequate, when the sleeves are installed as suggested. Those using weight distributing hitches will tend to need safety chains toward the longer side. Those with folding tongues, call for assistance.

With the hook installed on the end of the chain, slide the other end of the chain through the front (side toward the end of the coupler) of the LinkLock™ sleeve with the first link vertical. Make sure that the welds of the horizontal chain links are facing away from the tongue. Pull through until the hook is against the LinkLock™ sleeve. Insert the straight part of the bent pin into the **SECOND** link from the end of the chain. Our testing showed putting the pin in the second link to be much stronger if the user forgets to put the pin into the Link Lock™ sleeve. Make sure that the pin is right side up when all the links are straightened out. Put the small loop of the keeper cable over the straight side of the pin. Put the washer over the straight side of the pin. The push washer can be best installed by putting the push washer with the teeth pointing down over a 1/2" washer supported on something (like a piece of tube, vise jaws, etc.) so that the pin can be pushed through the push washer all the way up to the chain. The following series of photos shows how to properly install the pin in the end of the chain:



Repeat these instructions for the LinkLock™ other side of the tongue.