



# TTROY TRAILER HINGE INSTALLATION INSTRUCTIONS HEAVY DUTY HINGE KIT

QUESTIONS? 724-758-3526



## Please Read, Understand, Follow and Save these Instructions.


**Warning:** Improper installation or use of this product may result in property damage, serious injury, and/or death. Never permit installation OR use of this product by anyone without providing them with these instructions. You must read, understand and follow all instructions and warnings for any product(s) to which this product is used in conjunction with or installed. Save these instructions with the product for use as a reference for any future installation and use of the product.

### **Purchaser/Owner must ensure that product is installed according these instructions. Purchaser/owner must not alter or modify product.**

- Operator and bystanders should never position any part of body under any portion of this product or the load being supported.
- Never allow children to play on or around this product or the load being supported.
- Do not exceed maximum rated capacity of coupler, actuator, trailer or pivot length / GTWR. Refer to trailer tongue to obtain rated capacity. If uncertain, contact TTROY American-Made Hinges at 724-758-3526.
- Weigh your trailer plus added load. Do not exceed lesser of coupler, hitch, hitch ball, vehicle or trailer weight ratings.
- Do not attach safety chains to the coupler, swing tongue or their existing hardware. Attachment point of Safety Chain must be behind hinge on the trailer tongue.
- Mount **TTROY hinge product** to trailer tongues made only of steel. Trailer tongues to be 2"x3", 3"x3", 3"x4", or 3"x5" outside dimensions.

### **Before Towing:**

- Check swing tongue for signs of wear or damage. Refer to Installation Instructions for proper torque. Replace any worn or damaged components with **TTROY hinge** components. For replacement components check our website or call **TTROY American-Made Hinges** at 724-758-3526.
- Ensure safety chains are long enough for tight turns but not dragging and are properly connected to the towing vehicle and trailer (crossed, right to left and left to right).
- Ensure that all trailer lighting is hooked up and properly working.
- Check that the wiring is properly connected but loose enough to make turns without disconnecting or damage. Be sure that wiring is not dragging and clear of safety chains.
- When pivoting coupler, be sure wiring and brake lines are not pinched between hinges. Pinching could damage wiring/lines.
- Be sure that pivot bolt/locknut and hinge pin/hairpin cotter pin are installed and secured with the coupler in the towing position before towing.
- Contact trailer manufacturer for replacement labeling removed from trailer during installation.

 **WARNING** Failure to follow all warnings and instructions may result in product failure, property damage, serious bodily injury, and/or death.

### **LIMITED WARRANTY**

**TTROY** ("We" or "Us") warrants to the original consumer purchaser only ("You") that the product purchased will be free from material defects in both material and workmanship, normal wear and tear excepted, for a period of (i) five years for our trailer hinge products. The foregoing warranty is valid only if the installation and use of the product is in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with the applicable limited year warranty, Your sole and exclusive remedy is that We will replace the product without charge to You and within a reasonable time or, at our option, refund the purchase price. This limited warranty is not transferable.

**Limitations on the Warranty.** This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation, including welds; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

**Obligations of Purchaser.** You must retain Your product purchase receipt to verify date of purchase and that You are the original consumer purchaser. To make a warranty claim, contact us at 107 Jameson Avenue, Ellwood City, Pennsylvania - 724-758-3526, identify the product by make and model number. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs.

**Remedy Limits.** Repair or replacement is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for service or labor charges incurred in removing or replacing a product or any incidental or consequential damages of any kind.

**Assumption of Risk.** You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

**Governing Law.** This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. This limited warranty is governed by the laws of the Commonwealth of Pennsylvania, without regard to rules pertaining to conflicts of law. The state courts located in Lawrence County, Pennsylvania shall have exclusive jurisdiction for any disputes relating to this warranty.



**Prior to working on modifying your trailer, ensure that the following safety precautions are taken:**

- Read, understand, and follow all tool manufacturers' safety instructions.
- Always wear safety glasses and protective gloves.
- Use a jack stand (not the trailer jack) to support tongue. Chock all tires/wheels to ensure stable working conditions on trailer.
- Do not mount any accessories to **TTROY hinge product** (i.e. jack, spare tire carrier, winch stand).
- Remove any wiring and brake lines from trailer tongue prior to any cutting or drilling. Upon completion of installation, all wiring/lines should be properly re-routed and connected.
- Use only the mounting hardware supplied for installing **TTROY hinge product**. For replacement components visit our website or call **TTROY American-Made Hinges** at 724-758-3526.

**Required Tools:**

- 1/2" Drive Ratchet
- Drill Bits (1/8", 1/4", 3/8", & 1/2")
- Safety Glasses
- Clamp
- Jack Stand
- 3/4" + 15/16" Open End Wrench & Socket
- Metal Cutting Saw
- Gloves
- Square
- Wheel Chocks
- 1/2" Chuck Drill
- Tape Measure
- Centerpunch
- Hammer
- Torque Wrench (Capable of 80 ft-lbs.)



**Installation Instructions:**

**Measure and Cut Trailer Tongue Section**

1. Before starting, be certain to follow all safety precautions as described in these instructions.
2. Support trailer tongue with jack stand behind the approximate area of trailer tongue removal.
3. Measure from the center of coupler ball pocket the desired swing length back and mark. Be certain the mark is at least 4" from any obstruction (i.e. winch stand, jack bracket, etc.). Using a square, scribe a line around trailer tongue to indicate cut location. Before cutting, verify measurements.
4. Remove all wiring and brake lines from the trailer tongue so it is not cut or damaged during installation.
5. Cut trailer tongue along scribe line, being certain to follow all safety and operating guidelines of products used. Be careful of sharp edges or burrs and remove if present.

**Drill and Attach Safety Chains**

6. Along each side of trailer tongue, measure 4" from cut end and mark. Measure 1" up from bottom and mark (see illustration). At line intersections, use center-punch to mark drill locations for safety chain bolts. Drill to 1/2".
7. Secure safety chains using two separate 1/2" bolts and locknuts for each. Torque to 45 ft-lbs.

**Drill and Attach Hinge**

8. Place one side of hinge on trailer tongue until tube meets the plate. Temporarily secure with clamp.
9. Using transfer punch, mark locations of holes on trailer tongue, top and bottom. With center-punch, expand locator marks for drilling.
10. Remove hinge and drill 1/8" holes at center-marks. Be sure to drill square to the trailer tongue. Only drill through one side at a time using 1/2" bit.
11. Increase the 1/8" diameter holes to 1/4" holes. Then increase the 1/4" diameter holes to 3/8". Increase again to 1/2". Carefully remove metal shavings and burrs.
12. Replace hinge over trailer tongue and loosely attach the bolts and flange nuts. Tighten all eight fasteners with 3/4" box end wrench. Torque each to 75 ft-lbs.
13. Place remaining casting over swing tongue and attach in the same manner as previously described making sure the coupler holes are positioned correctly.
14. Attach swing tongue to trailer tongue by mating hinge together. Apply light grease to 5/8" pivot bolt. Secure through the castings with 5/8" locknut and torque to 50 ft-lbs.
15. Insert lightly greased hinge pin through top of hinge. Secure hinge pin with hairpin cotter.
16. Remove hinge pin and pivot swing tongue to verify that system works correctly.

**Rerouting Wiring, Brake Lines and Chains**

17. Pull trailer wiring back through the trailer section and into the swing tongue. Make sure to reattach any ground wires that may have needed to be removed during installation.
18. Route wiring through swing tongue in a way to prevent wiring from rubbing on sharp edges.
19. Route safety chains through guide on bottom of swing tongue. Check that safety chains are long enough to reach a tow vehicle and will not bind or drag during normal towing conditions.
20. Close swing tongue, ensuring wires are not pinched, and lock into place with hinge pin. Make sure the hairpin cotter is in place through the hinge pin. Check for proper operation of trailer lighting. Trailer is now ready for towing.

