

Service Bulletin: Hitch Assembly Inspection

Service Manual - For Certified Technician Use Only

Last Updated: 07/10/25

Document Version: 2.0

Applicable models: Rivet, Endless Highways, Terra Firma, Volterra

Purpose

The purpose of this SOP is to outline the steps required for completing the task of Bowlus hitch assembly inspection. Please read and understand the entire SOP before starting.

Tools and Equipment

3 Adjustable Jacks (2000lbs min)

Magnetic Extension 32" min ("Grabber")

9/16" Socket & Wrench

3/4" Socket & Wrench

3/8" Hex head (5" min length)

Rubber Mallet

Torque Wrench (0-100lbs)

1/2" drill bit

3/4" drill bit

Material in Bowlus Kit A

2 x 1/2" Socket head bolt 1 3/4" long (McMaster 91251A718)

4 x 1/2" Washers (McMaster 98023A033)

2 x 1/2" Prevailing Lockbolt (McMaster 92501A437)

2 x 3/4" Black Snap-In Plugs (McMaster 9283K14)

Warranty Labor Allowance

This repair is expected to take less than one hour to complete. You are authorized to charge us the service call fee (if mobile) and up to one hour of time. Should you need any additional time, please contact us at 805-436-5855 or service@bowlus.com for pre-authorization.

Technical Support

Should you have questions during the repair, STOP and contact BOWLUS at (805) 436-5855 or service@bowlus.com.

CAUTION

- Keep clear of all pinch points when working under a travel trailer.
- Use industry safety precautions and use appropriate personal protective equipment to avoid injury while performing this service.

Procedure:

1. Hitch Inspection

- Park the travel trailer on a dry, level solid/paved surface.
- Chock the wheels to prevent movement.
- Visually inspect the porch, including welds pictured below, for damage. Use a flashlight or magnifier to aid detection.
 - Note the first image shows the bottom of the hitch assembly with arrows identifying areas requiring inspection.



- Decision:
 - If no damage is found, proceed to Step 2.
 - If any damage is identified, STOP and contact BOWLUS at (805) 436-5855 or service@bowlus.com. Provide detailed, close-up photos of any damage. Bowlus will provide required parts to repair or replace the affected components.

2. Trailer Support

- Lower stabilizer jacks using hand crank.



- Position two jacks having a flat lifting surface on the bottom of the A-frame tubes, just rearward of the ½" mounting bolts that secure the A-frame to the trailer body as in the photograph
- Raise the jacks evenly until they firmly support the trailer; ensure both sides are at equal height.



CAUTION

Do not proceed under the travel trailer unless it is properly supported with jack stands.

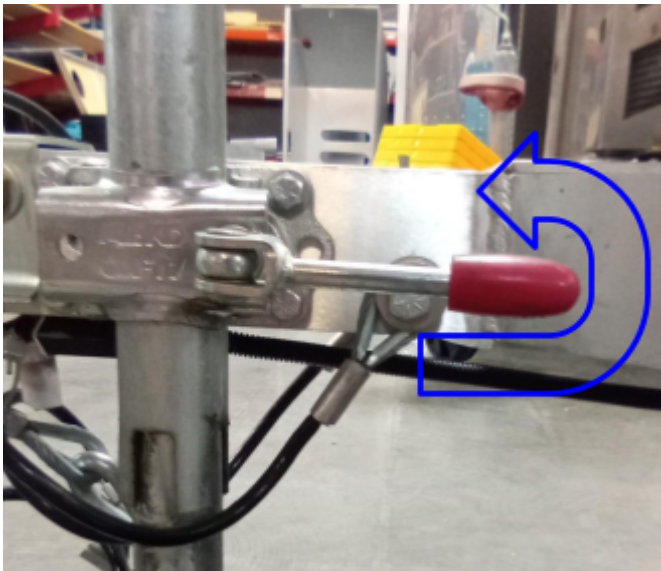
Step 3: Removal of Jockey Wheel and Coupler

Jockey Wheel:

- Ensure the trailer is properly supported as in step 2.
- Mark with tape the clamp location of the jockey wheel tube for re-installation.
- Rotate the red handle counterclockwise until the clamp releases the jockey post.

CAUTION

The jockey wheel mounting bracket attachment bolt holds up the entire front of the travel trailer. If the bolt is loose, the front of the travel trailer will drop, which can cause damage to the travel trailer, severe injury, or even death. Ensure that the bolt is always tight.



- Pull the lever forward toward the coupler to disengage the post and wheel.



- Use a 9/16" socket and wrench to remove the four jockey-wheel bolts.



Coupler:

- Locate the four coupler bolts (nuts inside the 3×3 tube).



- Use a 3/4" socket and wrench to remove all four bolts.
- Withdraw the coupler assembly.

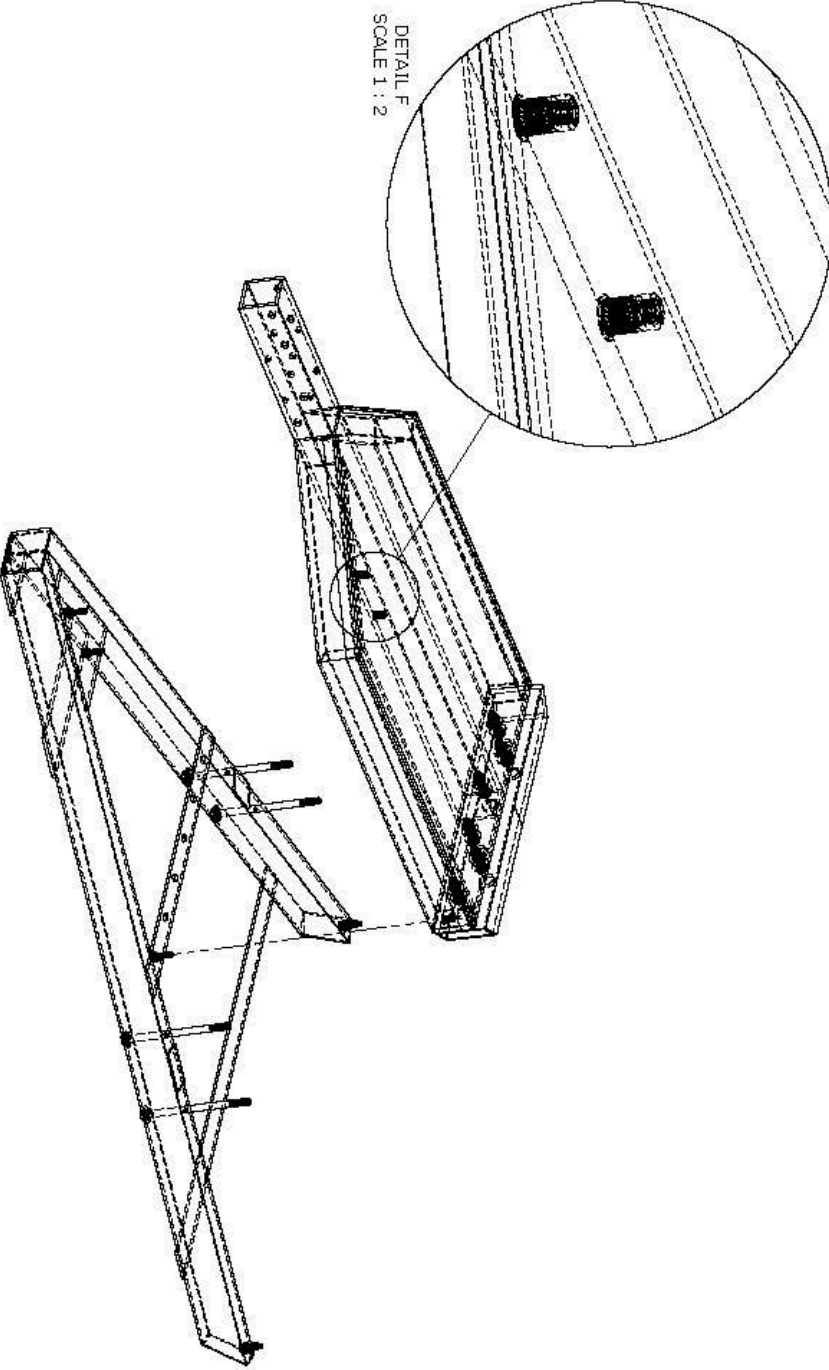
4. Replace Bolts Connecting Upper & Lower Assemblies

Pages 7 and 8 of this document are general diagrams showing the entire hitch assembly. Instructions for replacing the bolts that connect the upper porch to the lower A-frame begin on page 9.

PART NAME	PART NUMBER	DATE	PAPER SIZE
Porch & Support Components	Porch & Support	ENG	A
MATERIAL	FINISH	SCALE	REV.
		1:24	

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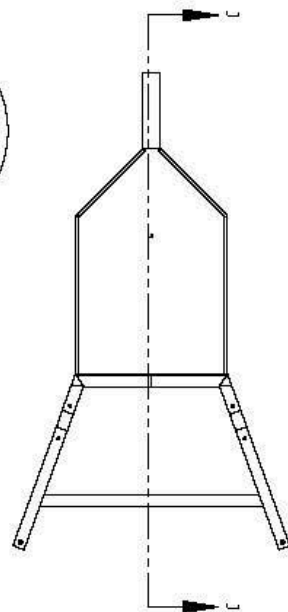


DETAIL F
 SCALE 1 : 2

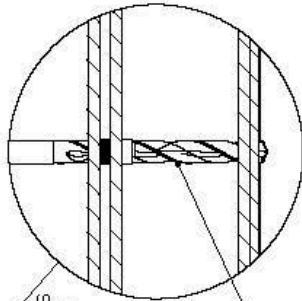
PART NAME	PART NUMBER	DATE	PAPER SIZE
Porch & Support Components	Porch & Support	ENG DRAWN	A SC A/E 11:24
MATERIAL	FINISH	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BOWLUS. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF BOWLUS IS PROHIBITED.	

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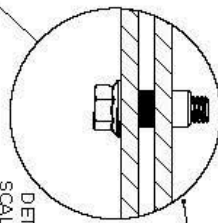
Using 9/16" socket/wrench, remove forward vertical serrated flange hex head screw 3/8"X16 , 1-1/2" long @frame connections point A (Note: Remove and drill 1 at a time to preserve alignment). Using 1/2" drill bit. Drill through the rivetnut. Once the rivetnut has been destroyed, drill through the diamond plate porch top. (Detail K)



Sight the drill bit so it is square in both directions to the diamond plate. The top hole is to line up directly above the bottom hole.

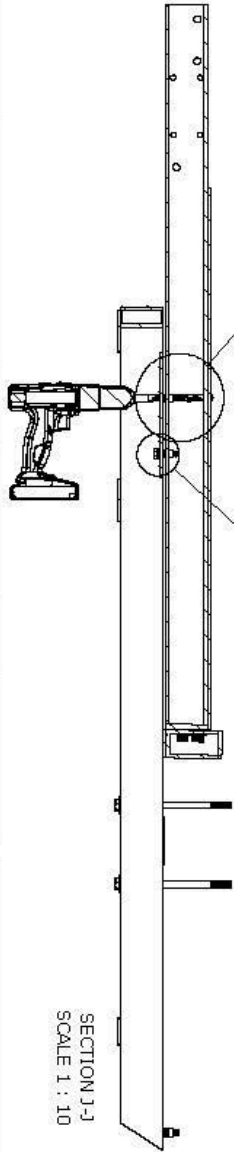


DETAIL K
 SCALE 1 : 3



Rear most high strength rivetnut remains secured.

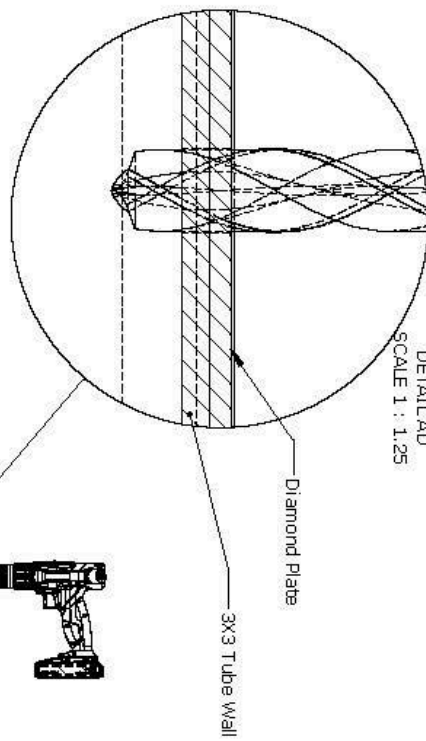
DETAIL L
 SCALE 1 : 2



SECTION J-J
 SCALE 1 : 10

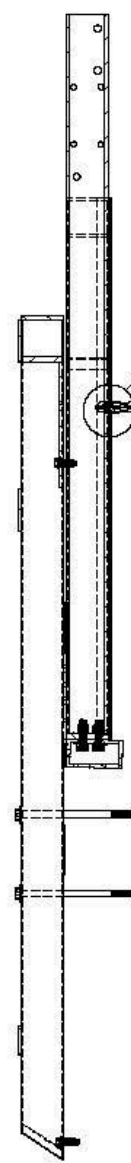
PART NAME	PART NUMBER	DATE	PAPER SIZE
Rivetnut To Bolt Procedure	Porch & Support	ENG DRAWN	A 1:24
MATERIAL	FINISH	PROPRIETARY AND CONFIDENTIAL. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BOWLUS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BOWLUS IS PROHIBITED.	

Using a 3/4" drill bit. Drill through the diamond plate porch top and upper wall of 3X3" tube, concentric to the 1/2" hole drilled when removing the rivetnut below.



DETAIL A-D
 SCALE 1 : 1.25

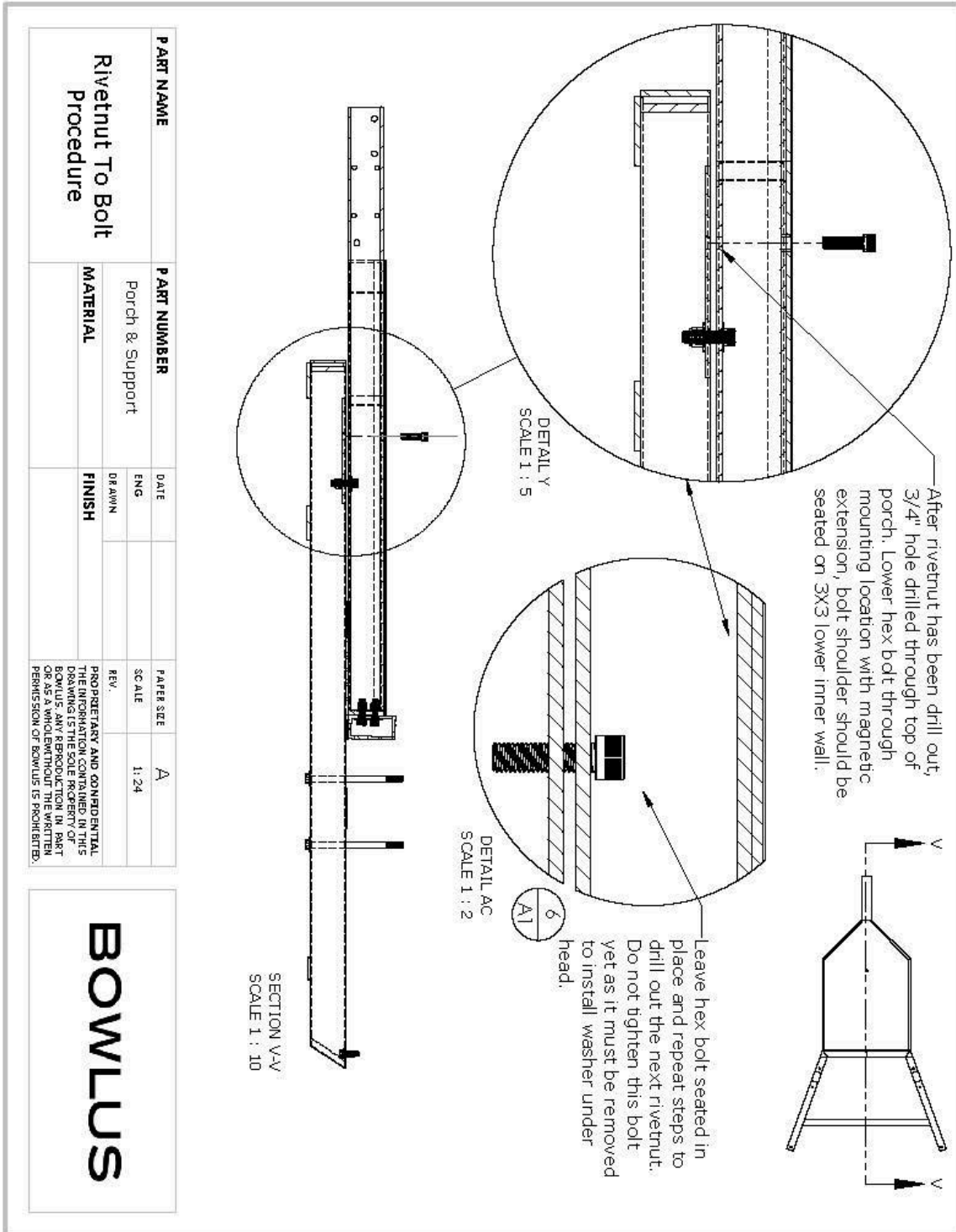
Diamond Plate
 3X3 Tube Wall



SECTION U-U
 SCALE 1 : 10

PART NAME	PART NUMBER	DATE	PAPER SIZE	A
Rivetnut To Bolt Procedure	Porch & Support	ENG	SCALE	1:24
	MATERIAL	DRAWN	FINISH	
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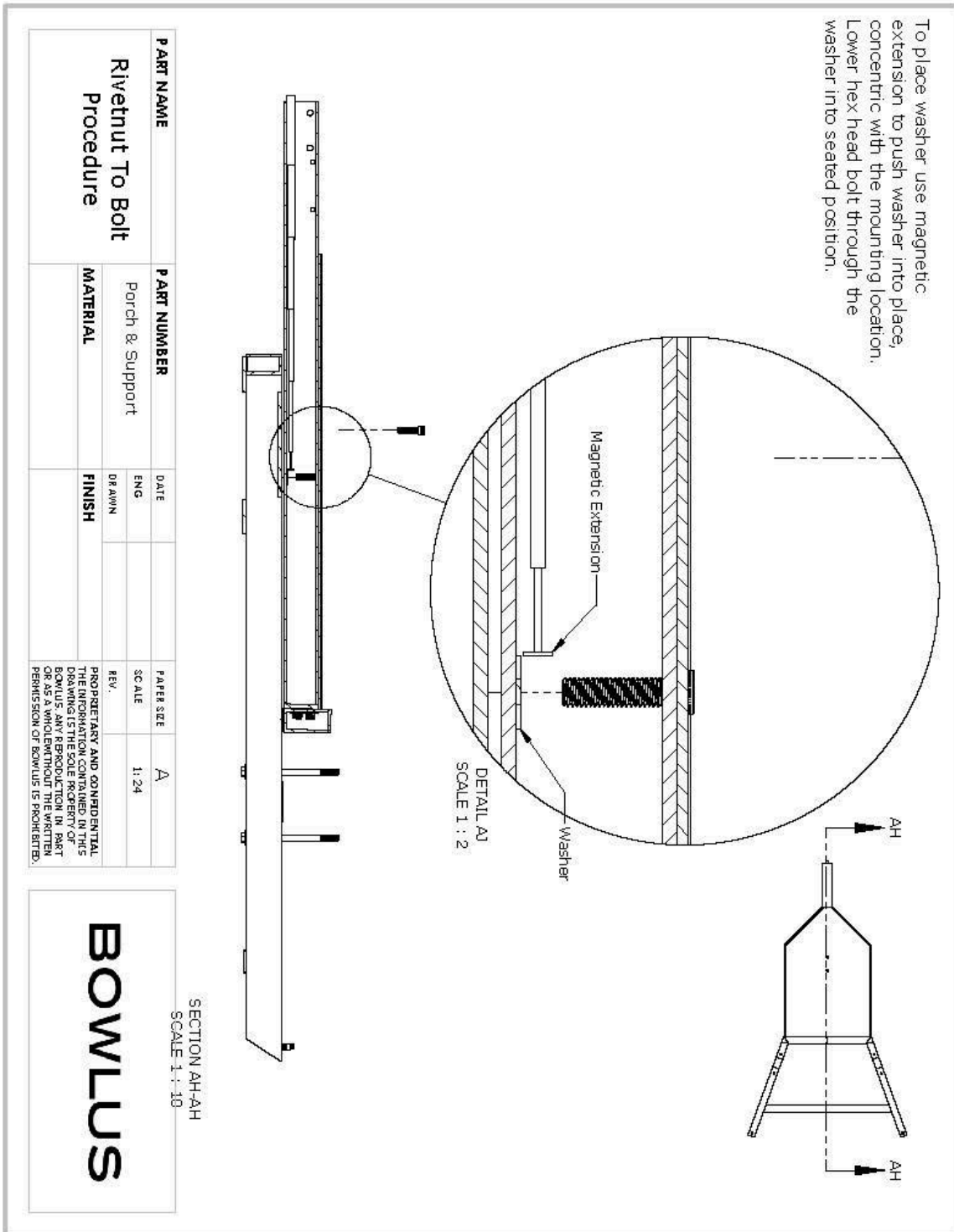
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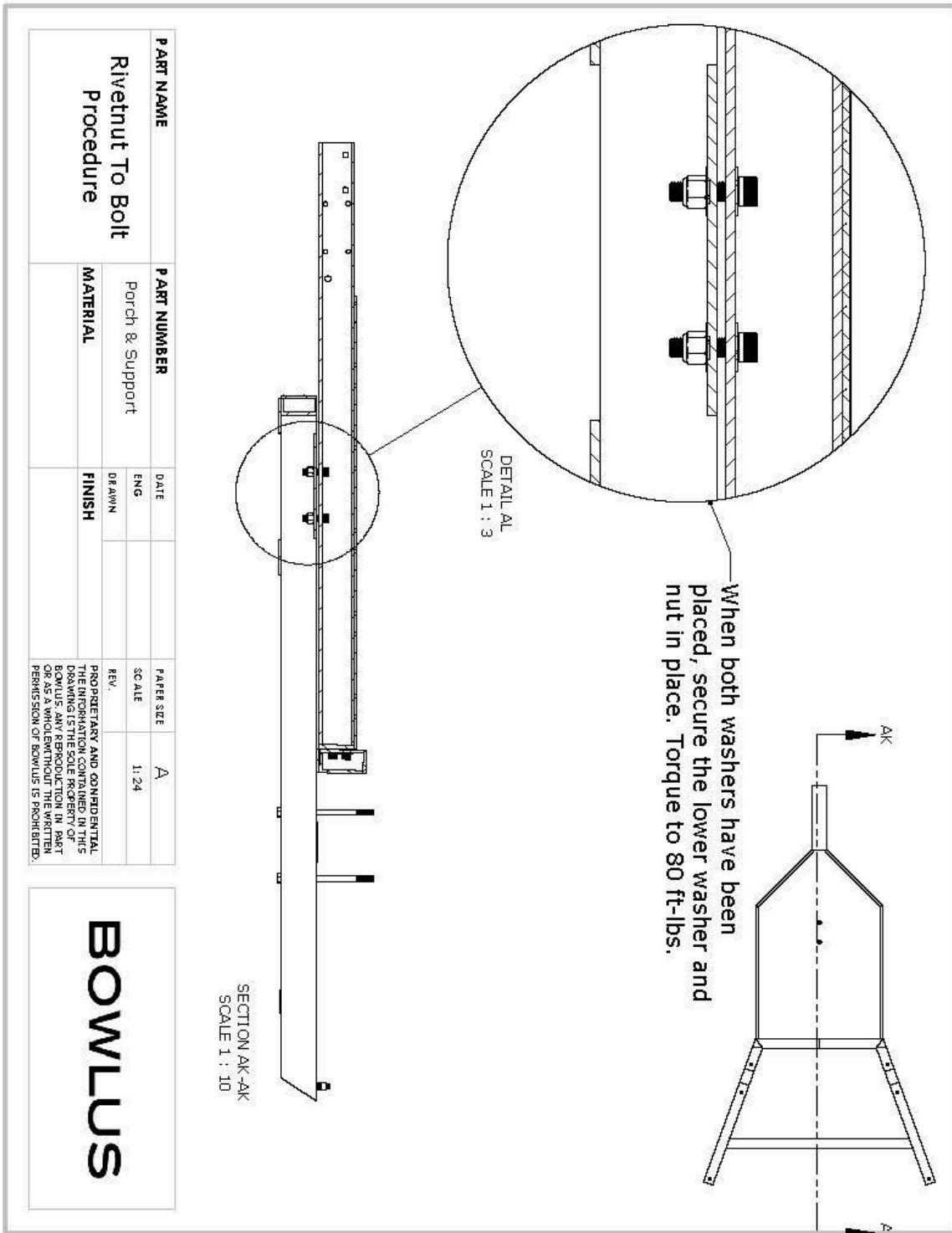


Note: Aluminum shavings from drilling out rivetnut will collect in the body of the 3X3 here. Making it necessary to clean out before attempting to place washers. Forced air through the mounting location, or washer push rod can be used to achieve this.

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		DRAWN	1:24
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Step 5: Reassembly & Torque Verification

- Reinstall coupler
 - Torque to specification with a torque wrench:
 - Coupler bolts: 70 ft-lbs
- Reinstall jockey-wheel assemblies in reverse removal order and reconfirm torque settings with a torque wrench.
 - Torque to specification with a torque wrench:
 - Jockey-wheel bolts: 30 ft-lbs
 - Jockey-wheel bracket attachment bolt (handle): 80 ft-lbs.



- A-frame to porch connection bolts: 80 ft-lbs.
- Install $\frac{3}{4}$ " black plugs into diamond plate holes.
- Remove the jacks.
- Lower the jockey-wheel with the hand crank.
- Retract the stabilization jacks.

Step 6: Image

Take a photo of the completed repair and text it to 805-436-5855 or email it to service@bowlus.com along with your invoice. Include the customer's last name and the last 5 digits of the VIN. The Bowlus Service department requires a photo of the inspected porch in order to process payment.