	Client: VotingWorks	Doc. No.: VWX-001-D012
	Project: Ballot Receptacle	Revision: X01
	Doc. Title: Ballot Box Assembly Instruction	Date: 11/01/2024


1.0 PURPOSE

The purpose of this document is to describe the required parts, assemblies, tools, preparation, and process to assemble the Ballot Box Assembly (VX~00-10000).

2.0 PARTS & ASSEMBLIES

2.1 Made-To-Spec (MTS)

Item Number	Description
VX~01-10001	ASSY, FRAME
VX~01-10060	ASSY, DECK
VX~02-10071	NAMEPLATE
VX~01-10082	ASSY, DOOR
VX~02-10116	FABRIC BIN
VX~02-10115	ASSY, DOOR HINGE TUBE
VX~01-10036	ASSY, FRONT VERTICAL TUBE
VX~02-10096	THRUST BEARING, DOOR
VX~02-10016	WASHER, SADDLE
VX~02-10140	PATCH, DOOR HINGE COVER

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2.2 Off-The-Shelf (OTS)

Item Number	Description
VX~99-10075	POP RIVET, 1/8 IN x 0.337 IN, BLACK, AL
VX~99-10118	TROLLEY HANDLE
VX~99-10108	POP RIVET, 3/16 IN x 0.45 IN, BLACK, AL
VX~99-10117	BHCS, M6 x 50mm, 18-8 SS, BLACK
VX~99-10026	BHCS, M6 x 40mm, 18-8 SS, BLACK
VX~99-10024	POP RIVET, 5/32 IN x 0.362 IN, BLACK, AL
VX~99-10119	POP RIVET, 3/16 IN x 0.7 IN, BLACK, AL
VX~99-10120	WASHER, RIVET, 3/16 IN, 18-8 SS
VX~99-10078	WASHER, RIVET, 5/32 IN, 18-8 SS
VX~99-10136	LOOP, 0.75 IN WIDE, ADHESIVE BACK, BLACK
VX~99-10141	HOOK, 0.75 IN WIDE, ADHESIVE BACK, BLACK
VX~99-10142	VHB TRANSFER TAPE, 0.002 IN THK, 1/2 IN

3.0 TOOLS

3.1 Made-To-Spec (MTS)

Item Number	Description

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3.2 Off-The-Shelf (OTS)

Supplier	Part Number	Description
ZIPPP	ZT1017VS	PNEUMATIC BLIND RIVET TOOL
-	-	4MM HEX WRENCH
-	-	HAND DRILL
-	-	#30 DRILL BIT
-	-	#20 DRILL BIT
-	-	#11 DRILL BIT
-	-	SCISSORS

4.0 PREPARATION


Ensure that the straight tubes have the star nuts installed per Tube Nut Assembly Instruction (VWX-001-D020). The pneumatic blind rivet tool can be used for all assembly operations. Both the 5/32" and 3/16" tips are required.

5.0 ASSEMBLY PROCESS

Assemble the Ballot Box Assembly (VX~00-10000) as defined in the following steps.

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STEP 1 FABRIC BIN INSTALLATION

1.1 Using the hand drill and #30 drill bit, chase the Fabric Bin mounting holes on the frame assembly.



NOTE: There are 2 fabric bin mounting holes under the horizontal section of the front u-tube and 6 under the horizontal section of the rear u-tube.

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1.2 Place the Fabric Bin in position within the expanded frame assembly and loosely attach the 8 side cinch straps



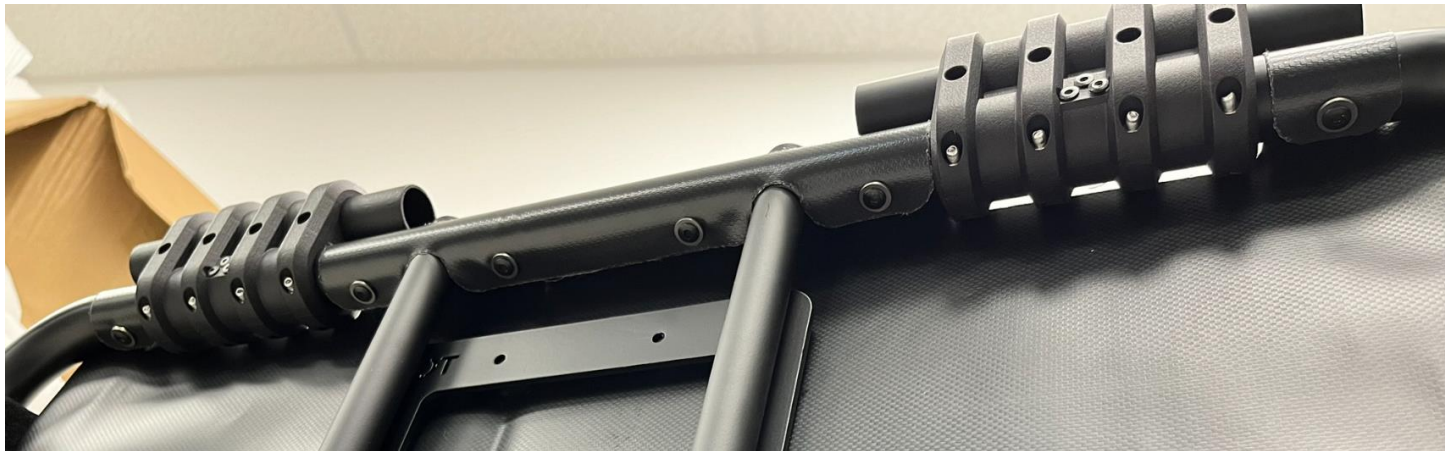
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- 1.3 Affix the Fabric Bin's rear tube wrap to the frame with six 5/32" blind rivets (VX~99-10024) and 5/32" rivet washers (VX~99-10078).



NOTE: When placing the Fabric Bin's tube wrap around the frame make sure it contours the tube surface without bunching and creating areas that extend away from it. If bunching occurs, create new holes in the Fabric Bin's tube wrap by holding it in place against the tube and using the hand drill and #30 drill.

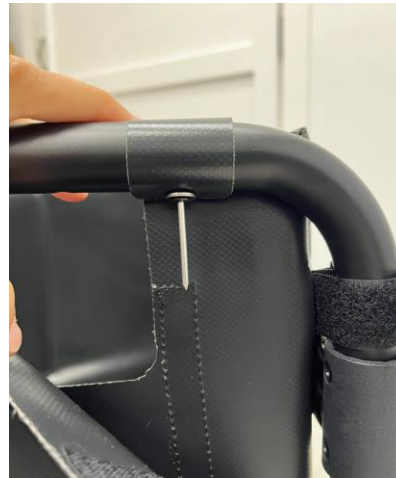
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- 1.4 Affix the Fabric Bin's front tube wraps to the frame with two 5/32" blind rivets (VX~99-10024) and 5/32" rivet washers (VX~99-10078).



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1.5 With the assembly laying on its backside, attach the Fabric Bin's lower tube wrap to the frame.




NOTE: This tube wrap is held in place with Velcro on the bottom of the Fabric Bin's floor.

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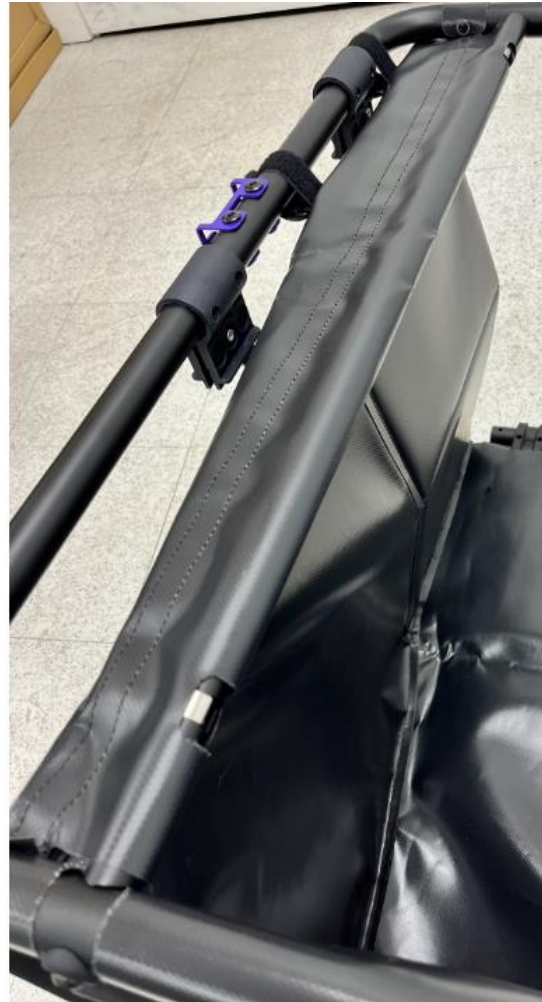
- 1.6 Affix the front vertical tube assembly onto the frame (VX~01-10036) using the M6 x 40mm long screws (VX~99-10026) and saddle washers.



NOTE: Take care not to damage the Fabric Bin lower tube wrap or finish on the underside of the front u-tube.

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1.7 Place the Fabric Bin's vertical tube wrap into position and affix its hook and loop closure.



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1.8 Install the Door Assy


- 1.8.1 With the assembly upright, slide the door hinge tube assembly into the door's hinges while holding the Fabric Bin's hinge cover so that it gets captured between the door and door hinge tube.



NOTE: It helps to rest the Door Assy onto a ~1.25" tall black to position the hinge cover between the Door's hinges.

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- 1.8.2 With the assembly laying on its backside, place the door thrust bearings onto the top and bottom end of the door hinge tube.
- 1.8.3 Position the bottom thrust bearing onto the lower frame tube and install the M6 x 50mm screw (VX~99-10117) and saddle washer.

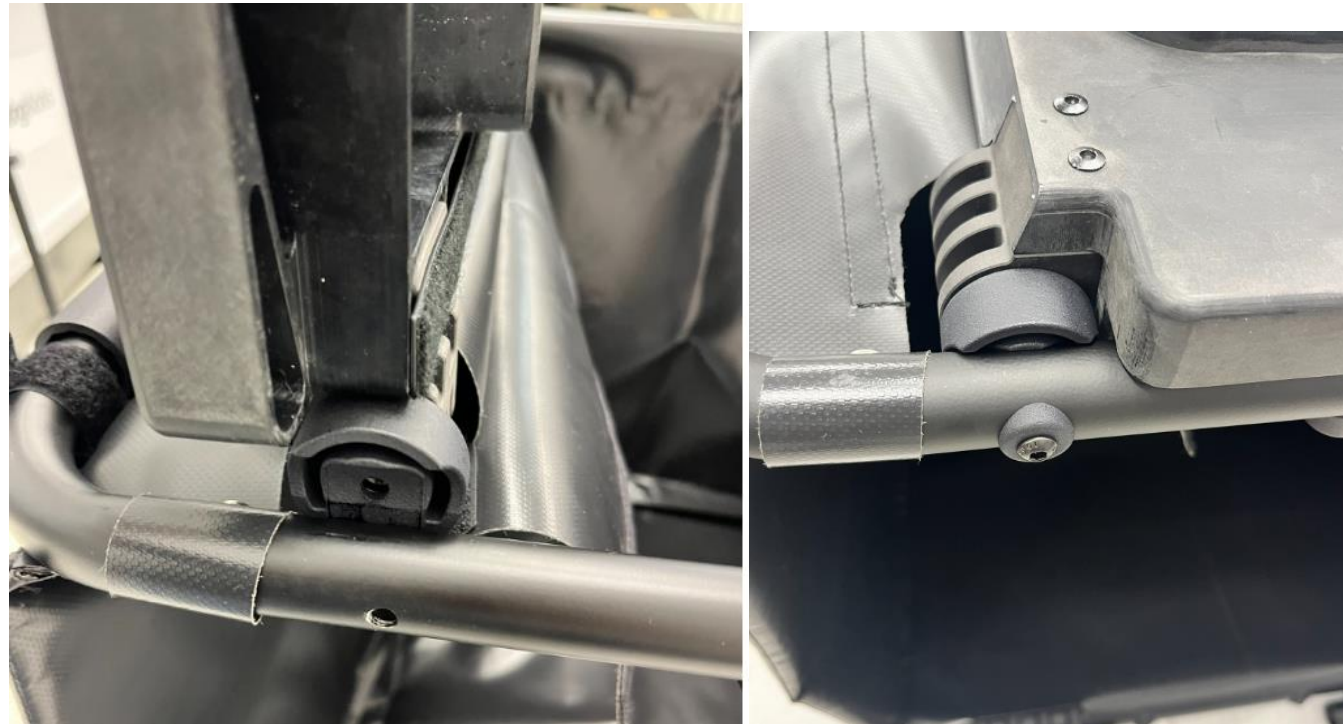


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- 1.8.4 Push the top thrust bearing into position onto the upper frame tube and install the M6 x 50mm screw (VX~99-10117) and saddle washer.



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1.9 Place the Fabric Bin's door hinge tube wrap into position and affix its hook and loop closure.



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1.10 Readjust and tighten 8 side cinch straps



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1.11 Attach 2 bottom cinch straps



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STEP 2 TROLLEY HANDLE INSTALLATION

- 2.1 Using a hand drill and #11 drill bit, chase holes through the trolley handle mounting plate and through the Fabric Bin.




NOTE: The location of these holes are dictated by the frame's trolley handle mounting plate. Hold the Fabric Bin up against this plate and chase the holes in the mounting plate.

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- 2.2 Affix the Trolley Handle to the Frame using four 3/16" blind rivets (VX~99-10119) and 3/16" rivet washers (VX~99-10120).



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STEP 3 DECK INSTALLATION

3.1 Rotate the Deck Links so they are both horizontal as shown.



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- 3.2 Orient the Deck Assy upside down and horizontal and place it into position on the Deck Link's hinge tubes, then affix the deck assembly to the deck hinge tubes with four 3/16" blind rivets (VX~99-10108)




NOTE: Pay close attention that the deck hinge tubes are well bottomed out in the Deck's interfacing features prior to crushing rivets.

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STEP 4 PERMENANTLY ATTACH DOOR HINGE COVER


- 4.1 Attach 2 strips of VHB tape as shown along the length of the patch (VX~02-10140) leaving ~20mm at the top of the patch exposed.



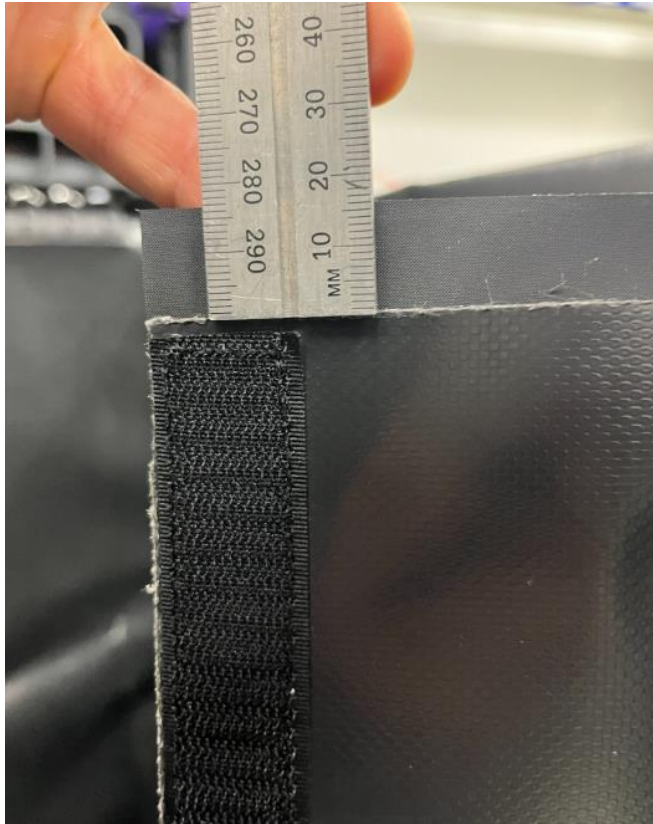
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- 4.2 With the Fabric Bin's hinge cover flat, use the VHB tape to hold the patch into position so that its top edge extends 16mm beyond that of the hinge cover.



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- 4.3 Place a small length (~15mm) of 3/4" adhesive back hook (VX~99-10136) and loop (VX~99-10141) and place it between the patch and Fabric Bin as shown.



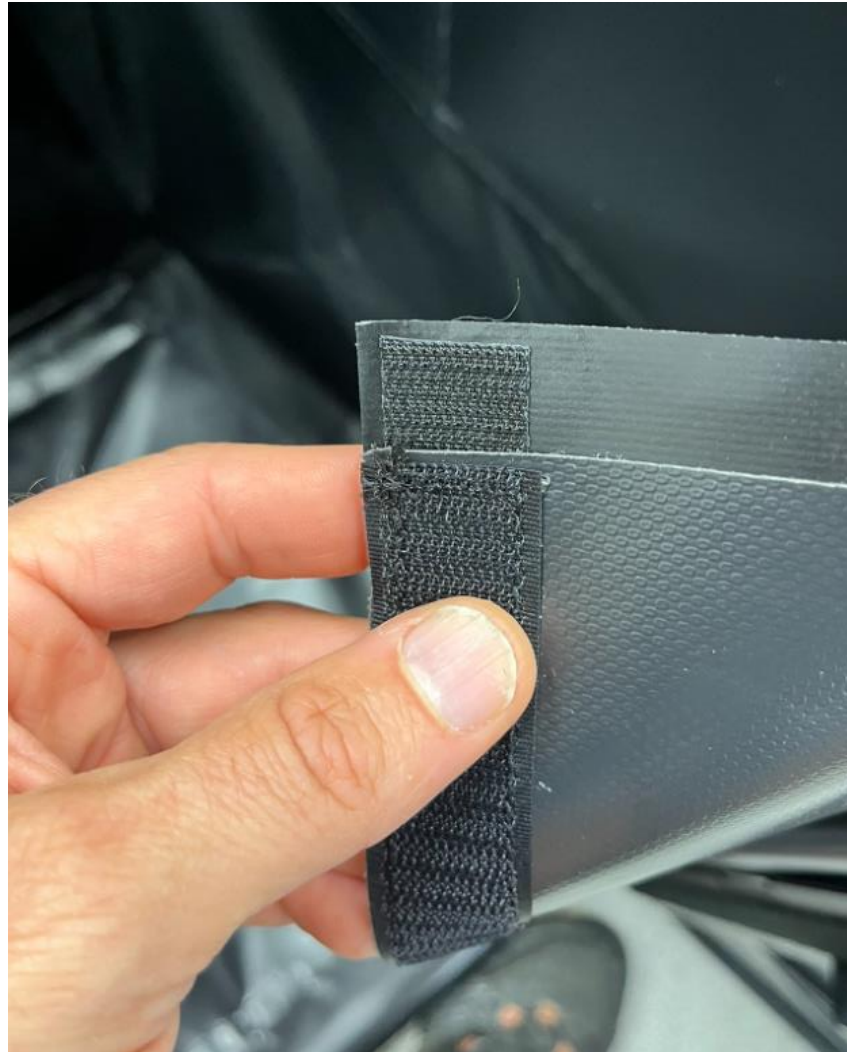
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- 4.4 Place a small length (~15mm) of ¾" adhesive back hook (VX~99-10136) and place it between the patch and Fabric Bin as shown.



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4.5 Affix door hinge cover to door with its hook and loop closure




NOTE: When in the proper position, the top edge of the patch should just touch or clear the bottom edge of the Deck when the Deck is latched.

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- 4.6 Drill #20 sized holes and install 5/32" blind rivets (VX~99-10024) in the positions shown to permanently secure the patch and hinge cover to the top of the door.



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- 4.7 Drill a #20 sized hole and 5/32" install blind rivet (VX~99-10024) in the position shown to permanently secure the hinge cover to the bottom of the door.



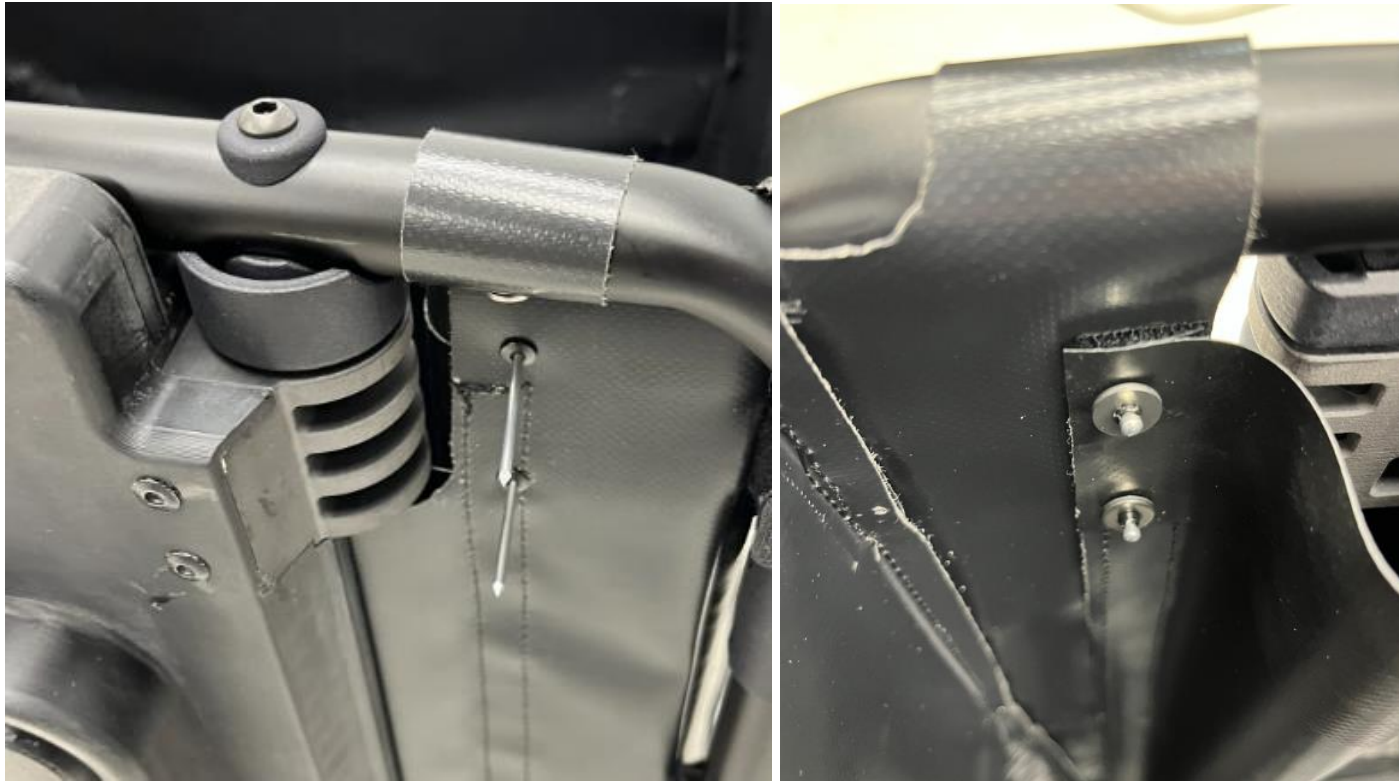
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- 4.8 Drill #20 size holes through the Fabric Bin, Patch and door hinge cover in the positions shown and install 5/32" blind rivets (VX~99-10024) through the front and use 5/32" rivet washers (VX~99-10078) on the inside.



NOTE: Use a block of wood to back up the fabric when drilling holes.

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- 4.9 Drill #20 size holes through the Fabric Bin, Patch and door hinge cover in the position shown and install 5/32" blind rivet (VX~99-10024) through the front using a 5/32" rivet washer (VX~99-10078) on this inside.




NOTE: Use a block of wood to back up the fabric when drilling holes.

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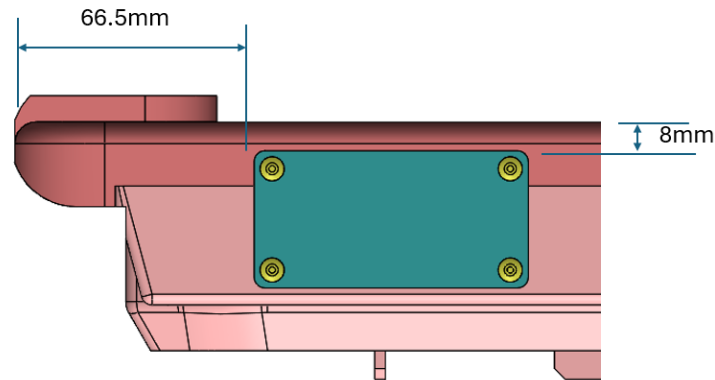
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STEP 5 INAMEPLATE INSTALLATION

- 5.1 Position the nameplate onto the Deck as shown. While holding it in position, use it as a drill guide to drill #30 sized holes into the Deck.



NOTE: Only drill holes through the first wall of Deck material.

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5.2 Install the 4 1/8" blind rivets (VX~99-10075) used to affix Nameplate to the Deck.



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REVISION HISTORY AND APPROVALS

If this document is a released alpha-revision, a record of the approvers and specifics of the approval process associated with each released version of this document is contained in the CR# listed in the table, and available for review on NOVO's online CR system.

Rev	Description	CR#	Date	Submitted By
X01	Initial Draft	N/A		