	Client: VotingWorks	Doc. No.: VWX-001-D016
	Project: Ballot Receptacle	Revision: X01
	Doc. Title: Rear Frame Assembly Instruction	Date: 11/04/2024


1.0 PURPOSE

The purpose of this document is to describe the required parts, assemblies, tools, preparation, and process to assemble the Rear Frame Assembly (VX~01-10002).

2.0 PARTS & ASSEMBLIES

2.1 Made-To-Spec (MTS)

Item Number	Description
VX~02-10007	U-Tube, Rear
VX~01-10003	Assy, Rear, Bottom Tube
VX~01-10004	Assy, Rear, Vertical Tube
VX~02-10017	Torque Inserts, Molded
VX~02-10015	Bumper, Deck Alignment
VX~02-10016	Washer, Saddle
VX~02-10029	Adapter, Plate, Trolley Handle
VX~02-10013	Slide, Scissor
VX~02-10045	Plug, Slide, Scissor
VX~02-10014	Link, Deck
VX~02-10006	Assy, Deck Tube

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2.2 Off-The-Shelf (OTS)

Item Number	Description
VX~99-10019	Wheel
VX~99-10022	Pop Rivet, 1/8 IN x 0.275 IN
VX~99-10023	Pop Rivet, 1/8 IN x 1.125 IN, AL
VX~99-10027	Washer, Rivet, 0.125 IN, 18-8 SST
VX~99-10024	Pop Rivet, 5/32 IN x 0.362 IN
VX~99-10025	Pop Rivet, 3/16 IN x 1.075 IN
VX~99-10026	BHCS, M6 x 40 mm, 18-8 SST
VX~99-10028	Foot, 1.0 IN Tube
VX~99-10123	BINDING SCREW, 6MM, 30MM, 18-8 SST
VX~99-10132	WASHER, M4, 12mm OD, 18-8 SS
VX~99-10133	SPACER, UNTHREADED, 6mm OD, 4mm L, M4, 18-8 SS
VX~99-10134	BHCS, M4x10mm, 18-8 SS
VX~99-10135	Thread Locker

3.0 TOOLS

3.1 Made-To-Spec (MTS)

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Item Number	Description

3.2 Off-The-Shelf (OTS)


Supplier	Part Number	Description
ZIPP	ZT1017VS	PNUEMATIC BLIND RIVET TOOL
-	-	4MM HEX WRENCH
-	-	2.5MM HEX WRENCHES (QTY 2)

4.0 PREPARATION

Ensure that the straight tubes have the star nuts installed per Tube Nut Assembly Instruction (VWX-001-D020). The blind rivet tool requires 1/8", 5/32" and 3/16" tips.

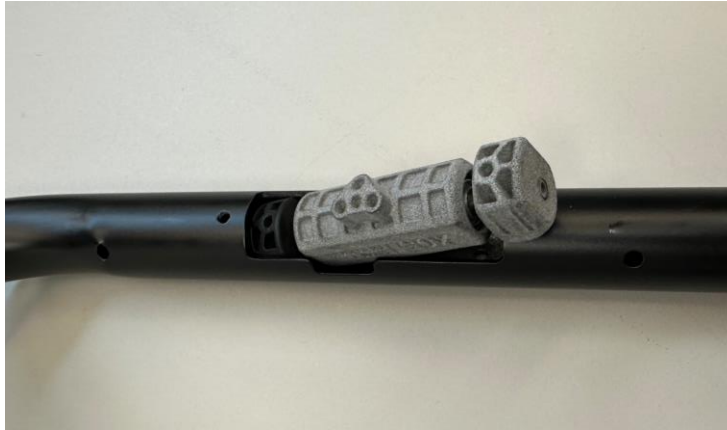
5.0 ASSEMBLY PROCESS

Assemble the Rear Frame Tube Assembly (VX~01-10002) as defined in the following steps.

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STEP 1 ASSEMBLY OF MOLDED TORQUE INSERTS

- 1.1 Insert the Torque insert Molded part (VX~02-10017) into the corresponding rear u-tube opening.




NOTE: The torque insert molded part will not fit into the frame opening unless it is inserted at an angle first

- 1.2 Align the rivet holes of the insert molded part with the corresponding holes on the rear u-tube.
- 1.3 Insert 6 blind rivets (VX~02-10022) into the corresponding holes and use the blind rivet installation tool to complete the riveting operation.

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STEP 2 ASSEMBLY OF STATIC SCISSOR SLIDES

2.1 Slide one slide scissor (VX~02-10013) onto a leg of the rear u-tube.




NOTE: Ensure the slide scissors are pointing away from the frame torque insert molded openings

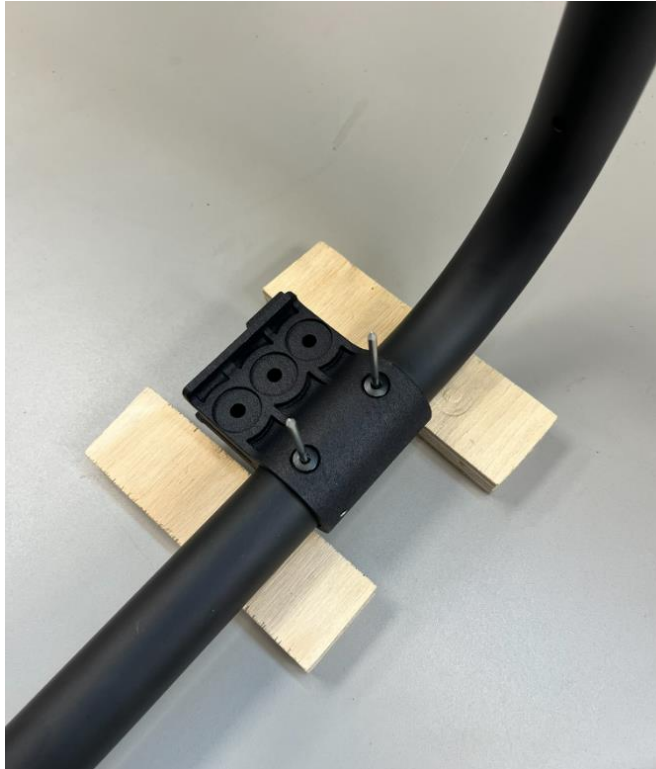
2.2 Place the assembly onto blocks on either side of the slide scissor as shown, place the slide scissor into position so that the corresponding holes are aligned, insert 2 blind rivets (VX~99-10024), and use the blind rivet installation tool to complete the riveting operation.

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NOTE: The blocks are required to ensure there is intimate contact between the front u-tube and scissor slide during the riveting operation.

2.3 Repeat 2.1 and 2.2 for the other scissor slide.

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STEP 3 ASSEMBLY OF DECK ALIGNMENT BUMPERS

- 3.1 Align two alignment bumpers (VX~02-10015) with the corresponding holes on the rear u-tube, insert 2 blind rivets (VX~99-10025) and use the blind rivet installation tool to complete the riveting operation.



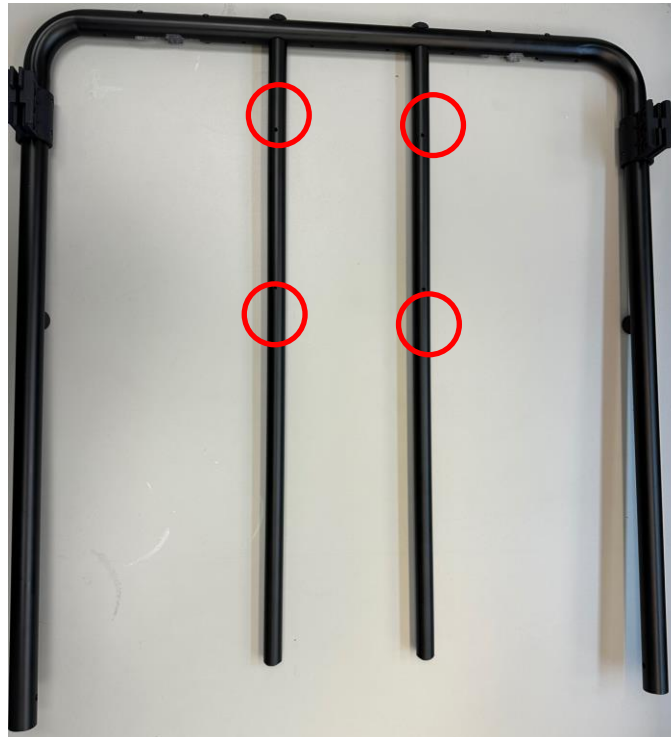
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STEP 4 ASSEMBLY OF VERTICAL REAR TUBES

- 4.1 Align two vertical rear tubes (VX~01-10004) with the corresponding holes on the frame. The vertical rear tubes will be oriented such that their holes for mounting the trolley handle adapter plate are facing upward as shown in red.



- 4.2 Insert 2 button head machine screws (VX~99-10026) with washer saddles (VX~02-10016) into the corresponding holes and use an Allen wrench to complete the fastening operation.

NOTE: DO NOT tighten the screws all the way to allow for alignment of other parts

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STEP 5 ASSEMBLY OF MOBILE SCISSOR SLIDES

5.1 Slide one slide scissor (VX~02-10013) onto each rear u-tube leg.




NOTE: Ensure both scissor slide's orientations match that of the previously attached ones. NO fastening is required.

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STEP 6 ASSEMBLY OF BOTTOM TUBE

- 6.1 Slide the rear bottom tube assembly (VX~01-10003) between the rear u-tube legs and align with the corresponding holes on the rear u-tube.




NOTE: Ensure the wheel tabs are on the same side of the frame as the bumpers and torque inserts

- 6.2 Insert 4 button head machine screws (VX~99-10026) with washer saddles (VX~02-10016) into the corresponding holes and use an Allen wrench to complete the fastening operation.
- 6.3 Complete the tightening of the vertical tubes at the top of the rear u-tube.

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STEP 7 ASSEMBLY OF TROLLEY HANDLE PLATE

7.1 Align the adapter plate trolley handle (VX~02-10029) with the corresponding holes on the vertical tubes.




7.2 Insert 4 blind rivets (VX~99-10024) into the corresponding holes and use the blind rivet installation tool to complete the riveting operation.

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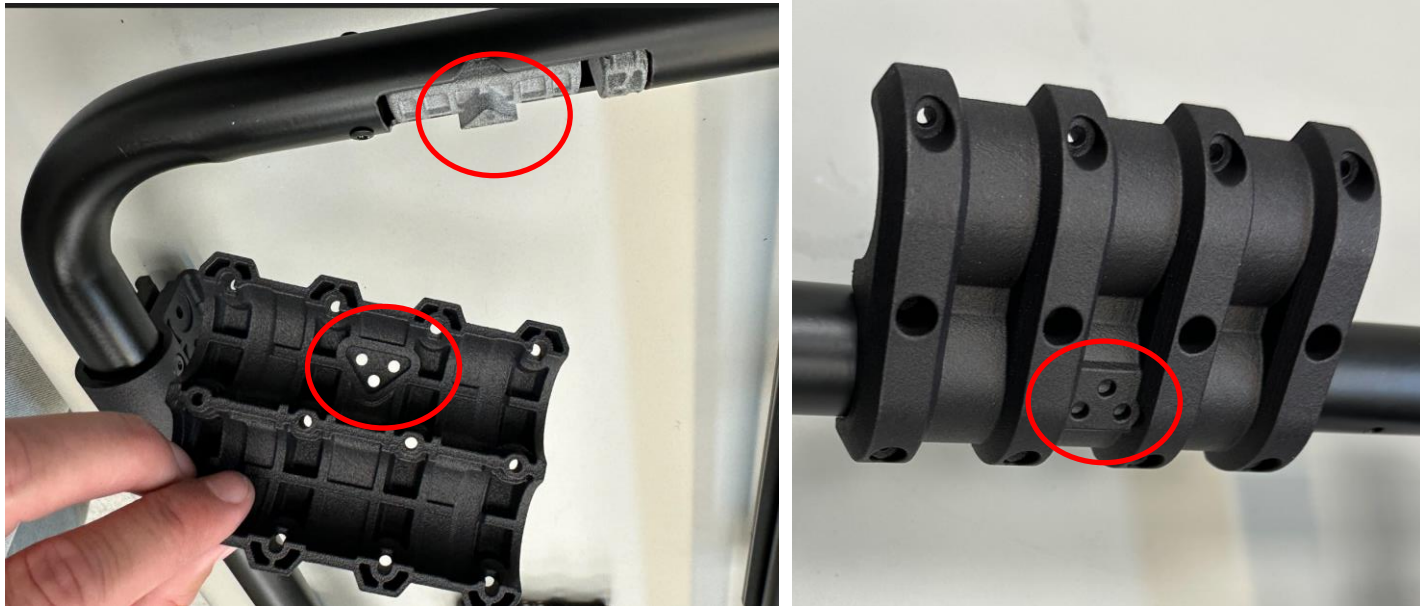
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STEP 8 ASSEMBLY OF DECK LINKS

8.1 Align deck link (VX~02-10014) with the corresponding holes on the torque insert molded.




8.2 Insert 6 blind rivets (VX~99-10022) into the corresponding holes and use the blind rivet installation tool to complete the riveting operation.

8.3 Repeat 8.1 and 8.2 for other deck link

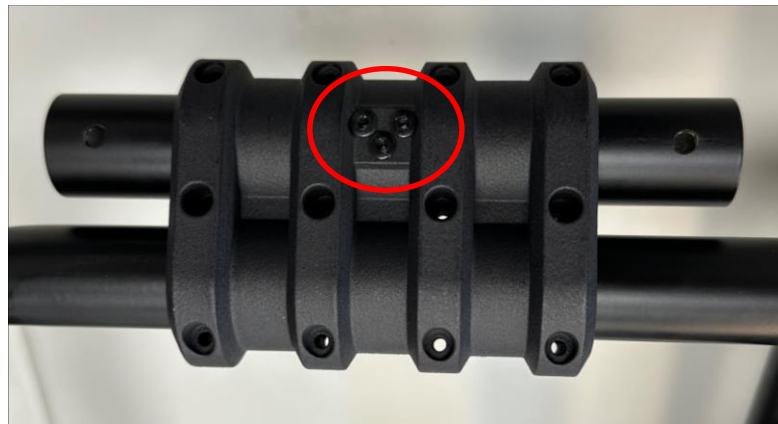
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- 8.4 Align deck tube assembly (VX~02-10006) with the corresponding holes on an attached deck link, insert 3 blind rivets (VX~99-10022) and use the blind rivet installation tool to complete the riveting operation.



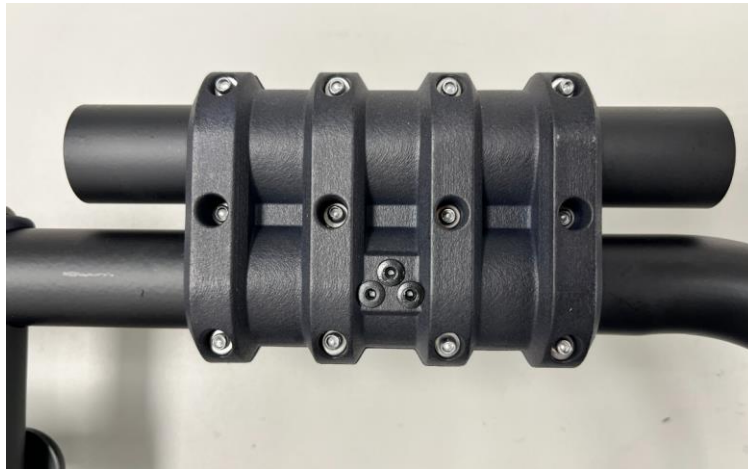
- 8.5 Repeat 8.4 to attach other deck tube assembly.

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- 8.6 Align deck link (VX~02-10014) with the corresponding holes on an installed deck link, insert 12 blind rivets (VX~99-10022) into the corresponding holes. One after another for all blind rivets, place a rivet washer (VX~99-10027) into position on the crush side of each blind rivet, then use the blind rivet installation tool to complete the riveting operation.



- 8.7 Repeat 8.6 for the other deck link.

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STEP 9 ASSEMBLY OF WHEELS

- 9.1 Place wheel (VX~99-10019) into position between the rear u-tube wheel tabs and install the shaft portion of binding screw (VX~99-10123) through the outside wheel tab and wheel axle.




NOTE: The screw side of the binding screw (VX~99-10123) is not used.

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9.2 Place spacer (VX~99-10133) into hole of opposite side wheel tab.



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- 9.3 Place washer (VX~99-10132) over BHCS (VX~99-10134), apply thread locker (VX~99-10135) to threads and install it into opposing binding screw. Use a 2.5mm hex wrench on each side to adequately tighten.




- 9.4 Repeat 9.1 through 9.3 for assembly of the other wheel.

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STEP 10 ASSEMBLY OF TUBE FEET


10.1 Insert one foot (VX~99-10028) onto each leg.



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STEP 11 ASSEMBLY OF SCISOER SLIDE HOLE PLUGS

11.1 Press 4 scissor slide hole plugs (VX~02-10045) into the holes of the scissor slides on one side of the u-tube as shown.




11.2 Repeat for the other side of the frame.

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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		