	Client: VotingWorks	Doc. No.: VWX-001-D024
	Project: Ballot Receptacle	Revision: X01
	Doc. Title: Torque Insert Assembly Instruction	Date: 2024-10-16

1.0 PURPOSE

The purpose of this document is to describe the required parts, assemblies, tools, preparation, and process to assemble the Molded Torque Insert Assembly (VX~02-10017).

2.0 PARTS & ASSEMBLIES

2.1 Made-To-Spec (MTS)

Item Number	Description	Reference Name
VX~02-10030	OVERMOLD, HOUSING, TORQUE INSERT	HOUSING OVERMOLD
VX~02-10031	OVERMOLD, SHAFT SIDE A, TORQUE INSERT	SHAFT OVERMOLD A
VX~02-10032	OVERMOLD, SHAFT SIDE B, TORQUE INSERT	SHAFT OVERMOLD B


2.2 Off-The-Shelf (OTS)

Item Number	Reference Name
VX~99-10033	HOUSING SCREWS
VX~99-10018	TORQUE INSERT

3.0 TOOLS

3.1 Made-To-Spec (MTS)

Item Number	Description	Reference Name
VWX-001-P048	COLLET, TORQUE INSERT	TORQUE INSERT COLLET

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3.2 Off-The-Shelf (OTS)

Supplier	Part Number	Description
-	-	Drill Press
-	-	#15 Drill Bit
-	-	Flat Head Screwdriver
-	-	Belt Sander
-	-	Vice Jaws

4.0 PREPARATION


None

5.0 ASSEMBLY PROCESS

Assemble the Molded Torque Insert Assembly (VX~02-10017) as defined in the following steps.

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STEP 1 TORQUE INSERT ASSEMBLY

- 1.1 Using the DRILL PRESS and the #15 DRILL BIT, drill out holes in SHAFT OVERMOLD A and SHAFT OVERMOLD B. Secure parts in the VICE JAWS with the flat sides facing downward.

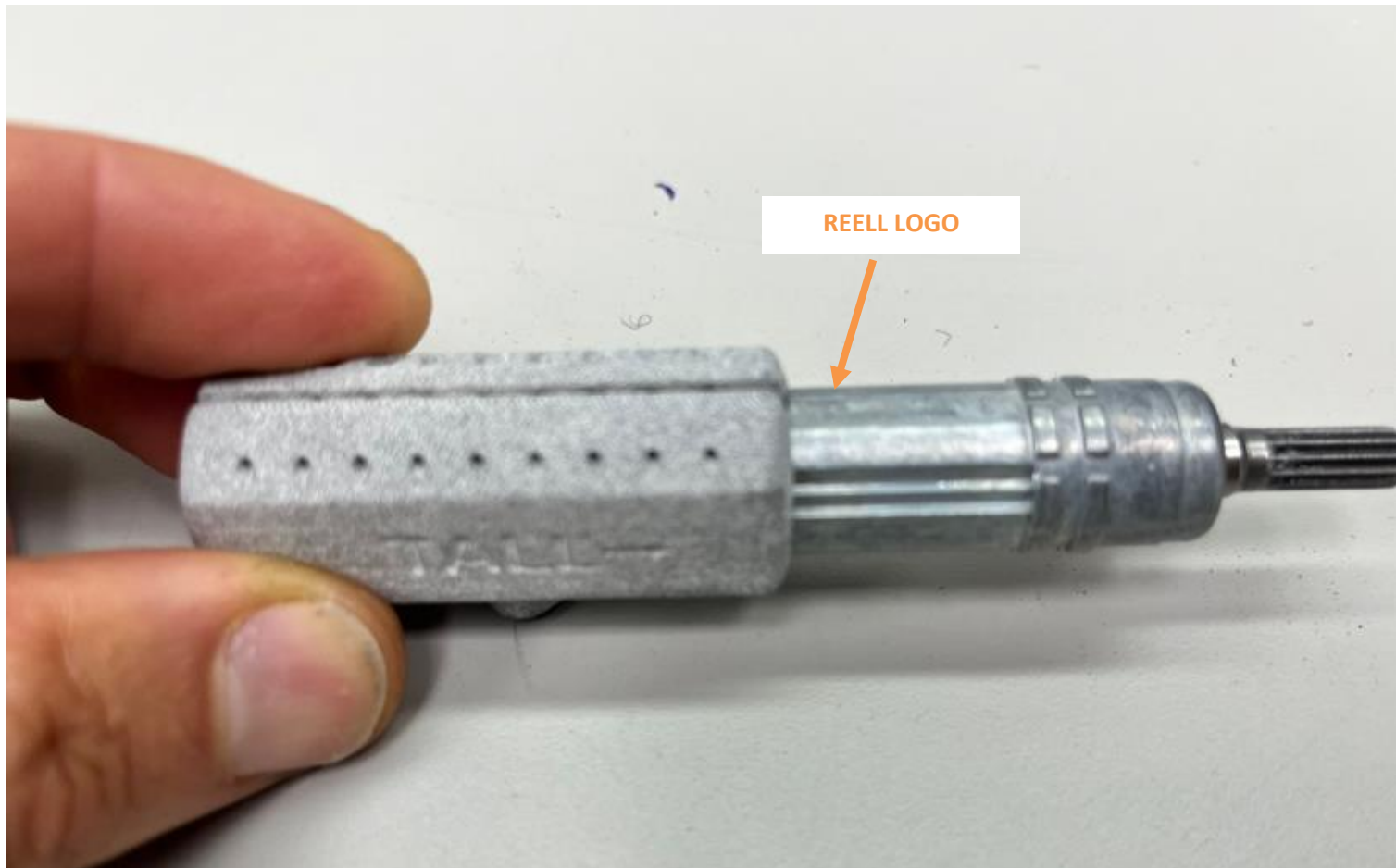


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- 1.2 Align the TORQUE INSERT with the HOUSING OVERMOLD. The TORQUE INSERT should be inserted on the side of the HOUSING OVERMOLD marked “TALL”. The “REELL” logo on the TORQUE INSERT should be aligned with the gap in the HOUSING OVERMOLD, and the side of the TORQUE INSERT without alignment rings should be inserted first.

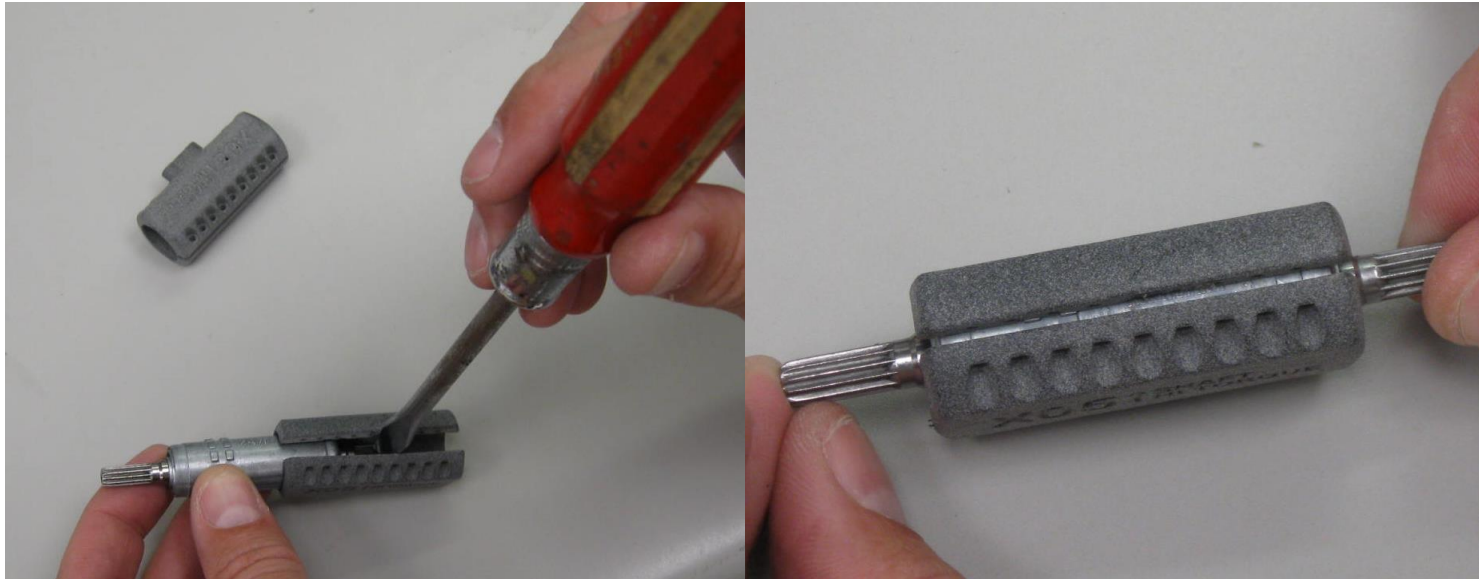


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- 1.3 Using FLAT HEAD SCREWDRIVER, pry open the HOUSING OVERMOLD and fully insert the TORQUE INSERT. When installed correctly, the HOUSING OVERMOLD should snap snugly around the TORQUE INSERT.



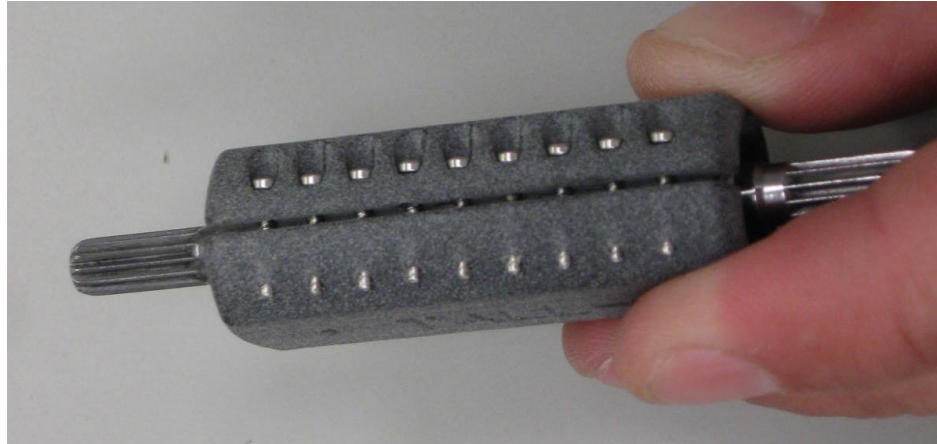
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1.4 Install 9 HOUSING SCREWS into HOUSING OVERMOLD using the following tightening pattern.

1.4.1 Tighten all screws so the screw head just touches the HOUSING OVERMOLD



1.4.2 Working in a line, slightly tighten each screw (around a half-turn)


1.4.3 Tighten back and forth in a line until the two walls of the HOUSING OVERMOLD are tightened together.



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- 1.5 Using a BELT SANDER, sand down the parts of the HOUSING SCREWS that protrude beyond the radius of the HOUSING OVERMOLD.



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1.6 Install the TORQUE INSERT COLLET into the DRILL PRESS chuck.




1.7 Secure SHAFT OVERMOLD B into the VICE JAWS with the flat side sitting on the base of the jaws.



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- 1.8 Place the semi-assembled TORQUE INSERT into the TORQUE INSERT COLLET, ensuring that the “TALL” indicator on the HOUSING OVERMOLD is pointing down.

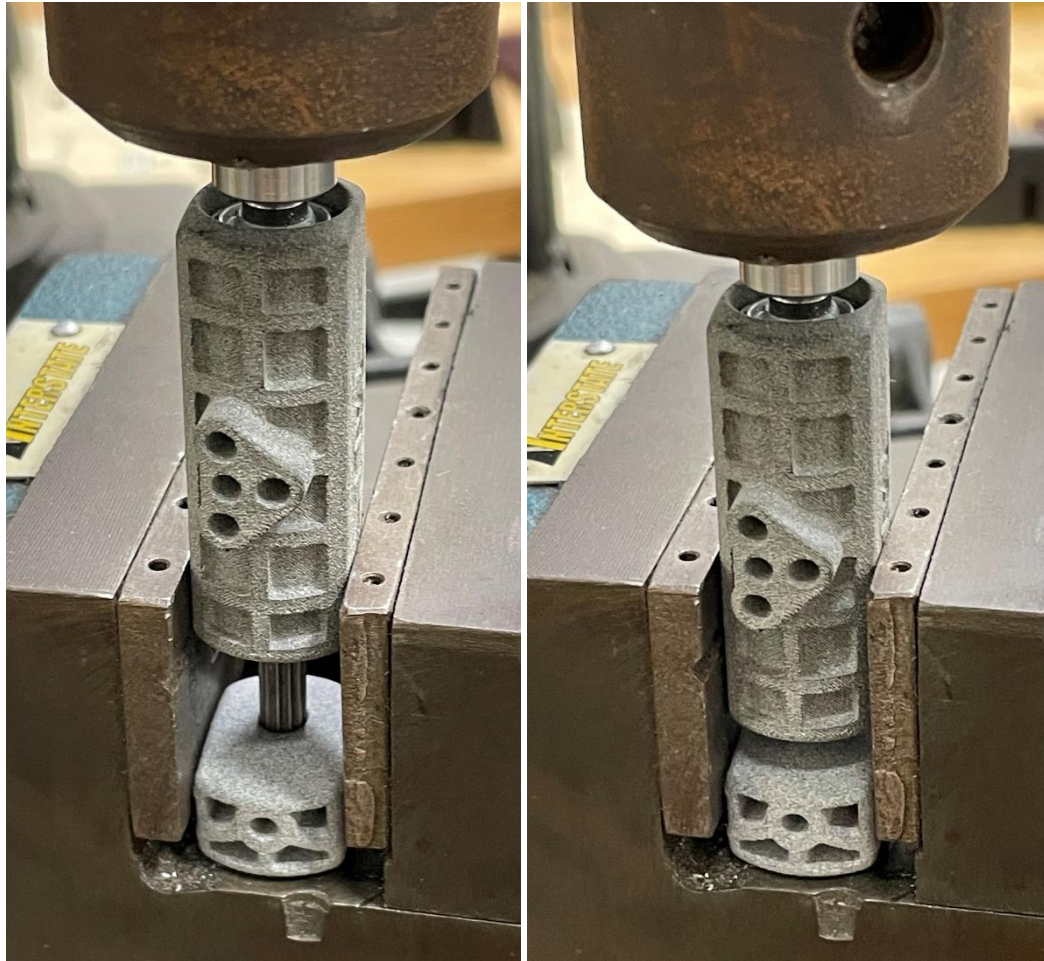


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- 1.9 Align the tall end of the SHAFT OVERMOLD B with the triangle boss on the HOUSING OVERMOLD and press the shaft into SHAFT OVERMOLD B.



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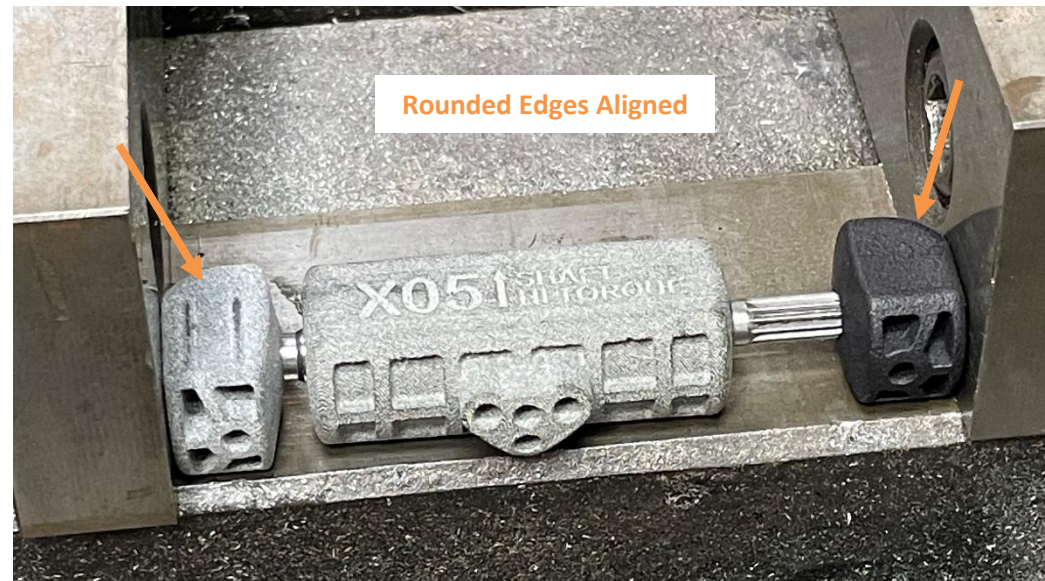
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1.10 Remove partial assembly from the TORQUE INSERT COLLET and place horizontally in the VICE JAWS.

1.11 Place SHAFT OVERMOLD A into the vice jaws with the hole aligned with the shaft. Ensure that:

1.11.1 The flat side of SHAFT OVERMOLD A faces away from the TORQUE INSERT


1.11.2 The rounded edge of SHAFT OVERMOLD A aligns with the rounded edge of the already installed SHAFT OVERMOLD B.



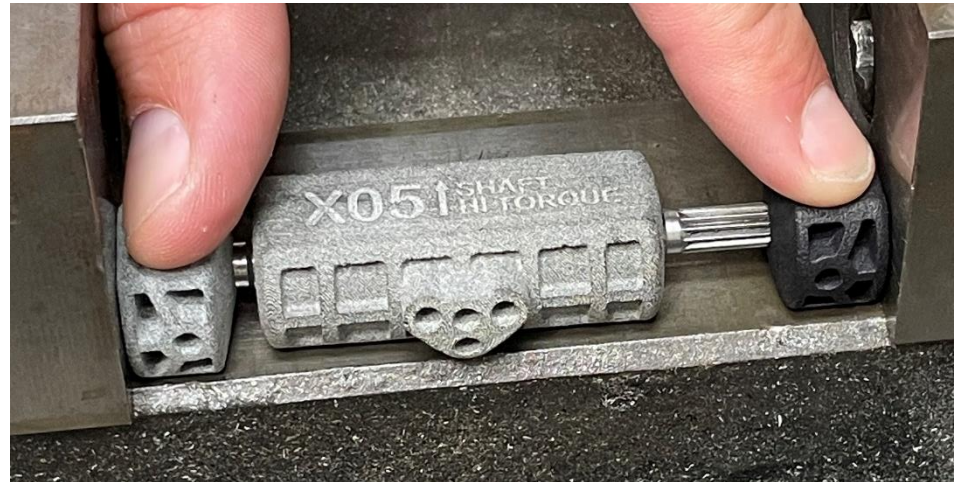
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- 1.12 Holding each shaft overmold down firmly to preserve alignment, slowly tighten the vice jaws to press SHAFT OVERMOLD A into place.



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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		