

Avery Rowan

Mechanical and product engineering generalist focused on design-for-manufacture, validation, and release-ready documentation.

Harbor City, North Coast, New Zealand - Citizenship: New Zealand

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Profile

Designed service fixtures, enclosure assemblies, and pilot-line tooling through concept, validation, and release at two New Zealand hardware companies. Cut assembly escapes by 31% through targeted design changes and shortened ECO turnaround from nine days to five at Northforge Instruments. Built fixture designs that reduced setup time by 27% and improved first-pass pilot completion from 84 to 95% through tolerance control and clear documentation.

Experience

Systems Design Engineer — *Northforge Instruments* Feb 2024 – Present
Harbor City, New Zealand

- Cut assembly escapes by 31% across two quarters through targeted enclosure and bracket design changes tracked in weekly manufacturing reviews.
- Shortened ECO turnaround from nine days to five by standardizing release documentation and coordinating directly with quality and sourcing teams.

Product Development Engineer — *Meridian Motion Labs* Jan 2022 – Jan 2024
Harbor City, New Zealand

- Improved first-pass pilot build completion from 84 to 95% through gasket stack-up standardization and cable routing simplification.
- Built CAD assemblies in Creo with GD&T callouts and authored 40+ drawing packages for prototype builds and production release.

Projects

Battery Module Service Fixture Apr 2024 – Jul 2024

- Added hard-stop alignment features that eliminated repeat adjustment steps, reducing pilot repair setup time by 27%.
- Released drawing pack and technician setup notes in one revision cycle after validating fixture with the service team.

Environmental Sensor Enclosure Refresh May 2023 – Oct 2023

- Standardized compression stack-up across three enclosure sizes using a single mirrored insert feature for cable routing.
- Improved pilot first-pass assembly completion from 84 to 95%, validated through three build cycles.

Education

Bachelor of Mechanical Engineering — Harbor Institute of Technology Mar 2018 – Nov 2021
Product Development and Manufacturing Systems

Graduate Certificate — Coastal Technical College Feb 2022 – Nov 2022
Quality Systems and Root Cause Analysis

Skills

Software SolidWorks, Creo, Fusion 360, Python, MATLAB
Methods GD&T, Design for Manufacture, Root Cause Analysis, Test Planning, Design of Experiments
Domain Engineering Change Control, BOM and Release Documentation, Validation Reporting
Strengths Technical Writing, Cross-functional Collaboration