Carolyn Parker

Mechanical Engineer

Mechanical engineering lead with 14 years across aerospace, energy storage, and industrial automation. Runs cross-functional design teams of 6 to 10 engineers and owns the technical roadmap from architecture through sustaining. Hands-on enough to redline a drawing, strategic enough to defend a program budget to the CTO.

Contact Information

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Education

- M.S. Mechanical Engineering, Arizona State University, 2012
- B.S. Mechanical Engineering, University of California, San Diego, 2010
- PE Mechanical, California (active)

Key Skills

- Engineering team leadership (6-10 engineers)
- Program technical ownership, gate reviews
- SolidWorks, NX, Teamcenter, Windchill
- ANSYS Mechanical, Fluent (thermal/CFD)
- ASME Y14.5 GD&T, ANSI B11 safety standards
- UL 9540, DO-160, IPC-A-610 familiarity
- Supplier strategy, make vs. buy analysis
- DFMEA, pFMEA, 8D root cause
- Budget and schedule ownership ($1M+ programs)
- Hiring, mentorship, performance reviews

Professional Experience

MECHANICAL ENGINEERING LEAD | SUNDIAL ENERGY STORAGE, PHOENIX, AZ
2022 – PRESENT

- Lead a team of 8 mechanical engineers and 2 designers on a 1.5 MWh stationary battery enclosure, from architecture through UL 9540A testing.
- Set the thermal architecture (immersion cooling) that holds cell temperature spread to under 3 degrees C across a full rack.
- Closed a $480K tooling overrun by renegotiating with two molders and consolidating four brackets into one casting.
- Run technical review boards twice a month and own the program-level risk register with the PMO.
- Hired 4 engineers in 18 months and rebuilt the design review checklist after a field failure on the gen-1 product.

PRINCIPAL MECHANICAL ENGINEER | MIRAGE AEROSPACE SYSTEMS, TUCSON, AZ
2018 – 2022

- Architected the structural and thermal design of a SATCOM gimbal assembly that passed DO-160G environmental testing on first attempt.
- Led the cross-functional team that delivered EMI/EMC remediation for a satellite ground terminal, recovering an 11-week schedule slip.
- Owned the technical relationship with three machined-part suppliers; brought a critical billet aluminum housing in-house when lead times slipped.
- Wrote and defended the engineering portion of two ITAR-controlled proposals totaling $12.7M in awarded work.
- Mentored 6 engineers, two of whom were promoted to senior.

SENIOR MECHANICAL ENGINEER | GREYWALL INDUSTRIAL AUTOMATION, SAN DIEGO, CA
2014 – 2018

- Led the mechanical design of a robotic palletizer cell installed at 7 distribution centers across the western US.
- Owned safety guarding design to ANSI B11.19 and worked directly with the customer's safety officer through buyoff.
- Built a parametric SolidWorks model that cut quote-stage layout time from about 3 days to half a day.
- Trained the field service team on alignment procedures, reducing post-install service calls noticeably in year two.

MECHANICAL ENGINEER | FOOTHILL TEST EQUIPMENT, SAN DIEGO, CA
2010 – 2014

- Designed pneumatic and electromechanical test fixtures for automotive sensor manufacturers.

- Released over 400 production drawings under company GD&T standard and led the rollout of a PDM vault.
- Supported root cause analysis on three field failures, including a recurring weld crack traced to fixture overconstraint.