

Derek Washington

EQUIPMENT ENGINEER

📍 Chandler, AZ

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Skills

Troubleshooting

Root Cause Analysis

Preventive Maintenance

Mechanical Systems

Vacuum Systems • SolidWorks

AutoCAD • Excel • PowerPoint

Communication Skills

Summary

Equipment engineer with 6 years supporting semiconductor and thin-film tools, now responsible for 22 etch and deposition tools in a 24/7 fab. Owns troubleshooting, preventive maintenance plans and root cause analysis, and has raised fleet uptime from 88% to 94%. Strong in mechanical systems, vacuum systems and RF, with SolidWorks and AutoCAD for tool changes.

Experience

Equipment Engineer

05/2022 - Present

Sonoran Semiconductor Fabrication

Chandler, AZ

300mm wafer fab with 1,800 employees.

- Own uptime for **22** etch and deposition tools, raising fleet availability from 88% to 94% in 2 years.
- Lead troubleshooting on vacuum, RF and robot faults with technicians, cutting mean time to repair 30%.
- Rewrite preventive maintenance procedures for 6 tool types, removing 400 hours of tool downtime a year.
- Design brackets and shields in SolidWorks for 5 tool modifications approved through change control.

Equipment Engineer I

06/2020 - 04/2022

Desert Crystal Electronics

Tempe, AZ

Thin-film coating and electronics plant.

- Completed root cause analysis on 35 chronic tool alarms and permanently fixed 28 of them with design changes.
- Installed and qualified 4 sputter tools with vendor engineers, each released to production on schedule.
- Tracked tool downtime in Excel and shared weekly PowerPoint reviews with the production manager.
- Drew AutoCAD utility hookup drawings for 10 new tool installs and reviewed them with the facilities team.

Equipment Engineering Intern

05/2019 - 08/2019

Valley Thin Film Systems

Mesa, AZ

Summer internship at a vacuum coating equipment builder.

- Leak-checked 30 vacuum chambers with a helium detector before customer shipment.
- Documented 12 pump and valve rebuild procedures with photos for field technicians.
- Built an Excel tracker for 150 spare parts used during factory acceptance tests.

Education

Bachelor of Science

05/2020

Arizona State University

Tempe, AZ

Mechanical Engineering