Mechatronics Design Engineer

End-Effectors and Service Cell · Founding Team 2027 · AUX-ENG-SD-02

Reference	AUX-ENG-SD-02	**Level**	Mid to senior, 5+ years
Reports to	Dr. Mamdouh Yanni, Founder and CTO	**Location**	On site in Dubai, at the first service bay and the pilot workshops
Employment	Full time, UAE employment contract	**Start**	Among the first hires once our Seed round closes (target 2027)

About Auxionetics

Auxionetics Artificial Intelligence L.L.C S.O.C is an IP-led robotics company in Dubai. Our patent-pending technology aims to let people and robots work safely side by side, and its first use will be the Smart Robot Mechanic: a car-service bay in which two collaborative arms will take on the repetitive, physically demanding work while a skilled technician stays in charge of every job. Six US patent applications and an international (PCT) application have been filed. We will run our own workshops in Dubai and license our Human-Robot Collaboration platform once it runs reliably in daily operation.

Why this role matters

A robot is only as useful as the tools at the end of its arm. You will design the end-effectors, fixtures and cell hardware that let our robots drain oil, change filters and handle wheels safely, reliably and fast, and you will turn the bay layout into hardware we can build, assess and replicate.

What you will own

- **End-effectors.** Design the service tools: socket and fastening tools, filter handling, fluid capture and wheel handling, with quick-change interfaces.
- **Cell layout.** Engineer the bay layout around the vehicle lift: arm mounting, reach and clearance studies, cable and hose routing, guarding.
- **Fluids and contamination.** Design for oil, heat and dirt: sealing, drip containment, cleanability and safe handling of hot fluids.
- **Analysis.** Run tolerance stack-ups, load and fatigue checks, and design-for-maintenance reviews.
- **Build and test.** Release drawings and bills of materials, work with suppliers and the Robotics Technicians, and test prototypes on real vehicles.
- **Safety file.** Produce the mechanical inputs to the risk assessment and the technical file for the bay's safety assessment.
- **Interns.** Mentor our summer intern AUX-INT-SD-01 each year: a defined 16-week project, weekly reviews and the final assessment.

Minimum qualifications

- A degree in mechanical or mechatronics engineering.
- 5+ years designing end-of-arm tooling, automation equipment or robotic cells taken into production.
- Expert 3D CAD (SolidWorks, Creo, NX or Inventor), GD&T and drawing release.
- Practical knowledge of machining, sheet metal, pneumatics and fastening.
- Clear written English.

Preferred qualifications

- Automotive service or production equipment experience.
- Tool changers, compliance devices and force-controlled fastening.
- Machinery safety design (ISO 12100, ISO 13849).
- Rapid prototyping and design for low-volume manufacture.

Your first year

By	What success looks like
3 months	Bay layout and first tool concepts reviewed; long-lead parts ordered.
6 months	First tool set built and running on test vehicles; design changes driven by measured results.
12 months	Bay hardware frozen for the pilot workshops, with a complete technical file and a replicable bill of materials.

How we work

- Safety by design. The bay will be engineered to ISO 10218-1/-2:2025 from day one; all work near robotic equipment follows a documented risk assessment and safety induction.
- **Measured, not claimed.** Targets are measured on real vehicles; simulation before hardware, review before merge.
- **Planned tools:** 3D CAD and PDM, FEA where needed, rapid prototyping, supplier machining.

What we offer

- A founding role, working one-to-one with a founder who has almost 30 years of engineering experience, including 12 in Silicon Valley.
- Named-inventor recognition for inventions you contribute to.
- A competitive salary; company-paid visa, work permit and health insurance; annual leave and end-of-service gratuity under UAE law.

Conditions. Every offer is conditional on the close of our Seed round, satisfactory checks, a UAE work permit, and an agreement assigning to the company the IP created in employment.

> **How to apply.** Email your CV and a short note, with images if possible, on the most relevant hardware you have designed to careers@auxionetics.com, quoting AUX-ENG-SD-02. Shortlisted candidates will have a technical interview and a design review of their past work with Dr. Mamdouh Yanni. CVs are used only for recruitment and deleted within 12 months unless the candidate joins us. **Auxionetics is an equal-opportunity employer** and selects on merit alone.