Date: 17th July 2023

Ref: Propulsion Engineer



Propulsion Engineer

Role Description

The **Propulsion Engineer** is a full-time role that works within the engineering team to support thruster design, build and qualification. This includes both analytical design tasks, as well as hands-on tasks such as assembly and test preparation.

As part of the engineering team within a small dynamic startup, this role will also engage directly with Protolaunch's institutional partners (ESA, UKSA, etc) and customers.

About Protolaunch

Protolaunch is a chemical propulsion startup developing new thruster technology for in-space mobility targeted for In-Orbit Servicing and Manufacturing markets. Protolaunch operates a dedicated Propulsion Test Facility located at E-Site, Westcott Venture Park, Buckinghamshire, UK with nearby office space also located at the Venture Park.

Originally founded in 2019, Protolaunch has recently secured significant funding (>£1m) for growth to commercialise our in-house *FOx* propulsion technology. The company is undertaking a substantial R&D program to progress the thruster technology from TRL 4 to TRL 7. As part of this period of growth, plans are underway to grow the Protolaunch team to 5-7 people by the end of 2023. This is a transitional period for the company moving from a very small team delivering project-based work for global customers, to a rapidly growing company delivering specific propulsion products. We have the resources available and need to build the team to deliver.

This role of **Propulsion Engineer** will be one of the early employees at the company beyond the original founders and will be a core part of the team. We're looking for someone motivated to get stuck in during the early days of a startup, prepared to accept a high-level of responsibility, and who is excited at the prospect of building a high growth Newspace company. A compensation package combining a competitive salary with company stock options is designed to reflect the business-building nature of this role. As we are in the early stages of building the team a range of experience will be considered and compensation tailored to match. We want great people with experience working with propulsion systems. As additional team members are employed at Protolaunch, this role will have a clear path for career progression to be a senior member of the growing engineering team.

Job Details

Job Location

Combination of in-person and remote working. 2 or 3 days per week in-person work is expected in the Westcott Office or at the Test Facility as required with flexible hours, but the option to come into the office 5 days a week is available.

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During test campaigns, and other times as needed, you will be required to travel to Westcott Venture Park, Aylesbury, Buckinghamshire, on a daily basis to undertake propulsion testing. It is very difficult to travel to and from Westcott Venture Park without your own vehicle.

Job Responsibilities

Protolaunch is a small dynamic startup and so all roles are expected to help colleagues and support work on other tasks according to business needs.

Compared to working at a large space sector Prime, Protolaunch can offer you the chance to move incredibly quickly and own all aspects of the design and test process. If you are frustrated by slow moving processes at a larger space company, come to Protolaunch and implement the process how you would like to see it work.

For this role in particular, the primary responsibilities and measurements of success are:

- Taking ownership of design tasks performing supporting design calculations, CAD work, and documenting design process.
- Taking ownership of sub-systems all the way through the process from design, to manufacturing, to hot-fire testing.
- Preparing BOMs, sourcing components, and inspecting components on delivery.
- Designing test and qualification procedures for subcomponents.
- Operating test stand equipment with limited direction.
- Take direction and balance multiple projects.
- Operate effectively in a dynamic team.
- Professionally engage with commercial and institutional partners as provided.

Essential Skills & Qualifications

- Masters degree in an Engineering discipline or equivalent subject.
- >1year previous experience in a relevant industry (space sector strongly preferred).
- Motivated to work in a small company with a rapidly changing startup environment.
- In-depth and numerical understanding of thermodynamics as applied to rocket propulsion systems.
- Experience designing/assembling pressurised fluidic systems.
- Passionate about space, curious and eager to learn.
- Take ownership and accountability for your own actions and mistakes.
- Can-do attitude and outstanding communication skills.
- Fluent English.

Desirable Skills

- Python programming language.
- Solidworks CAD experience.
- Hands on practical experience building things.

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Applicants should email a cover letter and CV to careers@protolaunch.co.uk. A start date of September 2023 is desirable.