

Powertrain Electrical Engineer

INTRODUCTION

- Responsible for providing an electrical systems platform and calibration. The system to include engine control, transmission control, battery control, human machine interface, sensors and actuators.

SCOPE OF JOB

- Define system electrical architecture, functionality and connectivity.
- Responsible for packaging of all components.
- Define specific software or hardware functions. Develop and validate where appropriate.
- Conduct system FMEA's.
- Support simulator and pre-production vehicle builds and feedback learning into the design process.
- Perform root cause investigation and analysis on vehicle issues.
- Plan and execute component validation activities through simulation, laboratory experiments and on-vehicle tests.
- Investigate in-field issues, identification of root causes and introduction of remedial actions.
- Troubleshooting of electrical vehicle systems during production launch especially CANBUS.

QUALIFICATIONS AND PREVIOUS EXPERIENCE

- Degree in Engineering.
- Chartered Engineer or working towards.
- Demonstrated experience working in automotive or defence.
- Knowledge of vehicle communications networks and diagnostic protocols.
- Detailed understanding of J1939 CAN and the integration and set up of CAN devices.
- Use of diagnostic tools such as CANoe and INCA would be an advantage.
- Proven troubleshooting.
- Knowledge and experience of latest vehicle electronic systems.
- Relevant knowledge and experience of either engine management or automatic transmission control.
- Appreciation of sensor and actuator technologies and the methods of interfacing such components.
- Conversant with electronic hardware and software design processes.
- Ideally, good understanding of EMC design and validation.
- Ability to read and interpret electrical technical drawings.
- Familiarity with methods for specification and modelling such as MATLAB Simulink, Stateflow would be an advantage.
- Ideally have experience of Hardware in the Loop (HiL) testing using a dSPACE environment.
- Knowledge and appreciation of vehicle packaging issues.