

CURRICULUM VITAE

DARCY SHEPHERD

Mechanical Engineer – Design, Testing and Simulation

Bachelor of Engineering (Mechanical) (Hons), RMIT University, 2021



PROFESSIONAL HISTORY

April 2023 - onwards

Engineer, Smedley's Engineers

October 2021 - April 2023

Graduate Engineer, Smedley's Engineers

November 2021 onwards

Motorsport Performance Engineer, Garry Rogers Motorsport

July 2021 – September 2021

Engineering Intern, Garry Rogers Motorsport

SPECIFIC TECHNICAL EXPERTISE

BricsCAD, Spaceclaim and Solidworks Intermediate-level

ANSYS static linear and non-linear finite element analysis of static structures

Data logging and field testing

Vpath4 software package for swept path analysis

Coordinate system, GIS-integration CAD

Motorsport vehicle dynamics & chassis tuning

DETAILED PROFESSIONAL EXPERIENCE

Smedley's Engineers (October 2021 - onwards) – Engineer and Graduate Engineer

- Conducted static FE analysis on multiple towbar designs for ADR62/02 approval.
- Conducted static FE analysis on full tipper trailer to analyse chassis failure points.
- Conducted static FE analysis on lift axle hanger assembly.
- Contributed to the development of static non-linear FE analysis for FUPD ADR84 approval.
- Conducted FE validation of omnibus rollover protection hoops integrating data from destructive testing of plastic hinge joints.
- Conducted FE analysis on earthquake, hydrostatic, pressure, lifting and roof loading conditions of 60 kL grease tank for Phoenix Power Recyclers.
- Developed 3D parametric models of pipework and mechanical layout for Southern Downs Regional Council, Leslie Dam RWPS project including temporary bypass pumping.



- Developed 3D parametric model and fabrication drawings for multiple SPS pit covers for Townsville City Council.
- Produced GIS-integrated drawings for land management and development site plan drawings.
- Conducted extensive physical data acquisition testing of an alternative heavy vehicle air suspension control system.
- Lead the data acquisition section of a project on road train combinations in Darwin, NT to revise the Australian Standard for heavy vehicle tow couplings.
- Assisted in the design and manufactured of load sensing components, isolator box and network electrical cabling used in physical data acquisition projects.
- Conducted vehicle swept path simulation using Vpath4 software package.
- Created vehicle layout drawings for PBS assessment.

Garry Rogers Motorsport (July 2021 – September & November 2021– onwards) – Performance Engineer and Intern

- Motorsport performance engineering – TransAm Australia, S5000 Australia
- Produced general fabrication drawings for miscellaneous parts.

