

# MacDon Industries - Electrical Design Engineer

## Job details

### Job type

- Full-time

### Shift and schedule

- Monday to Friday

## Location

680 Moray Street, Winnipeg, MB

## Full job description

### PURPOSE and SCOPE:

Participate as part of a team in the development and continuous improvement of innovative, class leading agricultural product designs for the Ag/Heavy Duty Off-Road machinery market. Team compositions vary and change from time to time, but will involve multiple engineers and technologists, team leaders, prototype shop and test personnel, supply/marketing/product support/publications/manufacturing and other specialists. Position will be based in Winnipeg, MB.

As a central Production Engineering resource, the specialist will work to maintain electrical system designs across product families. His/her activities will range, depending on the concern, from consulting on the components, subsystem, or system, to reviewing the entire system. Close communication and coordination will be required between the specialist and the Design Engineering Electrical Group and Product Engineering Managers (PEMs).

### PRIMARY RESPONSIBILITIES:

Participation as a team member in all team project activities as identified, including but not limited to:

- Perform control system audits, troubleshooting and performance/maintenance updates on product designs.

- Use CAD systems to create and revise electrical schematics, wire harness drawings, installation assembly drawings.
- Write requirements, technical documentation, Engineering Change Requests and Engineering Change Notices.
- Participate in design reviews, risk assessments (DFMEA) & work with Design Engineering on standards and specification maintenance.
- Assist in development and implementation of validation plans (unit testing, HIL, SIL, DVT).
- Liaise with Design Engineering, Supplier Quality and Vendors to ensure parts integrity is in alignment with specifications.
- Hands on rework and commissioning of electrical harnesses and control system assemblies.
- Continuous learning of MacDon and competitive products.
- Other duties as assigned.

## **QUALIFICATIONS:**

### **Required Qualifications**

- Graduate of an accredited Engineering or Technology program.
- P. Eng. or eligible for registration with EGM / C.E.T. or eligible for registration with CTTAM.
- Experience with electrical schematics & wire harness designs.
- Valid Class 5 driver's license.
- Valid passport and available for occasional travel.

### **Preferred Qualifications**

- 3-5 years previous experience in related work.
- Exposure to the following standards:
- SAE J1939 CAN, SAE J1455 Environmental, ISO25119 (ISO26262) Functional Safety, ISO 14982 EMC, ISO 11783 ISOBus.
- Experience with Zuken E3 and Solid Edge or similar CAD systems.
- Experience in ag/heavy duty off-road machine design, or a strong background in mechanical/hydraulic/electrical systems.
- Exposure to software design.

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Work Location: In person

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