

Nikhil Young

📞 (309) 555-7428 ✉️ nikhil.young@example.com 💼 linkedin.com/example/nikhilyoung 📍 Normal, IL 61761

SUMMARY

Manufacturing engineer with six years supporting **electric motor** and electromechanical assembly operations across safety, quality, cost, and velocity objectives. Builds stable production processes through **standard work**, routings, **work instructions**, BOM and MBOM alignment, tooling, ergonomics, PFMEA, control plans, and process flow documentation. Resolves recurring shop floor issues through **root cause analysis**, engineering print review, operator input, practical corrective action, and clear stakeholder communication. Leads NPI, APQP, PPAP, in process validation, capacity planning, capital justification, Lean Manufacturing, 6 Sigma, Poka Yoke, and continuous improvement efforts. Collaborates effectively with operations, design engineering, logistics, supply chain, safety, quality, and product change control teams. Ready to contribute sound technical judgment and practical process leadership within a demanding electric motor manufacturing environment.

EXPERIENCE

Senior Manufacturing Engineer, Electric Motor Assembly

February 2024 - Present

VectorDrive Manufacturing

Peoria, IL

Own **manufacturing engineering** support for **electric motor assembly** cells, guiding process stability, documentation, capital planning, NPI readiness, and cross functional problem solving. Partner with operators, production leaders, quality, design engineering, logistics, safety, and supply chain teams to protect production performance and improve practical execution.

- Owned electric motor cells, balancing safety, quality, cost, and velocity for production leadership.
- Resolved assembly issues through root cause analysis, print review, and corrective tooling actions.
- Maintained standard work, routings, BOM, MBOM, PFMEA, **control plans**, and process flow records.
- Led NPI readiness through APQP, PPAP, in process validation, and production handoff activities.
- Built capital proposals for **lifting devices**, tooling, equipment replacement, and assembly improvements.
- Applied **Lean Manufacturing**, **6 Sigma**, Poka Yoke, and RPA concepts to repeatable production tasks.

Manufacturing Engineer, Electromechanical Assembly

July 2022 - January 2024

Midwest Electromechanical Systems

Bloomington, IL

Supported multiple electric motor and **electromechanical assembly** workstations, translating engineering requirements into executable methods. Coordinated process changes, tooling qualification, documentation, capacity analysis, training readiness, and stakeholder alignment across operations, safety, design engineering, logistics, and supply chain.

- Supported motor assembly workstations, converting engineering requirements into practical shop floor methods.
- Investigated **safety, quality**, velocity, and cost concerns using evidence and operator feedback.
- Revised work instructions, **routings**, PFMEA, control plans, flow diagrams, and **BOM** documents.
- Qualified assembly **tooling** and error proofing features through in process validation trials.
- Coordinated approved changes across operations, safety, design, supply chain, logistics, and training.
- Used Excel analysis to compare capacity constraints and equipment alternatives for improvement projects.

Associate Manufacturing Engineer, Motor Components

October 2020 - June 2022

Prairie Motion Components

Decatur, IL

Supported motor component and electromechanical assembly processes while developing practical capability in prints, Bills of Materials, tooling, documentation, Lean events, and corrective action. Contributed to supervised trials and production improvements that strengthened workstation organization, process clarity, ergonomic awareness, and visual controls.

- Supported motor component processes, building practical knowledge of tooling, prints, and Bills of Materials.
- Updated **standard work** after supervised trials, incorporating operator feedback and engineering requirements.
- Collected defect and downtime observations, supporting root cause reviews for recurring production issues.
- Maintained **PFMEA**, **control plans**, flow diagrams, and routing documentation during product changes.
- Supported Lean events focused on workstation organization, material movement, **ergonomics**, and visual controls.
- Evaluated fixture and **Poka Yoke** concepts through trial builds and documented production results.

PROJECTS

Electric Motor Assembly Capacity Expansion 📅 2024

Aligned equipment readiness, capacity needs, tooling requirements, and production handoff activities for expanding motor assembly capability. Practical planning connected safety, quality, cost, and velocity priorities.

Poka Yoke Validation Program 📅 2023

Developed and evaluated error proofing concepts through trial builds and in process validation. Clear evidence supported tooling decisions and steadier assembly execution.

LEADERSHIP & AWARDS

- Lean Six Sigma Green Belt recognition, earned through applied process improvement work in 2023.
- Senior engineering leadership recognition for practical electric motor assembly support and cross functional problem solving.
- Production team recognition for improving documentation clarity, tooling readiness, and shop floor communication.

EDUCATION

Bachelor of Science in Manufacturing Engineering
Bradley University GPA: 3.5
Coursework: Lean Manufacturing, process design, quality systems, production engineering

2020
Peoria, IL

CERTIFICATIONS

- Lean Six Sigma Green Belt 📅 2023
- PFMEA and Control Plan Practitioner Training 📅 2022

TECHNICAL SKILLS

- **Manufacturing Systems:** VPPA, MESA, Capp+, PINpoint
- **Microsoft Office:** Excel, Word, PowerPoint
- **Quality Planning:** APQP, PPAP, CQMS
- **Failure Analysis:** PFMEA, SFMEA, root cause analysis
- **Process Documentation:** Standard work, routings, work instructions
- **Production Modeling:** BOM, MBOM, process flow diagrams
- **Lean Methods:** Lean Manufacturing, 6 Sigma, Poka Yoke
- **Validation Methods:** In process validation, control plans, process audits
- **Assembly Engineering:** Electric motors, electromechanical assembly, tooling
- **Automation Concepts:** RPA, system controls, tooling controls

SKILLS

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|--------------------------------|---------|-------------------------|--------------------------|
| • Electric Motor Manufacturing | • NPI | • SFMEA | • Standard Work |
| • Manufacturing Engineering | • APQP | • Control Plans | • Root Cause Analysis |
| • Lean Manufacturing | • PPAP | • Process Flow Diagrams | • Continuous Improvement |
| • 6 Sigma | • PFMEA | • BOM and MBOM | |

PROFESSIONAL AFFILIATIONS

- Active collaboration with operations, quality, design engineering, logistics, supply chain, and safety stakeholders.
- Ongoing professional engagement with Lean Manufacturing, 6 Sigma, APQP, PPAP, and process quality practices.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST