

# Veronica Hartwell

## Quality Engineer

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- Quality Engineer with 6+ years driving continuous improvement and defect reduction in automotive manufacturing environments
- ASQ Certified Quality Engineer (CQE) and Six Sigma Green Belt with demonstrated expertise in IATF 16949 compliance, supplier quality management, and APQP processes
- Reduced customer complaints by 58% through systematic root cause analysis and corrective action implementation across Tier 1 supplier base
- Proven track record partnering with cross-functional teams to implement quality systems that improve process capability, reduce costs, and ensure regulatory compliance

## PROFESSIONAL EXPERIENCE

### Precision Automotive Components, Inc.

June 2020 – Present

#### Quality Engineer

- Led cross-functional 8D problem-solving teams to investigate 15+ field failures affecting customer production lines, identifying root causes through failure mode analysis and implementing corrective actions that eliminated recurrence (zero repeat failures over 24 months)
- Executed first-article inspections on 250+ incoming material lots monthly using coordinate measuring machines (CMM) and optical comparators, reducing supplier defect escapes by 41% over eight months
- Partnered with manufacturing engineering to implement statistical process control (SPC) on five critical machining operations, establishing control charts for key dimensions and training 22 operators on interpretation, which reduced process variation by 32% (Cpk improvement from 1.08 to 1.72)
- Conducted on-site supplier audits for eight critical vendors across four states, identifying 31 non-conformances and collaborating with suppliers to implement corrective actions, resulting in 45% improvement in incoming quality metrics (from 92.3% to 97.1% acceptance rate)
- Redesigned incoming inspection process using risk-based sampling methodology, reducing inspection time by 38% while improving defect detection rates by 27% and saving approximately \$95,000

## TECHNICAL SKILLS

### Quality Methodologies & Tools:

Six Sigma (Green Belt Certified), 8D Problem Solving, 5 Why Analysis, Fishbone Diagrams, Failure Mode and Effects Analysis (FMEA), Statistical Process Control (SPC), Measurement Systems Analysis (MSA), Control Plans, Process Capability Analysis (Cp/Cpk), Advanced Product Quality Planning (APQP), Production Part Approval Process (PPAP), Layered Process Audits

### Quality Management Systems & Standards:

IATF 16949:2016, ISO 9001:2015, Internal Auditing, Corrective and Preventive Action (CAPA) Systems, Supplier Quality Management, Customer Quality Requirements

### Inspection & Measurement:

Coordinate Measuring Machine (CMM) Programming and Operation, Geometric Dimensioning and Tolerancing (GD&T) Interpretation, Optical Comparators, Micrometers, Calipers, Pin Gauges, Height Gauges, Surface Roughness Testing, Functional Gauging

### Quality & Data Analysis Software:

Minitab, Microsoft Excel (Advanced: Pivot Tables, Statistical Functions, Macro Creation), SAP Quality Management Module, ETQ Reliance Quality Management System, AutoCAD (Blueprint Reading), PC-DMIS (CMM Software)

### Cross-Functional Collaboration:

Technical Report Writing, Audit

annually in labor costs

- Managed PPAP submissions for 12 new product launches, ensuring full compliance with IATF 16949 requirements and achieving 100% on-time approval rate from automotive OEM customers
- Developed and delivered GD&T training program for 18 quality technicians and inspectors, improving blueprint interpretation accuracy and reducing measurement-related disputes by 52%

## Precision Automotive Components, Inc.

March 2018 – June 2020

### Quality Technician II

- Performed dimensional inspections on machined components using micrometers, calipers, pin gauges, and CMM equipment, maintaining 99.2% inspection accuracy rate across 1,500+ monthly inspections
- Initiated and led process improvement project that identified recurring weld defect pattern through Fishbone analysis with quality team, leading to equipment modification that reduced weld rejects by 29%
- Supported internal quality audits by preparing documentation, conducting process observations, and tracking corrective actions, contributing to successful IATF 16949 certification audit with zero major findings
- Redesigned calibration tracking system using Microsoft Access database, ensuring 100% compliance during ISO 9001:2015 surveillance audit and reducing calibration lapses from 14 to zero annually
- Collaborated with purchasing and engineering teams to resolve supplier quality issues through structured 8D process, maintaining positive supplier relationships while driving 47% reduction in incoming defects over 12 months

## Industrial Solutions Manufacturing

May 2017 – August

### Manufacturing Engineering Intern

2017

- Assisted manufacturing engineers in conducting time studies and process capability analyses for three production lines, identifying bottlenecks and contributing to 12% throughput improvement
- Supported Gage R&R studies on measurement equipment for critical characteristics, collecting data and analyzing results that led to improved measurement system capability (GR&R reduction from 28% to 15%)
- Created visual work instructions and standard operating procedures for assembly operations, improving process consistency and reducing new operator training time by 18%

Communication (Internal & External), Conflict Resolution in Quality Disputes, Training & Mentoring (Quality Procedures & Systems), Supplier Relationship Management

## AWARDS & RECOGNITION

### Honda Supplier Quality Excellence Award

Honda

2023

Recognized as part of facility team achieving zero customer complaints and 100% on-time delivery for 12 consecutive months, supporting \$18M in annual production volume

### Operational Excellence Award – Quality Category

Precision Automotive Components, Inc.

2022

Awarded for leading cross-functional DMAIC project that reduced internal scrap by 34% and generated \$185,000 in annual cost savings

### ASQ Section Outstanding Young Quality Professional

Detroit ASQ Chapter

2021

Honored by Detroit ASQ chapter for contributions to quality engineering profession and commitment to continuous improvement methodologies

## EDUCATION

### Michigan State University

2017

Bachelor of Science in Industrial Engineering

East Lansing, MI

## CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

**Certified Quality Engineer (CQE)** 2021  
American Society for Quality

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**Six Sigma Green Belt** 2020  
American Society for Quality

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**Core Tools Training (APQP, PPAP, FMEA, MSA, SPC)** 2019  
AIAG Authorized Training Provider

## PROFESSIONAL DEVELOPMENT

**Advanced FMEA Training** 2023  
TÜV SÜD Academy

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**Minitab Statistical Software Certification** 2022

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**IATF 16949:2016 Internal Auditor Training** 2021

## PROFESSIONAL AFFILIATIONS

**American Society for Quality (ASQ)**  
Member  
Member since 2018

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**ASQ Detroit Section**  
Active Member  
Active Member and Volunteer

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**Society of Manufacturing Engineers (SME)**  
Member  
Member since 2017