ENGINEERING ASSISTANT

Summary

Product and Process engineer with more than three years of experience with leading projects on new product development, new model assembly launch, quality and Toyota production systems. Extensive understanding on process engineering and design and development of automotive systems.

Skills

C, R, Catia, AutoCAD, ANSYS, Microsoft office, Product Project Management, GD&T, Minitab, Kanban, Kaizen, FMEA. development. Toyota production systems, APQP, PPAP, 8D, 5 why, KPI's, Reliability SAE Standards, Vehicle ergonomics, DVP&R, QCC, CNC engineering. Programming

Experience

07/2017 to 08/2017
Engineering Assistant Company Name ï¼ City , State

- Developed Delphi's SPQVC (Safety, People, Quality, Volume & Cost) metrics to cut assembly issues by 10%.
- Developed APQP, cost estimations and integrated new fuel injectors models in the remanufacturing process line.
- Performed PFMEA, root cause analysis and lead cross functional teams to resolve quality downtime issues.
- Sustained and monitored lean manufacturing (5S, workplace safety, Kaizen, Single piece flow) and drove continuous improvement.

06/2013 to 06/2016
Engineer Company Name ï¼ City , State

- Designed, developed, tested and introduced new product in the manufacturing line.
- Developed control plans and schedules to support prototype development, pre production and zero defect production parts launc h.
- Studied market forecast, conducted benchmarking and manufacturing cost analysis for new product introduction.
- Lead APQP, DVP&R and PPAP development and conducted DFMEA for new product development.
- Scheduled and coordinated phases of project (cost, tooling, equipment,) to develop 'World class model line manufacturing' imp lementing (TPS).
- Successfully launched new product assembly project worth $100 million adhering to Toyota standards.
- Performed design reviews, documented BOM and created assembly process documentations.
- Reduced manufacturing costs by 30% by improving SQD (Safety, Quality & Delivery) KPI's metrics.
- Performed and ensured quality and reliability of processes and developed validation recovery plans.
- Spearheaded cost estimations and closure of non-conformance reports using quality tools (Pareto charts, Fishbone analysis, 8D, 5Why, FMEA).
- Developed actions for IPQPR's (In process quality problem reports), SQPR's (Supplier quality problem reports) to present to Japanese quality teams.
- Prepared product and process engineering change requests (ECR's) documentations, cost reduction proposals and presented to management.
- Developed manufacturing process layout, control plans, work instructions and PFMEA.
- Major Projects.
- University of Michigan Dearborn Product Development - Designed a manually operated juicer using CATIA V5, prototyped the part using additive manufacturing (3D Printing), used benchmarking, customer surveys, DFMEA and brainstorming methodologies to build its business portfolio using lean canvas.
- Occupant package design - Assessing driver requirements like seat track length, head clearance, entrance height, steering wheel height and diameter, accelerator heal point and other important driver's requirement to design a new compact sedan with the help of Anthropometric data and SAEJ1100v005, SAEJ1516v002, SAEJ1517v002 and benchmarking analysis.
- Vehicle package analysis and evaluation of cargo compartment - Analyzed vehicle attribute requirements like cost, quality, operation and packaging of cargo compartment by benchmarking three entry level sedans and evaluating the results using ANOVA for customer feedback reliability.
- Analysis of driver door interior trim panel using Quality function deployment (QFD) - Evaluated HMI logical layout and packaging of systems in interior trim panel by benchmarking compact sedans, interviewed customers for user experience, used QFD to take suggestions to find area of improvements.
- Exterior and mechanical package analysis - Developed interface diagram and interface matrix to represent various functions between components.
- Studied vehicle anatomy by decomposing the vehicle into systems, sub-systems, and components.
- Vehicle body side aperture spot welding - Conducted detailed analysis of spot welding of BIW, determined robot base and end effector motion and the factors for complete station design using 4M.
- Gearbox FMEA - Conducted detailed study on potential failure causes in 6X4 truck gearbox casing failure in fracture using DFMEA and PFMEA.
- Implemented DFA and DFM to derive optimal design for ease of assembly and disassembly of gearbox casing.
- Design for assembly - Proposed assembly line for plant with 138 stations for volume requirement of 240k vehicles, analyzed the JPH, throughput, bottleneck, labor hours, number of shifts and operators, length of station and line speed.
- Six Sigma - Implemented lean six sigma concepts to improve the efficiency of base coat usage at body paint shop by DMAIC methodology.

Education and Training
04/2018

Master of Science : Manufacturing Systems Engineering University of Michigan Dearborn ï¼ City , State Manufacturing Systems Engineering 06/2013

Bachelor of Engineering : Mechanical Engineering Visvesvaraya Technological University Mechanical Engineering

Skills

anatomy, AutoCAD, benchmarking, CATIA, CNC, cost analysis, ergonomics, lean manufacturing, manufacturing process, Minitab, packaging, process engineering, Product Development, surveys, validation, welding