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Electrical Engineer
Augsburger Komm Engineering, Inc.
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EDUCATION

B.S. Electrical Engineering, GMI Engineering & Management Institute (Kettering University),
Flint, Michigan

SUMMARY

Electrical Engineering professional with more than 15 years experience in the automobile industry, with assignments in manufacturing, design and testing environments. Expert at analyzing, testing and troubleshooting all aspects of a vehicle electrical system. Broad base of experience with integration and testing of electrical and electromechanical systems.

PRINCIPAL AREAS OF EXPERIENCE

Design and analysis of vehicle electrical systems. Testing and troubleshooting of vehicle electrical systems, both in the laboratory and in the field. Automated laboratory testing of software and hardware for vehicle control systems, including those for power train, HVAC, ABS, traction control and stability control. Design and testing of vehicle braking systems, Bosch CDR System.

EXPERTISE

Vehicle Electrical Systems
Laboratory Test Equipment
Charging Systems
Sensors
Displays
Automated Testing
Electromechanical Systems
Vehicle Controls
Vehicle Base Braking Systems
Vehicle Fire Investigation

LICENSES and CERTIFICATIONS

Licensed Professional Electrical Engineer in the State of Arizona. License # 53693
Certified Fire and Explosion Investigator
Certified Vehicle Fire Investigator
Bosch Crash Data Retrieval System Analyst
NGVi, Certified CNG Fuel System inspector
CDR System Operator; Collision Safety Institute

PROFESSIONAL EXPERIENCE

- 2004-Present Electrical Engineer, Augspurger Komm Engineering, Phoenix, Arizona
Performed forensic and investigative consulting for various clients,
Including insurance adjusters and attorneys.
Provided expert testimony at deposition and trial when required.
- 2007-2008 Electrical Engineer, Engineering Institute, LLC, Farmington, Arkansas
Performed forensic and investigative consulting for various clients, including
Insurance adjusters and attorneys. Designed and prototyped the entire electrical
system for an off-highway vehicle intended for production.
Provided expert testimony at deposition and trial when required.
- 2002-2003 Sabbatical - Preplanned tour of twenty-two countries, including Africa, Asia,
Northern Europe and the Middle East.
- 1999-2001 Senior Development Engineer, General Motors, Desert Proving Grounds
Automotive Testing Facility, Mesa, Arizona
Performed testing of prototype and production braking systems for light duty
trucks. Troubleshoot hardware/software problems with anti-lock braking systems.
Organized and led braking system test trips to Death Valley. Responsible for
braking system compliance with Federal Motor Vehicle Safety Standards.
Performed testing on base braking systems, including brake balance and Federal
Motor Vehicle Safety Standards 135 and 105. Recommended and implemented
design changes.
Tested for performance and compliance with government regulations.
Identified and determined the root causes of problems with electronic anti-lock
braking systems and chassis control systems for cars and light trucks.
- 1994-1999 Senior Project Engineer, Microcomputer Laboratory, General Motors, Great
Lakes Technology Center, Flint Michigan
Managed simulator laboratory. Interfaced with design and release engineers to
prevent, identify, and solve problems with prototype, pilot, and production level
hardware and software. Tested and troubleshoot power train, chassis, and Heating,
Ventilation and Air Conditioning (HVAC) control systems. Tested hardware and

software on simulator and system bench to determine if systems were performing to specifications and compatible with each other. Analyzed data obtained from simulator. Identified problems and recommended changes to hardware and software. Oriented, trained and managed new employees. Peers recognized laboratory as the most capable site within GM.

Increased testing capability of simulator to include stability control, HVAC, and adaptive radar cruise systems. Changes were implemented at over 7 simulator laboratories throughout GM.

Procured funding and purchased equipment to increase testing capabilities of the lab.

Used simulator to accelerate development of Alpha, Beta, and prototype level software and hardware.

Used rapid prototyping controller to emulate HVAC controller to test and demonstrate software algorithms prior to availability of prototype hardware, enabling clearer communication of requirements to vendors.

Designed and performed field tests on Anti-lock Braking Systems, Traction Control Systems, Ignition Control Systems, and HVAC systems to gather data for correlation and improvement of simulator models.

Managed and trained students and Application Engineers.

Specified testing scripts to control simulator and verify software for target Controllers.

Reduced field problems due to software bugs on test and calibration trips by more than 80%.

Identified and resolved field problem with ABS 5.0 system. Rapid identification minimized cost of manufacturing downtime and subsequent recall.

1990-1994 Project Engineer, Analysis Department, General Motors, Great Lakes Technology Center, Flint, Michigan

Analyzed analog and digital electrical circuits using Saber analysis software.

Optimized designs of future vehicles circuits and systems.

Installed and managed real-time hardware-in-the-loop vehicle simulator.

Configured simulator to interface with power train, anti-lock brakes, chassis and HVAC control systems.

Troubleshoot, redesigned and tested fuel pump speed control module.

Developed Saber software models for electrical and electromechanical components and systems to improve accuracy of simulations.

- 1988-1990 Associate Engineer, Analysis Department, General Motors, Great Lakes Technology Center, Flint, Michigan
Analyzed analog and digital electrical circuits using SYSCAP circuit analysis software. Optimized designs of future vehicles circuits and systems.
Troubleshoot problems encountered in operations of automotive electrical systems.
Troubleshoot and redesigned analog twilight sentinel module to solve field problem. Developed SYSCAP software models for electrical and electromechanical components and systems to improve accuracy of simulations.
- 1983-1988 Cooperative Student, General Motors, Central Foundry Division Iron Casting Foundry, Saginaw, Michigan
Assignments in quality, maintenance, finishing, plant engineering and annealing departments.
Supervised production lines with up to 50 employees.
Troubleshoot problems in operations of manufacturing equipment and controls.
Collected, prepared and analyzed metallurgical samples used for process control.
Designed and implemented a measurement device calibration program for the entire plant, resulting in improved process control.

SEMINARS, CONFERENCES AND TRAINING

Bosch Crash Data Retrieval (CDR) Tool Operator/Technician 16-hour Specialized Course, Glendale, AZ, April 28-29, 2022
SATAI Winter 2018 Crash Test Conference, Glendale, AZ, January 25-27, 2018
CSI [Collision Safety Institute] 40 Hour Crash Data Retrieval Data Analyst Course, November 6-10, 2017, Glendale, AZ
ARC-CSI Crash Conference, Las Vegas, NV, September 18-21, 2017
NGVi, Natural Gas Institute, Certified CNG Fuel System Inspector, February 1, 2017
ARC-CSI Crash Conference, Las Vegas, NV, May 23-26, 2016
ARC-CSI Crash Conference, Las Vegas, NV, January 25 – 27, 2016
ARC-CSI Crash Conference (Presenter) Las Vegas, NV, June 1-4, 2015
CDR Summit, Crash Data Retrieval User's Summit, Houston, Texas, January 26-28, 2015
IAAI; Vehicle Fire Investigations Seminar, Phoenix, AZ 10/30/2014
CDR Summit, Crash Data Retrieval User's Summit, Houston Texas, January 27-29, 2014
NAFI Certified Vehicle Fire Investigator Training. Sept 30- Oct 3, 2013, Lexington, Kentucky
ARC-CSI Crash Conference, Presenter, May 13-16, 2013, Las Vegas, Nevada
CDR Summit, Crash Data Retrieval User's Summit, Houston, Texas. January 21-23, 2013
Collision Safety Institute Conference, Crash Data Retrieval Analyst Course, CDR System Operator Certification, Glendale, Arizona, October 1-5, 2012
ARC-CSI Crash Conference, Las Vegas, NV, June 4-7, 2012
Collision Safety Institute, Bosch CDR User's Summit, Houston, Texas January 16-18, 2012
ARC-CSI 8th Annual Crash Conference, Las Vegas, NV, June 1-4, 2009

Collision Safety Institute, Bosch CDR (Crash Data Retrieval), System Technician Certification Course, Whittier, California, April 13-17, 2009

Collision Safety Institute, Bosch CDR System Data Analyst Certification Course, Whittier, California, April 13-17, 2009

Investigation of Vehicle Fires Seminar, Lee S. Cole & Associates, Las Vegas, Nevada November 3-5, 2004

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