Exponent®
Engineering & Scientific Consulting

John Pierce

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Professional Profile

John Pierce's areas of expertise include automotive systems, engine dynamometer testing, finite element analysis, CAD design, and additive manufacturing. His vehicle engineering experience spans both educational and industry roles, with focus on the design and analysis of prototype components for novel rotary engines as well as powertrain development for energy efficiency.

Mr. Pierce's work has emphasized study in the areas of applied mechanics, engine dynamometer testing, advanced manufacturing methods for automotive components, and industrial 3D printing. His experience in 3D laser scanning, vehicle and site inspections, and passenger vehicle EDR data imaging enhance his consulting contributions to accident reconstruction.

Prior to joining Exponent, Mr. Pierce worked in research and development at Liquid Piston Inc. for the development of multi-fuel capable novel rotary engines. His role involved vehicle systems modeling, rotating assembly design, as well as structural & fluids analyses. Prior to this, Mr. Pierce gained hands on vehicle systems expertise during his experience working with vintage racecars at GMT Racing, ranging from recent Le Mans prototypes to Pre-WWII era examples.

Mr. Pierce earned his M.S. in Mechanical Engineering from the University of Massachusetts Amherst. His work at UMASS Amherst involved the CAD design and direct metal laser sinter manufacture of a DOHC cylinder head for the Society of Automotive Engineers (SAE) Supermileage program, of which he was Team Lead. Additionally, his graduate work included the design and analysis of an automotive plate clutch and multi-stage gear drivetrain for the SAE competition vehicle. During his undergraduate studies, he developed a transient stress analysis model of the four-stroke engine cycle to evaluate the efficacy of composite connecting rod designs for SAE competition usage.

Academic Credentials & Professional Honors

M.S., Mechanical Engineering, University of Massachusetts, 2022

B.S., Mechanical Engineering, University of Massachusetts, Amherst, 2021

Prior Experience

SAE Supermileage Vehicle Team, Team Lead, 2020–2022

Graduate Staff, UMass Additive Manufacturing Laboratory, 2021–2022

Engine Development Intern, Liquid Piston, 2021

Design Engineer Intern, Rotair Aerospace Corporation, 2020–2022

SAE Supermileage Vehicle Team, Engine Team Member 2019–2020

Racecar Technician Intern, GMT Racing, 2016–2019

Professional Affiliations

Society of Automotive Engineers (SAE), Member

American Society of Mechanical Engineers (ASME), Member

Patents

U.S. Patent Application Number 63/359062: Systems and Methods for Waste Collection, Handling, and/or Sorting (E. Walko, J. Pierce, I. Goodine, T. Gable)

Additional Education & Training

Bosch CDR Tool Technician Training, Institute of Police Technology and Management – University of North Florida, 2022

Traffic Accident Reconstruction, Northwestern University Center for Public Safety, 2022