Senior Simulation Engineer R&D 268

Jūsų užduotys

Job Title: Senior CAE / FEA Engineer – Brake Systems (NVH Specialist)

Key Objective of the Job Profile

We are seeking an experienced NVH (noise, vibration, and harshness) expert specializing in disc brake caliper systems to lead the analysis, development, and optimization of brake NVH performance. The role focuses on preventing and resolving brake noise issues (squeal, groan, judder, and moan) across vehicle platforms, ensuring best-in-class acoustic comfort and regulatory compliance.

Internal / External Contacts

FEA leaders, NVH experts, testing experts, TPMs, and design leaders.

Areas of Responsibility / Main Tasks

- Lead NVH development and issue resolution for **brake caliper assemblies** across all project phases (concept to SOP).
- Analyze and mitigate brake noise phenomena, including **squeal, creep groan, judder, and low-frequency noise.**
- Define NVH targets and design guidelines for calipers, pads, shims, pistons, and mounting interfaces.
- Perform **modal, dynamic, and frequency response analyses** using CAE tools (e.g., FEM, complex eigenvalue analysis).
- Correlate simulation results with **bench, dyno, and vehicle test data.**
- Support brake system tuning through material selection, stiffness optimization, damping solutions, and geometry changes.
- Lead and support **Design Verification Plan and** Report activities related to brake NVH.
- Collaborate closely with design, materials, testing, manufacturing, and vehicle integration teams.
- Support customer interactions, root cause analysis, and corrective action plans for NVH concerns.
- Contribute to continuous improvement, best practices, and knowledge sharing in brake NVH engineering.

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Required Experience

- **Education:** Bachelor's or master's degree in mechanical engineering, automotive engineering, or a related field.
- **Professional Experience**: 8-12+ years of experience in the automotive industry (OEM or Tier-1).
- **Project Experience:** 8+ years of relevant project experience in the automotive industry. Proven experience in 5+ NVH filed.

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Required Knowledge

- **Advanced:** Leading complex brake noise root-cause investigations, executing and correlating advanced CAE simulations (e.g., CEA and transient dynamics), optimizing caliper design and materials for robustness, and driving system-level NVH solutions across vehicle platforms.
- **Basic:** Understanding brake caliper systems and common NVH issues, performing basic vibration and friction analyses, understanding dyno and vehicle test results, and applying standard NVH countermeasures.
- **Tools**: HyperMesh (advanced meshing skills) and Abaqus (expertise in resolving convergence issues).

Ready to take your career to the next level? The future of mobility isn't just anyone's job. Make it yours! **Join AUMOVIO. Own What's Next.**

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Since its spin-off in September 2025 AUMOVIO continues the business of the former Continental group sector Automotive as an independent company. The technology and electronics company offers a wide-ranging portfolio that makes mobility safe, exciting, connected, and autonomous. This includes sensor solutions, displays, braking and comfort systems as well as comprehensive expertise in software, architecture platforms, and assistance systems for software-defined vehicles. In the fiscal year 2024 the business areas, which now belong to AUMOVIO, generated sales of 19.6 billion Euro. The company is headquartered in Frankfurt, Germany and has about 87.000 employees in more than 100 locations worldwide.