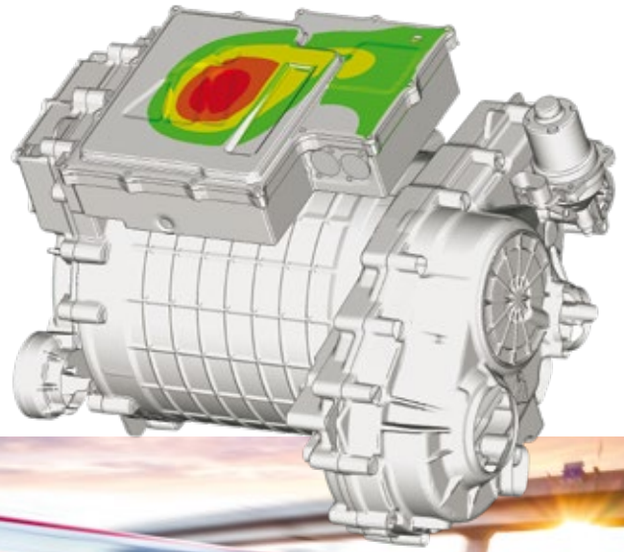
Your Benefits

- High quality simulations for virtual prototype
- Fast analysis for acoustic troubleshooting
- Powerful combination of multi body system and finite element methods
- Unified models – e.g. acoustics and durability
- Close integration of customer requirements
- Flexible work sharing with customer
- Software tools based on engineering experience

Integrated development process with testing

- Acoustic measurement
- Vehicle testing on dyno and track
- Engine test benches
- Drivetrain testing
- Fatigue lab



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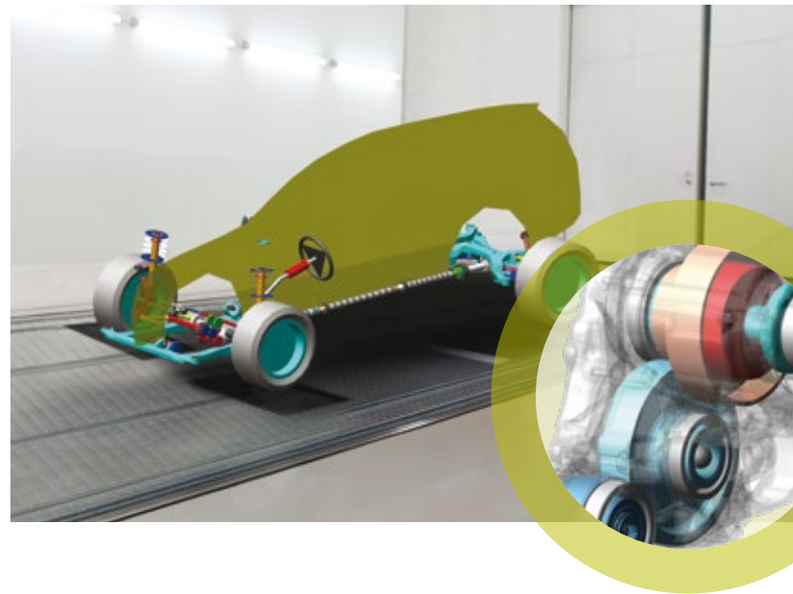
Dynamic Simulation



Dynamic and acoustic analysis of vehicles and components

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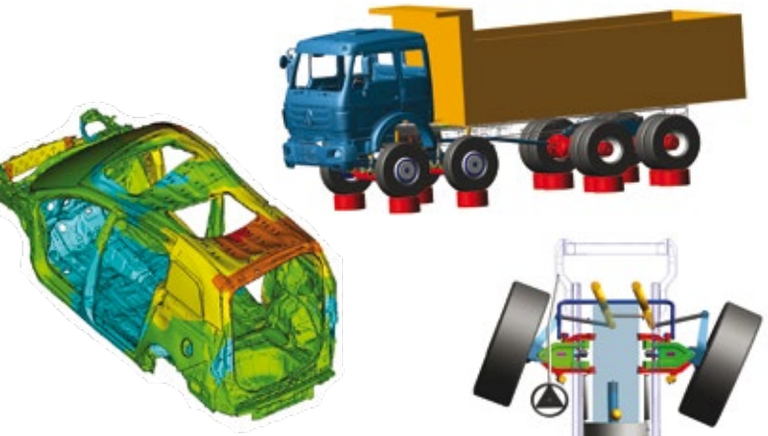
Vehicle Ride and Handling

- Multi body simulation of full vehicle for ride and handling
- Suspension and steering kinematics
- Layout of cabin suspension



Load Data

- Static load cases for fatigue
- Road load data generation with virtual iteration
- Fatigue test rig improvement
- Fatigue of vibrating components, e.g. fuel tank, attachment parts

Car Body and Truck Cabin

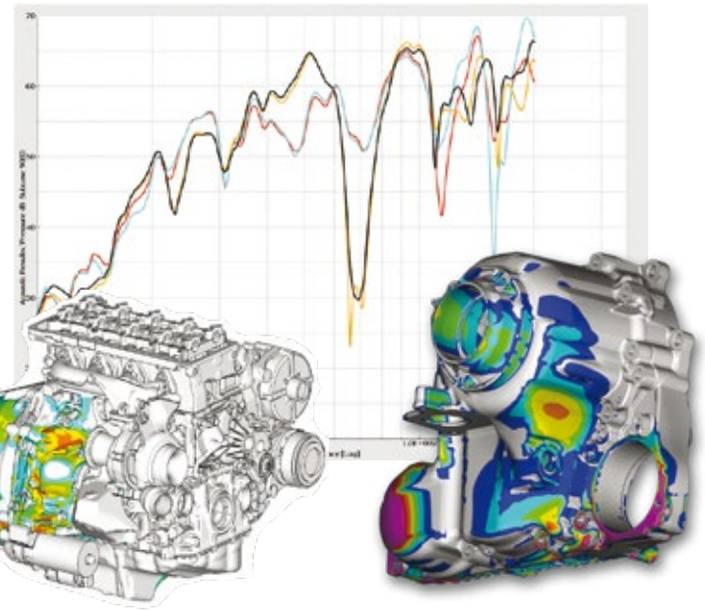
- Car body and truck cabin NVH
- Powertrain and road induced noise and vibration

Powertrain Dynamics and Noise

- Powertrain vibration analysis and improvement
- Model correlation to chassis dyno or test track measurements
- Engine start dynamics
- Engine mount characteristics

Powertrain Components

- Acoustic analysis of engines and gearboxes - MNOISE
- Crank train dynamics for fatigue and acoustics
- Modal calibration of models
- Spectral fatigue - FEMFAT



Dynamics and Acoustics Software

MAMBA software

MAGNA MODAL BASED ANALYSIS

- Simulation of joint contact phenomena
- Full nonlinear contact analysis of flexible structures in MBS
- Enhanced modal formulation using contact modes

MNOISE software

MODAL NOISE ANALYSIS

- Preparation of complex, acoustic relevant input data analysis
- Computation of acoustic parameters
- Engine and transmission run-up

FEMFAT LAB

LOAD DATA ANALYSIS software

- Load generation with virtual iteration based on measurements