ESEngSim

Valvetrain Modeling

With *GT-SUITE's* valvetrain engineering tools, EngSim can model complete solutions to optimize a valvetrain design for best engine performance while addressing stability, durability, and noise.

Simulation Capabilities

Standard or Non-Conventional Mechanisms

Many Profile Synthesis Options

Kinematic and Dynamic Modeling

Spring Dynamic Analysis
- Margin
- Surge
- Coil clash
- Stress

Hydraulic Elements for HLA, Phasers, Actuators

Single Branch, Single or Multi-Cylinder Systems

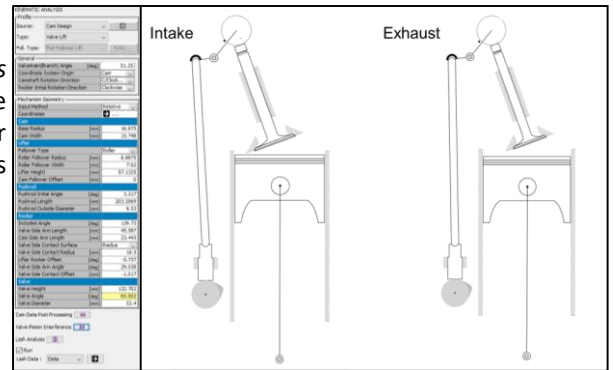*Camshaft Torsional and Bending Analysis*

Easy Visualization of Results
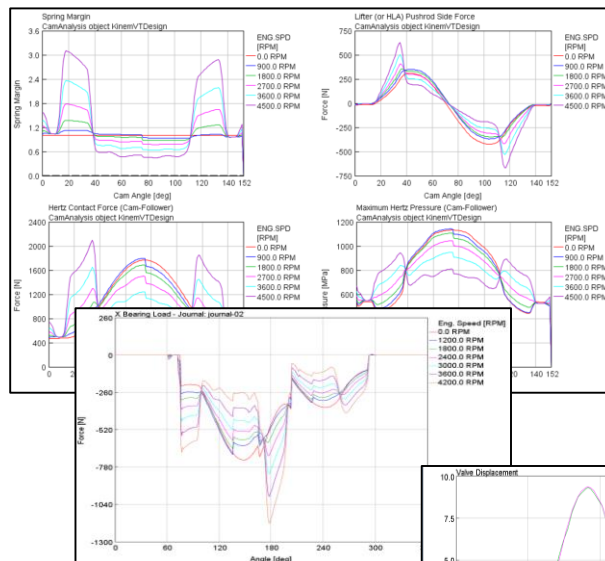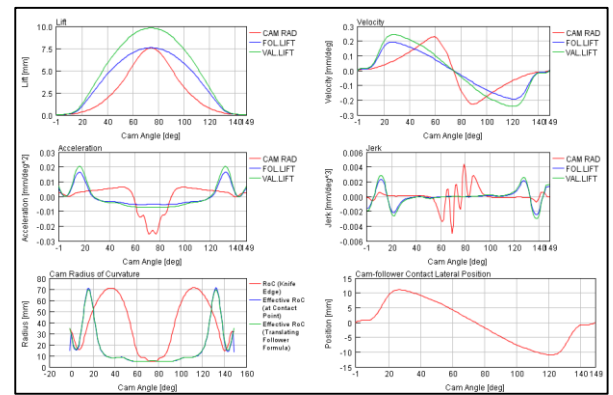
Can Be Integrated with Other GT-SUITE Modules
- Engine performance
- Lubrication
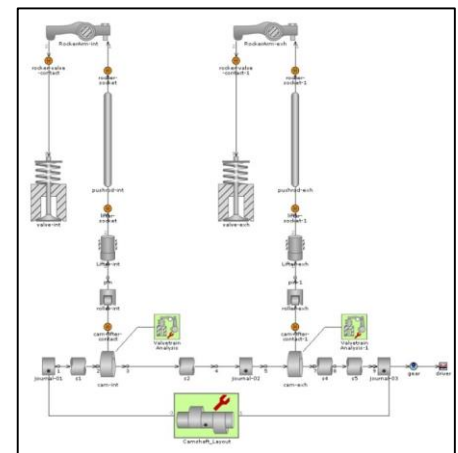- Timing drive

Original CAD

VT-DESIGN's interactive modeling for fast iterations

Many kinematic valvetrain design metrics such as lift, velocity, acceleration, jerk, radius of curvature, or follower run-off can be generated to determine the optimum profile

Dynamic valvetrain output can include metrics such as spring margin, component force, hertz force and pressure, and dynamic valve lift

GT-SUITE dynamic single-cylinder system model

www.EngSim.com