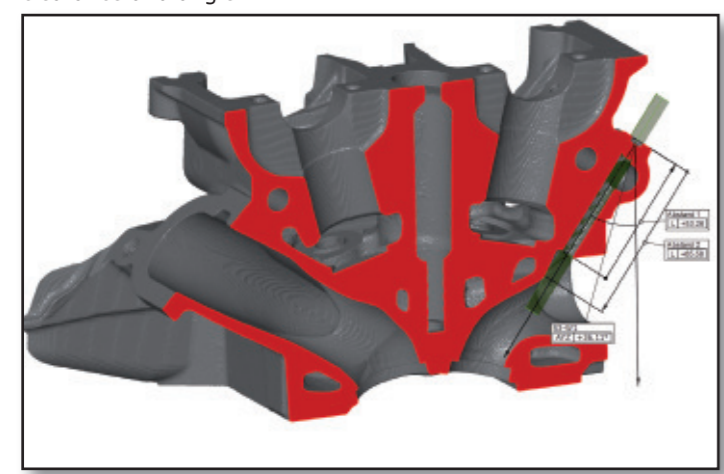




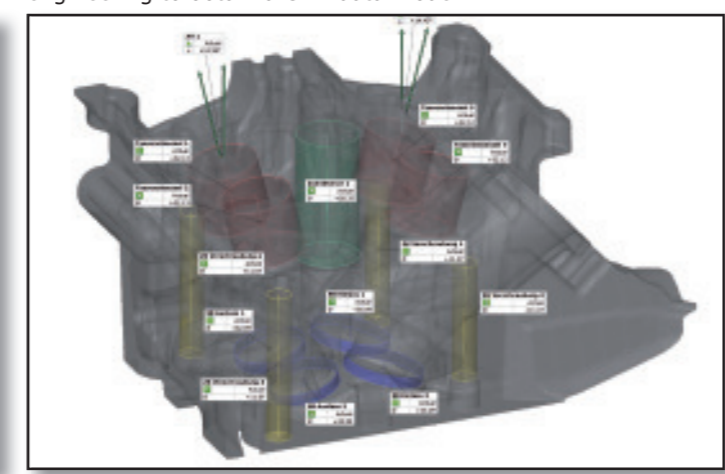
3D
FLOWTEC
 TECHNOLOGY - ENGINEERING - CONSULTING

>>> Optical 3D-measuring and Digitalisation <<<

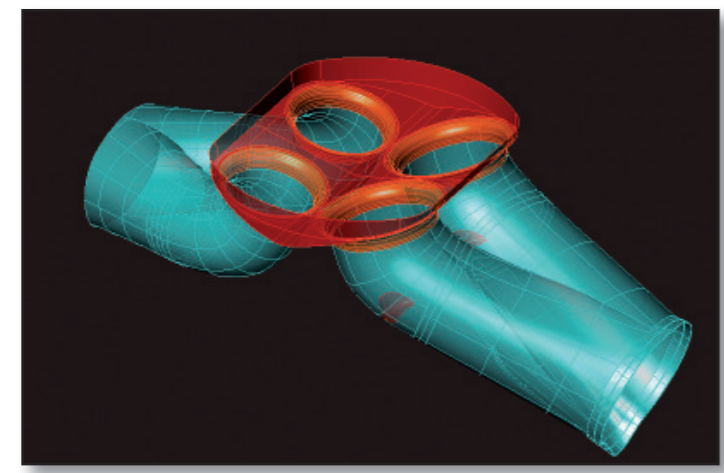
Computer tomography of a cylinder head to determine clearance and angle



Computer tomography of a cylinder head for reverse engineering to obtain a CAD data model



Digitalisation for CFD simulation



Rapid chassis measurement using photogrammetry for design and simulation



In the competitive motor sport sector teams and engineers are always searching for optimised performance – be it in the form of speed, time, accuracy or efficiency. Optical measuring systems enable teams and engineers to dramatically reduce their measuring time eliminating errors in design, simulation and design. Competitive teams and users who are looking for performance are moving technologically ahead to state-of-the-art light stripe sensors leaving behind the technology of hand operated laser scanners.

Our digitalisation services using portable measuring and imaging solutions include tools for simple referencing and/or non-contact imaging scanners plus computer-aided measurement software. All has been designed to provide improved solutions for inspection, alignment, surface modelling, reverse engineering and rapid prototyping, reconstruction and documentation. These state-of-the-art devices allow for more complex measurements than could ever be achieved with conventional laser scanners and tactile measuring systems.

We at 3D-FLOWTEC use equipment that has been assembled from a light stripe sensor and a photogrammetry system. We apply it for the majority of tasks assigned to us from the first concept to implementation of our design.

The measuring system can be used both as a portable measuring machine and surface scanner. It has been designed to cover very small overall heights (5x5x5mm) as well as large overall heights (6000x6000x3000mm). This gives us the competitive edge in engineering and racing. The measured data form a digital basis for a great variety of software used in design, quality assurance, and simulation.

For the leading teams worldwide in series like Formula 1, IndyCar, NASCAR and American Le Mans the competitions are about sustainable success. Our work with the best digitalisation system provides the optimal basis for this.

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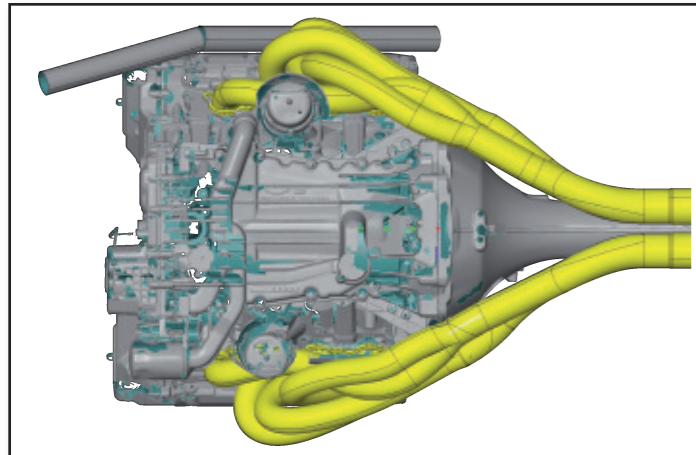
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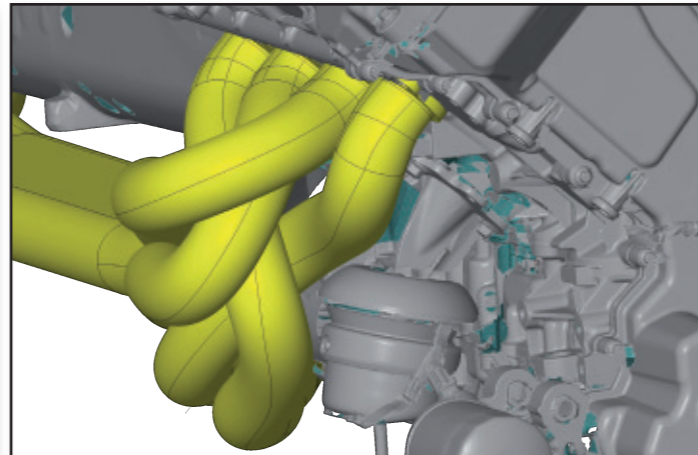
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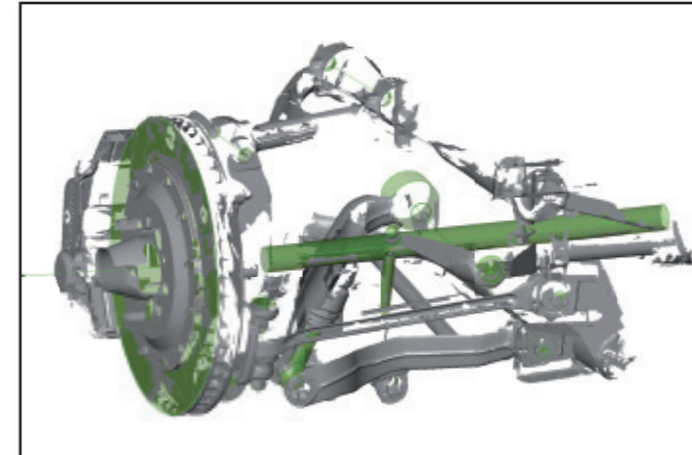
Overall height measurement to allow for non-collision CAD of exhaust systems



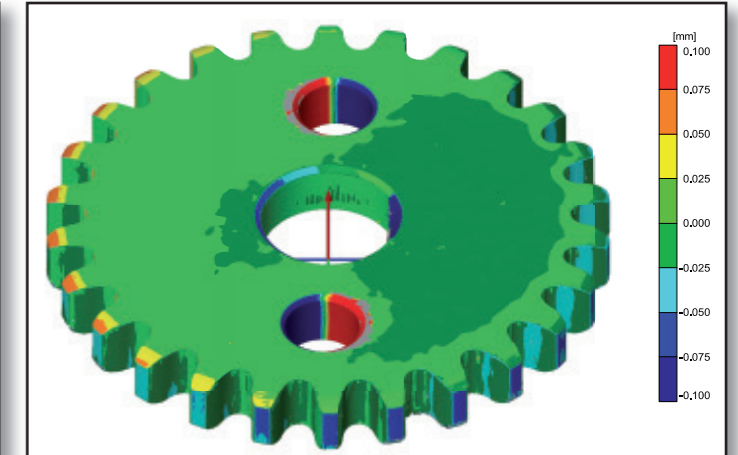
Overall height measurement to allow for non-collision CAD of exhaust systems



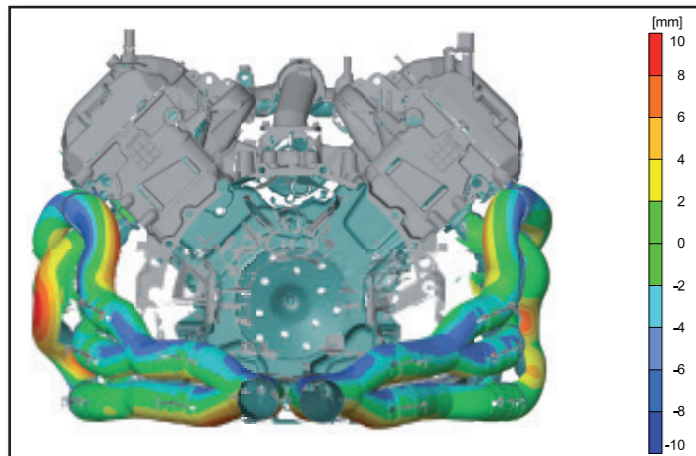
Chassis measurement for design and simulation



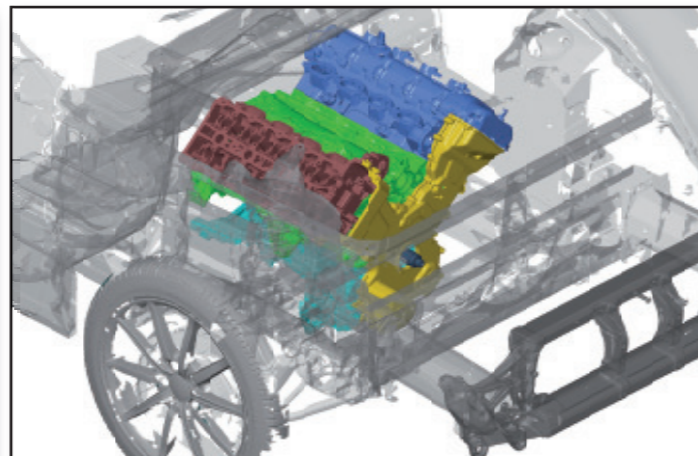
Comparison actual part versus CAD specified status



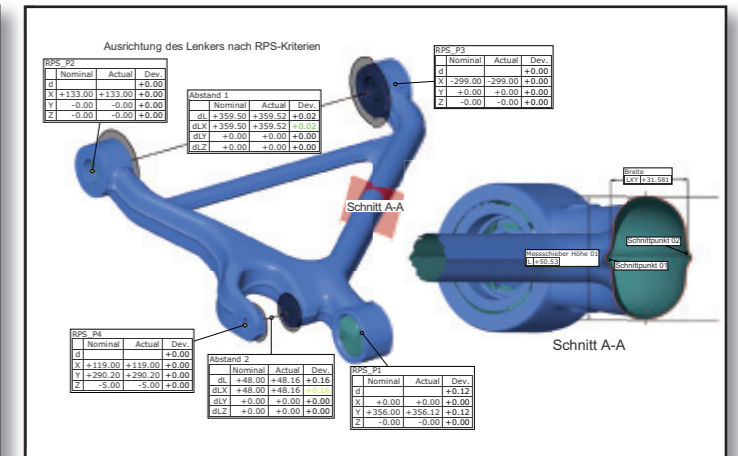
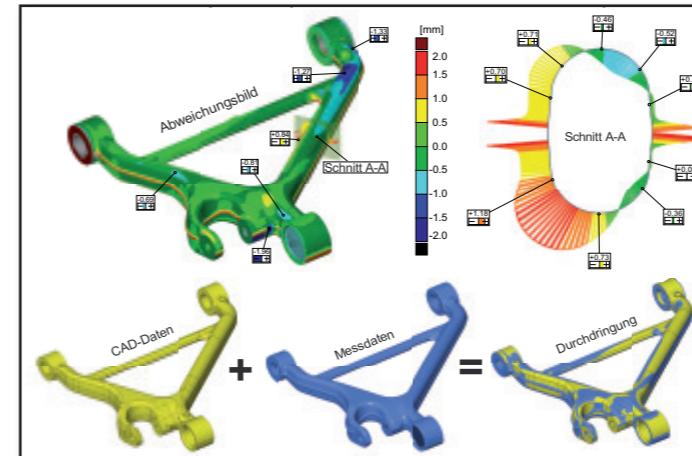
False colour comparison – exhaust system



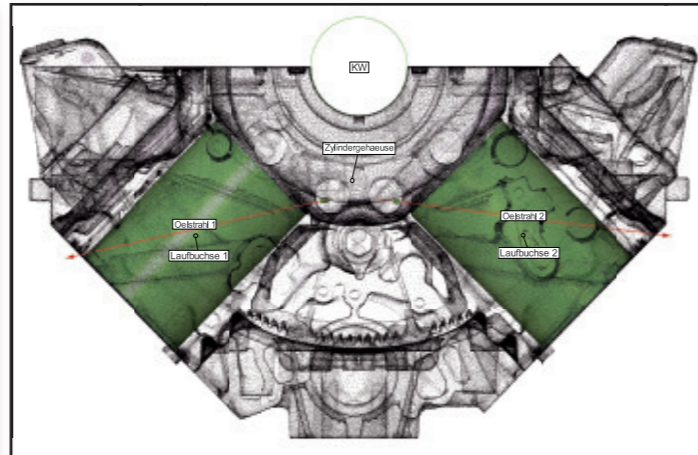
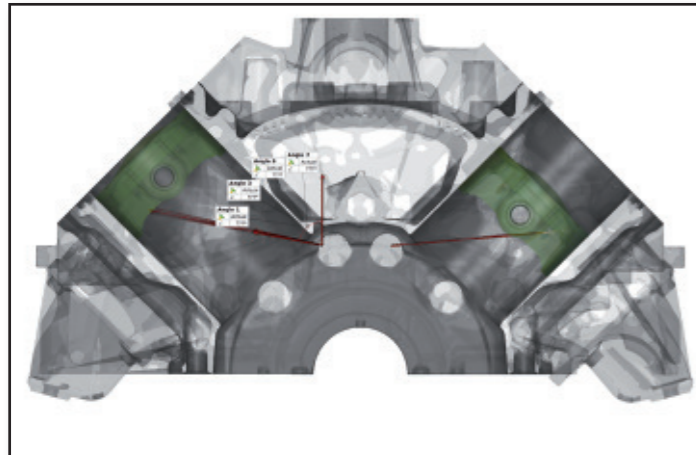
Overall height measurement to allow for non-collision CAD



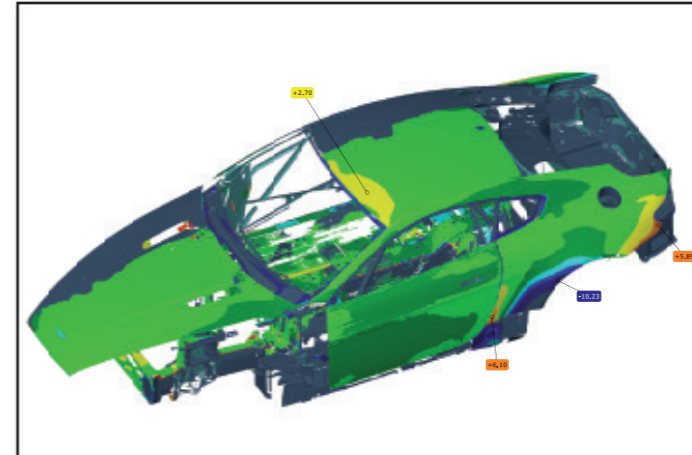
Quality control by way of gauging and evaluating cast parts, milled parts and forged parts



Position and angle gauging of the oil spray nozzle for a piston head cooling



Similar part comparison and static deformation analysis



Similar part comparison and static deformation analysis

