Sonnax Designs Aftermarket Transmissions Products Better Than New with SolidWorks Software

Automotive aftermarket manufacturer designs failure points out of parts with 3D CAD software

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CONCORD, Mass., Oct 14, 2008 (BUSINESS WIRE) -- Aftermarket auto transmission components manufacturer Sonnax has standardized on SolidWorks(R) 3D CAD software to re-engineer worn out parts so they are as good or better than the original, Dassault Systemes SolidWorks Corp. (DS SolidWorks) announced today. Using SolidWorks, Sonnax engineers have become more productive and more creative in their design approaches than with 2D software.

Since 1978, Vermont-based Sonnax has been designing, manufacturing, and distributing replacement components for automatic transmissions, torque converters, drive shafts and related products worldwide for the passenger vehicle, racing and heavy-duty vehicle markets. Precision and durability are critical as its parts are used in rebuilt transmissions which often carry 100,000 mile warranties.

“We get worn out parts that we reverse engineer to find out where the part failed,” said Steve McAllister, a technical group manager in engineering at Sonnax. “SolidWorks lets us identify the original failure point and design it right out of the product.”

Sonnax engineers need to study every design aspect of a city bus drive shaft, for example, to make sure that the replacement part will last. Because the bus travels hundreds of miles every week, durability is critical. Sonnax engineers have to collaborate closely with part suppliers since many aftermarket parts are custom designed to a specific vehicle. “There’s a lot of back and forth in the design stage to meet customer demand,” said McAllister. “SolidWorks substantially cut the time for modifying the designs based on supplier feedback from when we had to change multiple AutoCAD drawings. That helps us deliver products faster.”

Improved communication

Aside from sharp 3D models that give both Sonnax engineers and suppliers a comprehensive view of part designs, Sonnax also uses SolidWorks eDrawings(R) e-mail-enabled design communication tool to share 3D models and 2D drawings of its components with suppliers and customers. The company also uses PhotoWorks(TM) photorealistic rendering tool to create life-like images of its parts for the technical documentation that accompanies the parts -- a process that previously was delayed up to three weeks while engineers had to wait for the prototype to photograph it. Now the documentation is ready before the part arrives.

Sonnax is deploying SolidWorks Simulation and SolidWorks Flow Simulation to analyze component durability and fluid flow during everyday use to ensure optimal performance. Sonnax engineers will soon have even more visibility into potential failure points while analyzing how parts will perform in normal and high-performance operating conditions.

“Time to market is important in the automotive after-market industry, but reliability is everything,” said Ken Clayton, vice president of North American sales at DS SolidWorks. “Sonnax engineers are on a mission to make OEM parts better, and using SolidWorks will help them continue achieving that goal.”

Sonnax relies on authorized SolidWorks reseller CADD Edge, Inc. for ongoing software training, implementation, and support.

About Sonnax

Founded in 1978, Sonnax has become a leading supplier to the automotive aftermarket. The company designs, manufactures and distributes replacement components for automatic transmissions, torque converters, drive shafts and related products worldwide. In addition to serving the passenger vehicle aftermarket, Sonnax also has strong product offerings for the high-performance and heavy-duty markets. For more information, visit the Web site (www.sonnax.com).