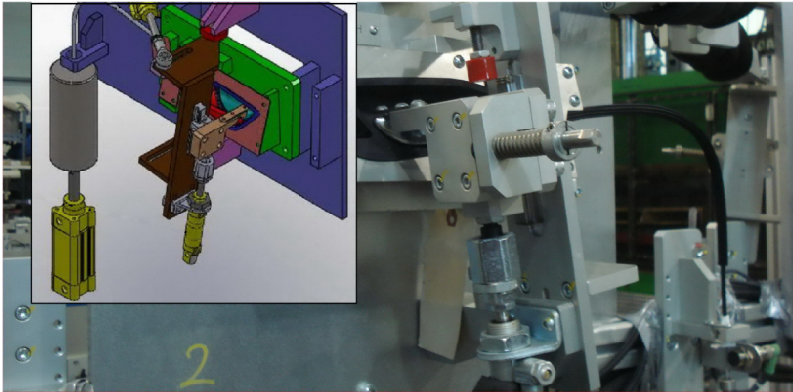

Case Study

Moving from Tier 2 to Tier 1 Bridging the Product Development Gap With a Complete Testing Solution



Which came first? The Chicken or the Egg?

The Customer

Our customer is a rapidly growing Tier 2 manufacturer of automotive door handles. As a Tier 2 supplier they were usually tasked with “building-to-print”. The products that they manufacture were normally designed and developed by a Tier 1 supplier. The recent period of intense restructuring in the automotive parts industry opened up new opportunities for suppliers that were appropriately positioned and prepared for the changes. Our customer was approached by a major OEM to take-over the validation testing and production of an all new design door handle for a new premium car platform.

The Challenge

As a manufacturer, our customer already had an internal QA lab that they used for quality assurance tests to monitor and control their process properties, but they didn't have any tools to perform a validation testing program on this product. The OEM retained design responsibility for the handle as well as the Design Verification Plan & Report (DVP&R).

Our customer asked us to help fill-in the gap between their QA testing capabilities and the validation testing requirements of the DVP&R, so that they could successfully deliver this new door handle design.

The Paragon Systems Solution

The client provided us with the CAD model for the handle with the trim surround and the DVP&R.

Using our extensive experience in designing and building durability testing tools for the auto parts market, we designed, built and qualified two durability testing tools and a variety of smaller support fixtures to execute on the validation testing program.

The first tool was designed to simultaneously subject multiple handle samples to the durability test parameters specified in the OEM CTS. As with most automotive validation testing programs, this tool had to operate reliably between -40°C and +80°C for the duration of the program.

The second tool measured the operating characteristics of each handle sample at various points along the durability program. Both tools included automated control systems with data collection for round-the-clock testing.

We managed the testing program using web based tools for regular meetings and sign-offs with a minimum necessity for client on-site visits. At the conclusion of the program, our customer had an accredited, third party impartial test report fully documenting their successful validation testing program.

We're uniquely qualified with product development testing experience on numerous mechanical and electro-mechanical automotive parts.

Hinges, latches.

Pedals, handles, switches.

Seats, window regulators, sunroofs, power mechanisms.

Tools

- Solidworks CAD Software
- Manual & CNC Machine Tools
- Drive-in and Reach-in Chambers
- LabView Data Acquisition
- Multi-channel 44 kHz data acquisition system