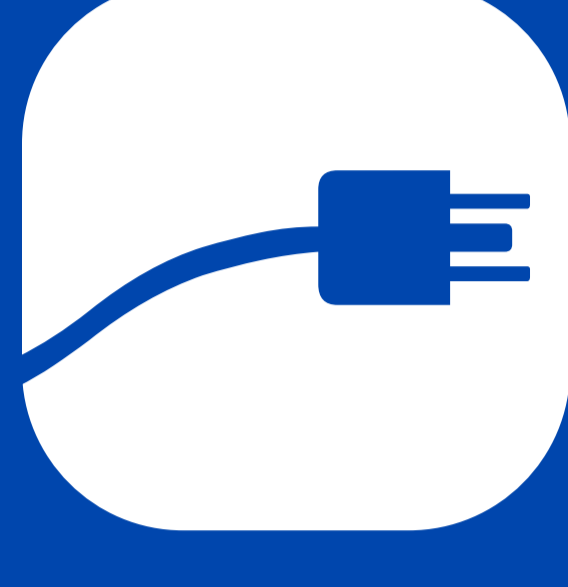


Automotive Connector Testing

Avoid issues that compromise a vehicle's safety and performance

Main Aspects of Automotive Connector Testing



Electrical performance



Reliability over the life of a vehicle



Resistance to extremes in mechanical and environmental conditions

Common Issues



Terminals must perform in all climatic conditions



Connectors must protect terminals from harsh conditions and environments to which a vehicle is exposed



Anti-locking braking system failure when a terminal or connector system fails



Disabled airbag that does not fire in a crash when a terminal or connector system fails



Audio system that does not work when a terminal or connector system fails

Solutions



Formulate a comprehensive test plan to provide meaningful data about a component's quality, safety, and performance



Consider the relationship of wire size and mechanical testing to have the correct conductor size for testing



Use enough test samples to conduct a complete test program



Develop unique testing fixtures or specially made test probes



Modify a standardized testing procedure to fully evaluate the component in a manner consistent with the intent of the standard or specification

TÜV SÜD's Automotive Connector Testing Services



Terminal crimp cross-sectional analysis



Microphotography and mating/un-mating force testing



Thermal shock and temperature/humidity cycling



Long-term electrical testing



Vibration/mechanical shock testing



Fluid compatibility testing



Connector seal retention testing – unmated



Pressure/vacuum leak testing

Expertise to Assist You with Automotive Connector Testing

TÜV SÜD has a combined 65 years of automotive testing experience, dealing almost exclusively with terminals, connectors, and modules of various types. Our experts have worked with most of the major component manufacturers and many sub-suppliers and understand the testing specifications used by automakers (and USCAR specs), as well as many international specifications. We also have in-house machining capabilities that allow us to construct specialty test fixtures as needed.



Learn more about TÜV SÜD's Automotive Testing Solutions.

www.tuvsud.com/en-us/automotive-testing-solutions

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