

ATS Seat Module Testing





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Description

Today's vehicles are more sophisticated than ever, and vehicle seats are no exception. Seats now contain many separate electronic components all communicating on a vehicle bus. These smart seats require a hi tech test solution to ensure product quality.

The seat tester consists of custom tooling that engages and provides a user defined load to the seat during the functional test in order to simulate the load of a person.

During the test the seat motors are powered and commanded to move through the full travel, and tilt. Voltage, speed, motor current, applied load, motor encoder pulses, and vibration are measured.

Internal components such as air bags, seat heaters, sensors, and memory modules are also tested.

Pass fail is determined based on user configurable settings around each measurement made during the test, and all data is archived for easy recollection.

An automated verification routine may be used to verify that all measurements and applied loads are working within tolerances using a calibration fixture or pallet.



Seat Module Tester

Capabililties:

- Apply and verify weight up to 250 lbs. Validate weight sensors
- Voltage applied up to 18 VDC, Simulate line resistance
- Validate motor current draw, and seat movement (distance/ time of flight)
- Validate Heat/cool modules and functionality
- Feature \ Part presence or color detect
- Side air bag connection/ Airbag resistance
- NVH analysis
- Palletized system or standalone
- Test passenger and driver seats separately or as a pair

Communications:

 Communicating to automotive bus diagnostics (CAN, LIN, K-Line, Class 2, SCP, etc...)



Contact ATS directly for custom or product specific applications beyond the scope of this document.



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