

Laboratory Life SIMULATION FACILITY

SYSTEMS TEST • LABORATORY • ACCELERATED LIFE TESTING

- Team Cube™ Multi axis shaker table
- Environmental Chamber
- Squeak & rattle evaluations
- Component & sub-system cycling
- Flexible service with rapid response time

Millbrook operates two Laboratory Life Simulation Facilities within the System Test Laboratory, which enable life simulation testing of automotive systems such as cockpit modules, doors, seats and front end cooling modules.

The facility combines vibration in six degrees of freedom with high and low temperature, humidity and infra-red ageing. Operation of features such as glove boxes, cup holders and infotainment systems during vibration is provided by remote actuation. A typical life test can be completed in 300 hrs - two weeks of continuous running.

The low operating noise of the Team Cube™ enables squeak and rattle appraisals to be carried out in-situ during the test.

Technical SPECIFICATIONS

Team Cube™ Multi-Axis Shaker Table

- Vibration in 6 degrees of freedom.
- Full road load simulation.
- Max. payload: 500 kg.
- Frequency range: 2-250 Hz.
- Max. dynamic force: 62 kN.
- Max. Acceleration: 5.1 gn.
- Vertical displacement: 100 mm.
- Lateral displacement: 50 mm.
- Low operating noise.
- Expander head 1.5m x 1.5m.
- Component mounting to vertical faces.

Technical SPECIFICATIONS

Environmental Chamber

- Working area dimensions: H2m, W3m, L3m.
- Temp range: -40°C to +120°C.
- Temp rate of change: 1°C/min.
- Humidity range: up to 95% RH.
- Sun load simulation.
- Acoustic absorption panels.
- Removeable mid floor.

Sub-system Exercising

- Accessory actuation.
- Actuation effort measurements.
- Hot coolant flow & pressure.
- System high pressure pulsing.
- Contamination application.

Noise Analysis

- Subjective NVH evaluation.
- Sound quality analysis.
- Binaural head.

Millbrook OVERVIEW

Millbrook is one of Europe's leading locations for the development and demonstration of every type of land vehicle, from motorcycles and passenger cars to heavy commercial, military and off-road vehicles. Located at the geographical centre of the UK automotive and fuels industry and situated centrally in the strategic Oxford to Cambridge Arc just 65 kilometres to the north of London, our custom-built facility provides virtually every test, validation and homologation service necessary for today's demanding programmes, complemented by a worldwide reputation for confidentiality, service and competitiveness.

Although significant work has been done commercially on behalf of many research organisations, Millbrook has always focused on real world applications and understand the constraints, limitations and budgetary controls that affect our customers. Our staff have experience and expertise from backgrounds in test work within vehicle manufacturers' engineering departments, so they know what their customers expect from a test. Putting working relationships first, and seeing things from the customer's point of view, means Millbrook's support will survive the test of time.