

Crash LABORATORY

STRUCTURAL • OCCUPANT • PEDESTRIAN • SYSTEMS

- Crash, HyGe & Safety Systems
- Test to Global & Corporate standards
- Legislative, development, model correlation
- Facilities used for official EuroNCAP tests
- Equipped to support high complexity tests

Millbrook's Crash Laboratory has held an outstanding track record in the field of crash testing for over 35 years. Our tried and tested facility design ensures excellent speed and alignment accuracy, carrying out the full range of frontal, side, rear and rollover impact scenarios to global or corporate standards, including FMVSS, ECE and EEC equivalents, TRIAS, ADR and insurance tests to Thatcham, Danner and AZT. We also have extensive experience of testing to Euro & USNCAP Protocols, including vehicle assessments by a former EuroNCAP Project Manager.

Millbrook's HyGe Laboratory has been providing test services to the rail, marine and aerospace industries for over 35 years, testing to Global and Corporate standards.

The Safety Systems Laboratory offers a range of flexible facilities for component and system testing for legislative approvals, development and model correlation. All tests benefit from rapid and customised data delivery so results can be evaluated quickly and decisions made.

Combining the original TRL-developed Pedestrian Impact test system with Millbrook's facilities and expertise provides a well equipped, flexible and knowledgeable resource for both development and homologation. Millbrook has established a strong reputation for achieving programme objectives quickly and cost-effectively, using its many years of commercial experience to deliver precisely what is needed. Now, with the definitive test system, the facility can deliver a wide range of tests at every stage of a pedestrian protection programme.

Equipped to support high complexity tests, we also offer the ultra-compact TDAS G5 Data Acquisition System, just one thirtieth the size and a fraction of the weight of a typical DAS unit, and digital cameras using a recording module that can be mounted anywhere in the vehicle with separate camera heads, some just two centimetres in diameter, providing flexibility to mount them wherever images are required.

Technical SPECIFICATIONS

Crash Laboratory

- Fixed Barrier Frontals (0°, +/30°, offset, underide)
- Vehicle to Pole (Front, Side, ISO)
- Moving Vehicle to Stationary Vehicle
- Moving Barrier (Side & Rear)
- Vehicle to Simulated Deer & Elk
- Vehicle to Roadside Furniture

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Technical SPECIFICATIONS

Tests Conducted To:

- FMVSS, ECE and EEC equivalents, TRIAS, ADR
- Insurance testing to Thatcham, Danner, AZT etc.
- Simulate majority of real world rollover scenarios
- NCAP Protocols including assessment by former TRL EuroNCAP Project Manager

Facility Capability

- Speed: 8km/h to 90km/h (5mph to 55mph)
- Accuracy: ± 0.5 km/h (± 0.3 mph) • Repeatability: ± 0.3 km/h (± 0.2 mph)
- Track Length: 220m covered with further 50m un-covered
- Preparation: Five secure preparation bays

Data Acquisition

- 376 data channels onboard conforming to SAE J211 specifications
- Key hardware data plots immediately after test
- Airbag triggering capability (DC & AC)
- 3D static pre & post test measurements (FARO-arm)

Photography and Analysis

- NAC Memrecam digital high speed colour video system
- Up to 1280 x 1024 pixel resolution at 1,000fps; recording rate up to 10,000fps
- NAC Memrecam Micro miniature camera head for filming in confined locations
- MOVIAS Pro film analysis software, analysis to SAE J211

High Energy Impacts

- Outdoor secure test facility for high energy test scenarios
- Equipped to support high complexity tests
- Moving Car to Moving Car tests, co-linear or angled

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.