Advanced Transmission Research & Development

Research • Development • Consultancy

A proven track record of transmission research and performance evaluation, integrating experimental and analytical approaches. Now supported with a new advanced transmission facility, designed for world-class research and operated to industry standards.

We provide research and development services to industry, helping to improve the efficiencies of transmissions for a wide range of clients, and providing expert advice and performance evaluation for the development of innovative transmission systems.

Highlights
A focus on complete design-modelling-testing development capabilities, which include:

- Industry standard (NEDC, etc) and custom designed test sequences
- Access to latest techniques developed within our ongoing research programmes
- Design of Experiments and statistical analysis
- Full report and electronic data delivery
- Outstanding test to test repeatability
- Analytical modelling expertise to support experimental programmes
- Support from our expert engineering staff within the PVRC

Experimental facility at a glance

- ABB twin dyno and drive system
  - Input: 109kW ~ 500Nm 5500 rev/min
  - Output: 200kW ~ 1kNm 4000 rev/min
    (Maximum power if using external prime mover, otherwise output power is 109kW)
- Full range of HBM torque flanges available
  - 100, 500, 1000, 2000 Nm
- Accurate encoder speed measurement - 1024 pulse
- Integrated robot driver for shift analysis
- Full CP Engineering Cadet V-12 control and data acquisition system

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www.pvrc.org.uk
Powertrain & Vehicle Research Centre

Experimental capabilities
- Drive cycle simulation
- Customer defined performance schedules
- Efficiency mapping
- Shift control analysis
- Oil and lubricant performance analysis

Simulation capabilities
- CVT modelling
- MATLAB™/Simulink™ programming
- Shift force analysis
- Analysing torque/ratio stability
- Modelling of bespoke systems e.g. hybrid concepts
- Performance analysis of concept CVT systems

Commercial Availability
Available for work ranging from short 1-day test programmes to custom designed research programmes lasting many months. The facility has been designed with flexibility in mind and is suitable for transmission testing and research across all industries and sectors.

Quality Centred Approach
Our emphasis is on quality. From the initial experimental design to the execution of tests and the analysis of results, we work to ensure the highest confidence in our results, enabling us to deliver excellent value to our clients.

To ignite the spark
To find out more about Consultancy Services at Bath please call Justin Furness on +44(0)1225 384706
email: J.Furness@bath.ac.uk
www.bath.ac.uk/researchandinnovation