

## University of Windsor / FCA Canada Automotive Research and Development Centre

### Vehicle Structural Development Laboratory

- The Vehicle Structural Development Laboratory has six Road Simulation development cells at the Automotive Research and Development Centre (ARDC) to perform durability development for full and half vehicles. The total floor space of this laboratory is approximately 3,863 square metres.
- When ARDC was launched in 1996, it included three road test cells; two multi-axis, spindle-coupled passenger car rigs and a tire-coupled rig in an environmental chamber.
- A light truck rig was added in 2000 to perform truck chassis/ suspension testing.
- In 2001, the ARDC was expanded to add three new road simulation cells with three spindle-coupled light truck rigs to support truck structure research and development. These state-of-the-art simulators have six degrees of freedom controls and are the most advanced available on the market today.
- Road simulation provides consistent, precise and quick development capability on the performance of the vehicle body, chassis and suspension structures. Vehicle noise and vibration development work is performed in the tire coupled environment test cell. It is also capable of supporting the research of the performance of components made of alternate materials under extreme environmental conditions.

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