

GROUND VEHICLE SURVIVABILITY & PROTECTION (GVSP)

HEAD IMPACT LABORATORY (HIL)

The Head Impact Lab (HIL) is an impact test machine used to test vehicle interior impact points that cause injuries to the head and extremities. The data provides information required to develop interior padding solutions that will reduce injuries to the head and extremities of occupants involved in a blast, crash, and rollover event in ground vehicles. The HIL fills a capability gap between component level testing, and system/vehicle level evaluation of occupant protection technologies.

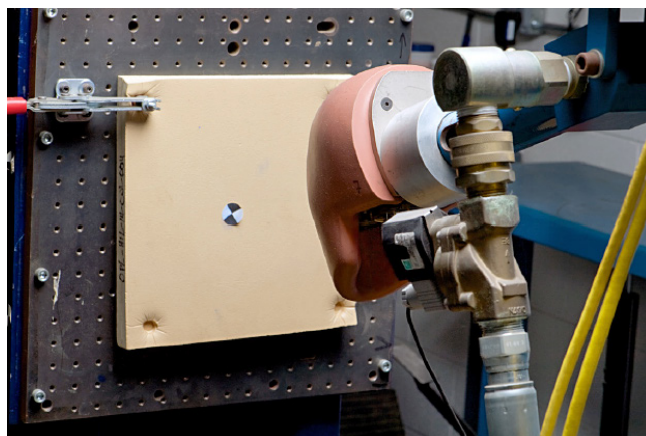
The HIL is located in the Occupant Protection Laboratory (OPL) a full-service test facility with the resources, capabilities, equipment, and partnerships needed to perform dynamic impact/impulse testing on components, subsystems, or systems within six distinct test capabilities. Researchers use the OPL to perform unique "out of the box" impact testing, as well as standardized testing on occupant protection and energy mitigation technologies.

CAPABILITIES

- The HIL is capable of testing speeds up to 24 kp/h (15 mph) using Federal Motor Vehicles Safety Standards 201u head form or with the European/ pedestrian head form with a mounted Advanced Combat Helmet
- Dynamic impact testing of energy mitigating materials
- The HIL is ISO/IEC 17025 accredited

AVAILABLE INSTRUMENTATION

- Accelerometers
- Load Cells
- High Speed Video



Close-up of head to hit EA material



Close-up of head to hit inside HMMWV



HIL with use of a HMMWV