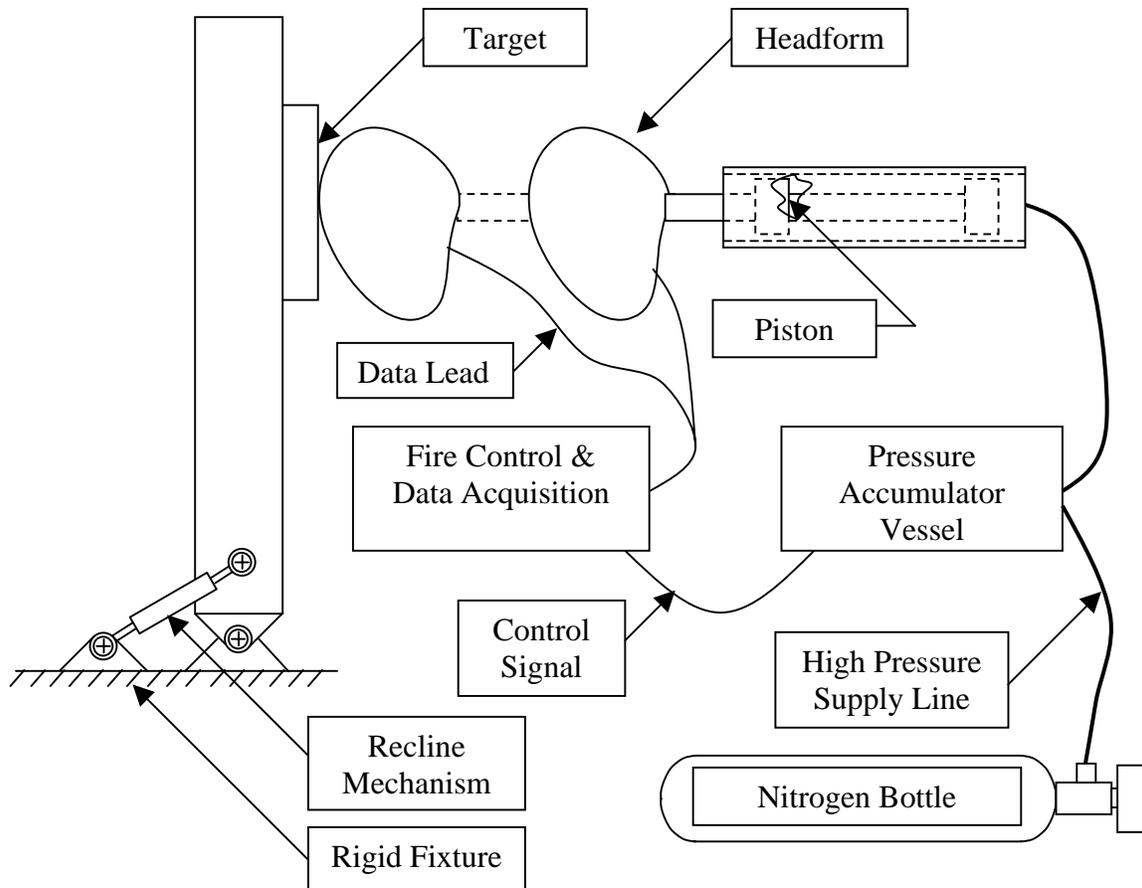


Attachment 4

Free Motion Headform Test Device



The Free Motion Headform (FMH) device is defined in 49 CFR part 572, subpart L, and is used primarily by the automotive industry to demonstrate compliance to Federal Motor Vehicle Safety Standards (FMVSS) 201U. This device can be used in a manner similar to FMVSS 201 to evaluate blunt trauma injury, and to assess the propensity for components to create sharp and injurious edges. The following criteria describe the test requirements:

- Each potentially injurious seatback mounted feature within the 35" headstrike arc must be assessed. To the extent practicable, the test articles should be positioned in order to be struck in the center by the headform, with a direction of motion that is perpendicular to the seatback/seatback mounted accessory. If the seat pitch is such that an item is located outside of the 35" headstrike arc, it need not be assessed.
- Each potentially injurious item should be mounted in a seat back that is connected to a rigid mounting fixture that shares the appropriate mounting points of the seat back (i.e., pivot and recline mechanism mounting). It is not necessary to represent a production seat except for the seat back, recline mechanism and their attachment to structure. As an option, it is acceptable to use a complete seat assembly, fastened to a rigid mounting fixture.

- The FMH forehead should be the initial point of contact, and should strike the center of the target.
- The impact velocity shall be at least 34 ft./sec.
- Electronic instrumentation shall be accomplished in accordance with SAE J211. Accelerations shall be measured in accordance with the requirement of Channel Class 1000.
- Pass / Fail Criteria: Peak accelerations shall not exceed 200g's; accelerations in excess of 80g's shall not exceed a cumulative duration of 3.0 milliseconds. The impact shall not cause the formation of any sharp or injurious edges or features that may impede egress.