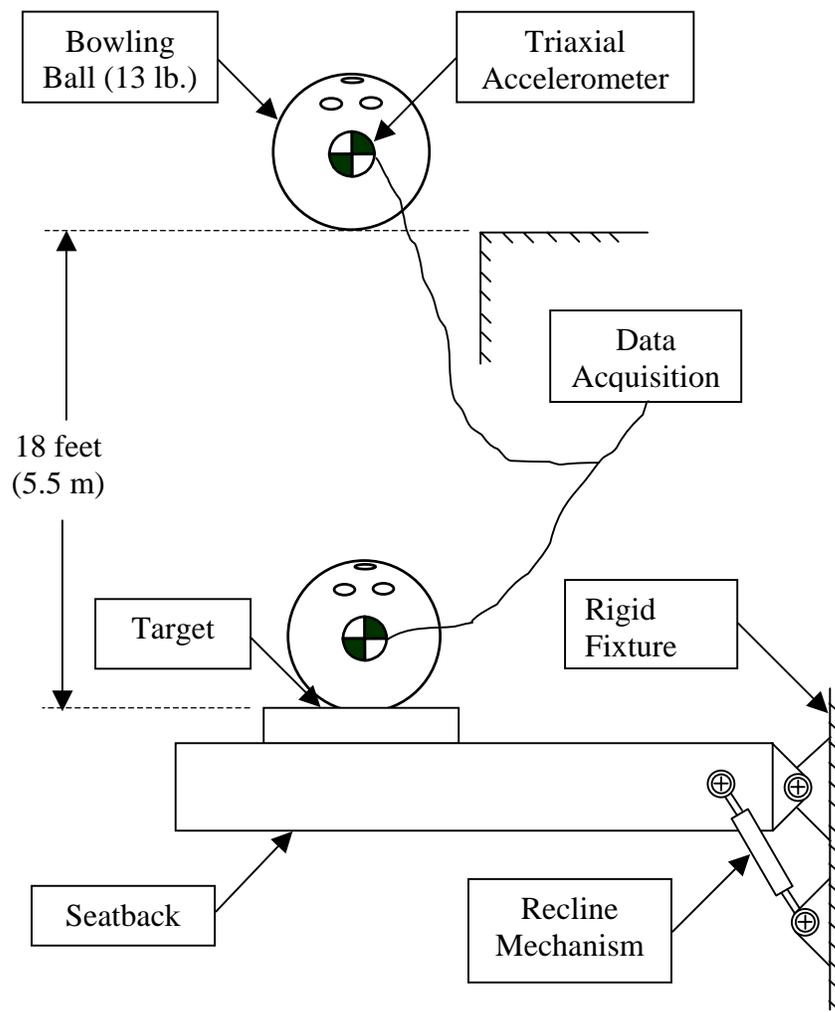


Attachment 2 Bowling Ball Test Device



Bowling ball tests should be conducted with a bowling ball weighing a minimum of 13.0 lbs., and instrumented with a triaxial accelerometer that records the accelerations associated with impact. As such, this test device can be used to assess blunt trauma injuries, and investigate 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 for the dropped bowling ball to strike the center of each item, 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 impact velocity must be a minimum of 34 ft./sec. Note: It is not necessary to measure the impact velocity provided the bowling ball is dropped from a minimum height of 18 feet above the impact surface.
- 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.