

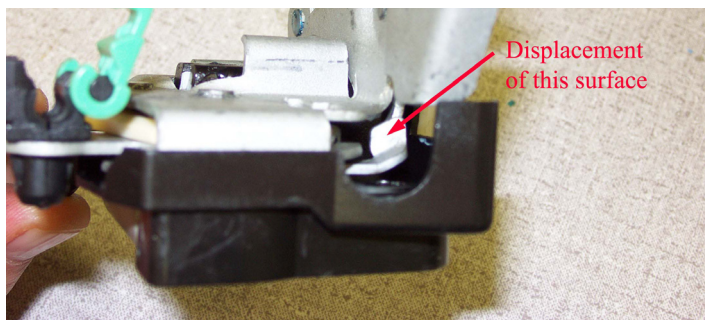
SENSORS FOR AUTOMOTIVE CRASH TESTS

A car door latch linkage was sent to us for an evaluation. The customer needed a sensor to measure the deflection of a part in the linkage during crash testing. They needed to determine if the car door would open during the crash test and if so, at what point during the crash sequence.



Door Latch Assembly

Model D100 Probe



APPLICATION

The Problem

- The linkage part to be measured is very small
- The part rotates about a pivot point as it moves
- The part is dull
- 4 mm displacement is required

The Solution

Philtec's model D100 sensor with a spot size of 2.5 mm and range of 10 mm seemed a good fit. We fixtured the test parts and made some successful measurements which are shown in the video clip below.

Since this target is not perpendicular to the sensor and it rotates as it translates, the response of the sensor to the motion of this target must be calibrated in-situ by the customer.



*click on image above to view video clip
must have Acrobat 5.0 or higher*

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Fiberoptic Sensors for the Measurement of Distance, Displacement and Vibration