



A173 Discharge of a Pistol Out of a Car Window With the Breech Within the Interior of the Car: Analysis of Gunshot Residue on a Car's Interior Surfaces

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The goal of this presentation is to show attendees where to sample for Gunshot Residue (GSR) in the interior of a car to document a firearm discharge within the vehicle.

This presentation will impact the forensic science community by providing locations for the sampling of a car interior to document GSR contamination from a firearm discharge while its breech is within the car.

The defendant, the driver of the questioned car, allegedly extended his right arm over the passenger seat and fired a single round from a .380 pistol out the passenger window. One witness, however, claimed that the defendant got out of his car and fired the pistol. A casing was not found at the scene. The attorney for the defendant requested an analysis for GSR of the alleged car, a 1997 Honda Civic®, used in the shooting. The brand of the .380 pistol was not known. A bullet was not recovered. A CCI® .380 Blazer® standard-primered cartridge with a full copper jacket bullet was hypothesized as being used in the shooting because the defendant had a box of this ammunition in the trunk of his car when arrested two weeks after the shooting. The CCI® Blazer® ammunition is distinctive for U.S.-manufactured ammunitions in that it has aluminum casings with the Berdan primer design.

Sampling for GSR of the defendant's car: The alleged car used in the shooting, a 1997 red Honda Civic®, was sampled at a police car storage yard. Thirty dabs each were made with a GSR sampler of the right door frame and the headliner over the passenger door. A heavy contamination of road dust prevented other surfaces from being sampled.

Considering the possible sources of the small number of GSR-like particles found in the defendant's car, it cannot be determined these few characteristic and consistent GSR particles were deposited on these surfaces by a discharge of a firearm from within the interior of the car or were transferred by hand contact.

Test of a similar car: A 2005 Honda Civic® of similar design to the questioned car was driven to a rural road and a Bryco® Arms Model 48 .380 pistol fired one time by a person in the driver's seat out the passenger window. The breech of the pistol was within the car's interior which simulates the shooting scenario in the defendant's car. As with the defendant's car, there were 30 dabs per sample.

The single discharge of the pistol in the 2005 Honda Civic® contaminated the interior surfaces of the car with GSR. The passenger window headliner and frame received many GSR particles. However, the dashboard sampling of a vehicle will provide more reliable evidence a firearm was discharged within a vehicle than other surfaces in the vehicle. A dashboard burden of GSR can only be from airborne deposition. Other surfaces where contact by hand is possible cannot be discounted for transfer of GSR from this source.

Gunshot Residue, Car Interior, Firearm Discharge