



6.5x25 CBJ Ball against windshield, CRISAT-panel and gelatin

Purpose:

The purpose of this test is twofold. First, it is a composite test where the scenario is that the target carries body armor and is sitting in the front seat of a vehicle.

Also, this test will demonstrate the ability of the 6.5x25 CBJ Ball/ST to penetrate body armor and its effect in ordnance gelatin when the bullet has been disturbed before impact by intermediate barriers.

This would be the case when the target is obstructed by e.g. thick foliage etc.

Test setup:

A windshield was set up according to Test Event 6 of the FBI Ammunition Test Protocol, which means it was inclined 45° vertically and 15° to the left and offset 45cm from the main target, which consisted of the NATO CRISAT-panel (a 1.6mm grade 5 Titanium plate and 20 layers of Kevlar) in front of a 10% ordnance gelatin block, shot at 4°C.

The dimensions of the block are: Length (Firing direction): 340mm, Height: 200mm, Width: 250mm. The range was 8m.

One 6.5x25 CBJ Ball round was fired at the target, V_0 : 844m/s.

Results:

The penetration of the windshield caused the bullet to tumble. As was evident from the shape of the bullet hole in the CRISAT-panel, the bullet impacted the body armor sideways. Nevertheless, the CRISAT-panel was penetrated as well as the entire block of gelatin (340mm) and there was a substantial temporary cavity.

Comments:

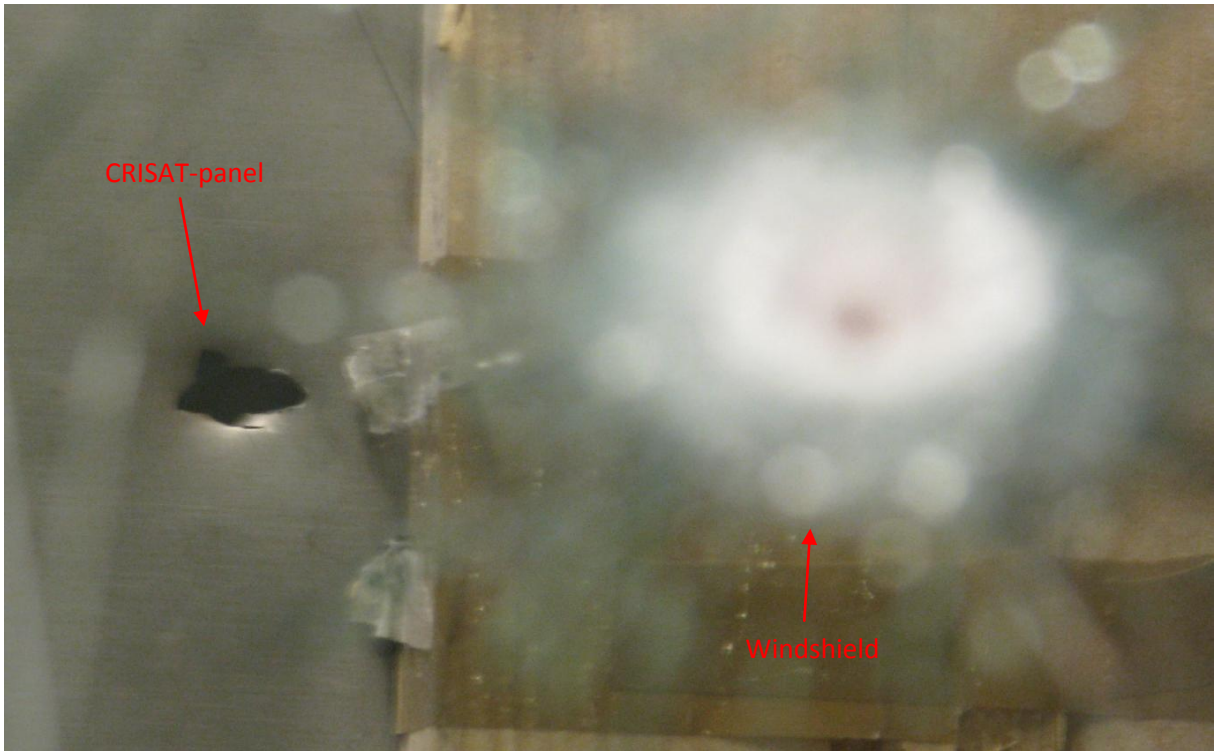
It is important that a bullet will perform well and have the necessary penetration even in less-than-ideal impact situations, which are common in real situations. This test has shown that the 6.5x25 CBJ Ball/ST will have a reliable performance under such conditions.

This is because the projectile will not fragment or substantially deform when penetrating typical barriers. The very high density of the projectile insures good penetration in all impact situations.

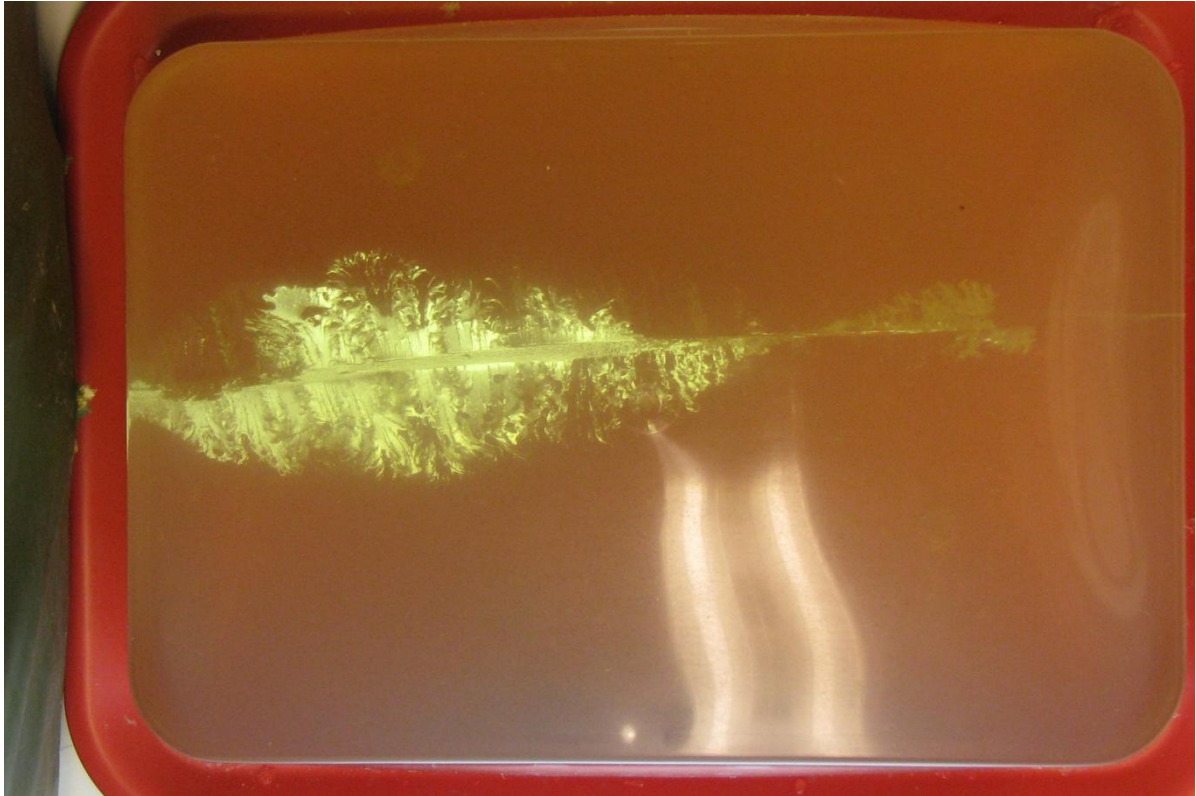
Also, as is evident from the temporary cavity, the energy loss of the projectile during penetration is limited and this energy is instead transferred to the soft tissue where it comes to better use.



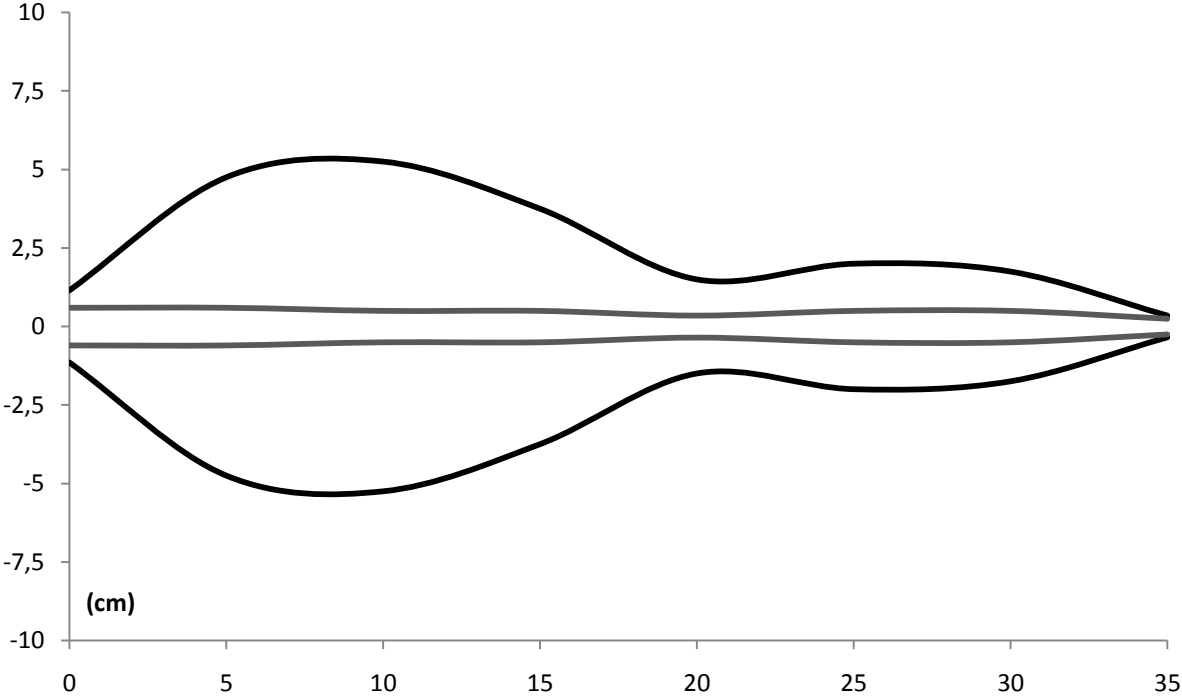
The test setup before the shot.



The bullet hole in the windshield and oblong hole in the CRISAT-panel, indicating that the projectile impacted the body armor sideways.



The gelatin block seen from above. The firing direction is from left to right.



The Wound Profile. Necessary penetration depth, which is the most important factor, is assured and the temporary cavity is substantial considering the intermediate barriers already penetrated.