

Rear Glass Hazard

Firefighters at the International Extrication Competition discover a hidden glass hazard

By Brad Havrilla

Nowadays, almost everywhere you turn you see sport utility vehicles (SUVs). They're everywhere except in the junkyard where we practice vehicle extrication. SUVs are bigger, tougher and trickier than most other vehicles. Before SUVs, during extrications we most frequently dealt with the following problems: electrical systems, fuel, glass, loaded bumpers and the pistons on a hatchback. If you cut high enough on the hatchback column and don't remove the piston, you can get hit in the face on the final cut. It seems that we have either forgotten this or not realized that the rear door of an SUV has two sets of pistons—one for the door and another set for the glass, similar to a hatchback.

During the most recent International Extrication Competition in Louisville, Ky., last fall, Ford donated about three dozen late model cars, trucks and SUVs. I witnessed the shock of the judges in the pit and spectators outside the pit when exploding tempered glass struck them after a competitor correctly broke the rear glass using a center punch. Luckily everybody was protected by their safety equipment and no one was injured.

The competitor told me it surprised him because he didn't realize the pistons loaded the glass. By design, the pistons hold the glass up when someone opens the rear window. We thought ours was an isolated incident, but realized our mistake when it happened two more times in our pit. The glass is under pressure—when struck with a center punch—the pistons release with significant force.

I discussed this with Len Watson a firefighter and author from England. Watson has written two books on extrication, **Road Traffic Accident Persons Trapped**, Greenwave Limited, 1990 and **Advanced Vehicle Entrapment Rescue (User Guide for Power Rescue Tool Operators)**, Greenwave Limited, 1994. Watson related a similar occurrence in which a firefighter in Great Britain was injured in the face when a piston releasing after glass broke.

How do we avoid injury? First we need to wear the proper personal protective equipment. Most face shields don't offer proper eye protection and most eye protection doesn't shield the face. A verbal warning of breaking glass should alert everyone in the action area of what's happening—especially those not in protective gear. Second, we need to recognize what we're dealing with right away. On most SUVs, the pistons remain hidden until the rear door opens. So how do we keep rear glass blowing out under tremendous force? We don't—we contain and restrain it. I suggest using a blanket, salvage cover to cover the glass prior to breakage. Or open the window first, let the pressure off the glass.

Let's be honest, we don't take all the glass off an SUV and remove the roof every day. Usually we gain entry through that big rear door. If we can't open the door, we'll certainly break glass to gain access to the door mechanism. We've been successful in reclining the seatback and taking the patient out the rear door. Just be careful of that rear glass and the hidden pistons.