

One Is Too Many!

Russell Williams / Action Photography

FIREPANEL™
VEHICULAR FIRE PROTECTION SYSTEMS

The potential for a fire to occur during a high-speed collision involving a police car is of great concern today. Well documented in the news, fires that have occurred after a high-speed, rear end impact have cost police officers their lives from otherwise survivable collisions. Now, a FIRE Panel installed directly on the fuel tank provides a strong layer of fire protection for officers.

The FIRE Panel product, which is patented technology, is the civilian embodiment of a fire protection concept used by the military for decades. This military technology has enhanced the survivability of aircraft fuel tanks during combat. Military aircraft have often encased the fuel tanks with hollow shields filled with fire suppressing agents. Currently, helicopters and some of the most advanced aircraft in development employ this type of fuel tank protection.

The FIRE Panel pedigree also includes motorsports. Earlier versions of FIRE Panels have been road tested in

competition using professional racing vehicles from the SCCA® Trans-Am® Series. This motorsports background demonstrates the durability of the FIRE Panel as it stood up to the rigors of professional racing.

The premise of the FIRE Panel fire protection is this: In order to reach the fuel tank with some object that would puncture or ignite the fuel, that object must first pass through a breakable, protective wrap containing fire suppressing powder, which is installed around the exterior of the fuel tank. As the protective wrap is shattered by the puncturing object, a "cloud" of fire suppressing powder is released, which "inerts" the space around the fuel tank, thereby preventing the ignition of the fuel or quickly suppressing the fire.

The sequence below, taken from an actual high-speed rear end collision, documents the deployment of the fire suppressing powder around a police cruiser.

▶▶▶ PLAY

0.00 SEC

0.11 SEC

0.67 SEC

1.53 SEC

3.48 SEC



|| PAUSE

FIRE Panels have many features that add to their powerful fire suppression properties:

- ▶ FIRE Panels have no moving parts to fail — they will always be ready to provide fire protection
- ▶ FIRE Panels are made of a rugged yet lightweight polymer for durability during regular use



The FIRE Panel wraps around the axle side, as well as both left and right sides, of the fuel tank.

- ▶ FIRE Panels install in minutes on the outside of fuel tanks, which minimizes vehicle downtime
- ▶ FIRE Panels work automatically and will not be affected by low speed “fender benders”
- ▶ FIRE Panels are cost-effective



"Image of fuel tank superimposed over CVPI is for general placement information only and is not to scale nor intended to be a technical representation."

To test the FIRE Panel in a “real world” collision, a normally functioning 1999 Crown Victoria Police Interceptor (CVPI) was equipped with two safety enhancements. A FIRE Panel was mounted on the axle side of the fuel tank (see Images 1 & 2),

and a bladder was installed inside the fuel tank. The fuel tank was filled with 14 gallons of unleaded gasoline, and the vehicle’s flashers were operating. A pickup truck was then crashed into the rear of the CVPI at 81.9 mph.



3 Post-crash CVPI

Image 3 shows that the impact of the high-speed, rear end collision was quite severe. As the trunk compartment of the CVPI compressed to absorb the impact, the fuel tank was thrust forward and up into

the other components of the CVPI’s underside. The safety enhancements used in the test lead to a most important and obvious result — there was NO fire. In this test, the FIRE Panel was immediately shattered (by design) at the onset of the collision by the impacting CVPI’s rear end components.

In a subsequent test conducted by the Automotive Safety Research Institute, a GMC® Sierra pickup truck, featuring conventional “side-saddle” fuel tanks mounted outside of the frame, was outfitted with the same two safety enhancements, a FIRE Panel and a bladder.

A Chevrolet® Caprice Classic was crashed into the side of the GMC pickup at 50 mph (see Image 4). Just as in the CVPI test, a large “cloud” of fire suppressing powder instantly formed around the fuel tank to “inert” the surrounding air (see Image 5).

What’s more, FIRE Panels are not limited to police vehicles. As mentioned earlier, professional and amateur motorsports continue to use and evaluate FIRE Panel for fire protection. Mass transportation vehicles such as city and school buses can also add a proven layer of safety by installing FIRE Panels on their fuel tanks.



4 Impact instantly creates “cloud”



5 “Cloud” of fire suppressing powder

Call us today, toll-free, at 866.607.0747 and learn how a FIRE Panel could make the difference between a devastating fire and a survivable crash.

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F.I.R.E. Panel LLC
7898 E. Acoma Drive, Suite 106
Scottsdale, AZ 85260 USA
Tel: 480.607.0595
Fax: 480.778.1773

www.firepanellc.com

E-mail: info@firepanellc.com
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