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5 critical lessons about armored vehicles from the Boston Marathon Bombing

Armored vehicles help law enforcement face a new world of potential threats

In many ways, the Boston Marathon bombing incident served as a wakeup call. Those in the law enforcement community and the public who may have harbored somewhat of an “It’s never going to happen here” sentiment were faced with the hard reality of the 21st century terrorism threat. While most agree that there is no feasible way of totally securing public safety in a free and open society, there is now more than ever a desire to provide law enforcement agencies with the latest and most effective safety procedures and equipment. At the top of the list of “must haves” is the tactical armored vehicle, like the **BearCat**[®], made by Pittsfield, MA-based Lenco Armored Vehicles.



More than a dozen **BearCats**[®] were deployed by multiple state, local, and regional agencies at the Boston Marathon scene, including one that took part in the final dramatic scene in which the **BearCat**[®] climbed a 24-inch retaining wall and then used a hydraulic battering ram on the vehicle to remove the tarp covering the boat in which the suspect had been hiding.

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During the bombing incident the armored vehicles served multiple purposes, from overwatch and cover during the door to door search, to transporting large numbers of officers. The vehicles’ features and interoperability made them especially useful in the densely populated multi-agency scene manned by different groups and equipment. At numerous debriefings and discussions after the incident, the desirability of having tactical armored vehicles available was stressed time and again, and their features called absolutely essential to today’s law enforcement.



Tactical Armored Vehicles Provides Hard Cover and Fast and Efficient Officer Transportation

Used over the last decade for SWAT operations, including executing search warrants on high risk individuals, drug raids, barricaded gunmen callouts, and hostage rescue, the **BearCat**[®] provides a much greater level of protection than tactical shields and offers a very large area of hard cover. These features are a big part of the reason they were used so successfully at the Boston Marathon incident.

For example, the Massachusetts State Police was called in after the initial shooting in Watertown, arriving at 3 a.m. Trooper John Suyemoto explains that the State Police used

one of its three **BearCats**[®] as its base of operations during the daylong area search around the vehicle abandoned by the fleeing suspect. The **BearCat**[®] also served as the delivery platform to investigate a series of civilian call-ins about people matching the suspect's description.

“We spent the day responding to more than ten different calls around Watertown and Cambridge,” said Trooper Suyemoto. “We cleared out large office buildings and even responded to a report of another suicide bomber. The truck was helpful for handling these types of situations, where we had incomplete or incorrect information that must be investigated before it can be discounted. The **BearCat**[®] allowed us to observe situations in general safety inside the truck.”

The **BearCat**[®] was also used as part of the 27-person Nashua, NH Police Department's Special Reaction Team, which was called in to assist with a door-to-door search in the Watertown Mall area. Linking up with the 50-person North Eastern Massachusetts Law Enforcement Council (NEMLEC) SWAT team, Sergeant Joseph Fay's team provided backup, along with units from other nearby County agencies. The area was broken up into quadrants and zones and each team was assigned certain areas to clear.

Sergeant Fay explains that the **BearCat**[®] was invaluable during the incident, providing better hard cover than shields in the event they had to engage with a suspect. It was also excellent for transporting large numbers of SWAT officers. “Some were inside and many others were loaded on the outside rails, which let us quickly transport large numbers to any location and deploy quickly.”

The daylong search for suspects over an entire city block area was an unusual call out because it involved such a large geographical area, and Fay noted how the availability of the **BearCat**[®] armored vehicles allowed a key change in tactics. “During the mission we pushed the **BearCat**[®] down the center to provide overwatch and cover while officers went door to door.”

He explains that in a mobile operation, you are constantly moving and must provide cover for the exposed team members. There is no other way to do that without a vehicle, because the operation constantly changes location. In a more traditional operation, snipers and marksmen provide that kind of cover, but in this situation the event was moving, so officers lost the ability to deploy a sniper in a single area.

“Looking back on the situation, I feel that the presence of the **BearCat**[®] was the only way to address this rolling situation. It is the only piece of equipment that can provide such a large area of hard cover,” said Fay. He notes that the vehicle did what it was supposed to, offering shooting ports, with turrets providing overwatch. In addition the hydraulic ramming arm shielded the team, allowing officers to work the mechanical ram from behind cover to avoid injury.

According to State Trooper Suyemoto, the **BearCat**'s[®] battering ram played a crucial role in the successful end to the operation. He explains that in the late afternoon, shortly after authorities allowed people to move around the area, a homeowner discovered that his boat had been compromised. He called 911 and the police deployed to that residence.

Trooper Suyemoto picks up the story. “We were at the command post on Arsenal Street and drove over, getting down in the area of the truck’s maneuverable G3 platform. Then, upon confirmation by a helicopter with thermal imaging that the subject was inside the boat, we mounted the 15-foot hydraulic ram arm on the front of the truck; thankfully, mounting the arm is a relatively quick and easy operation. We drove the truck up to the boat, which was difficult because we had to mount a 24-inch high stone wall. Luckily, the **BearCat**[®] was up to the task. It took a couple of attempts, but we reached the top of the wall and drove up the lawn. We got the truck positioned properly, and proceeded to remove the tarp covering the boat by moving the arm back and forth down the length of the boat to punch holes in the shrink wrap. We could then remove it and see inside. I can tell you that it felt very good to be in a safe position within that armored car. There is very little someone armed with a regular rifle or handgun could do to us with the cover provided by the **BearCat**[®].”



Mission-Critical Interior and Exterior Features and Options Promote Interoperability, Crew Safety and Comfort

Tactical armored vehicles are typically built on heavy-duty commercial truck chassis, fitted with NIJ IV rifle-resistant armor and a four-wheel drive system. They carry up to twelve people. Armor may vary among vehicles, but the **BearCat**[®] is always built with Mil-Spec steel armor plate certified to defeat multi-hit attacks from 7.62 AP/.50 Cal BMG rounds. Ceilings and floors provide enhanced blast and fragmentation protection and ballistic glass windows also offer multi-hit defeat.

The vehicles come in 2- and 4-door variants; IED blast seats are also available. They feature a 360° rotating zero gravity roof hatch and an optional armored cupola for added ballistic protection. Dual rear-mounted air conditioning and heat ensures crew comfort, and a custom center console and computer equipment designed to fleet and central command specifications guarantees interoperability. Kevlar ballistic skip round shields protect downed personnel during officer rescue missions. The ballistic blankets can also be used as stretchers.



Scores of other options can be used to tailor the vehicle to particular needs, including a front and rear strobe, siren/PA system, back up camera, on-board contained air, and long range acoustic device (LRAD) for crowd control. Says MA State Trooper Suyemoto, “The LRAD and the thermal camera with pan and zoom capability mounted over the driver’s head were absolutely invaluable features. We spent the day going on calls and the LRAD and camera system made an extremely safe platform in which to work, especially considering the evolving, fluid situation.”

Mission-specific equipment is available for SWAT, medical evacuation, bomb technicians, anti-riot, and dignitary and

VIP transportation. The newest options, designed especially for barricaded gunmen callouts, include the hydraulic RAM bar that extends 17 feet and elevates 12 feet. As mentioned, the hydraulic ramming arm was definitely an instrumental piece of equipment at the Boston Marathon incident. Another newer option, the Lenco gas injector unit (GIU) can be mounted at the end of the arm; chemical munitions can be deployed through a perforated spike controlled by a switch on the vehicle’s center console at a safe distance from the suspect.

Civilian and Officer Protection a Key Benefit of Armored Vehicles

Armored vehicles are an equipment extension for ballistic shields used for entries into homes and for officer protection. “We want the least amount of damage possible to people,” said an officer from the Boston Police Department’s mobile operations patrol (MOP), who asked not to be identified. “Tactical armored vehicles like the **BearCat**® are made to withstand small arms fire and small explosives to get wounded officers or civilians out of an area safely.”

The officer explained that the BPD deployed two armored vehicles during the incident. Armored vehicles like the **BearCat**® protect access and egress of officers who go in as part of rescue parties, or allow officers to safely enter a scene – delivering the team safely to and from a location is one of their key missions. In Boston, the **BearCat**® is typically used for securing an area, or where there are unknowns. The armored vehicle provides cover and concealment from armed felons and is most often used for warrant services.

Aside from the high visibility Boston Marathon bombing and its aftermath, armored vehicles have already won an important part in many law enforcement agency arsenals. Take the case of Pittsfield, MA, where the armored vehicle has quickly become a part of the tactics used in all city pre-planned or other high risk drug operations, barricaded subject calls, and in support of protective details.

According to Michael Wynn, Pittsfield Police Chief, the city frequently puts the armored vehicles in close proximity to the venue as a mobile bunker. This means, instead of using evacuate and flee tactics, they can evacuate and lock down, and then move out under cover. They may park the vehicle and put a tent over it to conceal it and then use it if necessary.

“The **BearCat**[®] is as quiet as a truck, and we use it almost any time we go on a raid. We would rather have it and not need it than have to call back for it,” said Wynn. “We can drive into a hot zone and we can conduct an officer rescue and it adds a whole new dimension when the team can approach a target.” The team’s capabilities have been greatly increased by the ability to ram a door and introduce gas without gunfire. “Also, you can’t underestimate the “Wow” factor – recently we simply had to drive up to a suspect’s front lawn and announce that he was surrounded. He took one look at the vehicle and surrendered. Minimizing the risk to the team by not having to execute cannot be overstated.”



Team Training a Must for Use of Tactical Armored Vehicles

Many of the officers present at the Boston Marathon scene focused on the importance of team training on the use and limitations of armored vehicles prior to putting the vehicles in service. In addition, they emphasized that training should incorporate EMS and EODs (explosive ordnance divisions) so that all parties can work together. “Everyone has to be able to work as a team,” said the BPD officer. “Each component is a building block and each officer must know what these vehicles can and cannot do and how they can and cannot be used.”

For example, BPD incorporated training on tactical armored vehicles during Urban Shield Boston, a continuous 24-hour exercise, during which first responders were deployed to and rotated through various training scenarios. This is the largest exercise ever conducted in Boston, involving more than 600 emergency responders from 50 agencies.

In the opinion of the BPD officer, other than a full armored vehicle like a tank (which most law enforcement officials do not think would be accepted in most U.S. cities), a tactical armored vehicle like the **BearCat**[®] will provide law enforcement with the greatest help to get in and solve a problem. “In my view, it is better safe than sorry. We need a vehicle like this for aiding and assisting officers. They are not tanks and are not going to block explosions or solve all the problems, but they are a huge help for aiding and assisting officers on the scene.”

Tactical Armored Vehicles Provide Peace of Mind

Armored rescue vehicles provide a huge measure of peace of mind for officers who arrive on a scene and may not know exactly what they are getting into. They can aid and assist getting officers in and out, getting wounded parties in and out, or providing cover. They certainly proved their worth in one of the nation’s most serious terrorist incidents in recent memory, and are considered an essential piece of equipment to own by most law enforcement agencies around the U.S.

State Trooper Suyemoto sums up it up this way. “The **BearCat**[®] did everything we asked it to do, including driving up and over a wall, and it performed very well. We pretty much used every piece of gear we got with it except for the gas injector. It provided a high level of safety to our guys and without it our next step would have been removing the shrink wrap on the boat by hand. Having an armored car made that potentially dangerous situation much safer. We don’t often get equipment that does what we want it to do, so when we do, we are happy to sing its praises.”