

# Killer traffic

## *Vehicle borne IEDs are insurgent's weapon of choice*

By Dave Crozier

On August 7, 2003, a truck bomb was detonated outside the Jordanian Embassy in Baghdad, killing 19 individuals. Twelve days later, another truck bomb was detonated outside the United Nations Headquarters in Baghdad killing 22 more. Since that time, the use of vehicle borne improvised explosive devices (VBIEDs) has quickly become a weapon of choice for insurgents attacking Coalition Forces and Iraqi security personnel.

Information obtained from Wikipedia (<http://en.wikipedia.org/wiki/Wikimedia>), the free encyclopedia developed by the non-profit Wikimedia Foundation Inc., shows that since then VBIEDs have been used extensively to bomb Iraqi police stations, military targets, Coalition Headquarters, Iraqi Army recruiting centers and facilities, etc., while racking up more than 890 deaths. VBIEDs have also been used to conduct the assassinations of a prominent Iraqi official, Iraqi cleric Ayatollah Mohammed Baqr al-Hakim (with 84 others), and Sergio Vieira de Mello, a United Nations Special representative (along with 29 others).

A mobile version of the equally effective improvised explosive devices (IEDs) used mainly alongside Iraqi roads and medians, VBIEDs come in all shapes and sizes. The Center for Army Lessons Learned (CALL) reports that vehicles being used vary in size from passenger cars to large delivery or sewage trucks and there have even been instances where donkey carts, ambulances and generators have been used to deliver the explosive attack. One of the reasons VBIEDs are gaining in popularity, according to experts, is the fact the vehicles can carry large amounts of explosives, from 100 pounds to more than 1,000 pounds and

the vehicle acts as its own delivery system. Items used in making the VBIED include the use of mortar rounds, rocket motors, rocket warheads, PE4 (plastic) explosives and artillery rounds.

In a recent Coalition Provisional Authority Force Protection Working Group briefing outlining the threat of IEDs and VBIEDs used in Iraq, officials warned the explosives can be disguised as anything or hidden anywhere and that it is difficult to spot IEDs at convoy speeds. In the realm of VBIEDs, the Authority cautioned Soldiers to be on the lookout for "a beater with worn shocks and springs; overloaded, trash on seats; good tires on a junk car. This is a one-way trip, the driver wants no flats."

In a recent issue of Countermeasure Magazine Command Sgt. Maj. Jeff Butler, 16<sup>th</sup> Military Police Brigade, told a story about an incident he experienced in Iraq when his vehicle encountered an improvised explosive device. In telling this story

| BATF Explosive Standards  |                             |   |                        |                             |                            |
|---|-----------------------------|---|------------------------|-----------------------------|----------------------------|
| ATF   | Vehicle Description         | Maximum Explosives Capacity             | Lethal Air Blast Range | Minimum Evacuation Distance | Falling Glass Hazard       |
|  | Compact Sedan               | 500 pounds<br>227 Kilos<br>(In Trunk)   | 100 Feet<br>30 Meters  | 1,500 Feet<br>457 Meters    | 1,250 Feet<br>381 Meters   |
|  | Full Size Sedan             | 1,000 Pounds<br>455 Kilos<br>(In Trunk) | 125 Feet<br>38 Meters  | 1,750 Feet<br>534 Meters    | 1,750 Feet<br>534 Meters   |
|  | Passenger Van or Cargo Van  | 4,000 Pounds<br>1,818 Kilos             | 200 Feet<br>61 Meters  | 2,750 Feet<br>838 Meters    | 2,750 Feet<br>838 Meters   |
|  | Small Box Van (14 Ft. box)  | 10,000 Pounds<br>4,545 Kilos            | 300 Feet<br>91 Meters  | 3,750 Feet<br>1,143 Meters  | 3,750 Feet<br>1,143 Meters |
|  | Box Van or Water/Fuel Truck | 30,000 Pounds<br>13,636 Kilos           | 450 Feet<br>137 Meters | 6,500 Feet<br>1,982 Meters  | 6,500 Feet<br>1,982 Meters |
|  | Semi-Trailer                | 60,000 Pounds<br>27,273 Kilos           | 600 Feet<br>183 Meters | 7,000 Feet<br>2,134 Meters  | 7,000 Feet<br>2,134 Meters |

*The above chart depicts the capacity and lethality of varying vehicle sizes and classes. SUVs, pickup trucks or large delivery trucks can carry the most explosives and are most likely to be used to transport VBIEDs, but smaller cars can also carry enough explosives to cause significant damage.*

Butler also points out a technique his team developed to combat VBIEDs.

An excerpt of that story follows: “The explosion rocked our M1114 up-armored HMMWV as shrapnel from an improvised explosive device (IED) shredded the right rear tire and tore into the quarter panel above it. The powerful concussion slammed into the HMMWV and spun it to the right as the passenger side tires grabbed the road and the vehicle began to roll over. The earth and sky changed positions three times before the damaged vehicle and now burning HMMWV finally landed on its wheels. The driver was unconscious. The gunner had been blown back inside the vehicle and tumbled around as the HMMWV rolled over. But at least he was alive ... Although we all had suffered minor injuries during the attack, the major loss was the vehicle, which burned to a shell. As I reflected on this, I was thankful for the safety measures that were in place that greatly contributed to our surviving this incident ... I’m here to testify to their effectiveness when it counts. I want to list and discuss some of these safety factors along with tactics, techniques, and procedures (TTPs).”

One TTP Butler described was “Route position” in which he outlines “vehicles should travel in the middle of the lane as much as possible.” Butler’s unit had adopted this technique so the rear vehicle would block traffic from passing on the left side. This, the article stated, is in response to recent vehicle-borne improvised explosive device (VBIEDs) attacks.

Countermeasures vary for VBIEDs, but remaining alert to possible signs is the greatest defense, according to experts. OIF Smart Card 4 states that a growing technique of the insurgents is to have multiple vehicles involved. The lead vehicle is used as a decoy or barrier buster. Once the vehicle has been stopped or neutralized and the coalition forces move in to inspect or detain



Photo by Staff Sgt. Michael Nasworthy

*In November, Soldiers from the 2nd Battalion, 7th Cavalry Regiment secured a mass weapons cache. The cache included 400 mortars, 15 rockets, two anti-aircraft rockets, 20 lbs of plastic explosives, 300 rounds of 7.62 ammo, multiple mortar tubes and stands, and one large VBIED.*

the individuals involved, the main VBIED vehicle comes crashing through and into the crowd and detonates, thus increasing its lethality.

“Servicemembers need to stay alert to signs and indicators of VBIEDs. Of these are false markings and plates, official symbols in the wrong location, drivers unfamiliar with the workings of their vehicle controls and drivers that seem to be agitated or lost,” states Smart Card 4.

Wikipedia also points out that very same tactic and adds that suicide car-bombers typically employ one or more suicide bombers to ram a car into a building and simultaneously detonate it. Defending against a car bomb involves keeping cars at a distance from buildings, often using Jersey barriers or similar devices, and hardening buildings to withstand an explosion.

Another tactic used by insurgents that involves cars or other vehicles is the use of abandoned/broken down vehicles alongside roadways to force convoys to move into close proximity to an IED either inside the broken down vehicle or along the median strip. Car bombs are also placed in broken down vehicles outside of the building or in close proximity to large crowded areas.

In any case, following proper SOPs and TTPs when dealing with IEDs and VBIEDs will go a long way to keeping Soldiers safe. The CPA also says Soldiers should “trust your instincts, be and look vigilant, especially when forced to slow down for a disabled vehicle or an accident, vests and helmets save lives, glasses save eyesight, and force protection is everyone’s business.”



USAF Photo by Technical Sergeant Lee Harshman

*What is left after an explosion as members of the Iraqi Police and Company A, 1st Battalion 21st Infantry Regiment secure a stretch of road near the city of Amel Shabi, in northeast Iraq. The area was the site of a VBIED attack that struck near a traffic control point.*

**Check out the VBIED smart card on the next page ➡**

## Vehicle Borne IEDs

Vehicle borne IEDs come in all shapes, colors, and sizes. From a simple passenger car, to a large delivery or sewage truck. There have even been instances of what appeared to be generators, donkey drawn carts, and ambulances used to attempt attacks on Coalition Forces and the New Iraqi Government. To include using vehicles that are familiar to coalition forces.

VBIEDs have increasingly used larger amounts of explosives, and the explosive charge has ranged anywhere from 100lbs to well over 1000 pounds. And has included things such as mortar rounds, rocket motors, rocket warheads, PE4 explosives, and artillery rounds.

A growing technique is to have multiple vehicles involved. The lead vehicle is used as a decoy or barrier buster, once it has been stopped or neutralized and the coalition forces start moving to inspect or detain – the main VBIED comes crashing through and into the crowd and detonates. Thus increasing their casualty ratio.

Service members need to stay alert to signs and indicators to prevent the VBIED from reaching its destination. Of these are fake markings and plates, official symbols in the wrong location, drivers that are not familiar with the vehicles controls, and drivers that seem to be agitated or lost in their directions.



8ft wide by 3ft deep hole left by vehicle IED. The auto disintegrated upon detonation.

Suspected 155mm artillery rounds as the main charge, unknown number of rounds used.

Wires connected to battery running back to the charge in the trunk, under the rear seat, and to the switch above the drivers sun visor. This VBIED was captured intact.



After ramming through the serpentine barrier, this VBIED detonated when the vehicle became disabled in gunfire. The vehicle vaporized.

## Why are VBIEDs more dangerous?

## They bring the attack to YOU.



Fake Ambulance, had over 1000 pounds of explosives inside it.

Single vehicle, well over 1000 pounds of explosives. Was a white sewage pumping truck. Explosives hidden inside the tank.

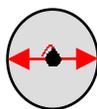


Delivery truck that detonated right outside the camp.

## IED Actions on the Scene

### 1) Immediately establish a security perimeter

- Clear the area of all civilians and soldiers
  - Airspace included
- Search for secondary devices
- Request Local MP support



300ft 360°  
1000ft for large IED  
2000ft for truck sized

### 2) Gather as much info as possible.

- What does the object look like?
- Where is the device?
- Who first identified the object?\*
- Let them tell their story

\* Have the person that identified the IED present for EOD to interview and question.

### 3) Notify EOD

- Request an expanded perimeter
- EOD will conduct analysis/diagnostics
- Remote Reconnaissance/Disruption
- Use EOD UXO/IED 9-Line



The enemy has increased its use of false IEDs to draw personnel into the kill zone. Using collapsing circuits, and using booby traps to catch personnel attempting to disarm IEDs.

**REMEMBER – DO NOT ATTEMPT TO DISARM AN IED YOURSELF.**

**LEAVE IT TO THE EXPERTS.**

## Countermeasures

- Use counter-recon and route security patrols along highly traveled MSR and other convoy routes. Aggressive patrolling can mitigate the threat; devices have been encountered that the perpetrator had not had time to finishing emplacing.
- While traveling in a convoy, watch the sides of the roads for objects that look out of place and stay alert.
- Increase the knowledge of Coalition forces on IED awareness and minimize knowledge of operations to non-Coalition personnel.
- Assume any manmade object encountered can contain an IED. Do not drive over or step on sandbags, garbage bags, burlap material, boxes, or garbage in the road while on patrol.
- Upon discovering an IED, assume it can be remote detonated. Be aware of any suspicious individuals in the area and secure a safe distance around the device.
- IEDs have been found that were targeting vehicles traveling in either the left or right lanes on the highways; drive aggressively and keep vigilance when driving for the above mentioned objects.
- IEDs currently used to target an initial Coalition activity (ex: convoy or patrol); future incidents could target a secondary activity (ex: first responders-MPs, EOD) as the devices and employment TTPs gain complexity.

## Key to Defeating the IED Threat

- LET THEM KNOW THAT YOU ARE READY:** The enemy is looking for an easy mark. He wants to get away. Show him that you are not an easy target.
- VEHICLE DISPERSION:** 75 m to 100 m or greater, makes it more difficult to correctly target the convoy – this results in late or early detonation and the likelihood that the enemy will not get away.
- KNOW THE INDICATORS:** Bags, piles of rocks, piles of dirt in or beside the road. If you don't like what you see, trust your instinct, stop, turn around, and go another way. Report observation through the chain of command. Let the experts check it out.
- VARY THE ROUTE AND TIME AND SPEED OF TRAVEL:** We know the enemy is watching us and attempting to determine our patterns; make every attempt to vary this pattern; never take the same route twice in two days. The enemy placed the IED there for a reason, and he is targeting you!
- ALWAYS HAVE FRONT AND REAR SECURITY OUT:** Roll up or remove HMMWV/FMTV canvas, so that you can see behind you, and pay attention to where you are going. Determine who has what security responsibilities before you move, face out during movement and constantly scan assigned sectors of fire. Many ambushes are initiated with an RPG shot from the rear.
- REPORT, SECURE AND REDUCE CACHE SITES:** The enemy is drawing his supply of explosives from somewhere.
- TRAVEL IN CONVOYS OF 3 OR MORE VEHICLES:** The enemy may not detonate the IED if he believes that he will be caught. It is very difficult to successfully attack 3 or more vehicles if they are widely dispersed.
- VEHICLE MODIFICATIONS:** Install machinegun mounts and outward facing seats.
- SANDBAG VEHICLES, WEAR IBA AND HELMETS:** ...these actions have saved lives.