Tradecraft: How to disable an MRAP for less than $50

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– Police and military vehicles are stolen from time to time. Should a citizen be in a community where a military vehicle is stolen, it would be wise to understand how civilian populations throughout history have disabled military vehicles in the past. This article has absolutely nothing to do with the recent trend of police departments deploying armored vehicles against people exercising their Constitutionally-protected rights. Perhaps the reader travels overseas and a military crackdown erupts while they are drinking Pina Coladas on the beach. The point is that this information should never be used against US law enforcement. That would be a violation of the social contract and you might end up in jail.

Most Americans are familiar with the Mine Resistant Ambush Protected (MRAP) vehicle because their local police department obtained one to look cool. Due to familiarity, this will be the vehicle used as an example. The same tactics will work against almost all other armored vehicles.

Prior to engaging an armored vehicle, it is important to understand what, exactly, you are dealing with, once the intimidation factor is stripped away. It's really just a heavy passenger vehicle that is designed to move people from one location to the next, while protecting them with armor. That's it. While these vehicles do have some offensive capabilities, like gun ports (holes to stick a weapon through and fire at a crowd), or even a mounted machine gun or grenade launcher, their primary mission is to move people. Defeating an MRAP is as simple as destroying its ability to move and protect its occupants at the same time.

The tactics discussed in the article will be limited to relatively low-impact methods. Obviously the most effective method of stopping an MRAP is deploying a shaped charge. I think the new terminology is Explosively Formed Penetrator. However, if you're reading this article, you (probably) don't have the technical expertise to safely use this method.

Destroying an armored vehicle's ability to move or protect its occupants does not necessarily mean destroying the vehicle. When encountering an armored vehicle on foot with no heavy weapons, the reader has adopted an unconventional warfare stance. It would be best to think unconventionally.

Stopping movement by obscuring vision:

While the outside of an MRAP varies greatly from a normal car, sitting in the driver's seat is fairly similar to driving a U-Haul truck. The driver looks over the steering wheel and through the windshield to the street. If the driver cannot see past the windshield, the vehicle ceases to move because it either crashes or the driver stops it.

Any sticky liquid substance that can be pumped into water balloons or packed into a glass container will stop an MRAP. If the balloon bursts or the glass container breaks open on the windows, the driver is forced to stop and the occupants are forced to exit the vehicle to clean off the windshield. The effect is enhanced if three different types of substances are mixed: a sticky liquid to obscure vision and defeat the windshield wipers and sprayers, a thin liquid to increase the splatter from the impact, and a granular substance to further obscure vision.

Examples:

Combination one: Syrup, milk, and sugar (Warning: Container not to be left around diabetics, small children, or people who bake)
Combination two: Heavy weight motor oil, lighter fluid, and aluminum or magnesium flakes (Warning: Extremely flammable)
Combination three: Elmer's glue and glitter (Warning: Possibly too fabulous for many people)

The person that is in fear for their life from the threat of the armored vehicle is only limited by their imagination in this case. Latex paint and honey have also been used as base liquids in the past with success. While these may seem silly or too simple to work, I challenge anyone to try it on their own vehicle. The glitter isn't a joke either; it reflects light which further obscures vision.

Historical note: The first armored troop transports that were deployed in large numbers were open on the top. When German troops deployed the "halftrack" in urban areas, resistance fighters would drop Molotov cocktails or hot tar from rooftops. While modern armored vehicles are closed on top, an elevated position can still be used to deliver vision obscuring material.

Stopping movement by stopping the engine:

Most modern armored vehicles have air intakes for the engine that are armored and have multiple grates to protect the engine from rifle fire. This presents another unique method of stopping the vehicle: clogging the air intake. The safest method is using spray foam insulation which can be sprayed at the vehicle from a relatively safe distance. Without air, the engine will either cease to run or will overheat. Some have suggested simply clogging the exhaust. However, the location of the exhaust makes anyone willing to stick a banana in the tail pipe of an MRAP much braver than I am because they are exposed to the gun ports, and are literally inches from the back door.

Stopping movement by pit or tip:

Both of these methods require prior planning and a rudimentary understanding of funneling tactics (the process of sending your opposition down the route that you want them to go).

“Tank pits” are highly-effective against all forms of armored vehicles. It is exactly what it sounds like: a pit dug in the intended path of the vehicle that is deep enough to put the vehicle at an angle that it can’t maneuver out of. The pit is covered by plywood and camouflaged to match the surrounding area. A pit for an MRAP would need to be about four feet deep, about six feet long, and as wide as it can be made across the intended path.

“Tipping” an armored vehicle uses the same principle of placing it in a situation that it can’t drive away from, but instead of using a prepared trap it utilizes the existing landscape. It’s a little bit of a misnomer because it doesn’t actually require the vehicle to tip over. Examples would be roads that have extremely weak bridges. A typical MRAP weighs in at about 36,000lbs with occupants. Removal of warning signs about the load capacity of the bridge can aid in this tactic. Other options are forcing the vehicle down a route that ends in an area too narrow to turn around. Alternatively, in urban areas, Egyptian dissidents lead armored cars down alleys and then ducked through side alleyways too small for the vehicle to move through. While the occupants were wondering whether or not to pursue on foot, a stolen bulldozer was placed at the entrance to the alley. Stolen bulldozers have also been used to flip armored vehicles down hills after impacting them from the side.

Using Flame:

The ubiquitous Molotov cocktail has two purposes when dealing with armored vehicles. The first is to obscure vision. Fire is very hard to see through. A true Molotov cocktail will burn for some time; and, if the flame is just below the windows, the driver will be unable to see and likely panic because well… fire is scary. The second purpose is to force the occupants out of the vehicle. Contrary to popular belief and what is often portrayed in movies, the best location for the flame is on the wheel wells and running boards of the vehicle, not the roof. Heat rises. A Molotov cocktail that is burning on the roof of an armored vehicle may not even be noticed by the occupants. However, one that is heating up the metal around them and the floor underneath them will be noticed very quickly and will cause them to exit the vehicle. Molotov cocktails also tend to interfere with the advanced optics on tanks. “Heat seeking” optics don’t react well to a flame burning in front of the sensor.

It is important to understand what a Molotov cocktail will not do. It will not “blow up” an armored vehicle. The set of circumstances required for an explosion to occur is so unlikely that it isn’t worth spending time addressing. It will not injure the occupants in most instances. There is an extremely rare, but worth mentioning, set of circumstances that has occurred in which insurgents threw several Molotovs at an armored car and for whatever reason the fluid did not light.

Instead, it simply soaked the vehicle. The fumes from the flammable material seeped into the cabin through the gun ports and when a functioning cocktail hit the vehicle later it ignited all of the remaining fluid. The fumes inside the vehicle also ignited in a fireball, severely injuring the occupants.

Concluding remarks:

None of the methods or tactics described above included the use of high explosives, firearms, or anti-tank weapons. Using those tools, the vulnerabilities of armored vehicles are exponentially increased. Unshielded coolant lines, hydraulic lines, and air brake canisters make the MRAP good for one thing and one thing alone: protecting troops in combat from Improvised Explosive Devices (IEDs). It's not even great at that. It is not a good raid vehicle. It is not a good vehicle for crackdowns.

The MRAP is a perfect case study in perceived capability vs actual capability. The perceived capability of the massive armored vehicle is that it can withstand anything. The actual capability of the vehicle is that it can be disabled by a kindergartner's art supplies. Rest assured that no matter what banana republic you happen to be in, if the government orders a military crackdown or begins enforcing a police state, you can defeat their armored vehicles. Keep in mind, we never even discussed the ways to sabotage the vehicle while it's parked overnight.