# Russian-Manufactured Armored Vehicle Vulnerability in Urban Combat: The Chechnya Experience

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In December 1994, the Russian Army entered the break-away Republic of Chechnya and attempted to seize the Chechen capital of Grozny from the march. After this attempt failed, the Russian Army spent two months in deliberate house-to-house fighting before finally capturing the city.[1] The dispirited Russian conscript force was badly mauled by the more- mature, dedicated Chechen force and the war drags on to this day. During the first month of the conflict, Russian forces wrote off 225 armored vehicles as nonrepairable battle losses. This represents 10.23% of the armored vehicles initially committed to the campaign. The Russians evacuated some of these 225 hulls to the Kubinka test range for analysis. General-Lieutenant A. Galkin, the head of the Armor Directorate, held a conference on their findings on 20 February 1995. The Minister of Defense attended the conference.[2] The results of the conference convinced the Russian Minister of Defense to stop procuring tanks with gas-turbine engines.[3] Further, the analysis disclosed Chechen anti-armor tactics and the vulnerabilities of Russian armored vehicles in urban combat.

*Chechen Anti-armor Techniques*

The Chechen forces are armed with Soviet and Russian-produced weapons and most Chechen fighters served in the Soviet Armed Forces. The Chechen lower-level combat group consists of 15 to 20 personnel subdivided into three or four-man fighting cells. These cells consist of an antitank gunner (normally armed with the RPG-7 or RPG-18 shoulder-fired antitank rocket launcher), a machine gunner and a sniper.[4] Additional personnel serve as ammunition bearers and assistant gunners. Chechen combat groups would deploy these cells as anti-armor hunter-killer teams. The sniper and machine gunner would pin down the supporting infantry while the antitank gunner would engage the armored target. Teams deploy at ground level, in second and third stories, and in basements. Normally five or six hunter-killer teams simultaneously attack a single armored vehicle. Kill shots are generally made against the top, rear and sides of vehicles. Chechens also drop bottles filled with gasoline or jellied fuel on top of vehicles.[5] The Chechen hunter-killer teams try to trap vehicle columns in city streets where destruction of the first and last vehicles will trap the column and allow its total destruction.

The elevation and depression of the Russian main tank guns are incapable of dealing with hunter-killer teams fighting from basements and second or third-story positions and the simultaneous attack from five or six teams negate the effectiveness of the tank's machine guns. The Russians attached ZSU 23-4 and 2S6 track-mounted antiaircraft guns to armored columns to respond to these difficult-to-engage hunter-killer teams.[6]

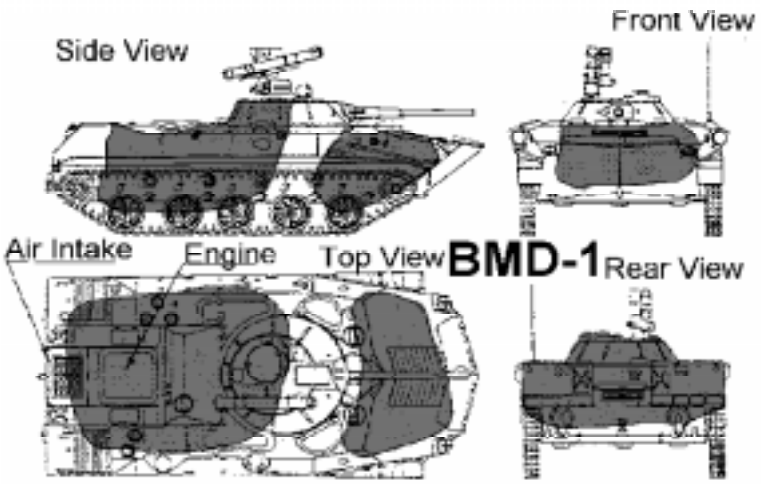
Initial Russian vehicle losses were due to a combination of inappropriate tactics, underestimation of the opposing force, and a lack of combat readiness. The Russians moved into Grozny without encircling it and sealing it off from reinforcements. They planned to take the city from the march without dismounting. Due to shortages in personnel, the Russian

columns consisted of composite units and most personnel carriers traveled with few or no dismounts. These initial columns were decimated.

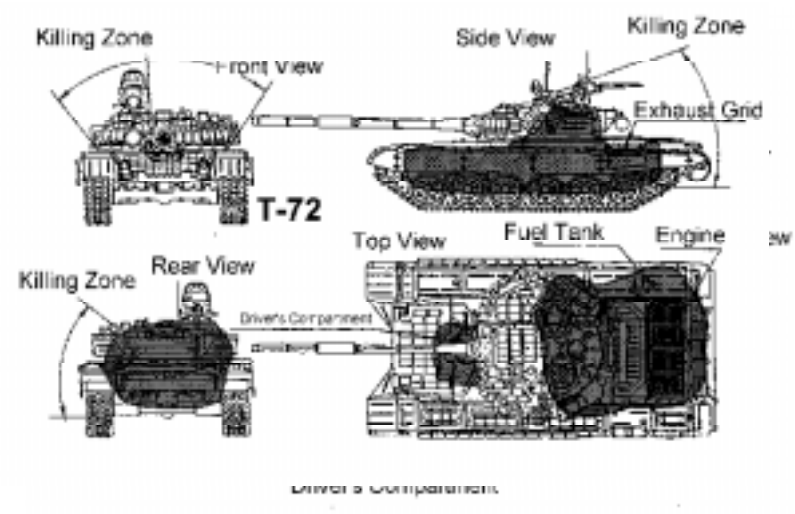
As the Russians regrouped, they brought in more infantry and began a systematic advance through the city, house-by-house and block-by-block. Russian armored vehicle losses dropped off with their change in tactics. Russian infantry moved in front with armored combat vehicles in support or in reserve. Some Russian vehicles were outfitted with a cage of wire mesh mounted some 25-30 centimeters away from the hull armor to defeat the shaped charges of an antitank grenade launcher as well as to protect the vehicle from a Molotov cocktail or bundle of explosives. The Russians began establishing ambushes on approach routes into a selected area and then running vehicles into the area as bait to destroy Chechen hunter-killer teams.[7]

*Vulnerabilities of Russian armored vehicles*

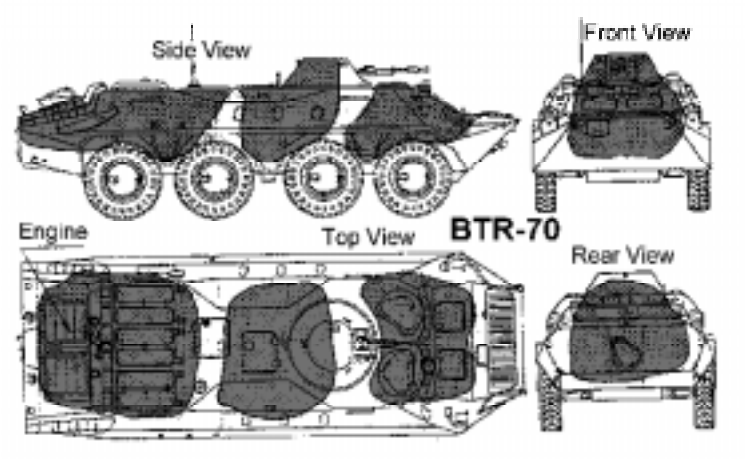
Shoulder-fired antitank weapons and antitank grenades knocked out the bulk of armored vehicles and each destroyed vehicle took an average of three to six lethal hits.[8] Fuel cells and engines are favorite aiming points for Chechen antitank gunners. The following illustrations have a grey area imposed which shows the area where 90% of the lethal hits occurred.[9]



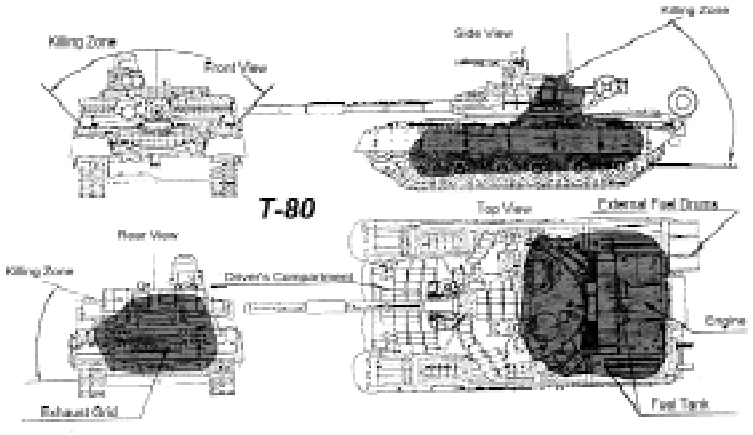

The BMD-1 is a personnel carrier assigned to airborne forces. As such, it is lightly armored. It was vulnerable to front, rear, flanking and top-down fire. The front portion of the turret is reinforced and, subsequently, is not vulnerable, but the rear of the turret is.




There is more armor on the BMP-2 infantry fighting vehicle. However, its top armor is weak, its fuel tanks are within the rear doors and the driver's compartment is vulnerable.




The BTR-70 wheeled armored personnel carrier showed many of the same vulnerabilities as the BMD and BMP.




Sixty two tanks were destroyed in the first month's fighting in Chechnya. Over 98% (apparently 61 tanks) were knocked out by rounds which impacted in areas not protected by reactive armor. The Russians employed the T-72 and T-80 tank in Chechnya. They were both invulnerable to frontal shots since the front is heavily armored and covered with reactive armor. Kill shots were made at those points where there is no reactive armor--the sides and rear and, on top shots, on the drivers hatch and the rear of the turret and rear deck. Early in the conflict, most Russian tanks went into combat without their reactive armor. They were particularly vulnerable to damaging or lethal frontal hits without it.[10]

*Conclusions*

The Chechen forces developed effective techniques to defeat Russian armored vehicles on the streets of a large city. Many of their techniques can be adapted by other armed forces which might fight Russian-manufactured armored vehicles (or other types of armored vehicles) in urban combat. These techniques are:

1. Organize anti-tank hunter-killer teams which include a machine gunner and a sniper to protect the anti-tank gunner by suppressing infantry which is accompanying the armored vehicles.

2. Select anti-armor ambush areas in sections of the city where buildings restrict and

canalize the movement of armored vehicles.

3. Lay out the ambush in order to seal vehicles in the kill zone.

4. Use multiple hunter-killer teams to engage armored vehicles from basements, ground level and from second or third floor positions. A problem with the RPG-7 and RPG-18 antitank weapons are the backblast, signature and time lapse between shots. The Chechens solved the time lapse problem by engaging each target simultaneously with five or six anti-tank weapons (obvious requirements for a future anti-armor weapon for urban combat is a low-signature, multi-shot, recoil-attenuated, light-weight weapon which can be fired from inside enclosures. The AT-4 and Javelin do not appear to meet these requirements).

5. Engage armored targets from the top, rear and sides. Shots against frontal armor protected by reactive armor only serve to expose the gunner.

6. Engage accompanying air-defense guns first.

This article was previously published in the January 1997 edition of ***Red Thrust Star.***

ENDNOTES:

1. For a discussion of changing Russian urban tactics, see Lester W. Grau, "Russian Urban Tactics: Lessons from the Battle for Grozny," ***Strategic Forum,*** Number 38, July 1995.

2. N. N. Novichkov, V. Ya. Snegovskiy, A. G. Sokolov and V. Yu. Shvarev, ***Rossiyskie vooruzhennye sily v chechenskom konflikte: Analiz, Itogi, Vyvody (Russian armed force in the chechen conflict: Analysis, outcomes and conclusions),*** Moscow: Kholveg-Infoglob-Trivola, 1995, 138-139. For the same period of time, forward-support Russian maintenance personnel repaired 217 armored vehicles, while depot maintenance repaired another 404 armored vehicles according to Sergey Maev and Sergey Roshchin, **"STO v Grozny" (Technical Maintenance Stations in Grozny),** ***Armeyskiy sbornik (Army digest),*** December 1995, 58. These were not all combat-induced losses, but it seems to indicate that 846 of 2221 armored vehicles (38%) were out of action for some period of time during the two-month battle for Grozny.

3. Mikhail Zakharchuk, **"Uroki Chechenskogo krizisa" (Lessons of the Chechen crisis),** ***Armeyskiy sbornik,*** April 1995, 46.

4. **"Pamyatka lichnomu sostavu chastey I podrazdeleniy po vedeniyu boevykh deistviy v Chechenskoy Respublike" (Instructions for unit and subunit personnel involved in combat in the Chechen Republic),** ***Ameryskiy sbornik,*** January 1996, 37.

5. Novichkov, 145.

6. Ibid, 123.

7. Sergey Leonenko, **"Ovladenie gorodom" (Capturing a city),** ***Armeyskiy sbornik,*** 31-35.

8. Novichkov, 137.

9. All illustrations are taken from Novichkov, 140-144.

10. Novichkov, 145.