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2T Stalker

Outlook

- 2T Stalker reportedly has yet to score any confirmed sales
- Vehicle exhibits a modern design with a correspondingly high unit price
- Limited prospects for domestic procurement and export sales alike

Orientation

Description. A tracked armored reconnaissance vehicle.

Sponsor. The prime contractor is pursuing this program as a private venture; the Belarus Ministry of Defense may contribute some marketing support.

Licensees. None.

Status. In development.

Total Produced. Through 2014, the prime contractor reportedly produced one 2T technology demonstrator vehicle and seven 2T Stalker prototype vehicles.

Application. An armored reconnaissance vehicle capable of operating at extended range during both offensive and defensive operations.

Price Range. In 2015 U.S. dollars, the 2T Stalker reportedly carries a projected unit price of \$4.315 million.

Contractors

Prime

Minotor-Service Enterprise	http://www.minotor-service.com , 40 Radialnaya St, Minsk, 220046 Belarus, Tel: + 375 17 245 2262, Fax: + 375 17 285 4602, Email: info@minotor-service.com , Prime
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Subcontractor

KBM - Konstruktorskoye Byuro Mashinostroyeniya	http://www.kbm.ru , 42 Oksky Ave, Kolomna, Moscow, 140402 Russian Federation, Tel: + 7 496 616 34 68, Fax: + 7 496 613 30 64, Email: kbm-kbm@mail.ru (ATGM and SAM Systems)
Peleng Joint Stock Co	http://www.peleng.ru , PO Box 18, Saint Petersburg, 195221 Russian Federation, Tel: + 7 812 545 28 50, Fax: + 7 812 543 45 02, Email: mail@peleng.ru (Fire Control Suite)

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Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 22 Commerce Road, Newtown, CT 06470, USA; rich.pettibone@forecast1.com

Technical Data

Design Features. A dedicated reconnaissance vehicle, featuring an advanced modular design with heavy armament and an extensive sensor array.

Crew. Three: commander, gunner, and driver. The vehicle can also accommodate a reconnaissance officer and one additional passenger.

Armor. Welded steel alloy base armor with additional layers of advanced-design composite armor. This armor suite reportedly offers protection over the frontal arc against 30mm armor-piercing projectiles at 300 meters (328.1 yd).

Dimensions. The following data reflect the definitive prototype 2T Stalker, as reported by the prime contractor. The vehicle is optimized for air transport via tactical transport aircraft such as the Il-76 or the C-130.

	<u>SI Units</u>	<u>U.S. Units</u>
Length	7.70 m	25.26 ft
Width	3.39 m	11.12 ft
Height	2.51 m	8.23 ft
Combat weight	27.4 tonnes	30.20 tons

Performance. The speed and range data reflect use on a paved road.

	<u>SI Units</u>	<u>U.S. Units</u>
Maximum speed	115 kmph	71.46 mph
Maximum range	1,000 km	621 stat mi

Engine. V-46-4 supercharged, 12-cylinder diesel engine. This powerplant generates 581.9 kilowatts (780 hp), with a power-to-weight ratio of 21.23 kilowatts per tonne (25.83 hp/ton).

The contractor has stated that the 2T Stalker design can accommodate a variety of other (including Western) diesel engines.

Gearbox. An unspecified hydromechanical gearbox.

Suspension and Running Gear. Hydro-pneumatic suspension, with six dual-tire roadwheels and three track return rollers on each side. The drive sprocket mounts to the rear. The driver can adjust vehicle ground clearance from 13 centimeters to 57 centimeters (5.12 in to 22.44 in) from his station in the vehicle.

Armament

Main Armament. Fully stabilized 30mm 2A42 rifled automatic cannon. This dual-feed ordnance fires a variety of high-explosive and armor-piercing 30x165mm ammunition from disintegrating-link belts. The vehicle carries 500 rounds of 30x165mm ammunition.

Secondary Armament. One coaxially mounted 7.62x54mm machine gun with 2,000 rounds of ammunition; one 30mm automatic grenade launcher

(possibly an AGS-30) with 116 rounds of 30mm ammunition.

Missile Armament. Each side of the turret features a retractable 1.5-meter (4.92-ft) mast mounting a two-round missile launcher. The mast on the right side of the turret mounts two infrared-guided Igla (SA-18 Grouse) or Igla I (SA-16 Gimlet) surface-to-air missiles.

The mast on the left side mounts two 9K114 Kokon (AT-6 Spiral) radio-guided anti-tank missiles. The vehicle carries two additional missiles for each launcher. Mast operation – as well as turret elevation, depression, and traverse – is electromechanically powered.

Fire Control. The optronic, computer-based fire control suite provides a day/night capability against air and ground targets, with simultaneous engagement of multiple targets by different onboard weapons systems. The commander's and gunner's stations feature stabilized day/night sights; the gunner's sight features an integral laser rangefinder.

A 6.0-meter (19.68-ft) telescoping mast mounts a variety of optronic sensors and electronic surveillance equipment. A Baguet digital computer performs the data processing functions of the fire control suite.

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As the 2T Stalker is a modular system, the contractor can integrate various other fire control and surveillance components to meet mission or customer requirements.

2T Stalker



2T Stalker

Source: Minotor-Service

Program Review

Background. In 1997, Minotor-Service (Minsk, Belarus) began development of a dedicated reconnaissance vehicle. The design team working for this new (since 1995) player in the military vehicle market set out to develop a modular design incorporating modern armor, armament, and sensors and other advanced features.

Starting from Scratch

Especially important to the team was the development of an effective man-machine interface to improve crew comfort and vehicle performance. To accomplish this, the team designed an entirely new vehicle rather than adapting an existing design. In the design effort, Minotor-Service enlisted the aid of several other firms and organizations in Belarus, the Russian Federation, and Poland.

In early 1999, Minotor-Service unveiled the initial prototype BM-2T. In an October 2000 display, the contractor called the vehicle the 2T Minokhod; at the 2001 IDEX weapons fair, the vehicle carried the current designation of 2T Stalker. Minotor-Service and its subcontractors are continuing developmental testing of the 2T Stalker; BelTechExport is conducting the international marketing effort.

Description. Although the contractor has thus far released few technical details, some information concerning the 2T Stalker has trickled out of Belarus.

Conventional Layout

The 2T Stalker exhibits a conventional interior layout. The driver sits in the center-front of the hull; the two-man fighting compartment occupies the center of the vehicle. The powerplant and gearbox mount in the rear of the hull. The driver's station features a single-piece hatch cover and three day periscopes; the center periscope is interchangeable with a passive night vision unit. The driver can also employ a rear-mounted TV camera/viewer for backing up the vehicle.

In the two-man steel alloy turret, the gunner apparently sits to the left of the 30mm main armament; the commander sits to the right. Either crewmember in the turret can aim and fire all onboard weapons systems.

Designed for Survivability

The center-mounted turret exhibits a low-slung profile, optimized to defeat incoming projectiles. The profile and paint/coating reduce the radar, thermal, and infrared signature of the vehicle. The 2T Stalker also features a roof-mounted laser warning system.

The 2T Stalker features crew compartment air conditioning and a collective nuclear, biological, chemical (NBC) protective suite. A self-entrenching device (dozer blade) mounts under the nose of the vehicle.

Related News

Belarus Plans Procurement of Tigr IMV Variant, Designated Fox-PM – Reports featured in an official publication associated with the Belarusian Ministry of Defense suggest that Belarus intends to pursue domestic procurement of a new variant of Russia's GAZ/VPK Tigr infantry mobility vehicle within the next several years.

Russian and Belarusian contractors reportedly collaborated on the development of this new Tigr variant, designated the Fox, to meet the specific requirements of the Belarusian armed services.

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The first Fox series vehicle, outfitted with a Belarusian Hornet ATGW system, made its initial appearance in late 2014 as a static display at the MILEX Belarusian Military Exhibition. However, ambiguity remained regarding many of the details and the procurement future of the program.

Several months later, Belarusian military publications reported on the ongoing testing and assessment of Tigr series vehicles by the Belarusian Army for eventual acquisition on a larger scale.

It now appears that Belarus will pursue some level of licensed serial production and co-assembly of the Fox design with Russian contractors. The baseline model appears to be designated the Fox-PM, with the most recent article showing five such vehicles arrayed in preparation for Belarus's Victory Day celebrations.

In appearance, the Fox-PM bears close design similarities to the VPK-233136 variant intended for operation by forces of the Russian Interior and Justice ministries. The VPK-233136 itself is a variant of the Russian Army's upgraded Tigr-M model. However, the Fox-PM also integrates a one-man cupola, intended to integrate a 12.7mm NSV machine gun or AG-17 30mm grenade launcher.

The magazine's report indicates that the armed services hope to acquire and develop an array of different sub-variants of the Fox design in addition to those displayed at MILEX, including a command & control and an ambulance variant. (*Belarusian Military Magazine*, 4/15)

Belarus Develops New RPG as Part of Military Modernization Plan – Belarussian company Belpetsvneshtekhnika (BSVT) is developing a new rocket-propelled grenade (RPG) launcher. The system has yet to be named.

The system is based on the RPG-32 developed by Russian company Bazalt and Jordan's KADDB through the JRESCO joint venture. A mock-up of the new RPG was shown for the first time at MILEX-2014 in Minsk in June 2014.

The system features an expendable missile container and a reusable sighting and control unit. It will typically be armed with a 105mm RPG weighing 4-7 kilograms and capable of penetrating 700-800mm of armor, not including explosive reactive armor (ERA). The weapons aiming range is claimed to be 750 meters, supported by a newly developed electronic sighting system. The system will also be capable of firing rounds of various calibers with a velocity of 140-160 m/s, roughly 30 m/s faster than the RPG-32. The visual and noise signature of the new RPG is also believed to be lower than that of the RPG-32.

BSVT may reach out to Russia to form a joint venture for the system's manufacture.

In addition to the development of a new RPG, Belarussian President Alexander Lukashenko is also intent on developing an anti-missile system on par with the Russian-made S-300. President Lukashenko said the nation's main goal is to arm the military with modern weapons in order to create a mobile and effective army. Lukashenko also stressed that such weapons should be sold on the international market. (FI, 10/14)

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Funding

Minotor-Service is funding development of the 2T Stalker as a private venture.

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
	1997	Development begun
Mar	1999	Contractor reveals BM-2T program
Oct	2000	Contractor unveils first prototype 2T Minokhod
Mar	2001	2T Stalker appears at IDEX weapons fair
	2003	Contractor testing
	2015	Development and marketing continue

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Worldwide Distribution/Inventories

Export Potential. Although the 2T Stalker has generated considerable interest since its appearance at the 2001 IDEX weapons fair, the vehicle has yet to secure its first sale on the international market. With a projected unit price in the class of main battle tanks, the 2T Stalker will only be a viable option for the more affluent nations.

Country. Belarus (one technology demonstrator and seven prototypes).



2T Stalker during Trials in Belarus

Source: Minotor-Service

Forecast Rationale

Despite being introduced onto the international market over a decade ago, the 2T Stalker reconnaissance vehicle has yet to secure its first sale.

Although Minotor-Service and BelTechExport continue to offer the Stalker for sale on the international market, the window of opportunity for the vehicle to achieve success as an export product is closing rapidly.

As a result, it appears increasingly unlikely that the 2T Stalker will ever enter serial production.

Advanced Design

The modular design of the 2T Stalker represents a radical departure from the traditional armored vehicle concepts of the former Soviet Union.

The 2T Stalker integrates numerous design elements drawn from modern, Western vehicle designs, including potent armament, a thoroughly modern fire control and sensor suite, and improved survivability features in order to better defend against both conventional dangers and mine and IED threats.

Limited Prospects

Around the time of the 2T Stalker's debut, media reports arose suggesting that the Belarusian Army could pursue near-term procurement of around 30 units of the capable

new design. However, no such deal had come to fruition at time of writing, and reports of impending Stalker acquisition by the Belarusian Army have largely vanished from media sources. Indeed, reports from Russian and Belarusian media sources suggest that such plans were quietly shelved by Belarusian defense planners, due primarily to fiscal considerations.

Although the 2T Stalker's modern design and high-quality components help to distinguish the vehicle from many of its conventional market competitors, these unique features also result in a correspondingly steep unit price.

Considerable expenditures would be required to procure the 2T Stalker at a scale commensurate with serial production, expenditures that neither Belarus nor many of its traditional trade partners can freely afford to devote to a relatively niche vehicle design.

Although the low-level tensions between Belarus and Russia stemming from the latter's ongoing military intervention in Eastern Ukraine could spur some interest among the Belarusian establishment in the expanded acquisition of partially indigenous vehicle concepts, the procurement of new armored vehicles of any origin remains a relatively low priority for Belarusian defense planners and government officials alike.

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