

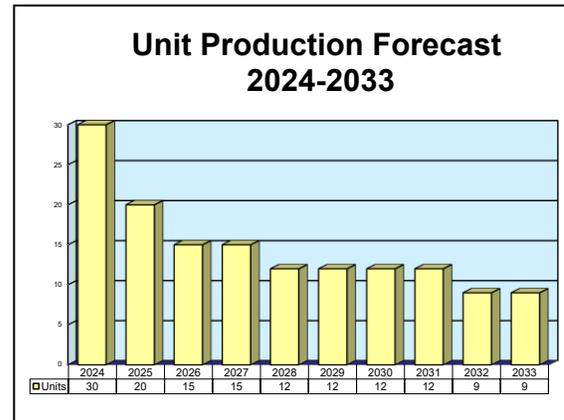
ARCHIVED REPORT

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Tigr (GAZ-2975)

Outlook

- Serial production of Tigr series vehicles is ongoing for domestic procurement and export
- Russian Army units began receiving the new Tigr-M variant in mid-2013
- Forecast reflects ongoing production of CTC Tigr, Tigr-M, and specialized Tigr variants for Russian Army procurement and export



Orientation

Description. A wheeled light armored vehicle.

Sponsor. The Russian Ministry of Defense and Ministry of the Interior jointly sponsor this program.

Licensees. In China, the YanJing Automobile Company assembled approximately 55 Tigr SPM-1 / SPM-2 vehicles under license. Russian contractors assembled the remaining 45 vehicles of the order.

Status. Development through serial production.

Total Produced. Through 2023, we estimate the contractors and licensees produced at least 1,072 Tigr vehicles.

Application. A multimission family of light tactical vehicles, optimized to support infantry operations.

Price Range. In 2024 U.S. dollars, the base-model CTC Tigr carries an estimated unit price of \$168,000.

Contractors

Prime

Arzamas Machine-Building Plant JSC	http://www.amz.ru , 2, 9th May St, Arzamas, Nizhny Novgorod, Russian Federation, Tel: + 7 83147 96 40, Fax: + 7 83147 4 31 40, Email: oao_amz@amz.ru , Prime
GAZ Group, Gorky Automobile Plant	http://www.gazglobal.com , 88 Lenin Ave, Nizhny Novgorod, Nizhny Novgorod Obla, Russian Federation, Tel: + 7 831 299 09 90, Fax: + 7 831 299 09 99, Email: UKGG@gaz.ru , Prime
Military Industrial Company, VPK	http://milindcom.ru/eng/about/ , 15, Rochdelskaya str., Moscow, Russian Federation, Tel: + 7 (495) 662-1057, Fax: + 7 (495) 662-1059, Email: SecrVPK@hq.basel.ru , Prime
Federal State Unitary Enterprise, Rosoboronexport, Rosoboronexport State Corp	http://www.roe.ru , 27/3 Stromynka St, Moscow, Russian Federation, Tel: + 7 495 534 6183, Fax: + 7 495 534 6153, Dealer/Distributor

Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 75 Glen Road, Suite 302, Sandy Hook, CT 06482, USA; rich.pettibone@forecast1.com

Tigr (GAZ-2975)**Technical Data****CTC Tigr/GAZ/VPK-233014**

Crew. Two: commander and driver. In the standard configuration, the troop compartment carries up to six fully equipped infantrymen. mines and improvised explosive devices (IEDs) at Level 2 STANAG 4569. Additional applique armor and mine/IED protection configurations are available.

Armor. The CTC Tigr provides all-around protection against 7.62mm armor-piercing projectiles and anti-tank

Dimensions. The following data reflect the latest production-standard CTC Tigr vehicle.

	<u>SI Units</u>	<u>U.S. Units</u>
Length	5.70 m	18.70 ft
Width	2.40 m	7.87 ft
Height	2.40 m	7.87 ft
Combat weight	7.20 tonnes	7.93 tons
Fuel capacity	125 liters	33.02 gal

Performance. The automotive performance data reflect use on a paved road.

	<u>SI Units</u>	<u>U.S. Units</u>
Maximum speed	125 kmph	77.67 mph
Maximum range	900 km	559.23 stat mi
Step	0.4 m	1.30 ft
Trench	0.8 m	2.62 ft
Slope	25%	25%
Gradient	30%	30%
Fording	1.2 m	3.94 ft

Engine. The CTC Tigr can mount a wide variety of powerplant configurations. The vehicle is most commonly outfitted with the Cummins B205-20 diesel powerplant generating 152.86 kW (205 hp) or the GAZ-562 turbocharged diesel powerplant, which generates 130.50 kW (175 hp).

Gearbox. 6 MKPP mechanical unit, with five forward and two reverse gears.

Suspension and Running Gear. Full-time four-wheel drive. Independent torsion bar suspension,

with hydraulic shock dampers. The vehicle mounts disc brakes at all stations. A central operator-controlled tire pressure inflation system regulates the KI-115AM tires with run-flat inserts.

Armament. The CTC Tigr can carry an array of roof-mounted machine guns and grenade launchers. The most common configuration mounts the 7.62mm Pecheneg machine gun and/or the 30mm AGS-30 grenade launcher.

Tigr SPM-2/GAZ/VPK-233036

Crew. Three: gunner, driver, and commander. In the standard configuration, the troop compartment carries up to seven fully equipped infantrymen.

Armor. The Tigr SPM-2 provides all-around protection against 7.62mm armor-piercing projectiles

Dimensions. The following data reflect the latest production-standard Tigr SPM-2 vehicle.

	<u>SI Units</u>	<u>U.S. Units</u>
Length	5.70 m	18.70 ft
Width	2.40 m	7.87 ft
Height	2.40 m	7.87 ft
Combat weight	7.6 tonnes	8.37 tons
Fuel capacity	125 liters	33.02 gal

and anti-tank mines and IEDs at Level 2 STANAG 4569. Additional applique armor and mine/IED protection configurations are available.

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Performance. The automotive performance data reflect use on a paved road. With preparation, the vehicle can ford 1.5 meters (4.92 ft) of water.

	<u>SI Units</u>	<u>U.S. Units</u>
Maximum speed	125 kmph	77.67 mph
Maximum range	900 km	559.23 stat mi
Step	0.4 m	1.30 ft
Trench	0.8 m	2.62 ft
Slope	25%	25%
Gradient	30%	30%
Fording	1.2 m	3.94 ft

Engine. Unspecified supercharged diesel powerplant that generates 152.86 kW (205 hp).

Suspension and Running Gear. Same as the CTC Tigr.

Gearbox. Same as the CTC Tigr.

Armament. Same as the CTC Tigr.



CTC Tigr/GAZ/VPK-233114 Light Armored Vehicle

Source: Vitaly Kuzmin

Tigr-M/VPK-233114

Crew. Two: commander and driver. In the standard configuration, the troop compartment carries up to nine fully equipped infantrymen.

Armor. The Tigr-M features enhanced armored protection over that of the baseline CTC Tigr, particularly around the powerplant. Additional applique armor and mine/IED protection configurations are available.

Dimensions. The following data reflect the production-standard Tigr-M vehicle.

	<u>SI Units</u>	<u>U.S. Units</u>
Length	7.63 m	25.03 ft
Width	3.15 m	10.33 ft
Height	2.76 m	9.05 ft
Combat weight	7.8 tonnes	8.60 tons
Fuel capacity	130 liters	34.35 gal

Tigr (GAZ-2975)

Performance. The automotive performance data reflect use on a paved road.

	<u>SI Units</u>	<u>U.S. Units</u>
Maximum speed	125 kmph	77.67 mph
Maximum range	1,000 km	621.37 stat mi
Step	95 cm	3.12 ft
Trench	2.3 m	7.55 ft
Slope	25%	25%
Gradient	30%	30%
Fording	1.3 m	4.26 ft

Engine. YaMZ 5347-10 supercharged, air-cooled diesel powerplant engine produced by Yaroslavl Diesel Equipment Plant, a subsidiary of GAZ Group. This powerplant produces 160.32 kW (215 hp).

Gearbox. Enhanced, unspecified continuously variable gearbox system.

Suspension and Running Gear. Full-time four-wheel drive. Independent torsion bar suspension, with

hydraulic shock dampers. Improved disc brakes are at all stations, as is an auxiliary braking system outfitted with a pneumatic actuation system. A central, operator-controlled tire pressure inflation system regulates the KI-115AM tires with run-flat inserts.

Armament. The Tigr-M can mount a number of remote weapons systems. Otherwise, the vehicle's available weapons configurations are like those of the baseline CTC Tigr model.

Variants/Upgrades

Variants. The basic Tigr design can accommodate a variety of roof-mounted ordnance. The Tigr product line currently offers the following variants. (The contractors are also planning a number of additional variants.) Unarmored variants intended solely for sale on the civil market or for ceremonial military duties are not covered in this report.

<u>Designation</u>	<u>Description</u>
Tigr-M	Tigr variant featuring enhanced armored protection and performance capabilities. The variant can also mount remote weapons systems produced by the KBP Design Bureau. Also designated the VPK-233114.
Tigr-M Special Forces	Tigr-M variant optimized for use in special forces operations. The variant is outfitted with an array of specialized communications and navigation equipment. Also designated the ASN/VPK-233115.
Tigr-Nexter	Tigr variant developed through a partnership of the prime contractors and French defense company Nexter. This variant is equipped with a 23mm cannon mounted on a Nexter-designed remote weapons system.
Tigr-M Electronic Warfare	Tigr-M variant outfitted with the Leer 2 electronic warfare system and an array of other specialized electronic equipment intended to perform jamming and intelligence-gathering operations on the battlefield. The standard CTC also can be, and has been, outfitted with electronic warfare equipment.
Tigr-Kornet EM	Tigr variant mounting two 9M133 Kornet EM multirole guided missile systems on the roof of an SPM-2 chassis. Each launcher system features four missile tubes. The systems are operated remotely from inside the vehicle cabin.
Tigr-SPM-1	GAZ-2330 series variant designed to fulfill the operational requirements of internal troops and special-purpose law enforcement units. Also designated the GAZ-233034.
Tigr-SPM-2	Enhanced successor to the Tigr SPM-1 featuring improved armored protection and performance capabilities. Also designated the GAZ-233036.
Tigr Scout	CTC Tigr variant designed to perform reconnaissance operations on the battlefield. This variant is outfitted with an array of specialized surveillance and communications equipment.

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Designation	Description
Tigr MK-BLA-01	Tigr variant using the chassis of the SPM-2 model but intended to serve as a launch and control platform for two or more unmanned aerial vehicles (UAVs). The Tigr MK-BLA-01 is outfitted with a tactical command and control system for operational integration and intelligence sharing up and down the chain of command.
Tigr Command Vehicle	CTC Tigr variant intended to serve as a mobile command post. Features an array of specialized communications equipment and command & control functionality.
Tigr 6A	Tigr variant using the chassis of the SPM-2 model designed to provide protected transport for military VIPs in hazardous environments.
Tigr Anti-Air	Tigr variant intended to serve as a command and control vehicle for anti-aircraft operations and outfitted with an unspecified tracking system.
VPK-233136	Tigr-M variant optimized for service with special-purpose law enforcement and internal security bodies, such as the Ministry of Interior's Saturn unit. Variant features enhanced armored protection and integrated roof hatches, but lacks NBC protection systems.
Tigr-M2	Tigr-M variant outfitted with a Kovrov Electromechanical Plant remote weapons system.

Modernization and Retrofit Overview. The prime contractors regularly pursue modernization and retrofit of Tigr vehicles in Army and MVD service, including upgrading existing Tigr stocks to a standard comparable to that of the more advanced Tigr-M.

Program Review

Background. The initial GAZ-2330 series was intended for use by internal troops and law enforcement personnel of the Russian Federation's Ministry of Internal Affairs (MVD) and for potential export to law enforcement and security and military forces worldwide.

Some early development work on the Tigr design was undertaken in a cooperative venture between GAZ Group and the Bin Jabr Group of the United Arab Emirates.

The vehicle's earliest prototypes were unveiled for the first time in March 2001, at the IDEX Military Exhibition held in Abu Dhabi. However, the two contractors would ultimately move to pursue independent programs, with the UAE going on to develop the Nimr light armored vehicle while Russia pursued further development of what would become the Tigr/GAZ-2330 series.

In part, the Tigr design was intended to rectify a significant shortfall in the operational capabilities of the Russian military and security forces.

As Russia entered the new millennium, the armed services and the MVD lacked a versatile, well-protected, all-terrain vehicle in line with those fielded by North American and Western European armed forces. The Army and MVD's vast, aging inventories of UAZ-469 light utility vehicles no longer adequately

fulfilled the requirements of the modern battlefield, particularly in the realm of survivability and IED protection.

For inspiration, Russian designers looked to widely utilized light armored vehicles such as the AM General HMMWV and the Panhard Véhicule Blindé Léger.

From roughly 2004-2007, the new design underwent an extensive period of trials and evaluations, with a steady supply of prototypes and development models being passed into MVD service.

Reports indicate that serial production of the vehicle was launched in 2007, and the Tigr officially entered active service with MVD internal troops and OMON special police units in 2008.

The serial-production models delivered to the MVD forces have primarily been Tigr SPM-1/GAZ-233034 and Tigr SPM-2/GAZ-233036 special-purpose variants.

Frontline Applications

During the same period that the GAZ-2330 series was entering active service with the MVD, the Russian Ministry of Defense was beginning to show greater interest in the potential for military procurement of the Tigr design. The prime contractors developed the GAZ-2975 series in order to fulfill the Russian Army's operational requirements for a new fleet of light armored vehicles.

Tigr (GAZ-2975)

The basic serial-production model of the GAZ-2975 series is designated the CTC Tigr, or GAZ-233014. The Tigr has faced stiff competition in the domestic procurement race from the Iveco Lynx light armored vehicle, which the Russian Army has procured in small numbers since 2011. The Lynx vehicles were assembled in Russia under license from the Italian contractor.

However, cost considerations and the contentious politics of importing foreign military products for Russian Army service favored the long-term procurement prospects of the Tigr series over the Lynx.

In November 2014, the Russian Ministry of Defense announced that it had concluded its final acquisitions of Iveco light military vehicles (LMVs), ending with 358 Lynx vehicles in total.

The Russian MoD made clear in the announcement that it has no plans to procure additional Lynx vehicles in the future. Instead, the Russian MoD will rely exclusively on indigenously designed and manufactured products for its light armored vehicle requirements through the forecast period.

At the Interpolitex International Defense and Security Exhibition in 2010, the prime contractors unveiled the enhanced Tigr-M variant, which features improved performance capabilities and armored protection and is compatible with an array of remote weapons systems.

The Tigr design has also been used as the basis for the development of a number of independent armored

vehicle series, the most prominent being the GAZ-3937 Vodnik and VPK-3927 Volk.

The Tigr series is most often referred to by the GAZ-2975 and GAZ-2330 designations in Western sources. However, Russian press and industry materials usually refer to the vehicles using the prepositional designation VPK, in reference to Russia's Military Industrial Company (MIC).

Although GAZ played an important role in the Tigr's design and development, the development and production of Tigr series vehicles for the Army and domestic security agencies reside under the authority of the MIC. In practice, the two designations are frequently used interchangeably depending on author preference.

Standard features of the Tigr family of vehicles include a full nuclear, biological, and chemical (NBC) protective suite; an electric winch capable of towing up to 4,000 kilograms (9,700 lb); navigation and communications equipment; automatic fire detection and suppression systems; and heating and air-conditioning systems.

Tigr series vehicles played a prominent role in Russia's 2014 annexation of the Crimean Peninsula, and in Western observers' identification of participating Russian special forces and airborne units.



Tigr-M2/VPK-233114 Light Armored Vehicle

Source: Vitaly Kuzmin

Tigr (GAZ-2975)

Funding

The Ministry of Defense and the Ministry of the Interior of the Russian Federation provide funding for this program.

Worldwide Distribution/Inventories

Export Potential. Despite the glutted nature of the international market for light armored vehicles, the Tigr family of vehicles stands to make modest gains on the export market. The Tigr's rugged design combined with its mid-range unit cost and suitability for both military and law-enforcement contingencies makes it an attractive option for operators looking to upgrade their light armored vehicle inventories to a more modern standard.

The Tigr series will likely achieve its greatest market success among Russia's traditional customer base: states located in the Middle East, South America and Africa.

Countries. Armenia, Belarus, Brazil, Guinea, Kazakhstan, Nicaragua, People's Republic of China, Republic of the Congo, Russian Federation, Syria, Uruguay.

Forecast Rationale

Serial production of the GAZ/VPK-2975 and GAZ/VPK-2330 series of vehicles is ongoing for domestic procurement by the Russian Army and MVD, as well as for export.

Modernization vs Combat Requirements

The Russian Ministry of Defense remains mired in its Ukraine campaign, trumping all previous modernization initiatives in the face of immediate combat requirements.

Even with these immediate combat requirements, the Russian MoD production schedule for the Tigr series remains somewhat anemic, reflecting the deteriorating state of the Russian economy.

Reports from the Russian military and press on the delivery of Tigr series vehicles remain sporadic. They nevertheless provide a reasonably clear picture of the scale of Tigr procurement.

Although deliveries of some specialized CTC Tigr variants are likely, the Russian military now appears to have shifted procurement primarily toward the upgraded Tigr-M model.

The Tigr's relatively low unit cost, modest production rate, and level of importance in the military's light vehicle modernization plans may still insulate the program from the most severe effects of Russia's budgetary constraints.

Moderate Export Potential

The Forecast International Weapons Group believes the Tigr series of vehicles will achieve a modest level of success on the export market, particularly among the traditional client base of Russian defense products in the Middle East, Africa and South America.

In particular, the SPM-1 and SPM-2 models that form the cornerstone of the Russian MVD's Tigr inventories have proven particularly attractive due to their suitability for both law enforcement agencies and the military. They have already been deployed with a number of interior ministries and security forces internationally.

The Tigr's mid-range unit cost and operational versatility are likely to ensure that the vehicle finds an export niche among customers in the developing world seeking to upgrade their light vehicle inventories to a more modern standard.

Tigr (GAZ-2975)

Ten-Year Outlook

ESTIMATED CALENDAR YEAR UNIT PRODUCTION												
Designation or Program		High Confidence				Good Confidence			Speculative			
	Thru 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
Arzamas Machine-Building Plant JSC												
GAZ-2975												
	725	30	20	15	15	12	12	12	12	9	9	146
Total	725	30	20	15	15	12	12	12	12	9	9	146