

# STEEL

## character

- ▶ STEEL SOLDIERS
- ▶ ON INDONESIAN ISLANDS
- ▶ ALWAYS STYLISH KRAZ CABOVERS
- ▶ KRAZ TRUCKS HELPED BUILD CHANNEL TUNNEL
- ▶ AUTOMOTIVE CLASSROOM FOR MILITARY MEN



**KRAZ CABOVERS: TIME OF CHANGE**

CORPORATE MAGAZINE OF “AVTOKRAZ” HOLDING COMPANY

# STEEL character

**Editor-in-Chief:** D. Stegantseva

**Designed and made up by:** D.Stegantseva

**Materials and photographs by:** S. Viazovskaya, D. Stegantseva, S. Sazonov, V. Ukhnal', S. Dun', S. Poposuyevitch, G. Zinchenko, E. Nikonova, V. Teryoshin, M. Shelepenkov, A. Govorukha, UMO news, “AvtoKrAZ” HC

**Editorial office:** “AvtoKrAZ” Holding Company  
62, Kiyevskaya Str., Kremenchug, 39631, Ukraine  
Press service  
Tel.:+38 0536 766092; tel/fax: +38 0536 766208 e-mail: pr@kraz.ua

*When using materials reference to “Steel character” is obligatory.  
Printed by — “Press-line”, Kiev. Circulation: 1000 copies.*



4-5



6-8



9-10



12-14

# TABLE OF CONTENTS

KRAZ NEWS	4-5	15-17	ALWAYS STYLISH KRAZ CABOVERS
STEEL SOLDIERS	6-8	18-19	STRONG LOGGERS
ON INDONESIAN ISLANDS	9-10	20-22	THE KRAZ TRUCKS HELPED BUILD CHANNEL TUNNEL
THE KRAZ-63221 SHRV-B TRUCK — GOOD FOR ANY EMERGENCY	11	23	FIGHTING WITH THE ELEMENTS
MILITARY VEHICLES	12-14	26-27	AUTOMOTIVE CLASSROOM FOR MILITARY MEN



15-17



18-19



23



24-25

## "AVTOKRAZ" REGAINS ITS POSITIONS IN THE MARKET OF CIS COUNTRIES



In 2010, after 2009 recession year, "AvtoKRAZ" 's sales gradually raise in the CIS countries due to measures aimed to improve quality and offer advantageous purchase and delivery terms.

The total number of the KrAZ trucks sold in 2010 exceeds 500 units; this is two times more than during the same period in preceding year.

The best part of them, 450 units, has been sold in Russian market. Among them are mostly 6x6 vehicles: dump trucks, logging trucks, short log trucks and truck tractors, chassis cabs for machine building plants.

The number of the units sold in Azerbaijan has almost tripled in 2010 when compared to 2009 results. For the first time ever, "AvtoKRAZ" has delivered to Azerbaijani machine building plants two large batches of the KrAZ trucks designed to be fitted with equipment for oil and gas companies.

## THE KRAZ T1701EX "HAULER" FIFTH WHEEL TRACTOR ENTERS FULL PRODUCTION!



"AvtoKRAZ" has started mass production of its KrAZ T17.1EX truck tractors.

This three axle all terrain vehicle is designed to haul trailers up to 75 tons over all types of roads and terrains, and in all weather conditions. It operates in temperatures from  $-50^{\circ}$  to  $+60^{\circ}$  C.

High performance of the KrAZ T17.1EX trucks combined with the best price are its prime competitive advantages.

The first batch of these trucks powered by 400 hp engines made in Yaroslavl (Russian Federation) was delivered to Russian customers.

"AvtoKRAZ" plans to increase sales in Russian market to some 150 units in 2011. These trucks are supposed to be used for carrying special heavy equipment in Krasnoyarsk and Sverdlovsk regions,

Khabarovsk Territory and Yakutia.

## COMPANY HAS OBTAINED AN ISO 9001:2008 CERTIFICATE

"AvtoKRAZ" has been certified as meeting the requirements of ISO 9001:2008. The certificate was issued on November 8, 2010, on completion of certification audit performed by auditors from "Citech Ukraine B.V." – official agent of the Netherlands certification body TNO.

The auditors noted that among success factors for "AvtoKRAZ" are a complete professionalism of its employees and particularly high corporate culture.



## “AVTOKRAZ” GAINS GROUND IN THE MARKET OF SOUTH-EAST ASIA

**INDONESIA.** These latter days, Indonesian businesspersons show a strong interest in the KrAZ trucks thanks in no small parts to faultless operation of the KrAZ-6322 Soldier trucks used by Indonesian police and UNO peace-keeping forces. It is the partnership with KrAZ that was a key point of negotiations during the visit of Indonesian delegation led by the extraordinary and plenipotentiary ambassador of Indonesia to Ukraine Mrs. Nining Suningsih Rochadiat.

Businesspersons emphasized in the course of negotiations that Indonesia, especially its mining industry, is in a great demand of the KrAZ trucks. Susianty Kavira, the president of company engaged in fire fighting equipment import, has taken interest in fire and rescue vehicles. She said that KrAZ is the very truck that can carry heavy loads in extreme weather conditions and has excellent cross-country ability.



**PHILIPPINES.** In December, “AvtoKrAZ” received an order from HANWA Co. Ltd, a large multinational company in Japan, to deliver 20 KrAZ-65032 dump trucks 6x6 and 3 special vehicles mounted on the KrAZ-6322 6x6. The trucks are supposed to mine nickel ore in Philippines.

HANWA Co. Ltd explains that the KrAZ trucks were chosen because ‘they are well adapted to harsh environmental conditions of Philippine Islands and fully meet requirements for the vehicles operated there, namely: increased load carrying capacity, simple maintenance and repair. Another advantage is absence of advanced electronics that make impossible job-site repair.’

## THE KRAZ-5233 “SPETSNAZ” WINS THE HEARTS OF MILITARY MEN OF UKRAINE AND RSA

The KrAZ-5233 “Spetsnaz” all terrain truck successfully passed governmental tests conducted by Ukrainian Ministry of Defense in September.

The final stage of tests was noted for extremely harsh environmental conditions and difficult terrain. The trucks have covered about 30 000 km on all types of roads and terrains, overcome obstacles of proving grounds, sand deserts and mountains. Impressed by successful results the Governmental Commission has recommended the KrAZ trucks for adoption by Ukrainian Army.

Meanwhile, its counterpart has undergone rigorous testing at Africa Aerospace & Defence, the largest exhibition in the field of aviation and defense industry.

The KrAZ-5233BE made a splash at the RSA MOD’s proving ground being the only vehicle to climb up the 70 percent slope.



# STEEL SOLDIERS



“The KrAZ trucks are traditionally designed for off-road mobility... For the moment, there is nothing more affordable, reliable and multirole than the KrAZ military vehicle...”

The KrAZ all terrain trucks are rightfully considered as special purpose vehicles of CIS countries motor industry”.

(F.Kiritchuk, “Special purpose vehicles of motor industry”, “Avtoprofi”, No. 18, July 2005)

A line-up of Kremenchug automobile plant has always included special vehicles. High performance of Ukrainian all terrain trucks

mostly lies at the heart of interest of military men. They meet all Army requirements for soldiers: strong, rugged, reliable and



The KrAZ-6322HMPV-A armored truck at IDEX-2007



The KrAZ-6322 trucks at the parade in African country. 2010

unpretentious.

The KrAZ trucks have been used in almost all wars and armed conflicts since the late 20th century until the early 21st century. A worldwide experience of military service and combat operations shows that these vehicles can operate successfully in the harshest environmental conditions (desert, jungle, mountains), in temperatures from  $-50^{\circ}$  to  $+65^{\circ}\text{C}$ , at an altitude of up to 5 000 m above sea level. They can negotiate water obstacles of up to 1,5 m and snow cover of up to 0,6 m. One more advantage is a centralized tyre inflation system ensuring high off-road ability on low-load-bearing capacity soils.

The cab-behind engine design offers a reliable protection in the field. Eyewitnesses say that although stunned crew survived after a mine blast destroying a front axle. There are examples when the KrAZ truck carried people with destroyed wheel.

Today's KrAZ trucks are adopted by armies in 36 countries all over the world: they carry personnel and various loads, haul artillery systems, are used as a carriers for EWS (electronic warfare system) and various combat systems, including the MLRS BM-21 "Grad" and the C-300 air defense system.

Currently, there is a need in armoring the trucks due to local wars and conflicts, to meet this need "AvtoKrAZ" has begun production of fully and locally armored trucks.

Development of new military models is underway. These are the KrAZ-5233BE "Spetsnaz" chassis-mounted firing units, the



Sergey Sazonov, General Director, "AvtoKrAZ" HC, with the delegation of African military officers at AAD-2010. RSA

KrAZ-63221PA "Bastion-03" vehicles that carry multiple launch rocket system 9K57 "Uragan" (see page 8), special vehicles that serve as a base for mounting EW systems.



The KrAZ-6322 PA "Bastion-01" on duty in Africa. 2010



The KrAZ-5233HE-based firing point

# MILITARY KRAZ TRUCKS' NUMBERS HAVE GROWN!



The KrAZ-63221 "Bastion-03"

In 2010, "AvtoKrAZ" jointly with Ukrainian defense plant mounted the MLRS 9K57 "Uragan" on the KrAZ-63221 chassis.

This combat complex is intended for destruction of any group targets with their weak components such as exposed and covered personnel, combat vehicles of the tank, motorized infantry, artillery divisions, air defense systems as well as parked helicopters, command and communication centers and various defense facilities. Firing range is up to 35 km.

The vehicle can successfully operate under extreme natural, climatic and road conditions

## Specifications

Wheel arrangement.....	6x6
Truck curb weight, kg .....	16400
Weight (including missile establishment and combat crew), kg.....	21600
Turbocharged engine.....	YAMZ, Cummins, Deutz
Power, hp .....	up to 400
Top speed, km/h .....	85
Control fuel consumption, l/100 km .....	35

of all continents in temperatures from -50 to +60 °C at an altitude of up to 5000 m above sea level, negotiating water obstacles up to 1,5 m and snow cover up to 0,6 m.

A centralized tyre inflation system ensures high cross-country ability on low-load-bearing capacity soils.

Both right-hand and left-hand drive versions are available as options, local armor protection can be provided for cab and main units.





# On Indonesian Islands



Indonesian defense market is one of the most important in South-East Asia. In 2008, “AvtoKrAZ” won the bid to deliver the trucks to Indonesian National Police. Dropside trucks designed to transport personnel and cargoes, water tank trucks used for fuel and potable water transportation and workshop truck have made a good showing in military service of Indonesian peace-keeping forces in Sudan.

The UNO peace-keeping personnel changes every year, but the KrAZ trucks do not. Trouble-free operation of the Kremenchug trucks is ensured by quality servicing. Used as training vehicles were all of the configurations of the KrAZ-6322 truck the National Police has in service: dropside truck, truck chassis cab and workshop truck. This helped to develop good skills in driving, servicing and repairing. The training was given by KrAZ’s engineer, Y.Promashkin, Vehicle Service Department, “AvtoKrAZ” HC. He recalls:

“Training teams consisted of both soldiers and officers. To get familiar with driving techniques, the trainees drove off



**Y. Promashkin conducts theoretical training at Indonesian police headquarter**



**The KrAZ-6322 training workshop truck**



Practical training – off road driving. 2008



Dwi Setiwan, Indonesian peacekeeper, next to the KrAZ-6322 water tank truck

road, in jungle.

According to officers that drive the KrAZ trucks, they have proved as so efficient and powerful that foreign peacekeepers often ask to recover their vehicles from sand or bog.”

Indonesian soldiers and officers are proud of their powerful trucks. Dwi Setiwan, Indonesian peacekeeper, wrote captions to his photos in Facebook: “My water tank truck. I am standing next to it, small driver. I like this truck. It’s very powerful!”

Excellent operation of Ukrainian trucks gave cause for a visit of plenipotentiary

ambassador of Indonesia to Ukraine Mrs. Nining Suningsih Rochadiat. During her visit she said, “AvtoKrAZ” is the only Ukrainian company operating in the Indonesian market. Considering the faultless and trouble-free operation of the KrAZ trucks delivered for the police and peace-keeping forces in 2008, we are very optimistic about future prospects.”



The KrAZ-6322 truck at UNO peacekeeping forces base. 2010



Indonesian peacekeepers. 2010

## The KrAZ-63221 SHRV-B truck — good solution for any emergency

Rapid deployment  
and easy access  
to rescue equipment

Corrosion resistant  
aluminum alloy body

Large variety of foreign- and home-made  
rescue equipment (around 300 units)  
to provide rapid and efficient response to  
emergencies

“AvtoKRAZ” received an order to build a special heavy rescue vehicle (SHRV) for Ukrainian Ministry for Emergencies and Protection of population from the Chernobyl catastrophe consequences. That was the first experience in building such vehicle.

The vehicle built on the KrAZ-63221 all-wheel drive chassis 6x6 offers the best performance in terms of reliability, endurance and off-road ability.

The KrAZ-63221 SHRV-B is designed to carry rescue teams and equipment to respond to natural and manmade emergencies in all weather and road conditions. It has a wide range of uses, particularly radiological control and chemical detection, fire fighting and evacuation from disaster area.

The vehicle is provided with a large variety

of rescue equipment, including stationary and portable electric power plants, hydraulic power unit, set of hydraulic equipment, self-contained water pump, welding equipment, mine rescue equipment and diving system, acid resistant clothing, 8-seat motor boat, Hiab load-handling system.



FOUR-DOOR SEVEN-SEAT CAB



LOAD-HANDLING SYSTEM



STATIONARY ELECTRIC POWER PLANT

# MUNICIPAL VEHICLES



The KrAZ H12.0 truck chassis

“AvtoKrAZ” is constantly expanding its lineup of cabover trucks. The KrAZ C20.2 dump truck 6x4 has been succeeded by two truck chassis: the two-axle KrAZ H12.2 4x2 and the three-axle KrAZ H23.2 6x4.

These vehicles are designed to be fitted with a wide range of special mountings used in construction, servicing and repairing of municipal facilities, industrial enterprises and roads.

They can successfully operate under all weather conditions over various hard-surfaced

roads, including cobblestone, crushed-stone surfaced and earth roads.

The vehicle cab of frame and panel type consists of steel frame and fiberglass panels, has ergonomically designed dashboard and seat, height and reach adjustable steering column, climate control system.



The KrAZ H12.2 fuel tank truck



The KrAZ H12.2 patching truck



The YaMZ-536 engine

The cabover design allows accommodating a wide choice of power units with both in-line and V-engines.

The chassis is provided with ABS and integral steering.

The two-axle KrAZ H12.2 truck chassis combines an advanced 6-cylinder in-line EGR YaMZ-536 engine Euro-4 rated to 312 hp and 1230 Nm of torque with a 9JS150TA transmission and MFZ430 clutch. The engine design allows for updating to meet Euro-5 emissions.

The KrAZ H12.2 truck chassis design



The KrAZ H12.2 refuse truck at KommunTech 2010

features extended springs attached through bolt and eye that are equipped with anti-roll bar. Mounted on the first KrAZ H12.2 truck chassis was a rear loader refuse body (120-1100 l containers) with 17m<sup>3</sup> hopper.

The new KrAZ H12.2 refuse truck was



The KrAZ H23.2 truck chassis



The KrAZ H23.2 refuse truck equipped with Multilift and load-handling systems

introduced at 8th edition of KommunTech 2010 held in November in Kiev.

A new municipal vehicle has been highly appreciated by exhibition visitors including representatives of machine-building plants, public services and building companies. According to them, the KrAZ H12.2 will compete with MAZ and KAMAZ vehicles.

Powered by the YaMZ-6501.10 in-line engine made in Yaroslavl Euro-3 the three-axle KrAZ H23.2 utilizes MFZ430 clutch and 9JS200TA transmission.

The KrAZ H23.2 pilot model is supposed to be fitted with a refuse body provided with Multilift hooklift system and PALFINGER PK 11001 handling system, hopper capacity up to 30 m<sup>3</sup>.



The KrAZ H23.2 truck-based "JUNLIN" concrete pump



The KrAZ H23.2 truck-mounted 9 m<sup>3</sup> concrete mixer

## Specifications

	KrAZ H12.2	KrAZ H23.2
Configuration .....	4x2	6x4
Curb weight, kg.....	7350	10200
– front axle, kg.....	4800	5300
– rear axle (bogie), kg.....	2550	4900
Gross weight, kg .....	21000	33200
– front axle, kg.....	8000	8000
– rear axle (bogie), kg.....	13000	25200
Payload, kg.....	13500	23000
6-cylinder in-line.....	YaMZ-536	YaMZ-6501.10
	(Euro 4, Euro 5)	(Euro 3)
Displacement, l .....	6,65	11,12
Power, hp .....	312 at 2300 rpm	362 at 1900 rpm
Maximum torque, N·m .....	1221	1670
	1300–1600 rpm	1200 rpm
Manual 9-speed gearbox .....	9JS150TA	9JS200TA
Tyres.....	315/80R22,5	315/80R22,5
Fuel tank, l .....	250	250
Top speed, km/h.....	90	85
Turning radius, m.....	8,5	8,7
Control fuel consumption, l/100 km.....	32	35

\* Vehicle designations in this article are based on a new classification for the KrAZ trucks. Materials on this topic will be published in forthcoming number 5 of Steel Character.

# Always stylish KrAZ cabovers

Maxim Shelepenkov, photos by Maxim Shelepenkov and Alexandr Govorukha

The KrAZ C.20.0 cabover was first shown to journalists last summer after it had left the experimental shop. Tests were out of question at that moment, as its capabilities were unknown to its creators.

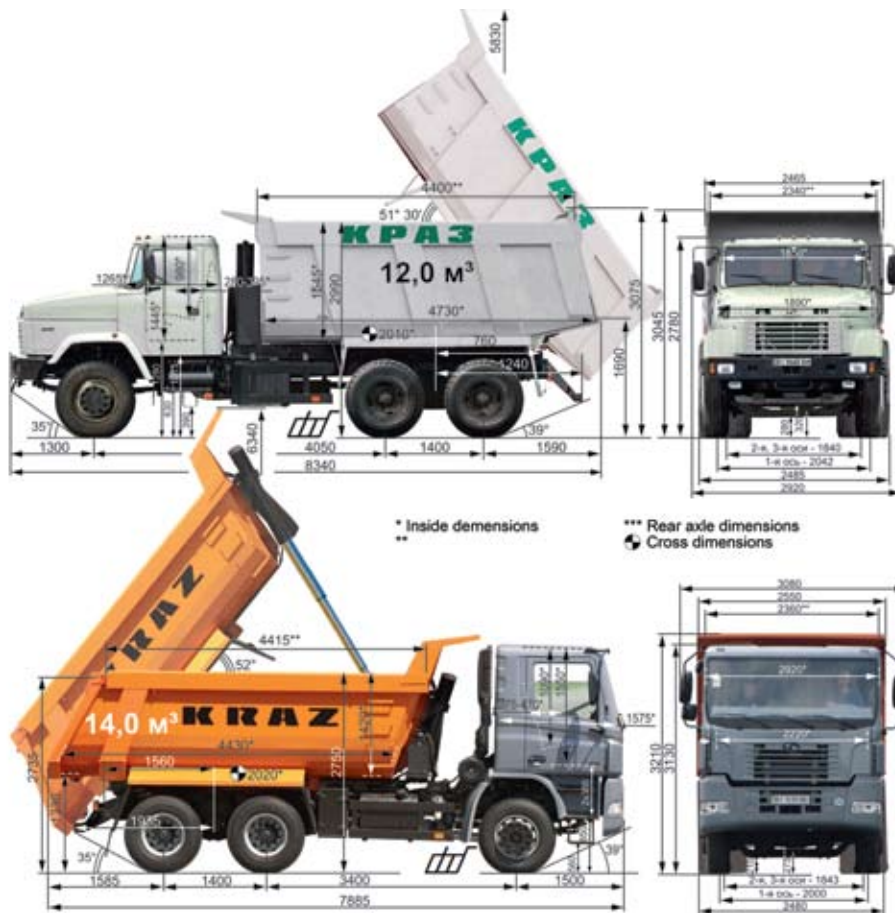
## MINE ROADWAY

An interest in Kremenchug vehicles shown by Russian and Ukrainian operators and driven by improved trade relations between the two countries is at its height now. This is not just another model but an all-new truck: different design, new cab, state-of-the-industry units. We had written about it more than one year ago but the opportunity to road test it has been recently put in our way.

The road test took place in an open pit of Poltavskiy Mining and Processing Integrated Works. We had at our disposal a standard KrAZ-65055 dump truck just to compare it with the cabover. 15 t of ballast weight was added to each vehicle. Unused roadways with turning circles and slopes of up to 8 percent were chosen as a road track by mining survivors. This allowed us to appreciate the cabover advantages over its predecessor.



The KrAZ-65055 and KrAZ C20.0 dump trucks at test drive in open pit of Poltavskiy Mining and Processing Integrated Works



### BONNET GOES OUT OF STYLE

All is familiar and predictable on a serial dump truck: an interior looks small against today's spacious cabs, a huge steering wheel, massive pedals and long gearshift lever. Huge truck for strong men! An all-new cabover looks like a revolutionary vehicle against its predecessor, not entirely blameless, however.

When getting behind the steering wheel of the KrAZ C20.0 truck, a driver sits much higher above the road, and looking out of windshield gives a wider view! What is more the bonnet does not hover before your eyes.

Improved cab interior looks nice. The vehicle has an adjustable steering column, and a previously floor-mounted handbrake lever repositioned on the dashboard. A gearshift lever travel is much reduced since it has migrated from the floor to a transmission tunnel, now it's within easy driver's reach. It is worthwhile noting that a pedal assembly was changed, the pedal travel reduced, and it's more sensitive now.

Then, almost since the beginning, I had difficulties with shifting due to improper adjustment or wear caused by intensive tests, anyway, Kremenchug truck makers shouldn't

ignore it. Especially given the fact that the Shaanxi gearbox proved itself on other KrAZ vehicles including conventional trucks.

I didn't like that a range-change button is located on the dashboard, every time when changing ranges the driver has to reach for it which is so inconvenient. It would be more logical to fit it on the gear-shifting lever as most manufacturers did. I was surprised, as always, to see that shift pattern is not on the gear knob or dashboard.

At the same time, it didn't take much time for me to notice increased power of a new engine: the YaMZ-238DE2 (330 hp) 8 V-engine was replaced by the YaMZ-5601.10 (362 hp) 6 cylinder engine. It's not the power but the torque increased (1670 Nm against 1305 Nm), that plays a large part when

the truck carries a heavy load. Its payload and gross weight increased by 2 tons as compared to the KrAZ-65055.

A new integral steering is much more responsive (when compared to the same truck). It is so sensitive that there is no need in a huge steering wheel. It can be replaced with a smaller one which is more comfortable for turning and occupies less space.

The turns demonstrated dramatically the difference between the cabover and conventional truck. If the KrAZ-65055 barely negotiated the turn, the KrAZ C20.0 had a plenty of extra space. This advantage can hardly be exaggerated in today's driving conditions.

Actually, it is not so easy to describe in words a new vehicle's comfort. Dozens of factors affecting driver fatigue play part including actual driving conditions, cab sound insulation and so on.

Making a final judgment about a pilot model is rather complicated but some conclusions can be drawn. A new KrAZ C20.0 is a good platform to expand a new lineup of Kremenchug trucks. It has a great potential for development and upgrade, as it is available in various configurations and



variants. A new cabover design and newly designed units will enable its use in municipal and interurban services that's why we eagerly await for continuation.

## Scene of action

Poltava Mining and Processing Integrated Works' look is so impressive! Pit dimensions strike not so much as working area that resembles a town. To get to a working face where ore is extracted, you have to drive for a long time past crushing and processing plants where ore is crushed and processed, past repair facilities, parking area for rock haulers and freight yards, as railroad vehicles operate in open pit on a par with motor vehicles. Figures do not so much clearly demonstrate the open pit size (depth is 300 m) as visual interpretation: an electric locomotive pulling a string of dump cars on the opposite side looks like a narrow grey strip barely perceptible on the horizon. 120-tons BELAZ and Komatsu trucks are hardly discerned on the pit bottom.



**The KrAZ C20.0 dump truck on pit road.  
10 percent slope**

Poltava Mining and Processing Integrated Works were put into operation in 1970 under name Dneprovskiy Mining and Processing Integrated Works. Today it is the largest producer and exporter of iron-ore pellets in iron and steel industries. Location near Komsomolsk, 109 km far from Poltava. *(Gruzovik Press, No. 11, 2010)*



**Loading of the KrAZ C20.0 dump truck. Excavator bucket capacity is 5 m<sup>3</sup>**

# STRONG LOGGERS



The KrAZ-64372 carries logs in a Krasnoyarsk forestry



The KrAZ-64372 and the KrAZ-6133M6 logging vehicles are the very reliable and simple in servicing trucks that have wide capabilities and meet the highest requirements in this application. That's an opinion of forestry employees who have acquired them.

Comparative analysis based on performance of timber trucks from different producers shows that Kremenchug logging trucks are much more efficient.

The Chief Engineer of Lebedin forestry (Sumy region) Mr. V. Vasilevskiy who operates the KrAZ trucks said, "We are convinced that such vehicle should be in every forestry fleet. One KrAZ truck can replace three Ural trucks. It paid for itself almost half price within a year of operation. Currently, we are considering a purchase of one more KrAZ truck".

High cross-country ability of Kremenchug truck combined with high payload and durability, simple maintenance, operation under severe weather conditions and excellent price/quality ratio contributed greatly to popularity of the KrAZ trucks all over the world.

Lumbermen of Krasnoyarsk territory and Vologda region use mostly the KrAZ trucks for timber hauling. Over 1 000 logging and short log vehicles were sold in this region within last five years.



AvtoKrAZ's gold medal.  
The 1<sup>st</sup> place  
at "Russian Forest-2007" exhibition

Quality and high performance of the KrAZ timber trucks is proved by bronze, silver and gold medals awarded at Russian Forest exhibition in Vologda.

In far-off Ghana, the KrAZ trucks are the only vehicles that can haul timbers over rugged terrain.

The logs (1,5 m in diameter and over 30 m long) of centenary valuable trees are hauled by the KrAZ trucks to local sawmills over earth roads abounding with sharp climbs.



The KrAZ trucks haul mahogany and ebony logs. Ghana. 2007

# BELAZ



UMO Plant Limited,  
Blackhorse Road, Letchworth, SG8 1HR Herts  
Telephone: Letchworth 71411/6  
Kirk Sandall, Doncaster, Yorks  
Telephone: Doncaster 683131  
Sole U.K. Concessionaires for Soviet Civil Engineering Equipment.

# 25GB DUMP TRUCK



Payload 14,000kg

# The KrAZ trucks helped build Channel tunnel



“AvtoKrAZ” started manufacturing its export trucks a year after the first dump truck had rolled off assembly line, on April 30, 1960. Exported to over 30 countries Kremenchug trucks were in demand overseas.

Nevertheless, our story is about record popularity of the KrAZ trucks in UK.

How did it happen that satiated British customers were pleased with heavy-duty KrAZs? The reason is quite simple and clear: exceptional load-carrying capacity, high profitable operation and quality after-sales service.

First export KrAZ-256Б3 trucks were delivered to this country in 1971. Unfortunately, it's a little known fact that did not get much press coverage as an example of high performance of Kremenchug dump trucks. One reason of it was that the vehicles were delivered under trademark of BeLAZ, another Soviet automobile plant.

How did it come to this? The answer is simple: this trademark was well known in England at that time. BeLAZs were the first Soviet trucks imported by British mining companies where they fitted in well. Instead of reinventing the wheel and expending money and time in promoting new vehicles, a decision was made to use this trademark. That's why the KrAZ trucks were delivered under borrowed but well known trademark.

Interestingly, a logo of BeLAZ and KrAZ trucks represented a rhinoceros instead of a Belarusian bison; in UK rhinoceros is a symbol of speed and power. British used to say, “Bisons were exterminated on British islands but Soviet rhinoceros breed well here”.

The British KrAZs slightly differed from their serial counterparts: service centres in Letchworth, Duncaster and Glasgow carried out pre-delivery inspection and installed optional equipment, UMO Plant, that imported Soviet trucks to UK, enhanced a cab interior to suit comfort level acceptable for British drivers. Local owners had no troubles with servicing as far as Avtoexport spared no expense in spare parts, equipment and overseas business trips of KrAZ

engineers.

Cromwel Ltd, Newport, became the first company that bought Ukrainian dump trucks. After two years of use A. Higgins, director of company, said, “We inspected the trucks and found, happily, that no component needs particular attention or renewal”.

With regard to performance he said, “these trucks are unique. They are reliable, durable and fuel-efficient at the same time. Drivers say they are easy to handle. A driver of mine hurt his arm; however, he thinks he can still drive. Cromwell Ltd uses the trucks to haul blast furnace slag. Four KrAZ trucks can carry as much as 6 15-tons trucks we used previously”.

Garry Godges and Sons Ltd, Yorkshire, a leading contractor specializing in earthmoving and blasting, purchased 19 KrAZ-256Б3 trucks. Dennis Pool, General Director, said, “with the KrAZs, we have lower fuel bills as compared to other 15-tons vehicles which enables us to save 850 £ per each vehicle annually. This is possible because on BeLAZ (KrAZ) only two axles out of three are driving, however, even in flourspar pits, these vehicles rarely use all-wheel drive”.

Dawsett Construction Company has bought over 40 KrAZ trucks and became owner of the largest KrAZ-fleet in Britain. Company workers considered them as ideally suited for highway construction.

Nevertheless, they were operated not only on highways job-sites. Michell used them to build power stations, open coal pits and ports. Its all-KrAZ fleet comprised 25 KrAZ-256Б3 dump trucks.

The brightest page in history of Kremenchug vehicles was using to build Channel tunnel, the longest undersea tunnel in the world. Everywhere, regardless weather conditions and kind of job, KrAZs had high amount of positive feedbacks.

Over all period, Kremenchug automobile plant had no



UMO Plant's label



quality claims from British operators.

In addition to funds in foreign currency, part of which government allowed to use for upgrading, and improvement of brand image, KrAZ plant gained valuable experience in design refinement.

An improved solution of 7,5m<sup>3</sup> body was available on export KrAZ-256B9 dump trucks. Rear underrun bar and mudguards above rear wheels were fitted for the first time ever. Headlamps and fog lights were repositioned to bumper.

Further improvement was enhanced power drive on a new variant of KrAZ-256B3. Moreover, the automobile plant extended warranty to 18 months.

A third variant of the KrAZ-256M was provided with 8m<sup>3</sup> dump body which offered improvement in additional payload capacity enabled to increase payload up to 14 tons.

The last large batch of 256 models was delivered to UK in 1979, later, in 1994 and 1998; there were occasional deliveries of new KrAZ-6510 dump trucks.

Total units delivered to UK is 433 units.

# FIGHTING WITH THE ELEMENTS

KrAZ trucks are in their elements over rough terrain under severe weather and operational conditions being the best for realization of their potential.

These later years, Kremenchug road maintenance trucks reveal their capabilities in rugged winters with abundant snowfalls, snowstorms and black frost. At the beginning of the year road traffic was disrupted due to month's snow fallen in several days in Ukraine. All the fleet, consisting mostly of three-axle truck-mounted road maintenance vehicles, was used in battle with snow.

It's only thanks to the KrAZ trucks that road traffic in Odessa, Zaporozhye and Donetsk regions was not blocked by particularly heavy snow falls.

The KrAZ road maintenance trucks have been highly appreciated by operators. The mechanic at Odessa road maintenance enterprise V. Slavov says, "There were no traffic jams on road section maintained by KrAZ trucks. 100 km section of three-lane 18 m Kiev-Odessa motorway was cleared up in just hours".

In 2006-2007, "AvtoKrAZ" delivered over 200 special road maintenance trucks to State Road Service of Ukraine, Ukravtodor. During all time



**The driver of the KrAZ-6510DM N.Gnoyevoy says, "My all-terrain KrAZ truck wins any element: traffic will not be disrupted". Kremenchug, January. 2010**

of operation the automobile plant had no claims from drivers.

Operators at regional road departments emphasize the necessity to provide their fleets with more efficient national vehicles. In fact, current demand for such vehicles comes to thousands of units.

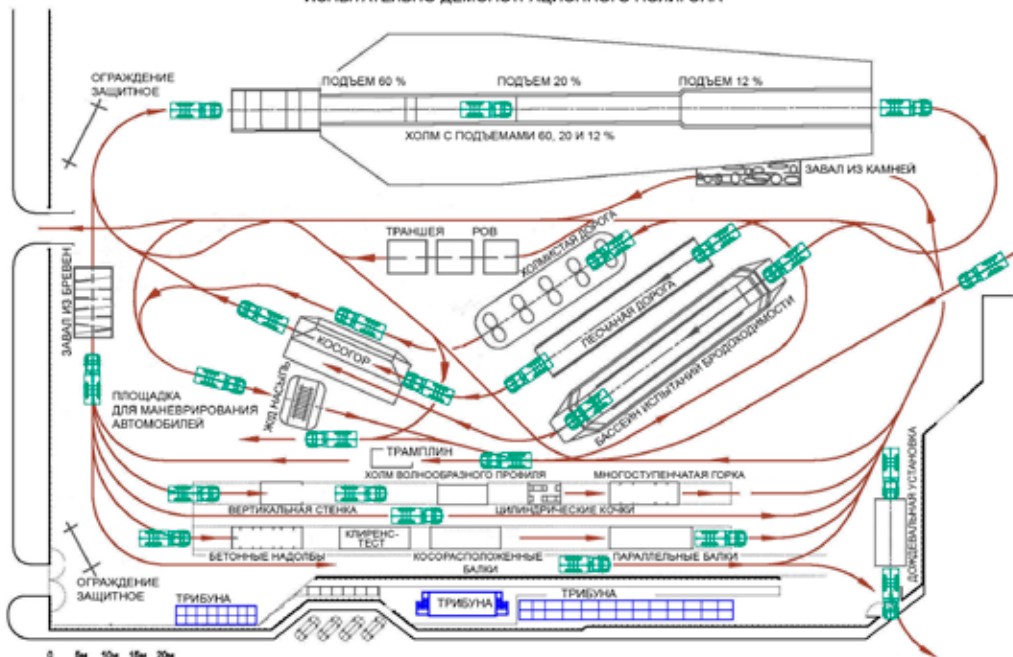


**The KrAZ-65055 equipped with Shmidt snowplough removes snow. Kiev-Odessa, January. 2010**

# "AVTOKRAZ" PROVING GROUND IS IN OPERATION



ПЛАН-СХЕМА  
ИСПЫТАТЕЛЬНО-ДЕМОНСТРАЦИОННОГО ПОЛИГОНА



“AvtoKraZ” Holding Company continues to develop its unique demonstration proving ground. New facilities and various obstacles were opened in 2009-2010 which enabled accelerated testing of the KraZ trucks as well as of wide range of heavy wheeled vehicles.

“AvtoKraZ” is regularly awarded contracts by State companies such as Ukrspetzexport and Ukrinmash to perform testing of armored vehicles.

Thanks to small size of proving ground, numerous delegations of politicians, businesspersons and



OUND



The KrAZ-6322 "Spetsnaz" negotiates rock run

military men can enjoy watching various vehicles to negotiate obstacles whilst sitting in comfortable viewing stand.

KrAZ all-terrain vehicles are always met with applause, cries of admiration and camera flashes. No wonder!

The few can be untouched when a huge truck climbs up 32° slope, almost swims when crossing 2m deep shallow water splash, wades through log roll and rock run of huge blocks.

Currently, "AvtoKrAZ", in partnership with National Academy of Sciences of Ukraine, does work to create test facility based national certification centre. This will allow carrying out quality testing of all new prototypes of national and foreign trucks.

The БРДМ-2/III armored reconnaissance patrol vehicle crosses shallow water splash



The armored vehicle "Dozor B" drives on concrete pipes



The БТР-3Е1 armored carrier overcomes concrete ditch



The delegation of Angolan Armed Forces led by Gerardo Abreu Ukwashitembu, Chief of General Staff, on viewing stand



# AUTOMOTIVE CLASSROOM FOR MILITARY MEN



Automotive classroom. General view

One more classroom has been added to “AvtoKRAZ”’s training centre opened in 2008.

A new automotive classroom is provided with a unique in Ukraine training simulator that represents a scale model of the KRAZ-6322 Soldier all-terrain truck. This model has parts, units and systems that are cutaway to show the parts inside.

This training aid is a real vehicle artfully made. When turning ignition key, warning lights come on that

allows easy checking of systems proper operation. Trainees can watch operating running gear and power drive units that are hidden when driving.

This scale model is completed with various training displays showing operation of air brake, electrical and fuel systems. Implanted microprocessors clearly demonstrate operation of system devices.

Trainers, engineers of the automobile plant and trainees, officers from

# CLASSROOM



Training displays of various KrAZ systems



Over 150 trainees from different countries of the world completed their courses in this classroom in 2010



Egyptian MoD officers study KrAZ compressor

different countries of the world, enthusiastically say that vehicle design study is simple and easy to do; this is more like a game now.

Previously it took about three months to complete training course that now lasts only 2-3 weeks.



Foreign trainees examine the dashboard



**KRAZ IS THE KEY TO YOUR SUCCESS!**



Foreign Trade Firm KRAZ  
2, Yaroslavskiy Proyezd Str.,  
Kremenchug, 39631, Ukraine  
Tel. +38 0536 766210  
Tel./Fax +38 0536 771673  
e-mail: office.ftfkraz@kraz.ua

“AvtoKRAZ” Holding Company  
62, Kievskaya Str.,  
Kremenchug, 39631, Ukraine  
Tel. +38 0536 766200  
Tel./Fax +38 (0536) 766208  
e-mail: info@kraz.ua

Trade House of AvtoKRAZ HC  
2, Yaroslavskiy Proyezd Str.,  
Kremenchug, 39631, Ukraine  
Tel. +38 0536 766313  
Tel./Fax +38 0536 778986  
e-mail: sale@kraz.ua

[www.autokraz.com.ua](http://www.autokraz.com.ua)