

CLASSICAL GAZ

John Blackman profiles the BA-64 armoured car and takes a look at the only example in the UK



While Allied forces made use of armoured Jeeps during WW2, they were pretty ad hoc affairs, for the most part cobbled together in the field. It was the Soviets who, having whole-heartedly adopted and copied the Jeep 4x4 light utility concept, took it to its ultimate conclusion with their BA-64 series of armoured cars.

In the mid-thirties the Soviets had introduced the BA-20 armoured car based on the GAZ M-1 saloon but, being a 4x2, its off-road performance was extremely limited. Come 1941 and

with the emergence of the Jeep-like GAZ-64 there was at last an all-wheel drive chassis on which to base a new armoured car so, in July of that year, the GAZ design bureau began work on what

would become the BA-64. The defined aim was to produce a simple, rugged vehicle with a sloped hull, and while the BA-20 had looked exactly like a lightly armoured saloon with a turret plonked on top – which indeed it was – when it came to the BA-64's body, the Soviets looked to the German Sd.Kfz 221 and 222 armoured cars for inspiration.



The Soviets took the armoured Jeep to its ultimate conclusion with the GAZ BA-64. James Stewart and Nick Vaughan of Trapper Industries discovered an original chassis and fabricated a replacement body with the result that they now have the only BA-64B in the UK.

INTO SERVICE

Progress was relatively swift with the prototype hull ready by the end of November 1941 and the complete vehicle being rolled out on 9 January 1942. Following the rectification of suspension weaknesses, the BA-64 was in February exhibited to and approved by the Commissar for the tank industry, V A Malyshev, in Moscow and then

sent for weapons testing at the Sofrinsky artillery range. The following month the BA-64 was again demonstrated at the Kremlin, this time for Stalin and government officials, following which it was accepted for service on 14 March 1942.

The body consisted of rolled steel armour plates, 4-12mm (later 15mm) in thickness, placed at an angle of not less than 30

degrees and welded together. The result offered reasonable protection against small arms fire from the front where the plate armour was thickest and limited protection from other aspects. The driver sat centrally in the hull with a vision port inset into an armoured flap in front of him. That one extremely restricted view of the outside world was later augmented by



Above: James Stewart occupying the BA-64B's turret. In service it would have had a 7.62mm machine gun mounted in the slot in the turret front.

vision ports/flaps in the front side plates.

It seems that while some were open-topped and armed with a pintle-mounted DT-29 for the second crew member to use, most BA-64s (and all subsequent BA-64Bs) had an octagonal open-topped turret which could be manually revolved through 360 degrees. The 7.62mm machine gun was mounted in a slot slightly offset to the right in the turret front and rigged so that it could be elevated over the top of the turret and used for air defence. It could also be dismantled and the vehicle was supplied with a detachable bipod for such occasions. Despite the cramped conditions, 1260 rounds of 7.62mm ammunition plus six fragmentation grenades and the crew's PPSH submachine guns were also carried.

IFFY RELIABILITY

The BA-64's engine was the GAZ MM, the company's take on the Ford Model B

engine, an in-line, four-cylinder, 3285cc unit as used in the GAZ-64 and modified to work with low-grade petrol and oil. It drove the rear or all wheels via a four-speed gearbox and single-speed transfer box. GAZ commenced production in April 1942 but almost immediately minor modifications were made to address niggles that became evident as the BA-64 entered service. Unfortunately the type exhibited a general lack of reliability, with many breaking down after only a few thousand miles. Chief culprit was apparently rear axle failure, probably due to overloading. By November 1942 a non-disconnectable front axle had been prescribed and over the following months various modifications were introduced with the aim of strengthening and improving the chassis and suspension.

By June 1943, when the GAZ plant was damaged by German air raids, 3901 BA-64s had been manufactured. However,





Above: The BA-64's driver sat centrally, astride the transmission.

Right: With armour plate up to 15mm thick, the BA-64 was noticeably top heavy, so Nick and James used 3mm mild steel when they fabricated the new body. With only a small vision flap to his front and small vision ports either side, the driver's view is limited.



any number of modifications couldn't fix what was the type's inherent problem: a lack of stability caused by a combination of narrow track and a high centre of gravity. That Achilles' heel was addressed when the BA-64B appeared in September 1943 based on the GAZ-67B which had a track of 1446mm, some 200mm more than its predecessor. Production of the BA-64B continued until 1946, by which time some 5209 had been manufactured, bringing total BA-64 series output up to 9110 – although sources do differ slightly. Many vehicles ended up being passed on to Soviet allies such as East Germany, North Korea, China and Yugoslavia, but there

“Compared to Jeeps, the GAZ is very industrial but much tougher...”

were a number of experimental prototypes produced. Among these was the BA-64Zhd, fitted with additional railway wheels allowing it to run on tracks, and the very much more ambitious BA-64SKh on which

RARE UK EXAMPLE

Although there are a number of BA-64s in ex-Eastern Bloc collections and museums – some genuine, some reconstructions – and one in the United States where it used to be

held in the Aberdeen Proving Ground collection, there were none in the UK... until recently. The

the front wheels were replaced by skis and the rear wheels by tracks so turning it into a snow-going half-track. Neither design progressed to production.

example you see illustrating this feature is owned by James Stewart and Nick Vaughan who jointly run Trapper Industries (www.trapperindustries.com), a company

Right: A BA-64 with its narrow track photographed in February 1944.
Below: A May 1942 photo of an early BA-64. There are no driver's side vision ports.





Right: Perhaps the most original BA-64B is that presented by Stalin to Roosevelt. Here it is shown at the Aberdeen Proving Ground some years ago.

specialising in Russian and Eastern Bloc military vehicles and equipment.

The duo set up the company, which is based not far from Gatwick, almost 10 years ago and currently have workshop facilities including fabrication and sandblasting areas, and a storage barn for vehicles held in stock. The three vehicles in the accompanying group photo, the GAZ 67, GAZ-67B and BA-64, all came from the regular – at least twice a year – trips Nick and Stewart make out to the old Eastern Bloc searching for interesting projects and following up leads provided by their local contacts. But of course they don't look so straight when found; the GAZ-67B owned by James was a true barn find.

"We were in the Baltic on the Russian border when we came across it," James explains. "It hadn't been used for some time and was in very poor condition. The chassis was complete and the engine block and head were there, but the body was very rusty. We dug it out of a barn and stored it there for six-months before bringing it back with a couple of other vehicles in 2012. It's a 1945-built GAZ-67B. The early GAZ-67s didn't do well so they modified them with a wider track and extra fuel capacity resulting in the 67B which was quite successful. People suggest it's basically a Russian Willys but in actual fact the Willys and the GAZ came out of the Bantam, so they are like cousins that took a different evolutionary path.

"Compared to Jeeps, the GAZ is very industrial but much tougher; more difficult to break. I think that overall they beat the pants off Jeeps and they are far more



capable off road. However, the engines don't run as well."

FORD POWER

The GAZ uses a Ford Model B-type engine along with Model AA truck axles because in the thirties the Soviets entered into an agreement with Ford America under the terms of which they agreed to purchase \$13 million worth of vehicles and parts in return for Ford providing technical assistance to facilitate the setting up of a manufacturing plant at Nizhny Novgorod. Known as Nizhegorodsky Avtomobilny

A-like. The grille is very similar, and even the GAZ badge looks like a Ford badge."

CLOSE TO ORIGINAL

When a contact of theirs reported locating a BA-64 chassis, James and Stewart didn't really believe him but trudged out to the Russian border anyway, fully expecting to find the remains of another GAZ-67B. "We took a close look and soon realised it actually was a BA-64," admits Nick. "There are several identifying features that you wouldn't find on anything else and it had a BA-type engine in it which was still the

Model B but with an earlier water pump. There was also a special

gearstick. Unfortunately the body had been scrapped many years before. The owner had obviously weighed it in for its scrap value to make a bit of money."

The lack of a body wasn't going to prevent Nick and James from buying such a rarity. "We brought it back to the UK and then spent about six-months fabricating a replacement body using original drawings that we found via Russian internet forums," Nick says. "Although the original used

"We used as much second-hand steel as we could because it's old and pitted."

Zavod, or NAZ, the plant commenced production on 1 January 1932 with versions of the Ford Model A car and Model AA truck which were sold as the NAZ-A and NAZ-AA respectively. In 1933, when Nizhny Novgorod was renamed after Maxim Gorky, the factory's name changed to Gorkovsky Avtomobilny Zavod, or GAZ. "Hence you find lots of Model A and B parts and similarities in GAZs," continues James. "The front of the vehicle is very Model

Above: The slogan on the front of this BA-64B photographed during a Berlin parade in May 1945 reads 'Glory to Stalin'. On the side is written 'Caucasus Berlin'.

Left: This early turretless BA-64 photographed in Stalino in November 1943 has a PTRD anti-tank rifle installed on top of the hull.



While early BA-64s were based on the GAZ-64, the BA-64B used GAZ-67 underpinnings and benefitted from a wider track.

armour plate up to 15mm thick, we used 3mm mild steel plate. BA-64s were very top-heavy and had a tendency to fall over, which we didn't want, obviously. And the cost of steel is horrendous. But we used as much second-hand steel as we could because it's old and pitted. We get a lot of our metal from railway restorers.


"The result is up to 60% original and is one of only two in Western Europe that we know of. The other is in a German museum. There are quite a few replicas in Eastern Europe but they are usually built on Willys or Land Rover chassis. There are plenty in Russian museums but they are all modified to some degree. The most

complete one we know of was in Maryland, and was given by Stalin to Roosevelt during WW2."

FINISHING TOUCH

The BA-64 has been finished in the markings of the 10th Guards Army which was formed after the Soviets were pushed back to Moscow. It subsequently thrust back via the Baltic, through Poland and to Berlin and is also the unit in which James's grandfather-in-law served as a KGB Captain during WW2 and which James and Nick re-enact at events.

So far so good. But I just know that there are readers out there wondering how

to pigeonhole this vehicle... restoration, recreation or even, heaven forbid, replica. Well, I'm going to firmly reject the latter. With a claimed 60% originality it certainly can't be considered a replica. As for the other two – restoration or recreation – it's a bit of both if you want to be nit-picky about it, but I don't. Nick and James rescued the remains of a rare and interesting vehicle and, with compromises made for good practical reasons, got it up and running for us all to enjoy and, it has to be said, perhaps spark our interest in a fascinating little vehicle the likes of which the Western Allies didn't have. And that's good enough for me. 

From right to left: James Stewart with a GAZ-67B, Nick Vaughan with the BA-64B and, for comparison's sake (note the narrower track), Derek Foreman with a GAZ-67.

