The revised ZAZ 968A differed slightly in appearance from the ZAZ 966 – it had a different grille treatment and revised lights. This example photographed in 1977 stands in front of a KamAZ truck, the result of one of the largest civil engineering projects ever undertaken in the Soviet Union. A factory with a capacity to build 150,000 trucks and 250,000 diesel engines per annum, it was created from scratch in less than five years on a greenfield site at Naberezhnye Chelny on the Kama River, in Tatarstan. *(Avtoexport)*

An export example of the ZAZ 966. The front grille was purely decorative, as the engine was at the back with its air-cooling vents on the rear wings. *(Avtoexport)*

distinguished by a revised front grille, improved rear lamps, the absence of grid-like cross-connections in the air ducts and wider tyres. Versions were also built for people with disabilities, the ZAZ 968B being for those who didn't have the use of either foot, the ZAZ 968B2 for drivers with the use of only one foot, and the ZAZ 968P for those with just one foot and one hand. Production of these disabled models started in January 1973.

At the end of 1974 the luxury-trimmed ZAZ 968A was launched, which was built in parallel with the standard model until the middle of 1979. It had improved brakes and better passive safety in the form of seat belts and an energy-absorbing steering column. Inside the cabin there was less chromium and more plastic and a new plastic dashboard in place of the standard metal one. In place of the old seats it had improved ones lifted from the VAZ 2101 Zhiguli. The ZAZ 968E export model included headlights which met international safety standards, a Triplex windscreen, decorative trim on the windscreen seal and an anti-theft steering lock. Exports of the ZAZ 968 were usually made under the name Zaporozhets and were mainly to fellow socialist nations.

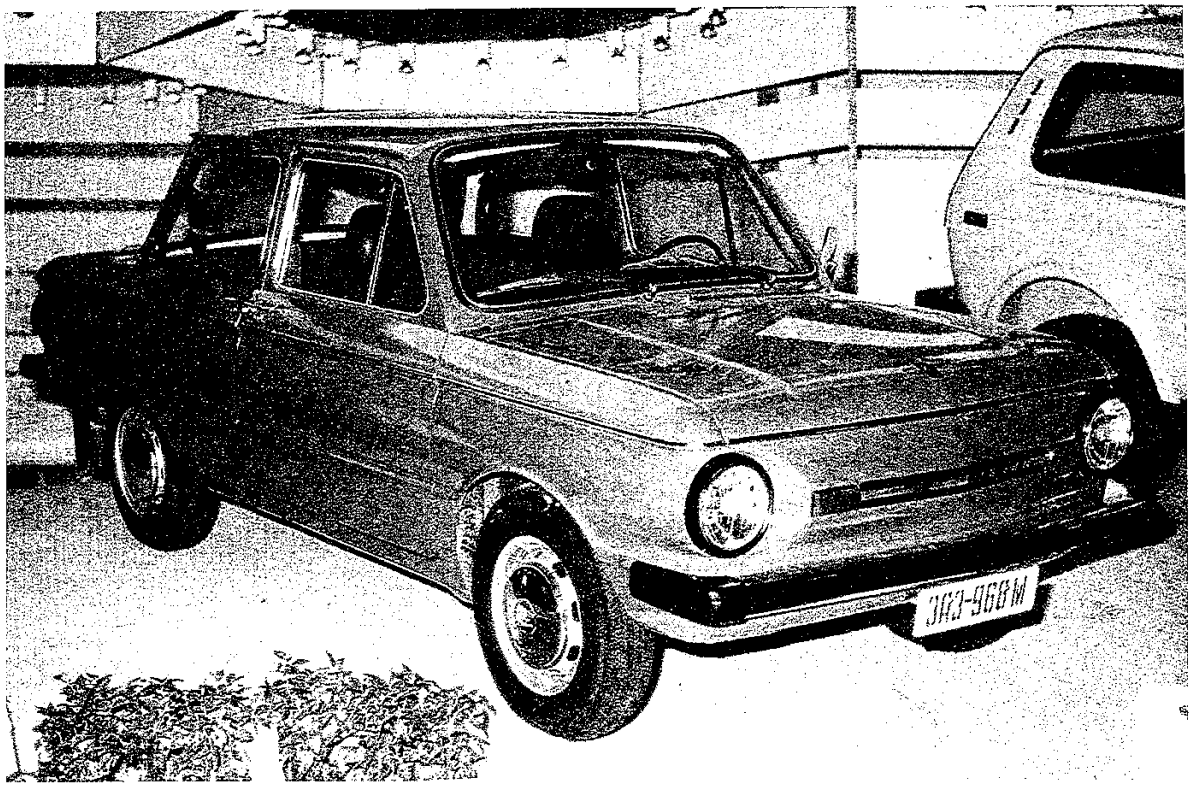
During September 1974 the millionth MeMZ engine was built and in October 1974 the MeMZ 968 engine was awarded a Soviet quality mark. In October 1975 MeMZ was incorporated into the new AvtoZAZ holding group, which also included the ZAZ assembly plant, the Ilyichyevsk Automobile Parts Plant and a number of other automobile-production facilities in Lutz and Kherson. In effect AvtoZAZ became the Ukraine's own national motor corporation.

The millionth ZAZ was built during January 1976. In 1979 the ZAZ 968 was given its most radical update, becoming the ZAZ 968M. The ear-like air ducts disappeared and there were new-style lights, including rectangular rear light clusters. The original prototypes for the ZAZ 968M had been seen in the autumn of 1977 and featured an original and rather artistic rear lamp cluster, made up of two large semicircles bracketing a large central tail lamp. The production cars, however, were fitted with less daring and simpler rectangular rear light units. Dual circuit brakes with discs up front and matt black trim replacing chrome were other features of the new car.

The ZAZ 968M was built with three engines: the MeMZ 968E producing 40bhp and, thanks to its basic carburettor and low compression ratio, able to use 76-octane petrol; the MeMZ 968GE, which produced 45bhp thanks to its dual chamber carburettor; and the MeMZ 968BE, which produced 50bhp and needed 93-octane fuel. The BE model differed from the GE by virtue of its increased compression ratio of 8.4:1, achieved by a change in the cylinder head design. As was by now normal for ZAZ, the model range also included a wide variety of specially adapted cars designed for use by disabled drivers.

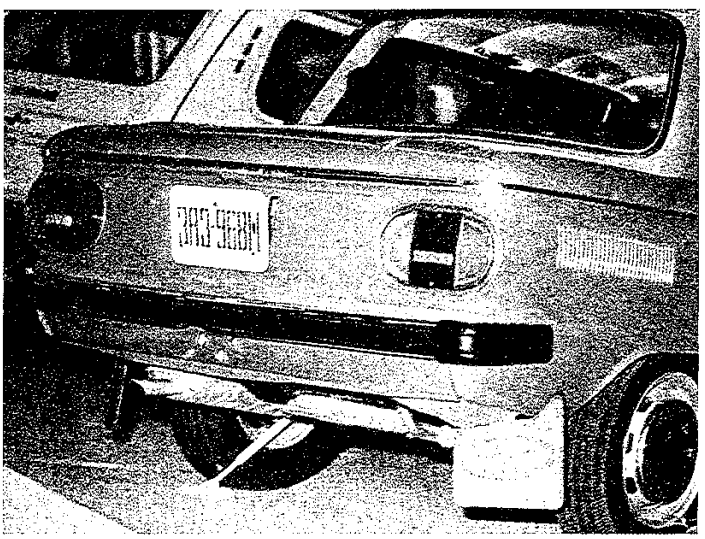
In this form the Dnieper Cossack continued to be built until 1 July 1994. Production had continued alongside that of the more contemporary front-wheel-drive Tavria, announced at the end of the 1980s, and finally stopped only because of the collapse of the Soviet Union and competition from second-hand Western cars available for the same price. Plans had been reportedly laid for 1,300 and 1,400cc versions of the ZAZ 968M but these came to nothing.

No sooner had the original ZAZ 965 started to roll off the production lines than the designers were working on vehicles that would open up new markets for the factory. It seemed that the opening of a new plant gave them the energy and drive to explore original designs and new market niches. In 1962 they came up with a prototype ZAZ coupe, the NAMI 086-Sputnik, which had a 500cc two-cylinder engine created by cutting the four-cylinder ZAZ 965 engine in half. This produced just 15bhp. The gearbox had four-speeds and an electromagnetic clutch, an outstanding feature for the period. Suspension was independent all round with torsion bars, and total weight was 520kg. The car was developed especially for disabled people, but it was never produced. A second attempt to create a sporty ZAZ came in 1969. The KD coupe had fibreglass coachwork reinforced with polyester,



↑In 1977 the first prototypes of a further update of the ZAZ 968 were unveiled. The most obvious change in the ZAZ 968M was the elimination of the side air scoops, replaced by more discreet grilles. *(Author's collection)*

→The prototype ZAZ 968M featured these interesting and original rear lights. Sadly they did not make it into production. *(Author's collection)*



fixed to a metal frame, and weighed only 500kg, which allowed its 30bhp engine to take the little car to a top speed of 75mph.

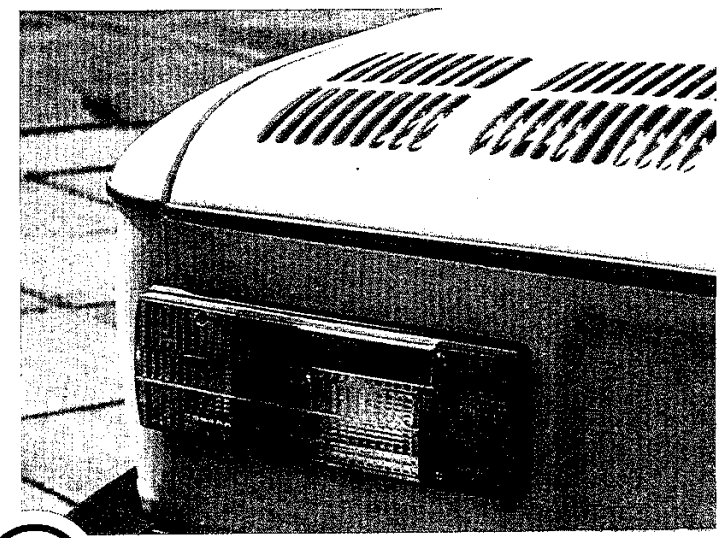
On a completely different tack was the development of a commercial variant. ZAZ was eager to develop its role as a producer of 'people's cars' accessible to all – including those who needed greater load capacity! ZAZ's top managers, headed by plant director Yuri Sorochkin wanted their company to become an independent powerful auto-producer, but the ministerial plans for ZAZ did not include development of any additional models – ZAZ was expected to focus its efforts on small cars. However, Sorochkin was not only a talented designer but also a great organiser, and at the start of the 1960s he raided his internal accounts so that design work on the new ZAZ 970 light commercials could be got under way. Compact utility vehicles were in short supply in the Soviet Union at the time, the only one that could meet the country's needs for small vans being the MZMA Moskvich, which was only ever made in small quantities.

Sorochkin's idea of a light truck built on the basis of a rear-engined, air-cooled car was not as far fetched as it may sound today. In the immediate post-war period designers across the world were extremely impressed by the German Volkswagen, and even the Americans got in on the act with their Chevrolet Corvair, made, like the VW, as a car, a van, a minibus and a pickup. The ZAZ team decided to go for a similar approach with the embryonic ZAZ 970 family and to include a pickup, van and minibus. The idea of a compact minibus with a forward-control

↑The ZAZ 968M was officially launched in 1979, and with a minimum of sheet metal changes updated the by then rather venerable ZAZ design. Matt black trim featured prominently in the upgrade. *(Avtoexport)*

➔ **For many years the ZAZ 968M was the cheapest car available to Soviet motorists. It had excellent rough-road capability and its air-cooled engine was able to cope with a wide range of climatic extremes.** *(Avtoexport)*

➔ **These rather dull rectangular rear light units were chosen for the production ZAZ 968M.** *(Avtoexport)*



layout was a new one – Fiat's Multipla was the first of its kind and had proven to be extremely popular. The first ZAZ model had a short stubby bonnet and a lot of the cheeky character of the ZAZ 965, while later examples had a smaller bonnet and a far more pronounced forward-control aspect.

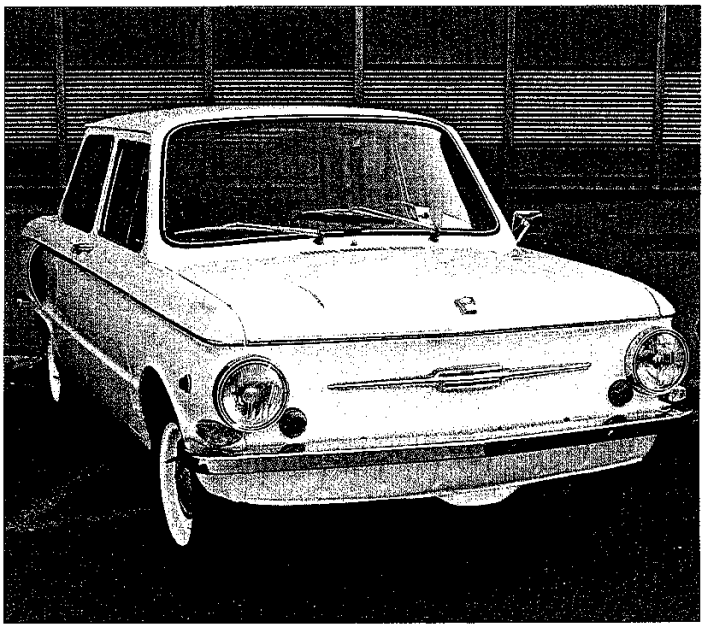
The extremely functional design of the ZAZ 970 was developed by Yuri Danilov's technical team based at ZAZ. Some clever solutions to problems were identified. For example, to create a chassis capable of handling a 350kg payload the team experimented with different metal profiles and varying degrees of metal thickness. For the body panels, ZAZ used 0.7mm steel for the first time in the Russian car industry. It was a special metal from the plant's neighbours at Zaporozhstal, the Zaporozhets Metallurgical Plant.

The engine and gearbox for the ZAZ 970 were lifted from the mainstream production ZAZ 965 cars. The rear wheel hubs had reducers to increase the gear ratio. The 27bhp MeMZ engine gave the fully loaded machine a top speed of only 47mph, but for urban use in the 1960s this was more than adequate. Fuel consumption was 7.5 litres per 100km (38mpg).

The engine was placed at the back, under the floor. However, the V format of the engine was not ideal for a cargo vehicle. In the Volkswagen the flat four motor was much more compact and allowed for an almost flat floor whereas on the ZAZ the motor created a hump in the loadspace.

Prototype models were constructed very rapidly. Drawings on a scale of 1:1 were used to make plywood templates and wooden bulkheads, onto which body panels were fitted. This approach was driven forward by Sorochkin, who had past experience as a panel beater. Three prototypes were developed and all were on the road by 1962, powered by MeMZ 966 engines. The ZAZ 970 was an all-metal van with a capacity of 2.5m³ and able to carry 350kg of load; the ZAZ 970B was a microbus with seats for six to seven people and room for 175kg of load; and the ZAZ 970V was a pickup capable of hauling 400kg of load. Prototypes with different bodies were tested in the grounds of the Zaporozhets plant and in the Kamenka-Dneprovsk region, where the testers were able to subject the new vehicles to every kind of condition, cobblestone roads and dirt tracks as well as smooth asphalt highways. ZAZ even looked at building all-wheel-drive versions, the ZAZ 971, ZAZ 971B and ZAZ 971V.

Representatives of commercial and trade organisations, the potential users of the new vehicles, were invited to the testing sessions in the hope that they would help lobby Minavtoprom to allow ZAZ to put the little vans into full-scale production. The testers and merchants were all extremely pleased with van, the only real problem being the engine hump in the floor, which interfered with access, especially on the van, which only had a rear door. The ZAZ 970V microbus had a side-loading door to allow better access. As late as 1965 ZAZ hoped that at the very least the ZAZ 970 van would make it to the production line but it was not to be: the plant was expected by the



The ZAZ 968A has a loyal following in the countries of the former Eastern Bloc. This example was seen in Hungary in 2007. *(Hungarian Moskvich Club)*

A well maintained example of the ZAZ 968M – a facelifted version of the original ZAZ 966 series – photographed in Hungary in 2007. *(Hungarian Moskvich Club)*

Soviet government to concentrate all its efforts on the new ZAZ 966 and what was to eventually become the four-wheel-drive LuAZ 969. A great opportunity had been missed, as became clear when other manufacturers, especially in Japan, subsequently developed whole ranges of microvans and microbuses for use in every corner of the developed and undeveloped world.

The ZAZ 970 prototypes languished at the ZAZ works, gathering dust and occasionally being raided for components for other projects, until they were eventually scrapped. The work wasn't entirely wasted, however, as one of those involved in the project, Leo Murashov, went on to work for VAZ and helped to develop the body and chassis of the VAZ 2121 Niva. ZAZ made one further attempt to develop a light van, the ZAZ 0466 in 1971, but it too didn't get beyond the prototype stage.

The ZAZ 966 was, however, used as the basis for a prototype fibreglass-bodied minivan, the Maxi. Developed in 1966–7 by the Russian Design Institute this had several interesting features, including a space-frame bodyshell clad with plastic panels, an adjustable pedal block, and seats that could rotate through 180°. Many of these features are now found in today's MPV vehicles, such as the Renault Espace.

Perhaps most significant on the development front at ZAZ during the 1960s and '70s was the creation of a front-wheel drive car to replace the ZAZ 966/968. This project, led by ZAZ designer Vladimir Steshenko, ultimately became the ZAZ 1102 Tavria, which took ZAZ into the post-Soviet era. ■

ROUND AND ROUND WE GO

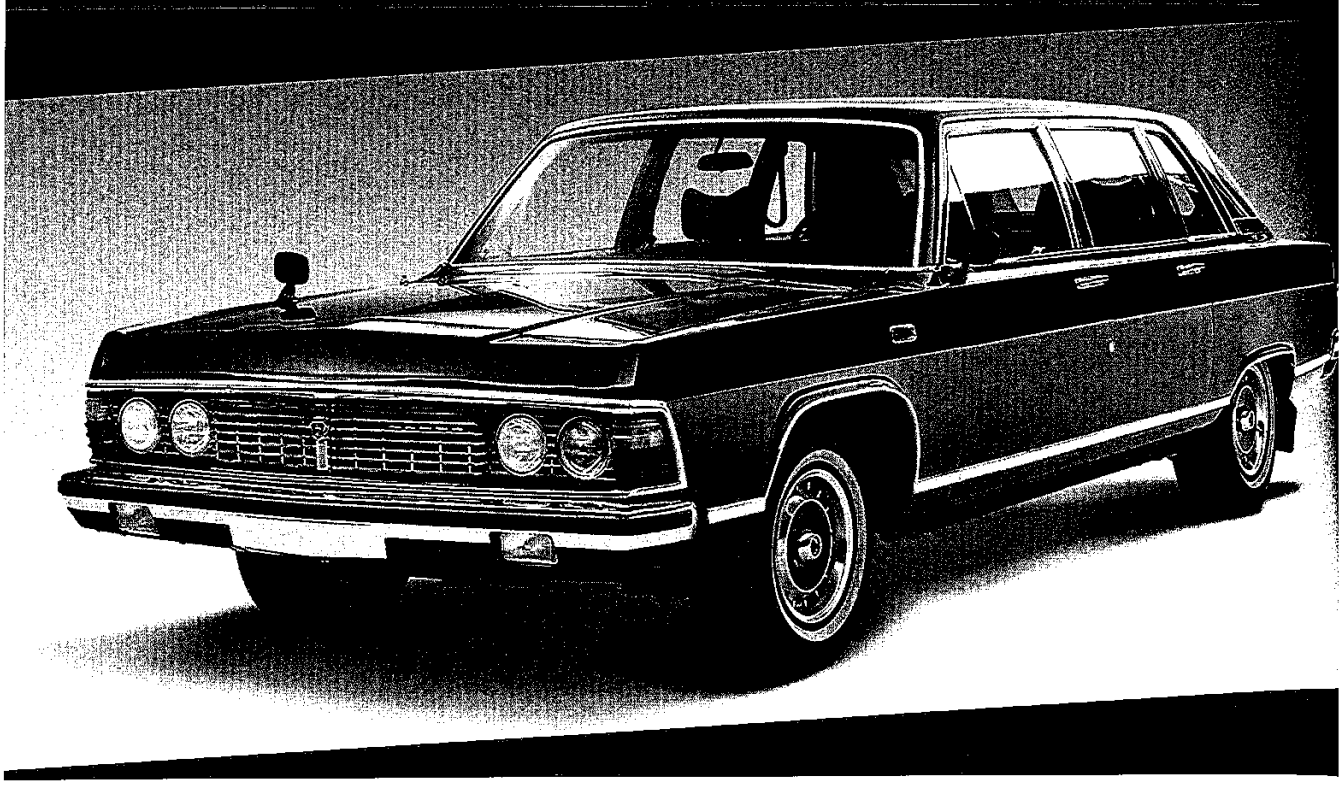
One Soviet car that represented a real leap into uncharted territory for both Western and Eastern Bloc carmakers during the 1960s and 1970s was never exported: the rotary-engined Ladas remained safely behind the Iron Curtain.

The Soviet automotive and aerospace industries had been involved in a little-known but extensive programme of rotary engine development since the end of the 1960s. The ability of rotary engines to produce high power from low octane fuel may have been one of the reasons behind this, since Soviet petrol was not produced in the high octane variants available in the West. This gave Soviet cars an additional sales advantage overseas, where they could be marketed as running on the cheapest petrol available.

Soviet interest in rotary engines was first noticed in 1968, when a book detailing the principles behind them was published in Russia. This was followed at the end of the 1960s and in the early 1970s by articles in Soviet Bloc technical journals. By this time two of the world's motor manufacturers were already mass-producing rotary-engined cars – NSU in Germany and Mazda in Japan – and in 1974 Soviet technicians were sent to visit the NSU plant in West Germany. Development of the Soviets' own rotary engine was passed to VAZ, which started work on the project in 1976. The first single rotor Lada was made in 1978 but it wasn't until the summer of 1980 that 250 rotary-equipped cars were sold to customers. ■

GAZ CHAIKA

THE SEAGULL FLIES EVER HIGHER



↑The GAZ 14 Chaika was a tour de force for the Soviet motor industry, being technically more advanced than the ZIL that was traditionally the country's top car. It was also extremely attractive to look at, with bold yet discreet lines. *(Group GAZ)*

At the top end of the market, a new Chaika did not appear until the end of the 1970s. By the beginning of that decade the appearance of the GAZ 13 Chaika was, to say the least, a little baroque and thoroughly outdated in a world of straight lines and sharp angles. The Politburo itself authorised the development of a new car, although initially changes were expected to be limited to the body style, possible due to the body-on-frame construction of the original Chaika. However, the design brief included making the new car easier for people to get in and out of and improving visibility. After various attempts to make a new body style fit onto the existing structure it was finally accepted that a new design was needed from top to bottom. The height of the GAZ 13 scuttle meant that the bonnet was too high and its wheelbase was too small to allow for big enough doors. Prototypes of the new GAZ 14 were built, with a longer wheelbase and a lower engine, and sent for prolonged tests on the roads of the Crimea and Caucasus. This less than rigorous approach – a change from full and formal test ground-testing – was seen as being suitable for a car that retained its most important components (steering gear, brakes, engine and suspension) from its predecessor. The results, however, were a little disappointing: the overall driving qualities of the new car were not up to the required standard.

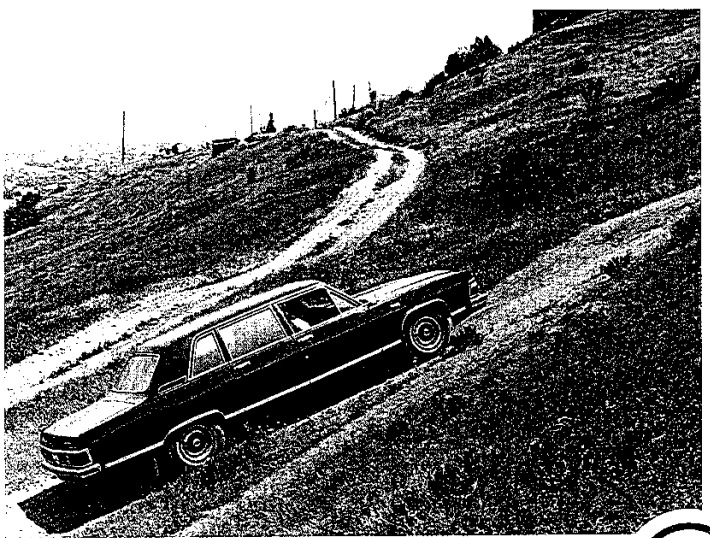
The GAZ design team worked hard on improving the new model. While working on improving the drivetrain they took the opportunity to develop the interior and trim, since the car was intended to offer the utmost convenience and luxury to those lucky enough to get to ride in it. GAZ engineers

← GAZ spent a lot of time testing the new GAZ 14 Chaika to iron out any problems. The first prototypes had not been as successful as the designers had hoped. *(Autocar)*

↓ By the time GAZ officially launched the Chaika in 1977 it was a superb car, extremely comfortable to ride in and built to the highest standards. Production came to an end in 1988. *(Autocar)*

developed a special type of soundproofing so that outside noise was all but inaudible inside. The successful combination of wide, high profile tyres, soft suspension, specially developed shock absorbers and long wheelbase meant that the GAZ 14 literally sailed along the road.

The GAZ 14 was a progressive car for the Soviet motor industry. A stylish seven-seater, it had a lot of technical innovations and was as comfortable as any comparable American car even if it was designed around an updated drivetrain and undercarriage taken from a car designed in the nineteen fifties. Disc brakes were fitted along with ball-joint front suspension, headlamp washers and electro-magnetic central locking. It had a 5,526cc 220bhp V8 engine with hydraulic tappets, top speed was 109mph and fuel consumption was



↑The elegant lines of the GAZ 14 Chaika are clearly evident here. Behind is an RAF 2203. *(Julian Nowill)*

↓Three generations of top-of-the-range GAZ cars at rest in a Russian field – left to right a GAZ 12 Zim, GAZ13 Chaika and GAZ 14 Chaika. *(Julian Nowill)*

16 litres per 100km (17.6mpg). It was 6.11m long and weighed 2,600kg – lighter than the ZIL 115, which turned the scales at 3,400kg! Although the GAZ 14 Chaika drew styling cues from the angular American luxury saloons typical of the 1970s, unlike its predecessor it couldn't be said to have been influenced by any single overseas design. The design was without a doubt a major advance over the GAZ 13 Chaika – which, strangely, remained in production until 1981.

The new GAZ 14 Chaika was presented to then Soviet leader Leonid Brezhnev in 1976 on his 70th birthday, with production beginning on 14 October 1977 at the short-run production division of GAZ that has continued to produce luxury-trimmed versions of the venerable Volga in small numbers.

The Chaika built for Brezhnev, who is known to have been a car enthusiast, was customised to have its instrument panel gauges relocated so that he could see them more easily. There is an interesting tale surrounding Brezhnev's limo that may or may not be another of the many Soviet urban myths. The GAZ employee who drove it to and from the plant for routine repairs put a bedpan, which he had bought in Moscow for his mother-in-law, on the back seat. A traffic officer eager to grab the chance to maybe ride in a limo stopped the car and saw the bedpan. This could be the source of the rumour, widespread at the time, that the Soviet leader's car was equipped with its own toilet...

The first Chaika built had to be repainted when its shade was found to be lighter than the dark cherry colour sample that had been sent from Moscow and ministry officials declined to approve it.

Like the GAZ 13, the GAZ 14 was available as a saloon or as a limousine, the latter with a glass partition between the driver and rear-seat passengers. However, the majority of Chaikas were three-row saloons with no internal partition. The RAF plant in Latvia produced several special versions for use by the Soviet medical service. In addition a film-makers' special was built to carry cameramen in 1981. ■

GETTING BIGGER AND BOLDER

At the start of the 1960s ZIL made its final foray into the world of motorsport, trying to prove the prowess of the Soviet Union by success on the grand prix circuit. Soviet success proved elusive on the racetrack, however, in complete contrast to their undoubted skills and abilities on the global rally circuit.

Two examples of the ZIL 112 Sports were made in 1960, with a 230bhp version of the ZIL 111 engine that could reach 162mph. This was the last time the Soviet Union made any real attempt to develop a motorsport car outside of the rally scene, which was perhaps in its more natural element, where the ability to engineer tough cars is arguably more important than simply being able to make a car go round a track very quickly. Thereafter ZIL turned its attention back to its truck range and its role as the maker of the Soviet Union's top car, as well as a small but stylish foray into the world of buses.

In 1967, for the first time, the USSR took part in the International Bus Exhibition in Nice, where the comfortable and compact ZIL 118, first seen in 1965, won 12 prizes. Sadly full-scale production of this bus never happened and it was only ever made to special order and used by high-level delegations of senior officials or important international guests of the government. Some, however, were built as high capacity ambulances. A facelifted version, with a crisper front end that bore a passing resemblance to the British Duple Viceroy coach body introduced in the late 1960s, was unveiled in 1970, as the ZIL 118K coach and the ZIL 118KS ambulance, both using the ZIL 508.10 V8 petrol engine usually found in the company's trucks.

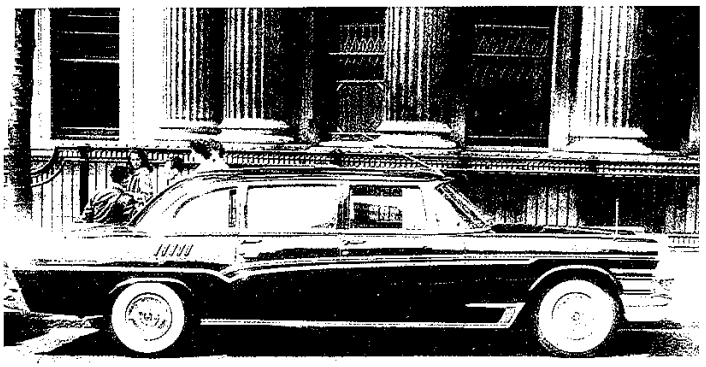
↑The ZIL 118 bus was first announced in 1965 but did not go into full-scale production. Instead it was made to special order only. A facelifted version was announced in 1970, but this is one of the original models.
(Author's collection)

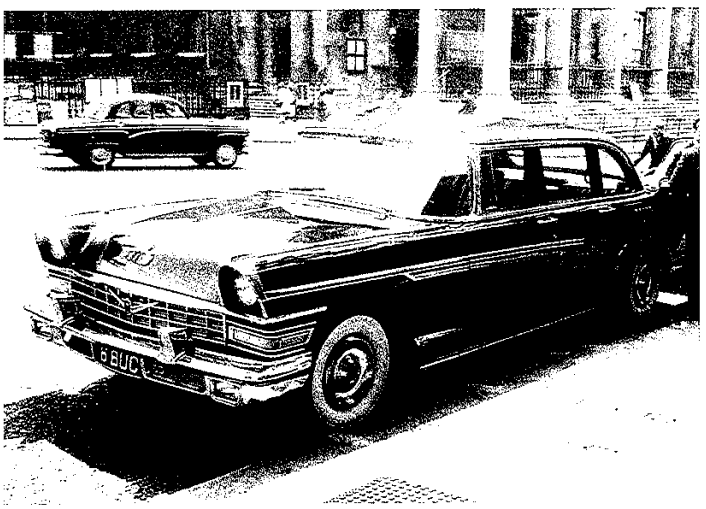
↑The ZIL 112 Sports was the last in a series of high-powered ZIS/ZIL racing cars. It was made in 1960 and could top 160mph. *(Julian Nowill)*

During the 1980s the facelifted 118 was renamed the ZIL 3207 and gained headlamps first seen on the VAZ 2105 Lada. Production ended in 1994, just 86 having been built since 1970.

At the end of the 1950s fashion in America was changing away from the overt ostentation that had reached its peak with the 1959 Cadillac. The Soviet government wanted to keep up with the latest trends and realised that its just-announced ZIL 111 was already looking dated. The facelifted ZIL 111 was first seen in the metal in 1961. It had a completely new grille, front bumper and four headlights but in other respects it didn't differ from the previous model. There were definite shades of Cadillac Fleetwood 75 about its front-end styling. This model went into small-scale production as the ZIL 111G from 1962 until 1966, with a more powerful 5,980cc 197bhp engine, air conditioning as standard, and a slightly changed windscreen. Fuel consumption was incredibly high but it could reach 106mph! The rear had more restrained rear lights and the bumpers were also changed. The very first cars retained the downswept curve of chrome strips along the side from the earlier ZIL 111 series; later cars adopted a simpler, straight moulding running from the front wing through to the top of the rear bumper. In total, 112 examples of the ZIL 111 series were built.

The ZIL 111 was used as the basis for a number of special open-top ceremonial cars. The three built on the ZIL 111 were named the ZIL 111V, while those built on the ZIL 111G became the ZIL 111D. In January 2007 one of the ZIL 111V cars appeared for sale on eBay, its seller claiming that the 1961





↑A rare treat indeed for car spotters, this ZIL 111 was photographed in London in 1961. *(Author's collection)*

black car had once been Nikita Khrushchev's (the other two built were both grey). The seller in Georgia related the following tale of how the ZIL had managed to wind up in the former Soviet republic. In October 1964 Nikita Khrushchev was on holiday at his state villa in Pitsunda, Georgia, where the ZIL had been delivered by train for him to use during his break. However, back in Moscow the other heads of government had decided to ask Khrushchev to step down as head of the Communist Party, and Khrushchev returned to Moscow to meet with the other members of the Politburo and agreed to resign. His ZIL 111V having been left behind, the Georgian government passed it over to the Red Army once it became clear that Khrushchev wouldn't be coming back for it. Some time later the car was deleted from the list held in Moscow detailing all official cars, and following the collapse of the USSR it was sold to a private owner. The car was reported to be in original but excellent condition with a recorded 14,375 miles under its belt.

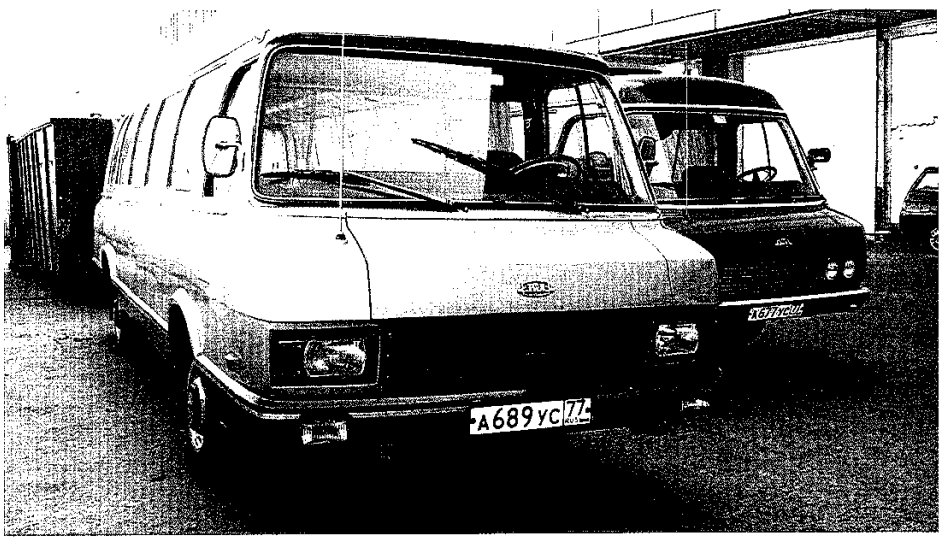
The first of the drop-head ZIL 111Ds was assembled at the beginning of 1963 – six months after the restyling exercise carried out on the limousine. Just eight ZIL 111D cars are believed to have been made, four of which were painted grey and were intended for use at the annual May Day and October Revolution celebrations. One was reportedly sent to East Germany. The ZIL 111D was equipped with an electro-hydraulic lifting mechanism for the soft-top, operated by a button located under the instrument panel. It also had a handrail and a microphone system. One additional detail was the antennae on the rear wings which played both a functional and a decorative role.

On 30 April 1963 Fidel Castro, the new Communist leader of Cuba, visited the ZIL works and was presented, on behalf of Nikita Khrushchev, with an open-top ZIL 111D. Castro returned home by aeroplane, and his car was delivered by ship to Havana, where the Soviet ambassador in Cuba presented it to its owner.

The new ceremonial cars made their first public appearance to the Russian nation as a whole on 7 November 1967, at a parade in Red Square to commemorate the 50th anniversary of the October Revolution. Until then old ZIL 111Vs had been used, and although the ZIL 111V fleet was in excellent shape the new cars looked much more modern. The grey-painted ZIL 111Ds continued to take part in military parades until the mid-1970s, when they were replaced by the ZIL 117V. The redundant cars are reputed to have lain idle, gathering dust in a Defence Ministry garage, until 1987, when they were apparently transferred to the Moscow fire department.

In 1967 the first of a new range, the ZIL 114, had been built, this model being characterised by sharp, uncluttered styling. Though it was announced to coincide with the 50th anniversary of the October Revolution, the first styling bucks had been produced back in 1962, and pre-production cars

↑In 1970 ZIL updated its strictly special-order-only bus into the crisp and modern ZIL 118K. *(Julian Nowill)*



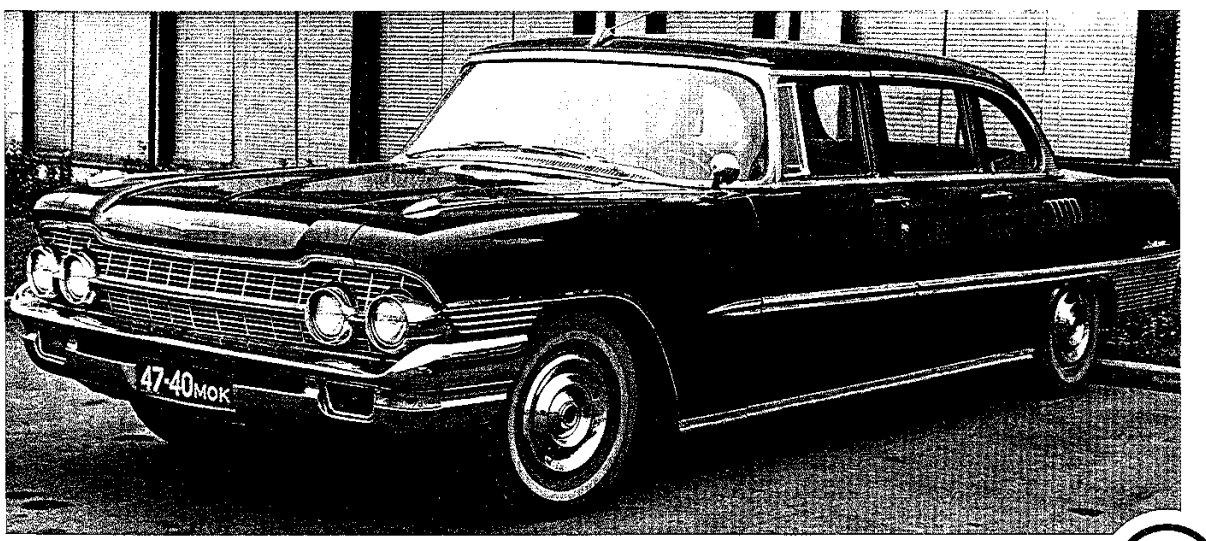
➔During the mid-1980s the ZIL 118K had its four-headlamp system replaced by the integrated sidelight/indicator/headlamp units used on the VAZ 2105/2107. It was also renamed the ZIL 3207. *(Julian Nowill)*

were built in 1966. The styling was much cleaner than on previous cars and the body was mounted on an extremely strong X-frame chassis that was very resistant to twisting. The suspension was designed so that under braking and acceleration the car did not pitch and dive and under cornering had minimal roll angles. Independent front suspension was by torsion bars. There were three brake circuits; if any one of them failed the other two carried on working, meaning that the car could be safely driven at all times. The ZIL 114 was the first Soviet production car to have all-round disc brakes and the handbrake was pedal operated. Electronic ignition was also introduced on the ZIL 114, as well as – for the first time in Russia – a central locking system.

The ZIL 114 had a longer wheelbase and body than its predecessor, being 6.2m long and weighing in at 3,175kg. Power came from a bigger 6,959cc light alloy V8 engine rather than a cast iron engine fed by a four-barrel carburettor. Torque was a mighty 560Nm at 2,750rpm, and power was 300bhp produced at a surprisingly high 4,300rpm. Automatic transmission with a hydraulic torque converter and two-speed gearbox were standard, although the driver could select gears manually if so required. Power steering meant that the ZIL 114 could be steered with one finger. Top speed was 119mph.

The driver had a remote control door mirror and could control the central locking from his seat. For convenience in getting in and out, the steering wheel was hinged. Even so, the driving position was, for such a large car, surprisingly cramped. The ZIL 114 was known for its excellent finish. Inside there were three rows of comfortable seats, the middle set being hinged. They were trimmed in leather and those up front offered adjustment for rake and backrest angle. Wood trim was also used to create the right atmosphere in a body specially built to offer good sound and heat insulation. Electric windows were standard along with air conditioning. Special glass prevented the temperature inside climbing in sunny weather and the upper part of the windshield was smoke-coloured. In 1971 the front-end styling was refreshed and in April 1975 a three-speed gearbox was added to the specification sheet.

A few limited edition examples of the ZIL 114 were also built. These included the ZIL 114EA, a special medical version built with a high-roofed station wagon body style. Just two were built. Another strictly limited edition was the ZIL 114K, which had an opening roof over the rear passenger compartment that allowed the occupants to stand up and be seen when on parade. A bespoke example was also built as a high-speed camera platform for the Soviet film industry. In all about 150 ZIL 114s were built, including the final ZIL 114Ns,



↓The 1962 ZIL 111G had a revised front end that featured double headlamps, as was by that time the norm for any car that considered itself to be at the top of the automotive tree. *(Autocar)*

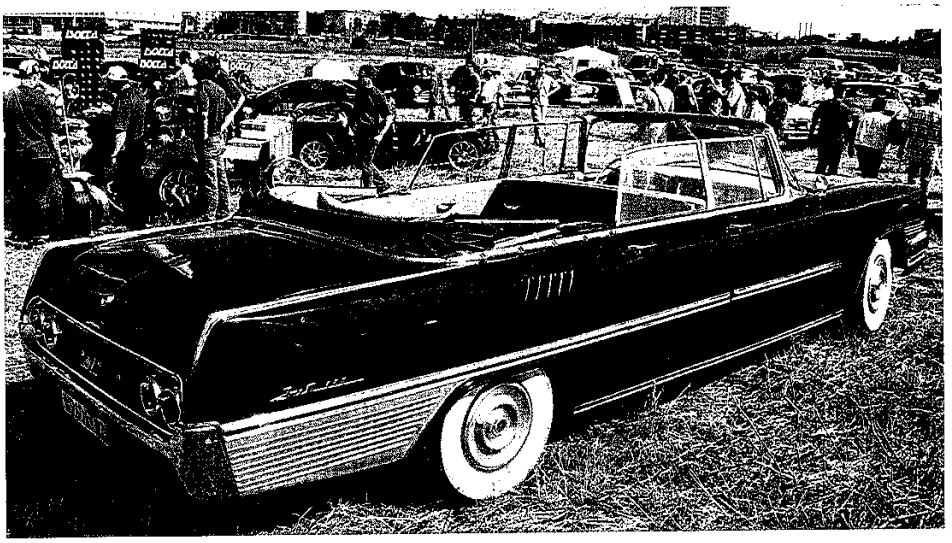
which were a transitional model that looked like the car's successor, the ZIL 4104, but under the skin remained very much a ZIL 114.

By 1971 the ZIL plant formed the nucleus of a major automotive combine, which became one of the five largest industrial conglomerates in the USSR and included 17 specialised enterprises located in different parts of the country. During the 1970s the ZIL plant played a major part in the development of the new KamAZ truck factory, and casting and assembly workshops were designed at the ZIL plant alongside development of the KamAZ truck range itself.

The car range wasn't neglected either. The ZIL 117 short wheelbase saloon, based on the ZIL 114, came out in 1972. The first full-size mock-ups had been made in 1968, and the first running prototype in 1970. This car was styled exactly like the ZIL 114 but was just a little shorter at 5,730mm and had a wheelbase of 3,310mm instead of the 3,760mm of the parent car. It had seats for five rather than seven and no partition between driver and rear-seat passengers. At 124mph its top speed was slightly higher than the 114. The 117 was produced in very small numbers, no more than 50 being made. It was used as a motorcade or official high-level convoy escort car and by people who had only been nominated for membership of the Politburo and so didn't yet rate a full-size ZIL.

The two-door ZIL 117V was the soft-top version, made between 1973 and 1979. At the touch of a button by the driver an electric mechanism could raise the roof within 15 seconds. The windows too were electrically operated. Five 117Vs were built for general use and three for use during military parades. The latter were fitted with a loudspeaker system and were painted grey like all Soviet parade cars. Considerable work was put into strengthening the chassis to avoid the risk of the doors becoming jammed shut as a result of the body, weakened by the loss of its metal roof, twisting out of line.

Design work on a replacement for the ZIL limousine series began during October 1974, and at the beginning of 1975 the blueprints were sent to the company's engineers to build the first five prototypes. More than 50 per cent of the components were carried over from the ZIL 114/7. The plan was to have the new cars ready for the 25th Congress of the Communist Party of the Soviet Union. For two years the cars underwent comprehensive testing and finishing before being finally signed off for production in January 1978. The first production model of what was officially named the ZIL 115 was built in November 1978. The ZIL 115 is now perhaps better known as the ZIL 4104, having been renamed almost immediately to bring it into line with the new Soviet vehicle indexing system.



→ One of the extremely rare ZIL 111D convertibles, based on the later four-headlamp version of the original ZIL 111, the ZIL 111G. *(Julian Nowill)*

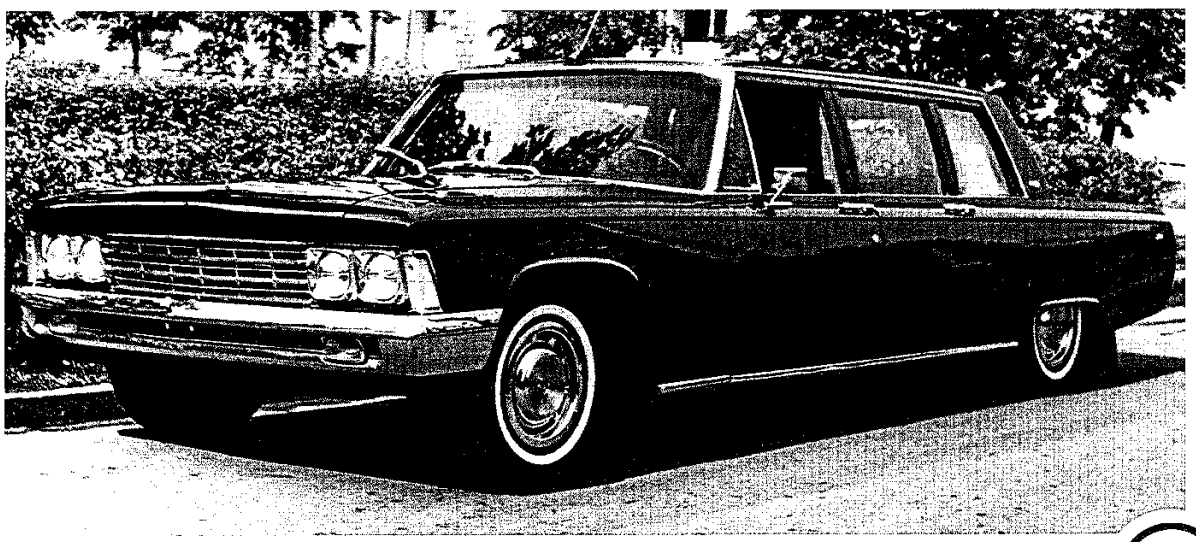
As was now normal for ZIL, its enormous seven-seater body rode on a separate chassis, with independent front suspension and a live rear axle suspended on semi-elliptical leaf springs with an anti-roll bar. The air conditioner and spare wheel lived in the boot. Steering was by recirculating ball with, unsurprisingly, power assistance. Front and rear brakes were ventilated discs. The engine was even bigger and displaced 7,695cc, the cooling system having a capacity of 21.5 litres! A three-speed automatic gearbox was again used, driving the back axle via a split propshaft. The power of the engine was 315bhp at 4,500rpm, with peak torque of 608Nm kicking in at 2,500rpm. The result was simply amazing – the 3,600kg limousine was capable of 119mph and could get from a standing start to 62mph (100km/h) in just 13 seconds. Even with completely flat tyres the ZIL 115 with its clever suspension design was still capable of 99mph.

The fuel tank held 120 litres of the 95-octane petrol needed for the high-powered engine, which it gulped at a rate of 22 litres for every 100km travelled (12.8mpg). However, the most striking feature of the ZIL was its cornering ability. The new ZIL was 6,330mm long, 2,068mm wide and 1,500mm tall, yet on a wide road this large and heavy machine could be steered with ease and take corners at surprisingly high speeds. Driving a ZIL down narrow streets and in or out of courtyards, however, was considerably more complicated due to its sheer size – definitely a car for the open road!

Variations of the ZIL 4104 included the ZIL 41043, equipped with special-equipment for use on parades, such as a roof that could be rolled back to allow the VIPs to stand up and be seen. The ZIL 41044 was a ceremonial cabriolet version, its original designation being ZIL 115V. Compared to the parent car, its wheelbase was 580mm shorter. This first series of ZIL 4104 cars were built up until 1983.

Ground clearance was rather low, which meant that driving a ZIL on rough country roads was not such a good idea – although the chances of a ZIL being forced to travel off-road were highly remote. However, it was built in such a way as to make sure that the occupants were as safe as possible should the Cold War warm up, and the threat of nuclear war was reflected in the car's construction. The entire body was allegedly sealed with a special material to try and protect the occupants from radiation. The windscreen had a special laminated screen and the side and rear windows were made from special triple-layered glass. In addition, thanks to careful chassis design the car was almost impossible to overturn, and practically all the vital systems were duplicated – there were two ignition systems, two 74amp batteries connected in

↓The ZIL 114, announced in 1967 to coincide with the 50th anniversary of the October Revolution, was the sharpest ZIL to date. *(Autocar)*



parallel, two fuel pumps and two electrical circuits to make sure that the car could keep going in an emergency. The wiring system, ignition and fuel systems were also designed to work under the most arduous conditions.

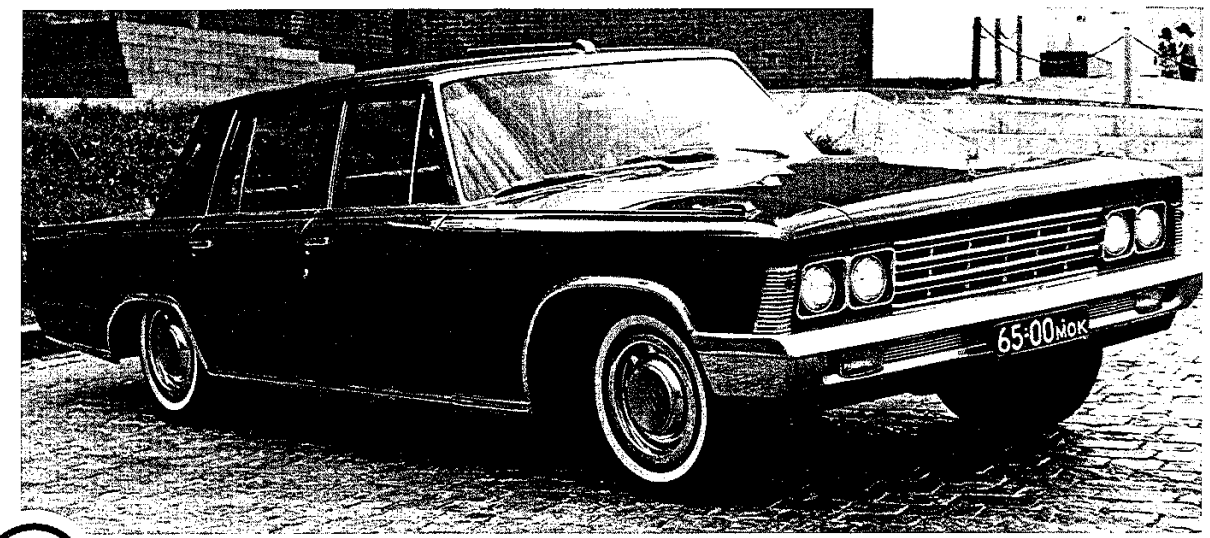
Inside, the ZIL 4104 was far and away the most luxurious car ever made in the Soviet Union. Door trims, the window frames, the dashboard and the centre console were finished in 10mm-thick Karelian birch. At the disposal of the two most important rear passengers, who were able to relax on a gigantic plush velour trimmed sofa, were remote controls for the radio, electric windows, heater and air conditioning. The rear seat itself was adjustable for backrest angle and height. The back doors could be opened both from the rear seat and from the occasional seats just behind the driver. In the partition between the driver and the passengers there was a clock inscribed with the ZIL name. And that was just the start – each ZIL then had its own special equipment, added to meet the particular requirements of the user to whom the car was originally assigned.

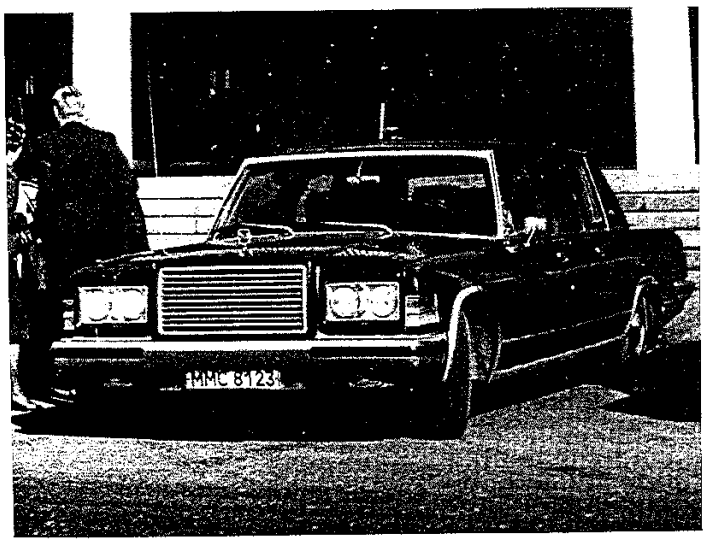
By comparison, the front cabin area was not so plush, but in no way could it be described as spartan. However, the space for the driver was arguably a little limited for anyone of above-average height, and the scope for adjustment of the front seats was minimal even if they were trimmed in leather. The steering column, however, was adjustable. The instrument panel had all the necessary dials to keep an eye on the car's performance, although the steering wheel was rather thin and in fact looked a little like the one fitted to the VAZ 2101 Zhiguli. The transmission tunnel housed a large Riga radio receiver below which was a Vilma cassette unit. The door mirrors were electrically adjustable.

Each ZIL engine was run on a dynamometer for 32 hours before being fitted to the car. Once complete the finished car was given a 2,000km road test and was only passed to its final user once every little fault and flaw had been ironed out.

Every ZIL was built under conditions of strict secrecy, with each car having its own individual dossier recording its construction and service history. The cars were managed and maintained in closed garages by a special division of the KGB. Everyone involved in making and maintaining each vehicle was listed alongside details of the work they did to it. Everything about the ZIL 4104 ensures that it will remain, without doubt, one of the world's most amazing cars. ■

The ZIL 117 was a shorter version of the massive ZIL 114, announced in 1972. It was used as an escort car on convoy duty or for those members of the Politburo who didn't quite rate a full-size ZIL. *(Autocar)*



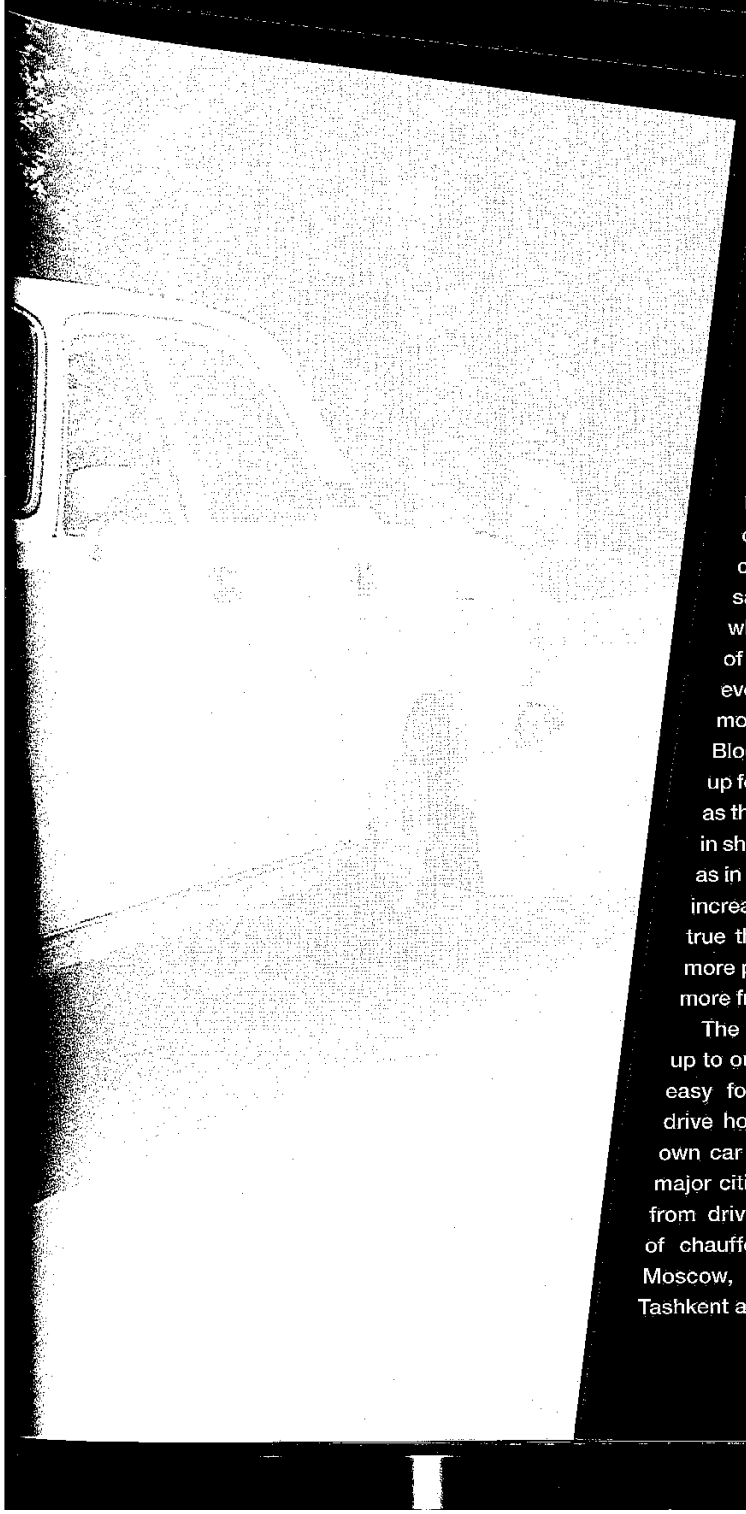


This was perhaps the most stylish of all the ZILs, the ZIL 117V Convertible. Just eight were built between 1973 and 1979. *(Autocar)*

The ZIL 115 was the replacement for the ZIL 114. It was better known as the ZIL 4104. *(Alexander Melnikov)*

PART

TOO MUCH TOO LATE
1980-1991



The 1980s was arguably the most revolutionary decade of the 20th century. Britain and America trail-blazed a new approach to government, rejecting the post-war mixed economy consensus in favour of a no-holds-barred free market. The Soviet Union changed dramatically too. The era of glasnost ('openness') and perestroika ('restructuring') brought in by Mikhail Gorbachev, the Soviet Union's leader from March 1985 until the country's final demise in December 1991, challenged many of the socialist beliefs held sacrosanct since the October Revolution while trying to maintain a belief in the ability of a planned economy to meet the needs of everyone in society, regardless of how much money they had. Everywhere in the Eastern Bloc, official momentum accelerated to make up for lost time in producing consumer goods, as the population wearied of everything being in short supply and generally out of date. Just as in the West, the desires of ordinary people increased, and nowhere was that more true than in the world of cars. Not only did more people want a car but they also wanted more from it.

The Soviet Union itself started to open up to outsiders and by 1989 it was relatively easy for Western tourists to go on self-drive holidays there. They could take their own car or hire a Lada from Intourist in 16 major cities. For those who wanted a break from driving, there was always the option of chauffeur-driven Chaikas or Volgas in Moscow, Leningrad, Kiev, Riga, Sochi, Tashkent and Tbilisi.

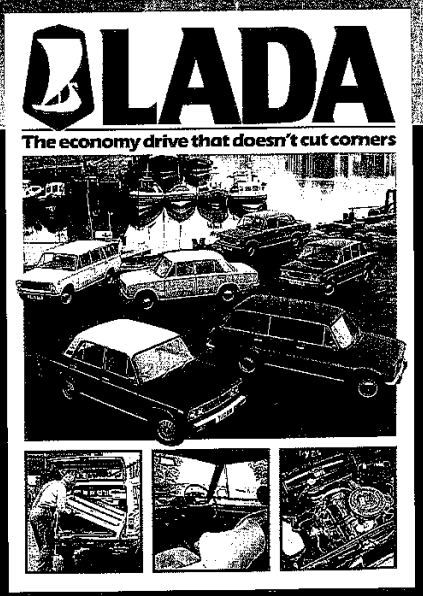
By 1987 the Soviet public road network, excluding roads within industrial and agricultural enterprises, amounted to more than 1.6 million kilometres, of which nearly 1.2 million were hard-surfaced in concrete, asphalt or gravel. With 40 per cent of the hard-surfaced roads being gravel, however, much of the Soviet road network was unstable in bad weather. In marshy areas and in the far north many roads were still only usable between November and May, when they were frozen solid. All in all, therefore, the Soviet transport industry still faced big problems getting from A to B, a particular problem when it came to shipping perishable food stuffs to market.

There were now, however, petrol stations at regular intervals along the main roads, which at least reduced the risk of running out of fuel. Most Soviet petrol stations offered two grades of petrol – 76 octane, which was favoured by most Soviet users because it was cheap, and 93 octane, less popular but then again not all that necessary since most Soviet vehicles were designed to run on low-grade fuel. The stations were self-service. As soon as the driver reached the pump, he took the nozzle from the driver who had just finished using it and stuck it in his petrol tank. Then he would go to the cashier's window and pay for the number of litres of petrol required, and the pump would stop automatically when it reached the amount for which the driver had paid. To help motorists keep on top of maintenance, the Soviet authorities had installed turn-offs with ramps alongside major roads. Drivers drove up the ramp, stood in the pit under the car and made any necessary repairs or adjustments. There was even a Soviet equivalent of the AA and RAC called Sovavtotrans, whose vans and workshops took care of repairs that owners or tourists couldn't do themselves.

By the end of the decade Russia was the fourth largest producer of trucks and the eighth largest producer of cars in the world. More than three-quarters of all the Russian automobiles and commercial vehicles were produced inside the Gorki (now Nizhniy Novgorod)-Togliatti-Izhevsk triangle, this region alone producing as many motor vehicles as Britain or Spain.

A typical Soviet-era petrol station. This picture was taken in 1980 by a team of British Lada dealers driving a VAZ 2106 (Lada 1600ES) from England to Moscow. *(Autocar)*

Lada's importer was always clear about what their car had to offer British motorists – big car motoring for small car money. This is a brochure cover from 1981. *(Author's collection)*
The Avtoexport showroom in Prague in 1985. *(Avtoexport)*



1932	3,000
1937	18,200
1942	2,500
1947	9,600
1952	59,700
1957	113,600
1962	166,000
1967	251,400
1972	730,100
1977	1,280,000
1982	1,300,700

Source: Avtoexport

In 1987 Avtoexport had a foreign trade turnover upward of $6 billion – 48 times more than in 1956, when it was established. *Za Rulem*'s print run in 1989 was 4.9 million copies! Promising new cars and new concepts that emerged as prototypes suggested a bright future for the Soviet motor industry. Fate, however, had other ideas, because by the end of the 1980s the Soviet Union and the Communist system were in terminal decline.

The various republics, many of which had once been independent nations, took advantage of the liberal approach to politics introduced by Gorbachev and started to suggest that they would exercise their right, enshrined in the Soviet Constitution, to secede from the Union. In 1989 Russia – the largest republic – convened a new Congress of Deputies and by 1990 was, like many other republics, passing laws that directly contravened and challenged the Soviet legal system. This, coupled with the creeping commercialisation of Soviet business, meant that the unique environment in which the Soviet motor industry had developed was soon to be no more. The 1980s was the last period of relative stability, and for many years the last period of progress, for Soviet and Russian carmakers.

LADA RIVA

THE CLASSICAL SOLUTION

↑The British importer created its own version of the VAZ 2106, the Lada 1600ES. Much of the additional equipment, such as the alloy wheels and the vinyl roof, was added to the cars once they had arrived in the United Kingdom.
(Author's collection)

ZAZ, AZLK and VAZ led the way in the changeover to front-wheel drive in the 1980s, although VAZ made sure it didn't put all its eggs in one basket. The perennial VAZ 2106 was hardly changed at all: in 1980 it was fitted with ozone-friendly carburettors; from 1985, for export models at first, a five-speed gearbox used on the VAZ 21074 Riva was offered; and in 1988 the exhaust system was modernised with additional baffles.

The rest of the original rear-wheel-drive models were gradually phased out as a new range of cars came on stream, all mechanically similar to the original Zhiguli but with a substantially revised bodyshell and technical refinements that made them more pleasant to drive. The VAZ 21011 1,294cc saloon was dropped in 1981 and the VAZ 2101 1,198cc saloon in 1982, their place in the line-up being filled by the VAZ 2105, known in Britain as the Lada Riva, first seen in 1979 but produced en masse in 1980.

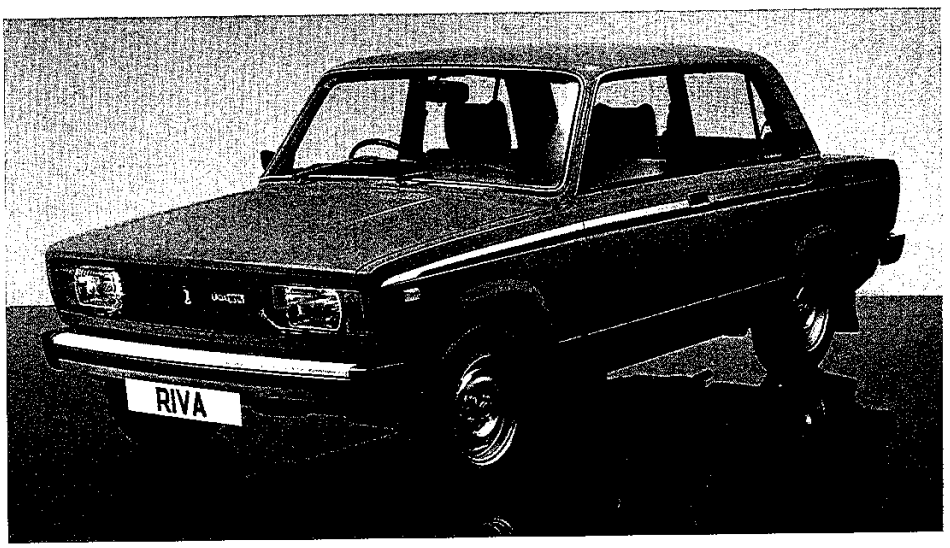
The VAZ 2105 Riva was a clever re-skin of the original Zhiguli. Every external body panel was changed, but the basic structure, and thus the silhouette, remained the same. The interior was entirely redesigned, with round instrument dials and a matt black energy absorbing safety dashboard. Square headlights with a wash/wipe system were joined by a number of mechanical refinements and changes, none of which fundamentally altered the car though they made it more efficient and easier to drive.

The first model in the new series was the VAZ 2105 Riva, powered by a 1,294cc 65bhp engine

↑The long-running, seemingly immortal VAZ 2106 continued right through the 1980s and beyond. It became the most popular of all the rear-wheel-drive Ladas. This is a 1981 VAZ 21061 with large profile aluminium bumpers. *(Author's collection)*

←The VAZ 21061 was sold in Canada as the Lada 1500, probably the only market in the world where Ladas were offered with whitewall tyres. *(Author's collection)*

↑The VAZ 2105 was a clever re-skin of the original Lada. Every external body panel was changed but the basic structure, and thus the silhouette, remained the same. *(AvtoVAZ)*



➔When marketed in Britain the VAZ 2105 was called the Lada Riva. The first cars were sold in spring 1983 as the Riva 1300GL. *(Author's collection)*

with the overhead camshaft driven not by a chain, as had been usual VAZ practice, but by a belt. By the end of 1980 it had been joined by the VAZ 21053 with the 1,452cc VAZ 2103 engine under its bonnet. Next to join the family was the VAZ 21051 Riva, which had the 1,198cc engine from the original VAZ 2101 Zhiguli; it went into production in 1981. All were to remain in production, largely unchanged, well into the 1990s.

A luxury version, the 1,452cc VAZ 2107, was announced in 1982; it featured a refined interior with seats incorporating headrests, a six-dial instrument panel and a Mercedes-like chrome radiator grille. One of the first VAZ 2107s completed was the seven-millionth Lada to be made. The 2107 series was the most expensive Togliatti saloon, based on the classical VAZ layout. Models were also offered with 1,294cc (21072) and 1,570cc (21074) engines. As for their less costly VAZ 2105 sisters, these too remained part of the VAZ line-up well way beyond the demise of the Soviet Union in 1991. There was also the 21079, with a rotary engine – of which more later in this chapter.

In 1984, the same year that the last VAZ 2103 and VAZ 21013 rolled out of the Togliatti gates, the VAZ 2104 station wagon completed the new-look line-up. It was offered in three versions: the VAZ 2104 with a 1,294cc engine; the VAZ 21041 powered by an 1,198cc unit; and the VAZ 21043 with the 1,452cc VAZ 2103 engine. The original VAZ 2102 Zhiguli estate car finally retired in 1986 after 660,900 had been made. The last one made was a VAZ 21023.

Sales of the new car in export markets were extremely successful, building on Lada's reputation as a maker of solid, unpretentious and reliable cars for motorists who wanted to drive on a budget. Lada introduced the new car to Canada, building on its entry to that market in 1978 with the VAZ 21061, sold as the Lada 1500. It was also popular in Finland and Holland. Indeed, the new Lada range won converts right across both Eastern and Western Europe, Cuba where it was a popular choice for taxi work and as far away as New Zealand.

Britain in particular became a very lucrative market for Ladas. Sales in the 1980s rocketed, especially in the North and the Midlands. A Lada was, for many working people, their only chance of buying a new car. Redundancy payouts from the Government-inspired closure of Britain's industrial heartland – including its car industry – and the additional disposable income people found by buying their council houses for monthly payments that were less than the rent, all helped provide a market for the Lada.

Lada's marketing campaigns were cleverly pitched at this target working-class market. Tag

←This is a British market 1986 Lada Riva 1200L, based on the 1,198cc VAZ 21051. *(Author's collection)*

↑In 1982 VAZ announced a more luxurious version of its new range, the VAZ 2107. It featured high-back front seats as well as a prominent chrome-plated grille. *(AvtoVAZ)*

lines included 'The economy drive that doesn't cut corners', and 'Tough cars. Tame prices.' *Autocar*'s road test of the Lada Riva 1300 in January 1984 was quite clear: 'We reckon that for most potential owners the pros and cons are largely outweighed by that low price tag. There is no doubt that the Lada Riva offers reasonable motoring at an affordable price.' Later that year it also put the more expensive VAZ Lada Riva 1500 GLS through its paces. It felt pretty much the same about the more expensive car as it did about the cheaper model, criticising its heavy controls and general lack of refinement but praising it for being a straightforward, well-equipped car that offered good value for money.

In 1982 Lada became the sponsors of the Classic snooker tournament and offered a Lada to any player who made a 147 break; Steve Davis, who achieved it, later commented that the players had joked that the prize for missing the final black was two Ladas. Indeed, jokes about Ladas (or Skodas) were almost mandatory in the routines of many contemporary comedians:

Q: How do you double the value of a Lada?
A: Fill it up with petrol.

Q: Why do Ladas come with a heated rear window as standard?
A: So your hands stay warm while you're pushing it.

Q: What do you call a convertible Lada?
A: A skip.

Q: Have you heard about the new Lada 16-valve?
A: Yes. Eight in the engine and eight in the radio.

Q: What do you call a Lada at the top of a hill?
A: A miracle.

Q: What is the similarity between a Lada and a bathtub?
A: You can't step out of either one in a public place.

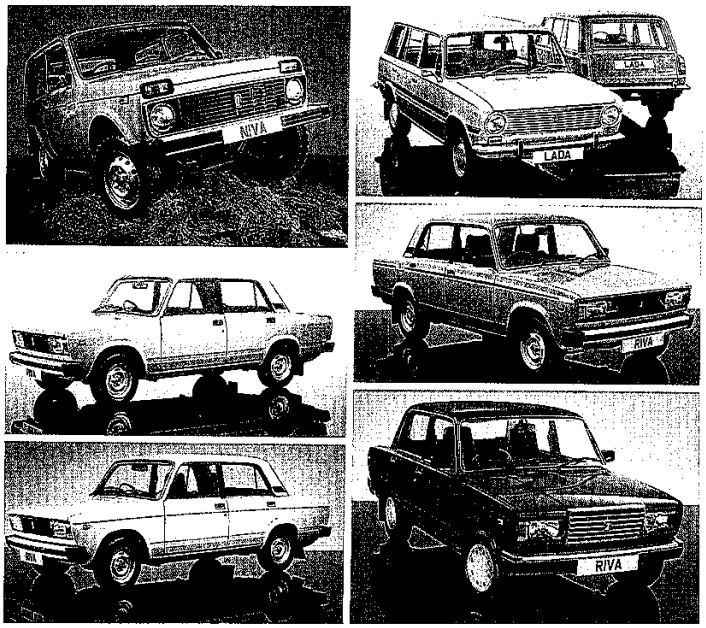
Q: What's on the last page of a Lada owner's manual?
A: The bus timetable.

Q: Why do Ladas have a rear wash-wipe?
A: To remove the flies that crash into them.

Q: How do you overtake a Lada?
A: Run!

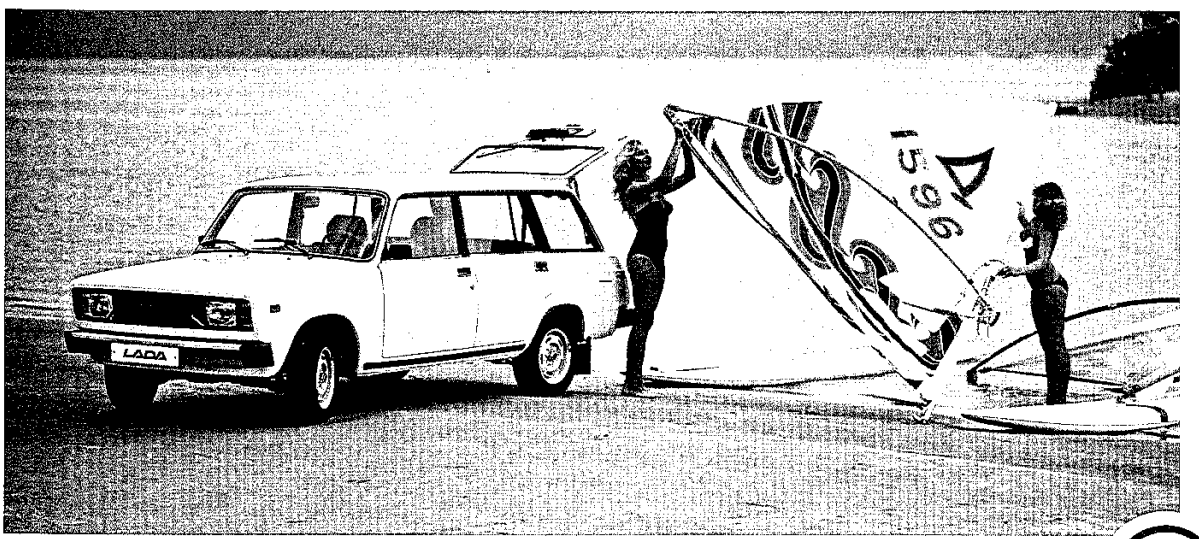
A chap is driving up the M1 in his Lada. Suddenly there's a loud bang, clouds of smoke billow out from under the bonnet, and the Lada starts to lose speed quickly. The driver pulls off onto the hard shoulder. A few minutes later a Porsche pulls up in front of him and the driver leaps out.

'Do you want a tow, mate?' he asks.



This was the British Lada range for 1984. Clockwise from top left: the Lada Niva (VAZ 2121), the Lada 1500 and 1200 estates (VAZ 21023 and 2102), the Lada Riva 1300 GL (VAZ 2105), the Lada Riva 1500 GLS (VAZ 2107), the Lada 1200L (VAZ 21051) and the Lada Riva 1200 (VAZ 21051). *(Author's collection)*

The final member of the new rear-wheel-drive Lada range was the VAZ 2104 estate car. *(AvtoVAZ)*



↑When imported into Canada the VAZ 2107 was briefly sold as the Dennis Signet, as can be seen from this 1986 sales brochure. The 'Dennis' prefix derived from the name of the car's Canadian importer, the Peter Dennis Motor Corporation. The Lada name eventually returned with the arrival in Canada of the VAZ 2108 Samara range. *(Author's collection)*

'Yes please', says the Lada driver.

'No problem, but if I go too fast then you'll have to let me know by putting your indicator on or I'll forget myself and keep on motoring!'

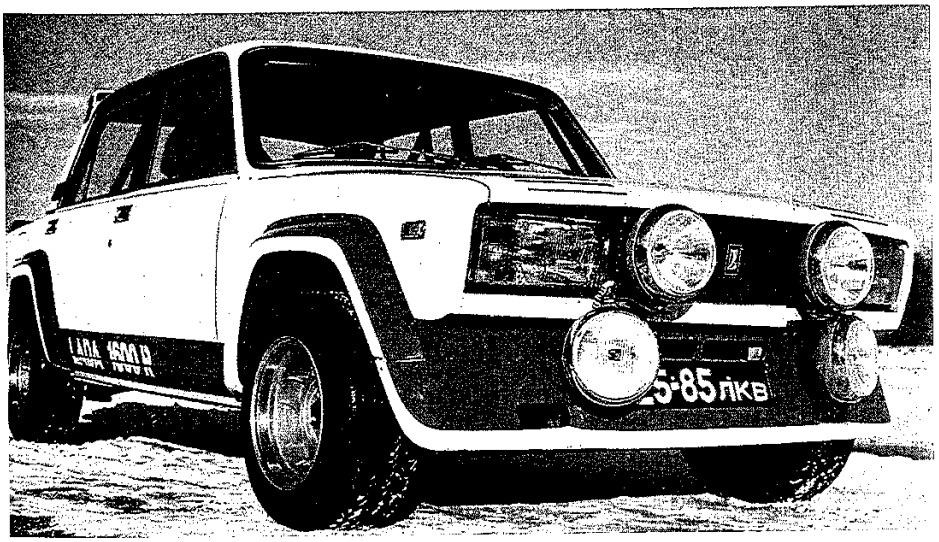
He hitches the Lada to the back of the Porsche with a tow rope and the two men set off. Ten minutes later a Ferrari pulls up alongside the Porsche, challenging the driver to a race. The Porsche driver takes up the gauntlet and the two zoom off, forgetting all about the poor Lada tagging along behind. Finally they take an exit to a little village and zoom past a pub with a man standing outside with his pint in his hand. He runs inside to his friends and shouts:

'You'll never guess what I've just seen! A Ferrari and Porsche racing at 150mph – and a Lada indicating to overtake!'

In the middle of Spain, a Lada is driving along and meets a donkey. The donkey, never having seen a Lada before, asks: 'What are you?' The Lada replies: 'I'm a car. And what are you?' The donkey laughs: 'Ha ha ha ha...yes and I'm a horse...'

A chap goes into his local garage and asks the mechanic 'Do you have a windscreen wiper for my Lada?' 'Sounds like a fair swap' replies the mechanic.

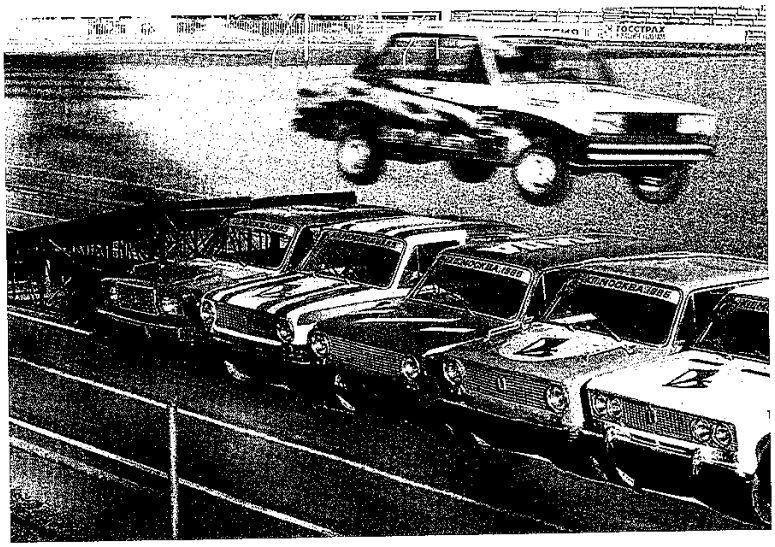
The joke, however, was on those in the motor trade who hadn't had the foresight to get themselves signed up with Lada. During the heady days of the late 1980s, British Lada dealers had one of the most profitable franchises in the industry, with 20,000 a year rolling out the showroom doors by 1986.



↑ ← The Lada Sport Group B rally car was made to order by the Togliatti factory. Examples competed in the Soyuz Rally in Estonia, Finland's Thousand Lakes Rally, the Acropolis Rally in Greece and in Britain's RAC Lombard Rally. *(Avtoexport)*

The business end of the VAZ 2104 estate car, first seen in 1984. *(Avtoexport)*

Those wonderful men in their flying machines... A VAZ 2105 gets put through its paces at a practice session for the 1985 VAZ-Autorodeo. *(Avtoexport)*



The new Riva range was introduced gradually, with each variant generally arriving a couple of years after its home-market launch, providing the dealers with a steady flow of products that they could sell without having to invest in state of the art, glass-and-chrome showrooms. In 1988 sales were even higher – 30,000 budget-conscious motorists bought the company's cars, mostly the bargain-basement Riva, though the front-wheel-drive VAZ 2108 Samara was also starting to gain fans. The VAZ 2121 Niva had made its mark too, being without any effective competition for a compact, low-cost yet civilised four-wheel-drive car.

Lada was the ideal franchise to bolt on to a suburban or country filling station or a used car business. A Lada dealership may have lacked prestige, status and glamour but it invariably had a solid and loyal customer base and, more importantly, steady profit margins. However, despite the fact that by 1989 Lada was tenth in the British bestsellers' list, its image was not as bright as its sales figures suggested. In an era when branding was becoming ever more important, Ladas never found favour among the newly emboldened middle class simply because they were unashamedly utilitarian and cheap to buy.

That unsophisticated and easy-to-maintain nature of Ladas was one of their most appealing features to conservative British motorists. However, back home VAZ were busy showing that it could be as innovative as any other manufacturer. In late 1980 the company proudly announced a limited production run of 250 twin rotor Ladas. A single rotor 70bhp VAZ 311 rotary engine was installed in

↑Two wheels on my Lada and I'm still rolling along... A VAZ 2105 shows the audience how to save on tyre rubber at the 1985 VAZ-Autorodeo. *(Avtoexport)*

a basic VAZ 21011 body to create the VAZ 21018. The car was technically quite advanced, with an electrical system that was way ahead of the norm for the period. A 'black box' analysed various engine inputs triggering electronic firing of the ignition coils. The spark plug design featured twin electrodes, still pretty unusual today.

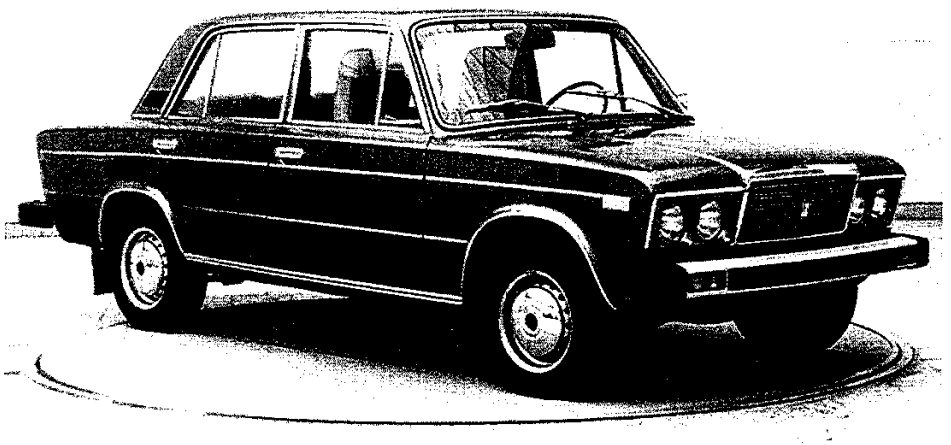
The cold-starting device was an antifreeze injection system. When trying to start the car in extremely cold conditions the driver could squirt some of the liquid antifreeze into the engine to try and stop the plug electrodes from icing up!

A standard downdraught carburettor was used but with altered jet sizes, and a two-stage air cleaner was employed. The seals on the apex of the rotors got their share of oil through a special lubricator and the oil level in the sump was maintained automatically. A belt-driven cooling fan was upgraded to an electric type for later versions. Getting the best out of the rotary Ladas meant keeping the engine revs up. The brake system though was always overworked, as the free-revving engine didn't offer much in the way of engine braking.

The VAZ 21059, first made in 1980, looked just like a standard VAZ 2105 but was powered by one of two twin rotor engines, the VAZ 411M or the VAZ 4132. Transmission was a four-speed manual and the car could be supplied with an extra fuel tank. When new, the VAZ 21059 cost 52,000 roubles – a veritable fortune for a Russian car buyer – but it could top 112mph and hit 62mph (100km/h) in just nine seconds. However, finding the cash to buy a rotary Lada didn't trouble too many people, as the cars were sold to state organisations such as the KGB and the Ministry of the Interior that could justify the need for such an expensive high-speed car.

The VAZ 21059 was joined in 1982 by the VAZ 21079, based on and looking just like the more luxurious VAZ 2107. It used the 120bhp two-rotor VAZ-411-01 engine, with an equivalent size of 2,300cc, or the slightly larger two-rotor VAZ-4132 engine offering an extra 20bhp. No torque figures were given for the engines but both had 9.4:1 compression and weighed in at 130–140kg per engine. Transmission on the VAZ 21079 was a five-speed manual and the price tag was 58,000 roubles.

Unfortunately rotary powered Ladas were even less reliable than the NSU Ro80s, an early rotary-engined car that had a notorious reputation for short engine life. According to the limited information available, many Lada rotary engines didn't make it through as far as their first 10,000km filter and oil-change service. At best, engine life seems to have been no more than 20,000km, and in some cases exasperated users replaced



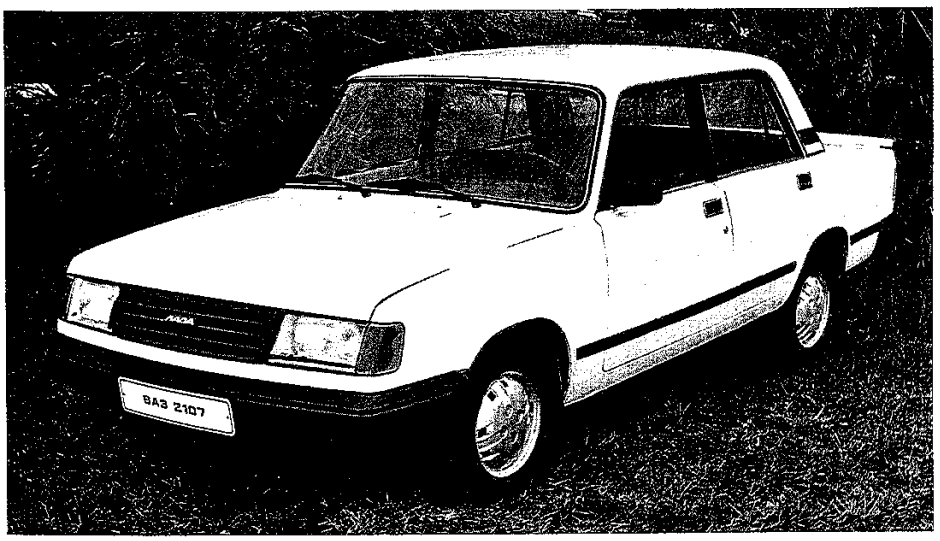
→The imposing VAZ 2107 grille is tested out on this 2106-based prototype. *(Julian Nowill)*

VAZ Zhiguli Lada Riva (and derivatives) – British market 1980 to 1990

British Model	AutoVAZ model	Engine size	Introduced	Discontinued
Lada 1200 Saloon	VAZ 2101	1,198cc	May 1974	October 1982
Lada 1200 Estate	VAZ 2102		May 1974	October 1985
Lada Riva 1200 Saloon	VAZ 21051		April 1984	October 1989
Lada Riva 1200 L Saloon			June 1984	October 1989
Lada 1300 Saloon	VAZ 21011	1,294cc	March 1980	May 1983
Lada 1300 ES Saloon			October 1977	March 1980
Lada Riva 1300 E	VAZ 2105		April 1991	April 1992
Lada Riva 1300 L			October 1989	April 1992
Lada Riva 1300 GL			May 1983	May 1986
Lada Riva 1300 SL	VAZ 21072		May 1986	April 1990
Lada Riva 1300 Estate	VAZ 2104		October 1985	April 1992
Lada Riva 1500 GLS	VAZ 2107	1,452cc	April 1984	May 1986
Lada 1500 Estate	VAZ 21023		October 1977	October 1985
Lada 1500 ES Estate			October 1977	March 1980
Lada Riva 1500 Estate	VAZ 21043		October 1985	Autumn 1996
Lada 1600 Saloon	VAZ 2106	1,570cc	September 1978	April 1984
Lada 1600 ES Saloon				
Lada Riva 1600 SLX	VAZ 21074		May 1986	April 1991

the rotary power unit with a more conventional four-stroke engine!

In 1982 some Lada rotary units were installed in rally cars. Feeding through two twin-choke Weber DCOEs meant at least 150bhp was available for some serious high-speed motorsport. The rotary engines were developed without a huge amount of publicity, partly because they had military applications, but in 1988 several VAZ rotary engines were put on display at an exhibition in Moscow. The VAZ rotary car programme continued in a small way until production came to an end in 2004. ■



← Developed for the 1990s was this extremely effective and coherent proposal for the VAZ 2107. There are clear shades of the GAZ 31029 Volga in the front end, especially around the light units. *(Julian Nowill)*

GOING FURTHER THAN EVER BEFORE

↑The VAZ 2121 Niva remained largely unchanged throughout the 1980s apart from the introduction of a five-speed gearbox in 1985. There were no external changes. *(AvtoVAZ)*

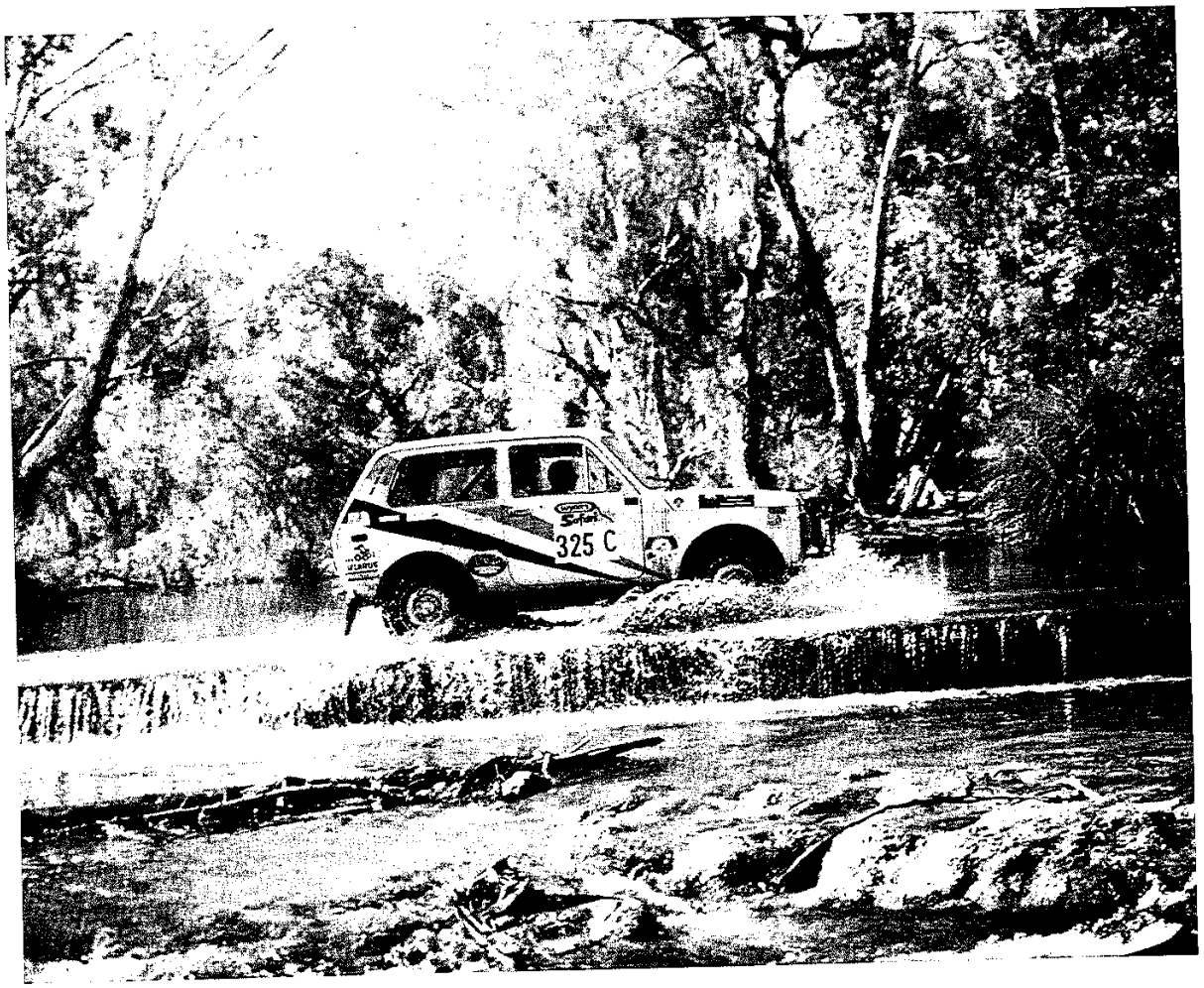
The other mainstay of the VAZ range, the VAZ 2121 Niva, began the decade with a gold medal at the international trade fair in Poznan in 1980. Meanwhile, across the capitalist West – including markets as far apart as Britain, South Africa, Canada and Australia – it provided off-road motoring to a whole new class of driver, predating by several years mini SUVs such as the Suzuki Vitara that later came to dominate this sector. Indeed, when the original Vitara was launched in 1988 the Japanese acknowledged the inspiration that the Soviet machine had provided. So successful was the Niva during the 1980s that off-road clubs sprang up right across Europe.

Changes to the VAZ 2121 were few. In 1985 the gearbox became a five-speed unit. However, in spite of this welcome change the main disadvantage of the Niva remained – as it does to this day – the design of its transmission. The gearbox is based on that used in mainstream rear-wheel-drive VAZ cars, and the transfer box is not integral with the basic gearbox but bolted on as a separate unit. This component is extremely noisy and, by being separate from the main gearbox, adds to drivetrain vibrations.

Apart from local market special trim models, the 1985 gearbox upgrade was the only change of any significance made to the Niva until the mid-1990s. The European market versions, put together by importers and which proliferated from the 1980s, were designed for an increasingly affluent class of buyer. Spring 1983 was celebrated by an open-top convertible, designed by the French carriage-builder Wassermann. In 1988

Importers throughout the world created their own unique Nivas. This is the British Cossack from 1990.
(Author's collection)

The British importer pushed the Niva hard, both as a working vehicle and as a lifestyle choice for those who wanted to go where angels feared to tread.
(Author's collection)



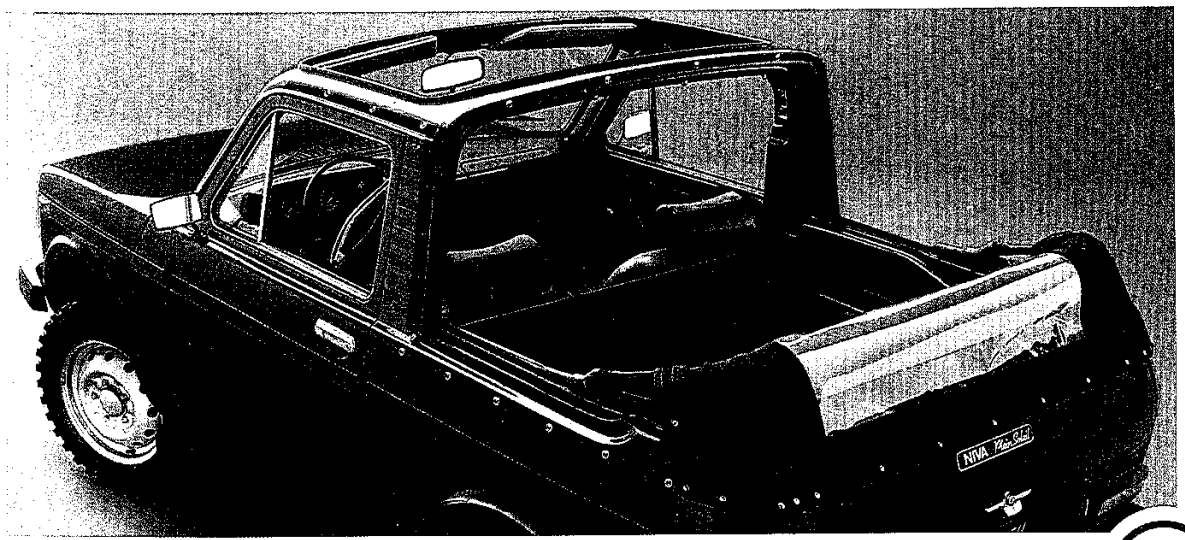
↑Nivas were sold everywhere, including Australia. This example is competing in the 1986 Wynn's Safari, which traversed the Australian outback. *(Avtoexport)*

Britain got the Cossack, which added colour-coded cloth seats, front bull bar with driving lights, wheelarch extensions and styled alloy wheels to the basic Niva. In France and Belgium there were, among others, the Taïga and the Safari, which, while leaving the mechanics and bodywork unchanged, offered extra equipment that was either extremely useful or simply cosmetic. Either way, all of this enabled the Niva to maintain and improve its sales throughout the '80s, satisfying its existing converts and tempting new customers – including England's 1966 World Cup football hero Bobby Charlton! There were eventually so many Nivas throughout Europe that at the end of the decade many owners were invited to take part in the Nivalp, a grand excursion taking several days to roam through the French, Swiss and Italian Alps. ■

VAZ 2121 Lada Niva – British market 1980 to 1990

British Model	AutoVAZ model	Engine size	Introduced	Discontinued
Lada Niva LHD	VAZ 2121	1,570cc	November 1978	February 1983
Lada Niva			February 1983	September 1995
Lada Niva Cossack			January 1988	September 1995

←↓The French importer created and sold its own open-top version of the VAZ 2121, the Niva Plein Soleil. *(Author's collection)*



GAZ 3102

A NEW LOOK FOR AN OLD FAVOURITE

↑One of the first official pictures of the GAZ 3102 Volga, taken in 1982. *(Avtoexport*

GAZ, like VAZ, kept the rear-wheel-drive faith. In 1980 it was awarded the prestigious 'Golden Mercury' international award for its contributions to the automotive industry and international trade, and in March 1981 its ten-millionth vehicle rolled off the production line.

In the early 1970s the GAZ 24 had looked rather modern and, as was usual for Soviet cars of the '70s and '80s, it remained in production for a long time. The planned economy had no room for planned obsolescence. However, as early as the mid-1970s the weaknesses of the Volga were becoming more and more obvious, and NAMI came up with ideas to solve the problems that simply couldn't be ignored. In 1976 its researchers highlighted the Volga's lack of directional stability at high speed and its low level of passive safety as being in most need of attention. NAMI suggested a new style of front suspension, even putting forward a date – 1978 – for the introduction of the new system. Changes were also suggested for the rear suspension. Instead, in 1977–8 GAZ simply introduced the minimum changes necessary to meet the new international safety regulations being adopted by the Soviet Union. The front suspension remained unaltered until 2003, when the change from a high-maintenance kingpin-based set-up to one using sealed-for-life ball joints was prompted by a substantial increase in sales to private as opposed to fleet buyers. The driver behind the change wasn't really to improve the handling – it was to make the car easier to maintain by people who didn't have a fleet manager or company garage to keep their car on the road! The rear suspension

got an anti-roll bar at the same time but the idea of coil springs, first mooted in 1978, remained no more than a concept finally explored on a prototype unveiled in 2003, the GAZ 31107.

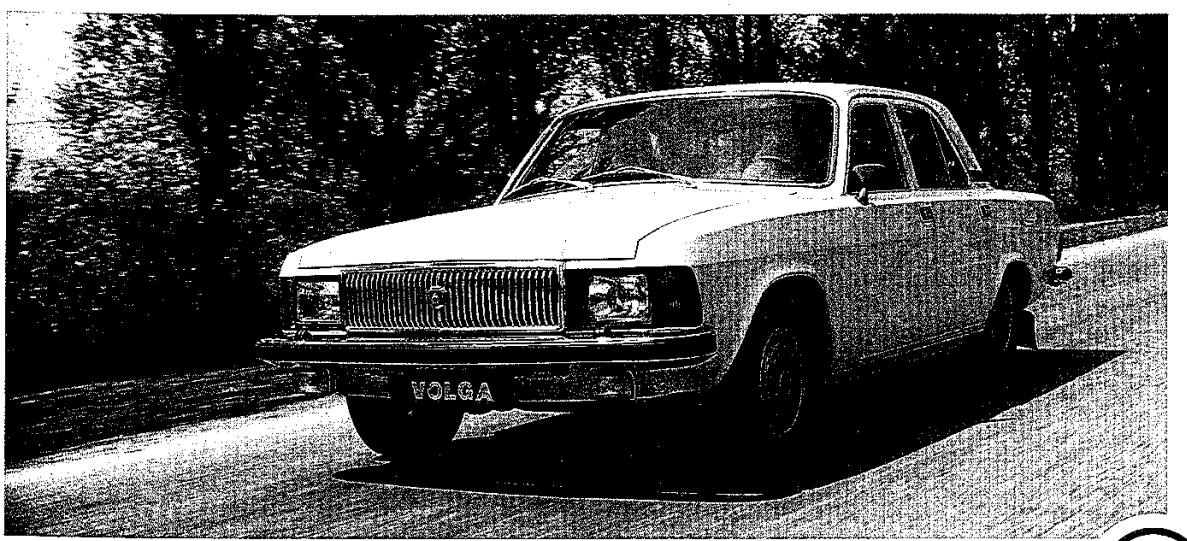
By the 1980s the GAZ 24 also looked old and outdated. Moreover, the introduction in 1977 of the GAZ 14 Chaika, which was much closer to the top-line ZIL, created a gap in the Soviet motoring hierarchy above the GAZ 24 but below the new Chaika. GAZ designers therefore set to work on a more upmarket version of the 24 initially called the GAZ 3101 – the first GAZ model to use the new style of Soviet vehicle designation. Prototypes of the 3101 were produced in 1976–7. From the very beginning the designers wanted to offer several engines – the traditional inline four, a V8 and the much discussed but never built six-cylinder unit. In its initial form the 3101 was, however, very much a cosmetic tart-up of the mainstream Volga with few mechanical or sheet metal changes although some were tested with a 3.5 litre V6 engine.

As the project developed the changes went deeper and a revised bodyshell was developed. The central part – the passenger area – was unchanged, but the boot was larger and longer and helped to create a more wedge-shaped profile. By now the new model was called the GAZ 3102 Volga. There were apparently a few examples made combining elements of the car in its early prototype form and the proposed option of a V8 engine. This car, the GAZ 31011, had a 4,250cc V8 engine and the original proposal for the grille of the GAZ 3102, a rather sporty and rakish mesh effect.

This sporty mesh grille of the 1980 prototypes was eventually replaced with a more sedate waterfall grille for the production cars. By this stage the fuel tank had been relocated behind the rear seat, out of harm's way in the event of a rear-end shunt, although for some reason it returned to the boot floor during the 1990s.

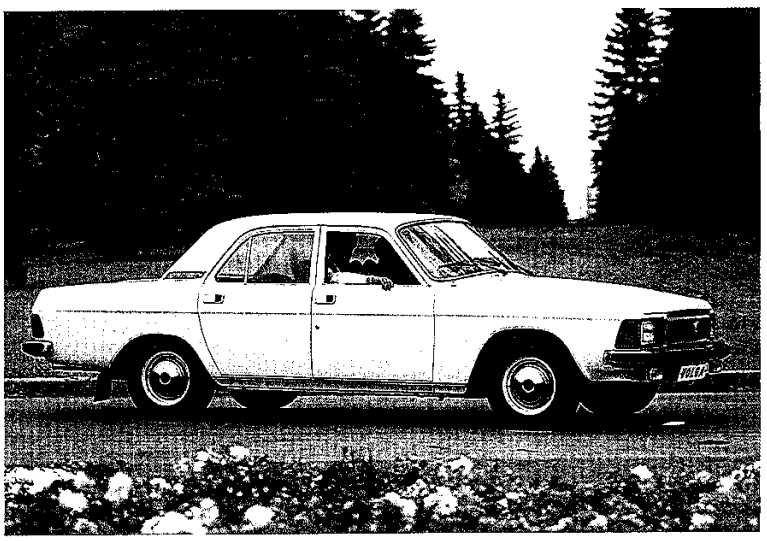
Limited production of the GAZ 3102, powered by a new version of the long running ZMZ 2445cc engine began in 1981 and it was officially launched in 1982. It was first used by the KGB and other important official bodies in 1983, before being made more generally available to official organisations after 1984. Because members of the public were unable to buy it until after the collapse of the Soviet Union, the GAZ 3102 developed a reputation that it has retained ever since as a prestige vehicle,

↓The GAZ 3102 Volga was the first serious update of the GAZ 24. Although the central section of the body was unchanged, the revised front end gave the car a much more up-to-date appearance. *(Author's collection)*



The revised rear aspect of the GAZ 3102 Volga made an already long car even longer. *(Author's collection)*

Under its skin the GAZ 3102 was a bit of curate's egg. True, it had disc brakes and the option of a 12-valve engine, but it retained kingpins for the front suspension that needed regular greasing, the only transmission available was a four-speed manual, and power steering wasn't on the options list at all. *(Author's collection)*



driven or used only by those in positions of authority or power. So deep-rooted is this belief that in 2008 GAZ was still able to charge a premium over the standard GAZ 31105 Volga series (the latest update of the venerable GAZ 24) for the privilege of owning one! Nowadays, however, it is used both by the government and by private individuals seeking a little class and, in a world dominated by German prestige cars, a little individuality.

The GAZ 3102 Volga was surprisingly different to look at from the standard GAZ 24 Volga. It had restyled front wings with a slight wraparound effect for the indicators, a prominent chrome grille with rectangular headlamps and a new bonnet. The front overhang was longer by 200mm, the bumpers were larger and up front had rectangular driving lights mounted underneath. The new rear end was larger, squarer and topped off with large, horizontal light units. The front doors lost their opening quarter-lights in favour of one-piece glass and all the doors got new handles. The interior was completely revised, with a padded, soft-rim steering wheel, a new dashboard and fully adjustable headrests on the front seats, which had a stepless reclining mechanism. Some of the special features included new armrests on both front and rear doors in the hockey stick style first seen on the VAZ 2103. Inertia reel safety belts completed the seating improvements.

The instrument panel was moulded from thermoplastic, which was not only considerably more up to date than the dated metal GAZ 24 dashboard but was also simpler to make. All instruments were now round. The controls for the indicators, headlights, windshield wipers and windscreen washers were placed on the steering column, while the centre console housed the controls for the heating and ventilation system. To the right under the dashboard was a fire extinguisher, fitted as regular equipment. The rear window was heated too, instead of relying as before on a hot-air blower to clear ice and mist.

Mechanically, there were disc brakes up front, each caliper fitted with two large and two small pistons. All cars got a diagonally split hydraulic system and stronger servo. The rear drum brakes had a pressure regulator to prevent them locking up under hard use. Power came from a more powerful 105bhp 12-valve ZMZ 402.10 version of the long-running 2,445cc engine – enough for a top speed of 94mph – and 205/70 R 14 radial ply tyres were mounted on wheels with stylish full wheel covers.

For the first time in the Soviet motor industry, a mass-produced passenger car featured a pre-combustion chamber and electronic ignition. Work on developing this technology had started at the end of the 1960s.

←A GAZ 3102 Volga undergoes crash-testing at the NAMI test centre. The relatively low level of damage shows the inherent strength of the Volga. *(Avtoexport)*

All in all then, the GAZ 3102 included a number of major improvements, but some things remained as before – the front suspension still needed to be lubricated using a grease gun every 5,000km and the steering column was still oddly positioned. The ignition key was hidden away below the steering column and tall drivers still didn't have enough headroom. What also remained unchanged, however, was the Volga's almost mystical ability to offer a comfortable journey along Soviet roads and, if maintained, an almost unbreakable reputation for reliability.

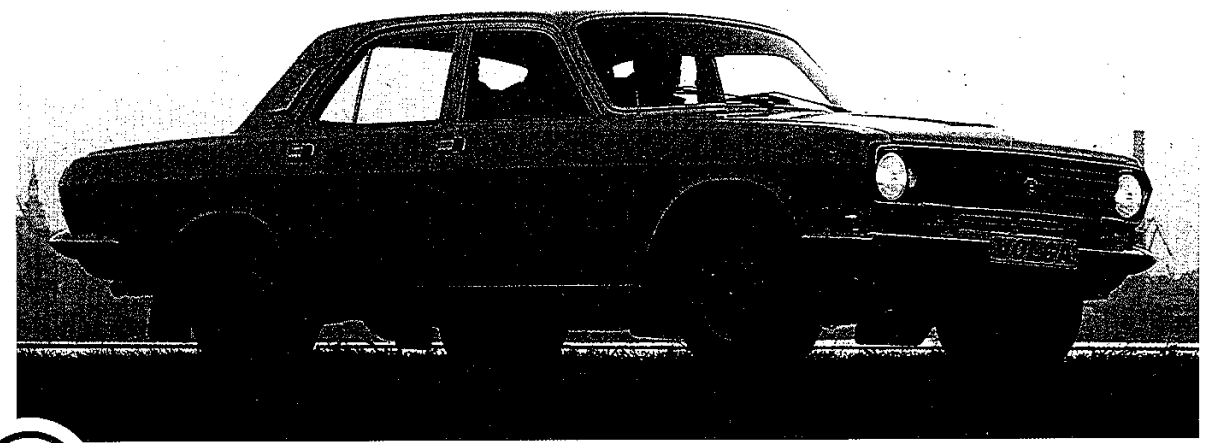
GAZ built some models equipped with a twin rotor VAZ 411-01 engine, as used in the VAZ 21079. The GAZ 31028, made in 1985, had an engine equivalent to 2.6 litres and produced 140bhp. There was also rumoured to be a three-rotor 210hp VAZ 431 model, but it was never officially listed. An experimental version with a modular engine also existed – two single-rotor engines combined into one with the possibility of turning one of them off. This car was built by NAMI and the concept – displacement on demand – was similar to a system developed by General Motors in the 1980s for use in the Cadillac, creating a V8-6-4 engine as required!

The rotary models were used by the KGB and traffic police, but the engines weren't noted for their long life. For more general use by the police and the KGB GAZ built a number of V8-engined GAZ 3102s, following in a long tradition of shoehorning big V8s into the medium-sized Volga. First up had been the experimental Volga 31011 with the 4,250cc V8 160bhp engine and automatic transmission made in 1977 as part of the 3102 development programme. This was followed by the GAZ 31014, another experimental car, built in 1985 and powered by the 5,530cc ZMZ 505.10 V8 220bhp engine, complete with two four-barrel carburettors, mated to an automatic gearbox, both from the Chaika GAZ 14.

The production V8 cars were the GAZ 31012 Volga, with the a 195bhp 5,530cc ZMZ 503.10 V8 engine, fed by a single four-barrel carburettor and which churned out a staggering 450Nm of torque at 2,500rpm; and the GAZ 31013 Volga which was the same car but had electronic ignition. Both had a three-speed automatic gearbox and were made available from 1986. Looking very much like a mainstream GAZ 3102, the cars retained the nose-heavy stance of their V8 Volga predecessors, only slightly reduced by the 90kg lead plate under the boot mat to help keep the back end on the road. They were quite simply the fastest cars on Russian roads, being even quicker than a Mercedes Benz 500 – at 62mph (100km/h) the engine was only using a quarter of its power! Unsurprisingly, the shatteringly fast GAZ 31012/3 needed to be driven with respect – especially on slippery roads, where careless use of the accelerator could easily send it spinning across the steppes.

The low-key appearance of the GAZ 31012/3 was quite deliberate. From the outside they looked

↓In 1985 the mainstream Volga was updated to become the GAZ 24-10, featuring many but not all of the mechanical improvements made to the GAZ 3102. Drum brakes were fitted all round. The revised plastic grille and full-size wheel covers can be seen in this twilight publicity shot. *(Author's collection)*



like any other GAZ 3102 so that when used by the police they wouldn't arouse the interest of ne'er do wells. Nevertheless, Soviet drivers soon learned how to recognise them since the traffic police vehicles had special antennae and in most cases two exhaust pipe outlets. Some, however, were altered to have just one tailpipe.

The GAZ 31012 and 31013 cars were to all intents and purposes hand built. They were given high-quality paint jobs and their small-scale production made it possible to equip them with all manner of auxiliary equipment. All had power steering and some had electric windows and air conditioning.

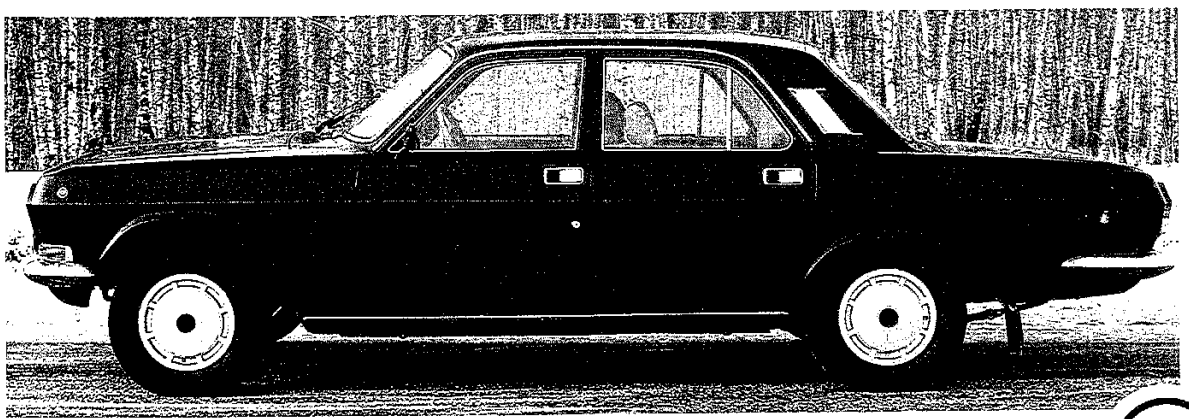
Although they remained in service with the KGB and its successor the FSB after the Soviet Union came to an end, they were gradually sold off to private buyers as they got older and more suitable foreign cars became available. Even so, they remain rare and do not come onto the second-hand market very often.

The total number of KGB Volgas based on the GAZ 24 bodyshell built is unknown. The last were built in 1995. Most of the earlier cars built before the GAZ3102-based cars were destroyed after finishing their KGB service, although one or two escaped into private ownership. Second-hand buyers of any Volga V8 find that they own an extremely powerful car but one that is not very easy to keep running. Spare parts are hard to come by for the engine and transmission. They are also awkward cars on which to carry out major repairs, as the drivetrain is really too large for the bodyshell. Some parts, such as the power steering, are unreliable and they need regular servicing – which can be problematic since there aren't that many mechanics who are familiar with them. They need a lot of high-quality fuel too – about 20 litres per 100km (14mpg) – which in Soviet times was specially imported from Finland. Finally, starting in cold weather isn't easy and the KGB manual actually recommended that they should be kept in a heated garage.

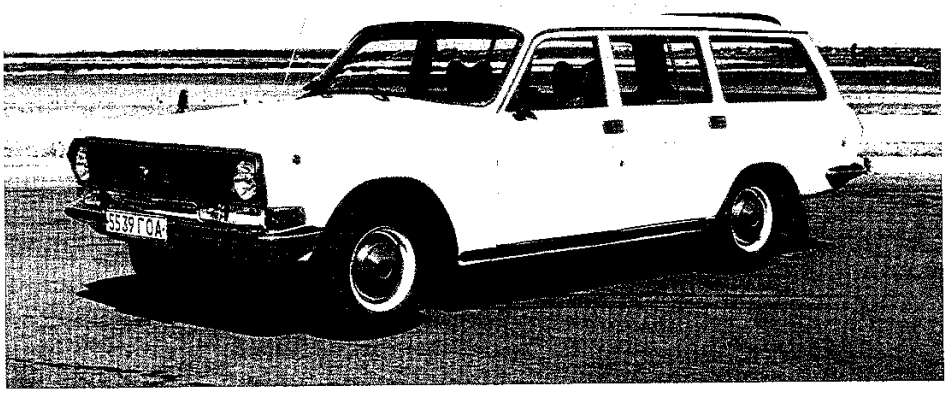
The GAZ 3102 was the basis for a number of prototypes that were never put into production. These were the GAZ 31025 of 1983, powered by a 70bhp 2,112cc Indenor diesel engine; the GAZ 3102L, a long wheelbase limousine built in 1987; and the GAZ 31015 of 1989, with a 2,600cc 166bhp Mercedes engine.

In 1985 the mainstream GAZ 24 Volga was updated, becoming the GAZ 24-10 and being made available for general sale. There were no sheet metal changes but a number of important mechanical and trim modifications were introduced, most of which had been launched on the GAZ 3102. One of the reasons suggested for the cosmetic approach to improving the GAZ 24 rather than more substantial modernisation was that in 1985 work began on a fundamentally new Volga, the GAZ 3105, intended to replace both the GAZ 3102 and the GAZ 14 Chaika. The GAZ 3105, a four-wheel-drive V8, was most certainly aimed at the higher echelons of official motorists. However, it was part of a family that

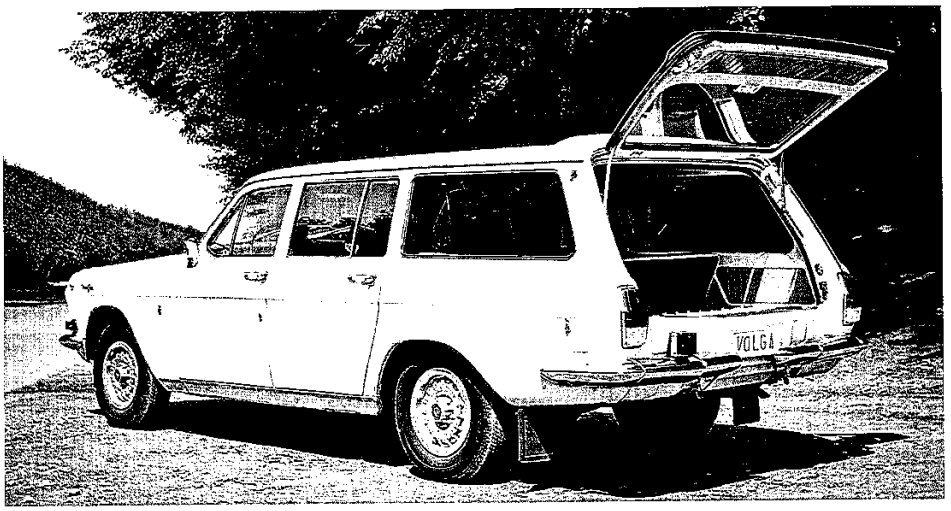
As can be seen, the GAZ 24-10 Volga did not change in profile from its GAZ 24 predecessor. Inside, it shared the revised and far more luxurious trim introduced on the GAZ 3102. *(Avtoexport)*



➔The estate car in the GAZ range was similarly upgraded in 1986, becoming the GAZ 24-12 Volga. *(Author's Collection)*



➔Volga estates had three rows of seats although the third row was really only suitable for extremely small and compliant children. The rear backrest can just be seen in this picture of a Belgian market example. *(Author's collection)*



➔GAZ had a long tradition of building high-performance versions of the Volga in extremely limited numbers for use by the Soviet security services. The usual approach was to put the biggest available GAZ engine that would fit under the bonnet. To look at, the cars did not differ at all from their mainstream counterparts apart from a slightly lower stance caused by the weight of the engine. This is a GAZ 24-34 Volga, the V8 version of the GAZ 24-10. *(Group GAZ)*

←The GAZ 3105 was intended as the replacement for the GAZ Volga series. Development started in 1985 with running prototypes built in 1987. The first cars weren't built for sale until 1992, and just 55 were made before production ended in 1996. This is an early prototype, pictured at a Soviet research establishment. The interesting low waistline, with the bottom of the door windows in line with the top of the wheelarches, was dropped for the production cars. *(Avtoexport)*

was intended to include mainstream general sale variants with smaller engines and front-wheel-drive only, the GAZ 3103 and GAZ 3104. Sadly, political events at the start of the 1990s resulted in these plans all but grinding to halt. Just 55 examples of the GAZ 3105 and its sister cars were built by hand between its official public debut in 1992 and the end of production in 1996.

The upgraded GAZ 24-10 did gain a choice of modernised ZMZ engines. The ZMZ 402 produced 100bhp, needed 92-octane fuel and was able to reach 91mph, while the ZMZ 4021 churned out 90bhp but was able to use cheaper 76-octane fuel and had a slightly lower top speed of 86mph. Contactless electronic ignition was standardised. Brakes were now dual circuit with servo assistance but still comprised drums all round. The rear axle was improved, and the wheels came with larger 205/70 R14 tyres and plastic trims. The dashboard and steering wheel came from the GAZ 3102, finally replacing the horrible thin, shiny plastic steering wheel that had been fitted to the GAZ 24 since production started in 1970. However, after adopting the GAZ 3102 dashboard the old heating system wasn't as ice-breakingly efficient as before –not so good for a Russian car! The front seats got headrests and up front the chromium grille was replaced with a matt black plastic unit. Bumpers were new and the doors lost their quarter-lights but got new locks.

Although the new car was announced in 1985, production didn't get under way until 1986. Consequently between 1985 and 1986 transitional cars were made, most often combining GAZ 24-10 mechanical components with GAZ 24 body

and trim. These cars officially didn't exist and were given no formal model code, but unofficially they were known as the GAZ 24M.

The GAZ 24-02 estate car was similarly updated in 1986 and named the GAZ 24-12. Production got under way in 1987 although export versions had been using the new plastic grille since 1985. Both saloon and estate car were made until 1992.

The KGB also got a version of the GAZ 24-10 known as the GAZ 24-34, with twin fuel tanks and a V8 drivetrain derived from the GAZ Chaika 14. The engine normally used was the 195 bhp ZMZ 503.10 although some are believed to have been built with the 220bhp twin carburettor ZMZ 505.10. It was even more of a Q-car than the V8-engined GAZ 3102. Production ran from 1987 to 1992.

The GAZ 3102 Volga was never officially exported outside of the Eastern Bloc and export sales of the GAZ 24 and its successor the GAZ 24-10 outside of the Comecon market faded away during the 1980s. The estate car remained the most popular model sold in Western markets, remaining on sale until 1992 in Belgium with a choice of Peugeot diesel engines, the 2,000cc XDP 88 and the 2,300cc XD2P 2.3 l.

In 1985 President Gorbachev started to push the idea of joint ventures between Soviet enterprises and their Western counterparts as a way of introducing new technology and new management techniques into the stagnating Soviet economy. Three years later, in April 1988, a high-level protocol was signed in Moscow between the Americans and the Soviets to encourage development of trade links. An elite group of seven companies, including Ford, formed the special American Trade Consortium specifically to develop joint ventures. Ford and GAZ started looking at a project to build the Ford Granada/Scorpio at a new plant near Gorki as a replacement for the Volga. However, in March 1989 Ford pulled out of the deal and the plans were abandoned. GAZ was left, as it had been for so long, with the long-running Volga to sell to aspirant Soviet motorists.

As the GAZ 3102 came on stream, with access strictly limited to official users and buyers, the more proletarian GAZ 24-10 was made much more widely available as a new car option to private Soviet motorists. In the 1980s a GAZ 24 officially cost 15,300 roubles and its replacement the GAZ 24-10 cost 16,300 roubles, at a time when one USSR rouble was officially worth $1, though the illegal exchange rate was about four roubles per dollar.

It is often said in Russia that from 1985 the quality of GAZ cars started to fall and the GAZ 24-10 is not seen as being as reliable as the GAZ 24 was. However, things were to get much worse in the 1990s. ■

➔ One of the few production GAZ 3105s made, the first being hand built at the Gorki works in 1992. The basic lines of the first prototype cars remained but with a slightly more pragmatic approach to the door windows! *(Author's collection)*

LEADING FROM THE FRONT

The real Soviet automotive revolution started at the end of 1984 when the first front-wheel-drive production VAZ was revealed. The decision to build the Soviet Union's first mass-produced front-wheel-drive car, the VAZ 2108 Samara, was made on 16 September 1978. The car was inspired by the front-wheel-drive Lagoda 900cc three-door hatchback prototype made by VAZ in 1976, itself inspired by the VAZ 1101 front-wheel-drive prototype of the early 1970s. The Samara looked very much like the Lagoda and, indeed, the later VAZ 1106 compact saloon prototype. This new generation of cars had to meet not only local needs but also Western tastes, the aim being to export a substantial number of cars to secure hard currency for the Kremlin's coffers.

The concept, as well as the design, was studied by NAMI in co-operation with VAZ engineers. Several body styles were considered: three- and five-door hatchbacks and also a four-door saloon that was originally slated to receive a unique body style with its own panel pressings. The saloon was even given its own code, VAZ 2110. Limited finances meant that the final production saloon adopted a more pragmatic solution sharing panels forward of the C post with the hatchbacks. However, the work on the stand-alone four-door wasn't wasted, its prototypes forming the basis for work on the first post-Soviet Lada that appeared in 1995, confusingly also called the VAZ 2110 series. During development work on the new front-wheel-drive range VAZ engineers looked closely at its European competitors, including the Opel Kadett/Vauxhall Astra, Ford Escort and Renault 9.

↑An early official publicity picture of the VAZ 2108 Samara, Lada's first production front-wheel-drive car, built in 1984. *(Avtoexport)*

↑The VAZ 2108 Samara was an extremely modern car, well able to match the best of the rest available from global manufacturers while still offering features required for the Soviet market, such as decent ground clearance and easy-to-maintain mechanical components. *(AvtoVAZ)*

Cars were tested in the extremes of East Siberia, where temperatures dropped to minus 40°, and the Kara-Kum Desert where they climbed to that much above zero!

The first production front-wheel-drive VAZ was called the 2108 in its first version, which had a 1,288cc engine, an all-new three-door hatchback body and a four-speed gearbox. The first one left the production line on 18 December 1984. In Russia it was initially called the 'Sputnik', although the name didn't catch on and the car was more commonly known either by its VAZ model code or colloquially as the 'Eight'. Its export name was 'Samara', named after a tributary of the River Volga. At the time of its launch VAZ revealed that as well as the launch three-door 1.3-litre model the car would be made with a full range of engine and body options, including 1.1-litre and 1.5-litre engines and a five-door bodyshell.

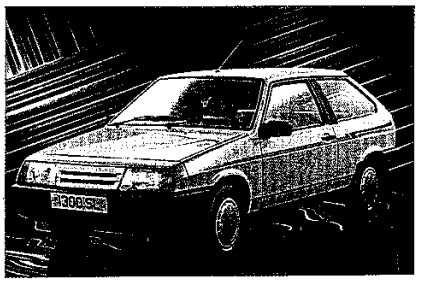
For the first time in the USSR, the grille was made out of body-coloured plastic, the bumpers were integral to the style and bodyshell of the car, the clutch was operated by a cable and the body itself was rust-proofed using the cataphoresis process. The Samara engine had a single overhead cam driven by a rubber belt and was eventually built, as promised, in 1,099cc and 1,499cc versions as well as the original 1,288cc unit. It was largely designed and produced in-house although the combustion chambers were developed in collaboration with Porsche and the carburettor was licensed from Solex. Suspension was by McPherson struts up front and by torsion bar at the rear. Rack-and-pinion steering was another first

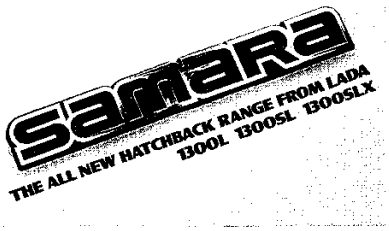
for the Soviet car industry. Togliatti's first automatic assembly lines were introduced for the production of this car.

The Samara was a major step forward for the Russian car industry. Its aerodynamic bodyshell had a respectable coefficient of 0.36 and the build quality, while not up to Western standards, was much better than most other Eastern European cars. Consequently, when the Samara was announced it received some good press reviews in the West although there were some reliability niggles. Electric problems were rife and clutch discs seemed to have a very short life. This situation was exacerbated in many cases by the minimal maintenance the cars often received, especially from budget-conscious Western owners who were the car's main buyers.

The nine-millionth Lada, a white VAZ 2108, was built on 24 May 1985, the ten-millionth just over a year later, on 9 October 1986 – again a VAZ 2108.

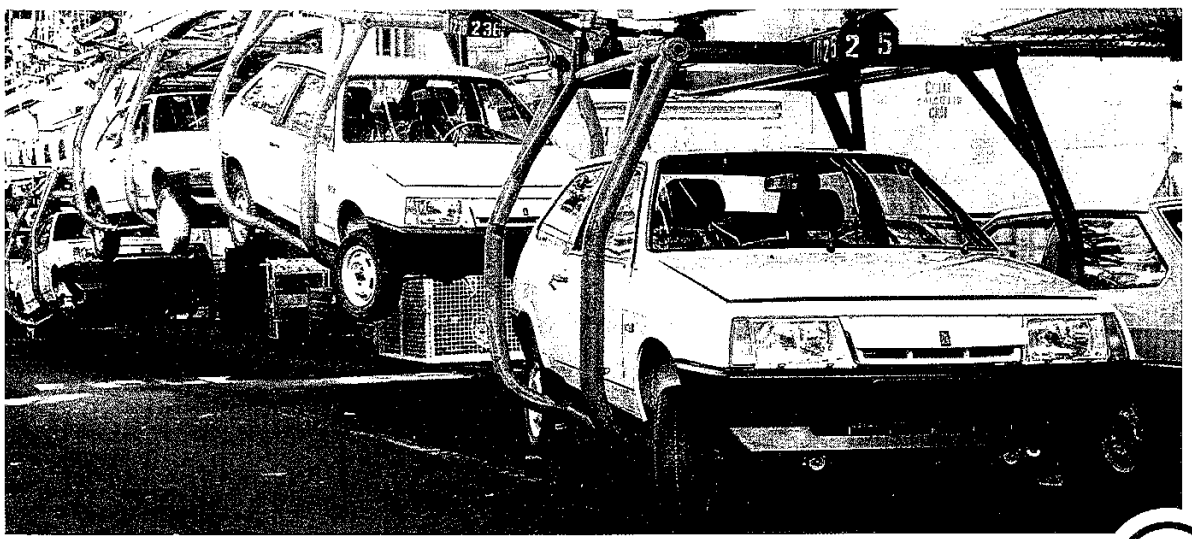
In 1987 the range was expanded by the addition of the VAZ 21083, which had a 1,499cc engine producing 71bhp, a bored-out 1,288cc unit that came with a five-speed gearbox; and the VAZ 21081 with a 53bhp 1,099cc engine based on the 63bhp 1,288cc unit but with a reduced stroke. The smallest engine was reserved for export markets. Top speeds were 87mph for the 1,099cc engine, 92mph for the 1,288cc unit and 97mph for the 1,499cc. Fuel economy respectively was 7.9 litres per 100km (35.8mpg), 9.3 litres per 100km





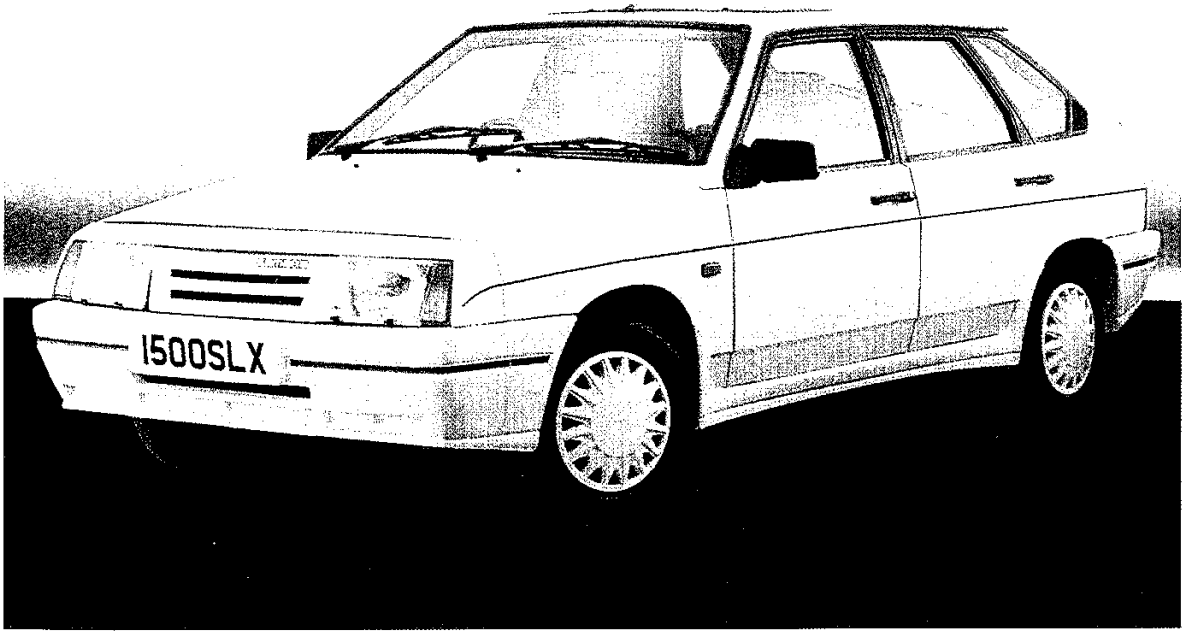
The VAZ 2108 Samara came to Britain at the end of 1987, initially as a three-door only. The British importer, as was becoming usual, created its own versions, adding extra equipment and trim details at its import centre. The front page of the launch brochure shows the mid-range 1300SL, which had a different style of radiator grille compared to the Soviet version. *(Author's collection)*

VAZ 2108 Samaras prepare for touchdown at the end of the Togliatti production line. The Samara heralded a massive increase in the use of robots at the VAZ works, many of which were designed and built by the plant itself. The first robots at Togliatti had been introduced with the launch of the VAZ 2105 Riva. *(Avtoexport)*



↑ Soon after the launch of the original Samara, in 1987 VAZ announced the five-door 2109. *(Avtoexport)*

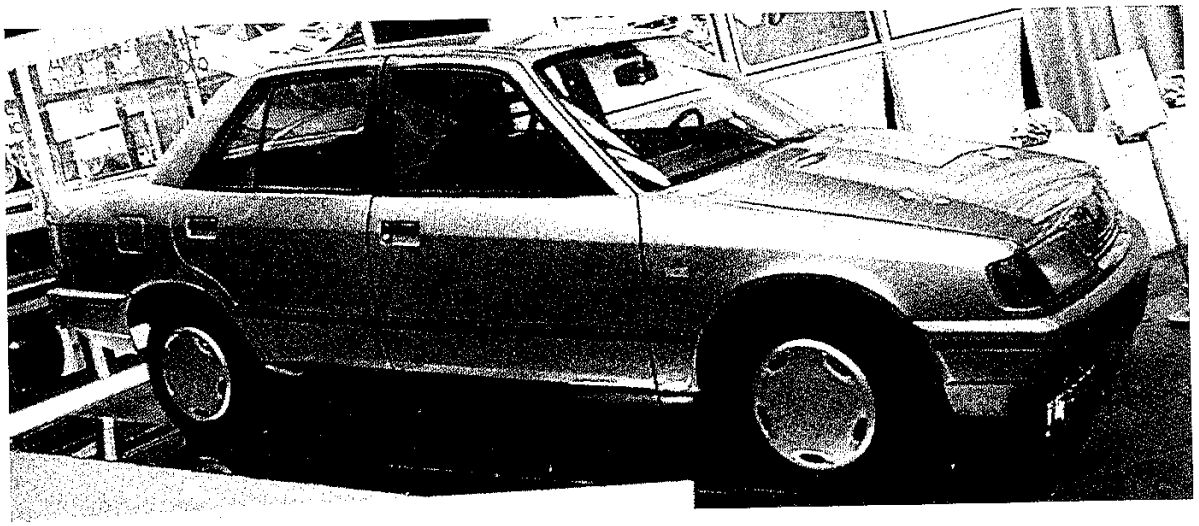
➔ A 1989 British market VAZ 2109 Samara, badged the Samara 1300L. *(Author's collection)*



(30.4mpg) and 9.5 litres per 100km (29.7mpg). In the same year the company also presented the VAZ 2109, the five-door derivative of the VAZ 2108. This was available with all three engines, the 1,099cc model being the VAZ 21091, the 1,288cc the VAZ 2109 and the 1,499cc VAZ 21093. The 12-millionth VAZ, made on 6 July 1989, was a right-hand-drive VAZ 2109.

The VAZ 2109 was followed in 1989 by the VAZ 21099, which was a VAZ 2109 with a three-box four-door saloon body and a new bonnet, a new grille and new wings up front, as well as a better instrument panel. The VAZ 2109 for 1992 and then the VAZ 2108 for 1994 adopted the new front-end styling features of the 21099, replacing the previous rather bitty arrangement with its distinct front moulding and huge panel gap in the front wing where the panel met the rest of the bodywork. The saloon's rear overhang was increased by 200mm to allow for a truly huge boot. The car was given its 21099 code to differentiate it from the VAZ 2110, which had been the original proposal for a four-door Samara-based saloon but which was by this time starting to evolve into a completely new and separate model line. Full-scale production and marketing of the VAZ 21099 didn't begin until December 1990, coded VAZ 210993 with the 1,288cc engine and VAZ 21099 with the 1,499cc. To differentiate the three-box saloon, which was intended to be a cut ever so slightly above the hatchbacks, it was given its own name in some markets: Sagona in France, Diva in Belgium and Forma in Germany. In Britain, however, it remained a Samara.

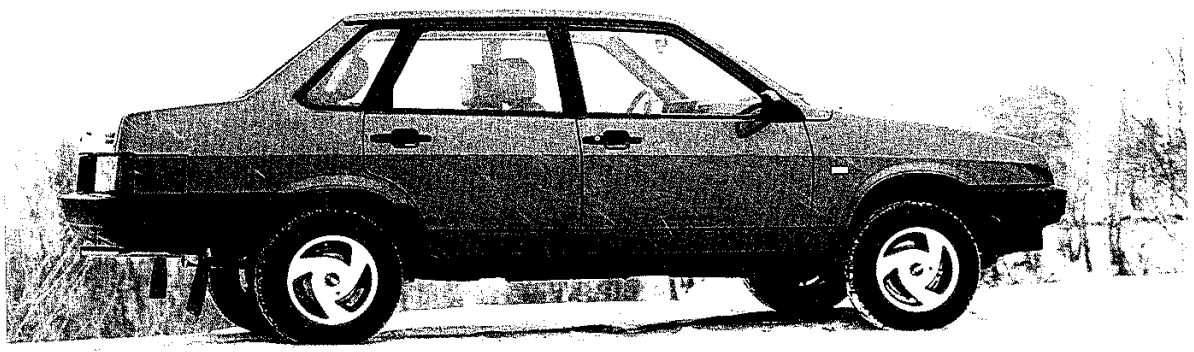
↑Top of the British Lada range in 1989 was this Lada Samara 1500 SLX complete with one of the less ugly body kits that, for reasons which remain shrouded in mystery, the importer regularly bolted onto its Samaras in the misguided belief that these grotesque plastic mouldings added to the car's appeal. *(Author's collection)*

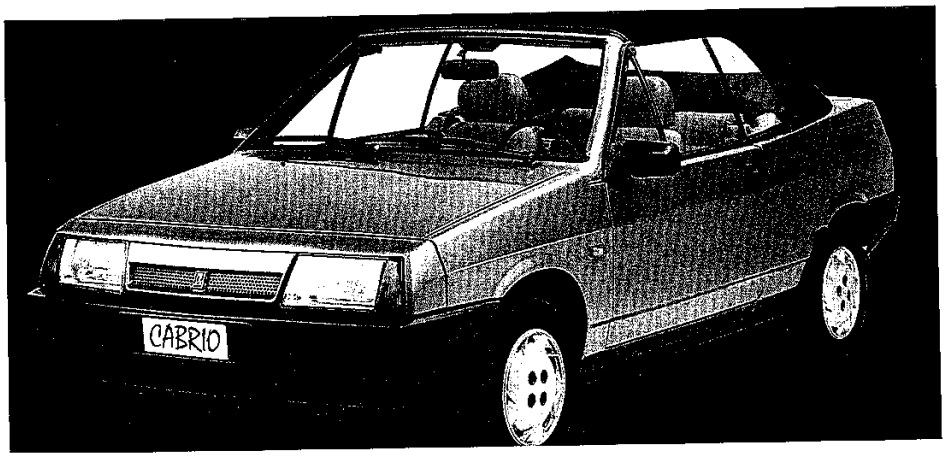


The original plan for the Samara saloon was for it to have its own entirely unique body style, officially called the VAZ 2110. This is the prototype, first developed in 1985 and seen here in 1989 at a Soviet motor exhibition. It was abandoned in favour of a simpler approach that involved grafting a boot onto the mainstream VAZ 2109. *(Avtoexport)*

The production four-door Samara was given the formal title VAZ 21099. It shared much with the five-door VAZ 2109. *(AvtoVAZ)*

The four-door VAZ 21099 had longer rear overhang than the hatchback model, giving it a huge boot. *(AvtoVAZ)*

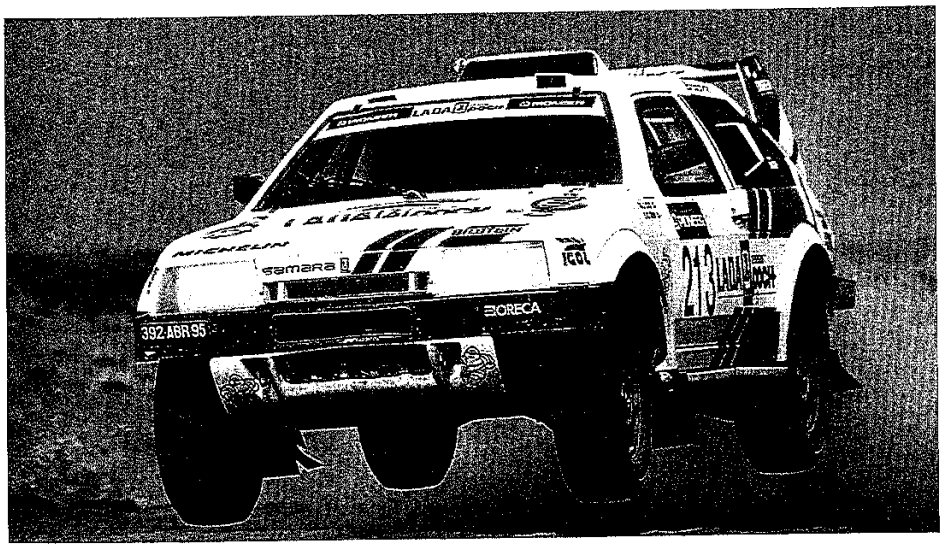




Belgian buyers got the chance to buy this extremely smart soft-top Samara, a coach-built car developed by the local importers. *(Author's collection)*

The VAZ 2108 Samara had first arrived in Britain in November 1987 as a 1,288cc three-door with a standard five-speed gearbox. There were three trim levels – L, SL and SLX – all created by the importer on the basic Soviet VAZ 2108. All of the Samaras sold in Britain were fettled and buffed up at Satra's Carnaby import centre to include – depending on the trim level required at any particular time by the British importer's marketing strategy – new grilles, body kits (some of extremely dubious taste), radios and wheel trims.

Motor magazine welcomed the new Samara as 'a massive leap forward for Lada...It offers unrivalled price for size value, combined with fair performance and economy, safe handling and very generous equipment. On the negative side, the ride is poor, the finish downright shoddy and – compared with Lada's own Riva...the Skoda Estelle, FSO Polonez and Yugo 55A – it's not that cheap.' Priced at £4,795 the Lada faced competition from the Fiat Uno 45 Fire at £4,780 but was much less expensive than the Ford Escort 1300 Popular at £5,662 and the Peugeot



The Lada Samara T3 came seventh in the 1990 Paris–Dakar Rally, when 1982–3 Formula One world champion Jacky Ickx was at the wheel. In 1991 it came fifth. Development of the car had started in May 1989, prompted by Lada-Poch, the French Lada concessionaire. Apart from the general styling, headlamps, windscreen and grille badge there wasn't a huge amount of genuine Samara left in the T3. The rear-mounted engine was a six-cylinder 3,600cc Porsche unit developed by NAMI to produce 300bhp. The gearbox and all-wheel-drive transmission were borrowed from the Porsche 959. Suspension was designed by the Tupolev aircraft plant and the body was made from carbon fibre reinforced plastic panels fixed to a tubular frame. Top speed was 138mph. *(Author's collection)*

↑This NAMI 0290 was powered by an extremely well-developed VAZ 2106 1,568cc engine, which with its Mitsubishi turbocharger churned out 180bhp. The car could reach 130mph. It was made in 1989 and had permanent four-wheel drive. The car's nickname was Appelsin (Russian for 'orange'). The doors were taken from the ZAZ1102 Tavria but much of the bodywork was made from plastic materials – total weight was just 960kg. Note the wheels – standard Samara units! A later version, the 0300, was built in 1991 and was powered by a 2,300cc 16-valve ZMZ engine that in detuned form would later become a standard production option for the GAZ Volga range. *(Avtoexport)*

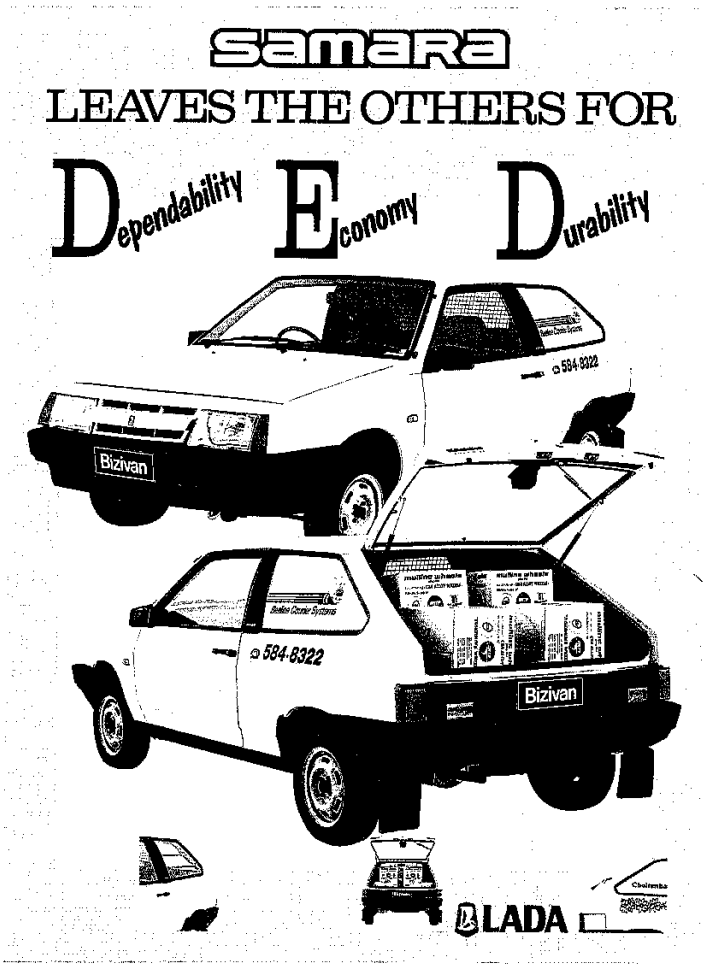
➔This is the 1989 Australian sales brochure for the Lada Samara Volante. It was marketed as a sport hatchback thanks to its sports road wheels and go-faster stripes. *(Author's collection)*

309 XE with its ancient Simca engine at £5,545. *What Car?* pitched the Samara 1300L up against the Mini City E, the Citroën AX 10E, the Fiat Uno 45 Formula, Hyundai Pony 1.3 Sonnet and the Renault Five Campus. They weren't impressed and ranked the Lada bottom of the pile, noting that they were 'not convinced that build quality is as good as we'd like to see, even at this budget price. The Lada may offer a low cost way into medium hatchback motoring, but it might prove difficult to advance to anything more refined after a year or two of hard use.' It admitted, however, that the Samara did 'offer a lot of car for the money'.

Five-door models arrived in Britain a year later in October 1988 along with 1,499cc versions of the three-door. The five-door cars with the larger engine came in February 1989. Writing of the five-door 1300L, *Autocar and Motor* said: 'Lada is building cars to an acceptable standard'. At just £4,925 the five-door Samara 1300L looked an excellent buy compared to the 957cc three-door Ford Fiesta Popular at £5,004, the Austin Metro 1.0 City five-door at £5,237 and the five-door 1,108cc Renault Five Campus at £5,320.

A rotary-engined Samara, the three-door VAZ 2108-91 hatchback – only ever offered to Russian buyers – was powered by the two-rotor VAZ 415 engine. At 56,000 roubles its price new was a little less than the 21079. It had a five-speed gearbox and could reach 124mph, needing just eight seconds to accelerate from rest to 62mph (100km/h). It was followed by the five-door VAZ 2109-91, which used the same drivetrain.

The Samara formed the basis of a concerted effort to become involved in motorsport. A Samara 4x4 was built for the 1985 Soyuz Rally. Transmission was permanent 4WD and the engine, directly derived from that used in the classic Zhiguli series but boosted to 150hp, was placed above the rear axle, on the left side. The Samara-EVA of 1987 had a 1,860cc engine with 16-valve cylinder head, a turbocharger and electronic injection. Again derived from the VAZ 2106 unit but now placed centrally, this could produce 300bhp when a normally aspirated version of the same engine produced a mere 160bhp. The only engine part that survived the transplant from the Zhiguli was the cylinder block, and from the Samara itself came just the shape of the coachwork – produced in fibreglass around a



↑A more practical approach to Samara marketing down under was the Australian Bizivan. Britain also had a Samara van. *(Author's collection)*

←Cuba's President Fidel Castro tries out the new Lada Samara in 1989. His younger brother Raul reputedly drove himself to work every day in his own white Lada. *(Avtoexport)*

tubular frame – and the headlights. The Samara S-Proto of 1989 had a layout similar to the Samara-EVA but boasted a maximum power of 350bhp.

Exports of the VAZ 2108/9/99 were generally not as successful as the VAZ 2105 series. Its higher price pitched it up against stiffer competition that, while smaller, was arguably more sophisticated. However, in countries where rugged ability to get the job done was perhaps more of a buying factor than the smoothest ride and the finest interior trim mouldings, the Samara found its niche. It was sold reasonably successfully in Australia and Canada, for example, where it was marketed alongside the VAZ 2121 Niva. It was more popular in the Soviet Union and the Eastern Bloc, retaining a market in these countries even after the collapse of the Iron Curtain thanks to its low price, ease of maintenance and ability to cope with rough roads and poor driving conditions. ■

↑The Samara was quickly co-opted onto the motorsport circuit to promote the image of Soviet cars abroad. This example was battling for the chequered flag in 1989. *(Avtoexport)*

↓Crash-test survivor – a Lada Samara shows its mettle. *(Avtoexport)*

VAZ 2108/9/99 Lada Samara – British market 1980 to 1990

British model	AvtoVAZ model	Engine size	Introduced	Discontinued
Lada Samara 1300 L 3-door	VAZ 2108	1,288cc	November 1987	April 1991
Lada Samara 1300 SL 3-door				May 1989
Lada Samara 1300 SLX 3-door				
Lada Samara 1300 L 5-door	VAZ 2109		October 1988	April 1991
Lada Samara 1300 SL 5-door				
Lada Samara 1500 SL 3-door	VAZ 21083	1,499cc	October 1988	April 1991
Lada Samara 1500 SL 5-door	VAZ 21093		February 1989	April 1991
Lada Samara 1500 SLX 3-door	VAZ 21083		October 1988	April 1991
Lada Samara 1500 SLX 5-door	VAZ 21093		February 1989	April 1991

I SPY WITH MY LITTLE EYE ...

The Samara had a major influence on the last car to be approved for production by the Soviet government. Ironically, it was a car that truly filled the role of 'people's car'. At the beginning of the 1980s VAZ designers and engineers starting thinking about designing a car totally different from anything that the company then produced – a car smaller than anything else built at the time in the Soviet Union but which could still carry four people in relative comfort. It was to be the Soviet Union's take on the fast emerging 'city car' concept.

Work on a concept vehicle started in 1981, watched over by leading designer Yuri Kuteev. At the same time engineers at the SeAZ plant in Serpukhov, which made the SZD – a plain and simple means of transportation for people with limited physical ability – realised that their own product was out of date, being little more than a motorised wheelchair powered by a motorcycle engine.

Several SeAZ engineers, supported by their chief engineer Alexander Popov, told Minavtoprom that the Serpukhov enterprise desperately needed to introduce a new product. They found allies in the corridors of power and in 1983 the SeAZ team found themselves working at the VAZ plant to make a new car for disabled people. The starting point was a development by NAMI – a small experimental car called the Oka ('Eye'), intended exclusively for use by disabled drivers. Its name came from the river that flows past the Serpukhov factory. The experimental Oka was short, narrow, and still powered by a motorcycle engine. The biggest

↑A prototype Oka undergoing pre-production tests. Production models had a different and simpler door-handle arrangement, replacing the traditional external handle with a button and a recess in the B post to access the latch – not dissimilar to the first Fiat Pandas. *(Julian Nowill)*

↑An early prototype of the Oka shows the simple yet effective styling ideas that were to stay with the car throughout its life. Note the clam-shell bonnet, designed to allow easier access to the engine compartment. *(Julian Nowill)*

problem facing the engineers was right there in the engine bay, since at that time the country didn't have its own small engine suitable for cars in this class.

Meanwhile VAZ was finalising production of its new VAZ 2108 Samara, the first mass-produced Russian front-wheel drive car, for which the company had engaged Porsche to help with the design of a new engine. Everyone was fired up with enthusiasm for the new car, for front-wheel-drive and for trying out new ideas. A senior engineer at the plant, Andrei Rozov, developed an original twin-cylinder engine but that was rejected when it became known that the new city car was to be mass-produced. To make mass production easier it was necessary for the engine to be based instead on an existing VAZ unit. Therefore in 1983 the engineers took the VAZ 2108 1,288cc engine and, to put it crudely, cut it in half, to create a perfectly serviceable 649cc single-overhead camshaft two-cylinder unit with a power output of 30bhp. The Oka was then able to ride the crest of the creative wave engulfing Togliatti, especially as there was now a practical and affordable solution for its power source.

For further inspiration for what was still intended to be a car for disabled drivers the design team looked east to Japan, the world leaders in micro car development. The car that inspired the exterior design, completed by Yuri Vereschagin, was the Daihatsu Cuore, which most closely resembled the Russian team's original thoughts for the Oka. The team first looked at producing a plastic-bodied version, but the SeAZ team wanted the car to be

as easy to build and as durable as possible. They considered plastic to be inferior to metal because of its cost and its perceived lack of long-term durability. At one stage they even wanted to use metal bumpers going against the global trend in favour of plastic fenders.

Despite being tightly restricted by the project's design parameters the team continued their work, even though at times it seemed the project would never make it into production. Then the minister in charge of the Soviet motor industry, Viktor Polyakov, visited the Togliatti works, and looking at the clay styling buck for the Oka he realised that what he had before him was in fact a true people's car, with the potential to solve a major problem facing the country – how to produce enough goods to meet the rising demands of Soviet consumers. After this the scope of the project went beyond simply replacing the limited-use SZD and instead creating a new entry-level vehicle for Soviet motorists. Since the ZAZ 968M was bigger than the previous ZAZ 965 and its proposed replacement, the ZAZ 1102, was likely to move even further away from the 'cheap and cheerful' niche originally occupied by the ZAZ 965, the Oka could become the car that anyone could afford to buy.

The first prototypes were built, but then almost everything was quickly changed: the rear suspension was not good enough, the boot was too small, the front subframe was too complex. In fact three different series of prototypes were developed before the final design was agreed. The length was increased by 100mm and the rear suspension was changed to resemble a smaller

↑The little Oka, also known as the VAZ 1111, was a well-sorted mini car, offering decent motoring for those on a budget. *(AvtoVAZ)*

version of that used on the VAZ 2108 Samara. There were some problems with the headlights too. The headlight unit was developed by NAMI, which had been trying to develop a single standard headlamp for use on all Soviet trucks, cars and buses. It was imposed upon the Oka team, who managed to successfully incorporate the chosen rectangular shape into the body.

The finished Oka was neat and trim, small at just 3,200mm long and 1,422mm wide but very capacious. The relationship between weight, engine and tyres even gave it good off-road ability, although this was an unintended benefit. Of greater relevance was the fact that the Oka was a remarkably competent car at speed. Although some people felt that such a narrow car would be unstable tests showed that it was no more prone to overturning that any other car. The Oka had obviously benefited from the work on the VAZ 2108 Samara and Porsche's input into that model. It was subjected to an extensive series of tests and trials, including spending time up in the Georgian mountains, before being signed off in March 1984 for production as the VAZ 1111.

The Soviet authorities had great hopes for the Oka. It was to be built at a proposed gigantic industrial complex in Yelabuge in Tatarstan and would put an end to the Soviet Union's long-standing shortage of cars. However, the plans for the massive new factory were inexplicably abandoned. In hindsight, the cause was most probably the lack of available resources at the end of the Soviet era for anything other than the most essential of industrial investment. Instead, production was farmed out to existing factories across the country. Some were to be built at the VAZ Togliatti plant, some at the SeAZ plant in Serpukhov, and some in Tatarstan following a decision in June 1985 to build it at the KamAZ truck plant in Naberezhnye Chelny.

The KamAZ truck plant was one of the Soviet Union's greatest automotive achievements, establishing from scratch on a greenfield site one of the world's biggest truck and truck-engine manufacturing plants. Work had started in 1969, the first truck being built in February 1976. Since then more than 1.7 million trucks and 2.3 million engines have been made by KamAZ, which remains one of the world's top ten truck manufacturers, offering a massive range of vehicles in the 16- to 32-ton classes. It is perhaps most famous in the West for the regular appearance of its drivers on the truck class winner's podium of the Paris–Dakar Rally. Production of the Oka at KamAZ started on 6 November 1987, with the thousandth rolling off the line in March 1990.

The SeAZ plant built its first Oka in 1989 after being completely revamped and re-equipped. At the same time the plant was officially transferred to the VAZ group, which had started to make Oka cars at its Togliatti works in 1986. Okas were only ever a tiny part of the VAZ plant's output, just 20,000 being produced at Togliatti between 1986 and 1995. VAZ found the little car unprofitable to build and in 1995, when the importance of making a profit in the post-Soviet motor industry was paramount in the minds of the plant's managers, the Oka equipment was dismantled and sent to SeAZ, which along with the KamAZ plant continued producing the little car into the 21st century. Marketing and sales of the Oka were primarily in the hands of VAZ, but KamAZ also sold it under its own badge.

Development of the Oka in the Soviet era was limited, although very early on a three-cylinder engine of 820cc producing 40bhp was developed, again based on the VAZ 2108 unit. This was installed in the 1988 prototype VAZ 1121, developed with an eye on exports, and gave the Oka a top speed of 87mph. The same engine also went into an off-road prototype. However, this new power unit never went into full production and Okas continued to be powered by the original 649cc engine until 1996. Top speed with the two-cylinder 29bhp engine was 75mph but fuel economy was a very creditable 6.4 litres per 100km (44mpg). The gearbox had four speeds, driving the front wheels. Front suspension was by McPherson struts with torsion-beam rear axles on coil springs at the back.

The Oka was indeed a basic car although it was a modern design. However, the instrument panel was taken from the original VAZ 2101 Zhiguli – virtually identical to the one Fiat had introduced in 1966 for the original Fiat 124 – which with its rectangular shape and dated graphics rather spoiled the effect. Indeed, many components were shared with other Soviet cars to make it easier for owners to find spares. The engine, being effectively half a VAZ 2108 unit, shared such things as

pistons. Many other components were taken from the VAZ 2105, for example the radiator and some heater parts. The front wings were detachable for easy repair.

The Oka was a tight car to drive, nimble and responsive. The driving position was able to accommodate surprisingly large people but the three pedals were well offset towards the centre. The gearchange was not that good either, and the heater did little for rear seat passengers. Four average sized people could fit easily into the Oka, which was no mean achievement bearing in mind its tiny external dimensions. The capacity of the boot with the rear seats folded down and the front seats moved forward made it possible to carry things as large as a refrigerator or a 25in television set. However, when loaded in this way trips over rough ground were not a good idea, as the exhaust pipe would then drag on the ground. Indeed, the ever popular role of Soviet and Russian cars as transport for families to and from their dachas, complete with vegetables grown on the family plot, was perhaps a little beyond a car as small as the Oka.

The VAZ 1111 Oka didn't really become the all-purpose people's car of the Soviet Union – the VAZ 2104/5/7 Riva series was much better able to fulfil that role, mainly because its was bigger and not that much more expensive. However, the Oka soon found its own niche in the Soviet and post-Soviet marketplace as a city car. Sales were also helped by it being the cheapest new car available – a positive advantage in the early post-Soviet era when many working people were often short of money. ■

↑The styling of the Oka was bang up-to-date when it was unveiled in 1986. The tiny car was built for a time in three separate factories including, ironically, the massive KamAZ truck plant. *(Author's collection)*

ZAZ

THE DNIEPER COSSACK COMES OF AGE

↑The undoubted potential of the ZAZ 1102 Tavria, both domestically and for export markets, was not fully realised as a result of the collapse of the Soviet Union. The Ukrainian factory was unable to maintain either the quantity or the quality of production to meet even local needs, much less to explore sales beyond the nation's borders. *(Avtoexport)*

ZAZ continued to make its 968 series throughout the 1980s – the two millionth ZAZ was built during October 1982 – but by the end of the decade it had introduced a bang up-to-date three-door front-wheel-drive hatchback, the Tavria. The story of the ZAZ 1102 Tavria, however, goes back as far as the 1960s.

In November 1963 the idea of a front-wheel-drive ZAZ was suggested by a budding young engineer Vladimir Steshenko, who was inspired by the idea of front-wheel drive by the famous Austin/Morris Mini. The Mini was particularly attractive to Steshenko because it was beating all of its competitors in rallies, including the Porsche 911, Fiat Abarth 600 and Volkswagen 1200 Beetle, all of which had a rear-engine, rear-wheel-drive layout similar to the Dnieper Cossack.

The prospect of working on a front-wheel-drive concept was a shock for the ZAZ workforce, to say nothing of the higher echelons of the government. They had, after all, only just finished getting the ZAZ 965 into production, which with its all-round independent suspension and air-cooled V4 engine was hardly a conventional car. And work had already started on its successor, the ZAZ 966, which was where the omnipotent Minavtoprom saw the future of ZAZ – as a producer of small cars with rear mounted air-cooled motors.

Work on what was eventually to become the Tavria continued in parallel with the design and development of the ZAZ 966 and the ZAZ 968, even though officially the ZAZ front-wheel-drive project did not exist – Minavtoprom had not given it a green light, and technically projects

outside of the official economic plan shouldn't really have existed. As far as the men from the ministry were concerned, the priority was to increase production capacity for the existing ZAZ 966, which sold like hot cakes in the car-starved Soviet Union.

The first front-wheel-drive ZAZ concept, designed independently by the company's engineers, was built in 1970 just before VAZ pulled together its own first experimental take on FWD. This was the very first ZAZ 1102 three-door hatchback. By this time Steshenko was ZAZ's chief designer. In 1974 a saloon version of the front-wheel-drive hatchback was built and in 1976 a four-wheel-drive 1.2-litre hatchback was made. In 1975 MeMZ started work on a water-cooled four-cylinder engine for the new car. Road tests, however, revealed many design shortfalls in the ZAZ 1102 that needed to be ironed out before the car could be put on sale.

Only in 1978, when a prototype had already been worked up and the technical and design problems resolved, did the plant get official consent to design and develop the ZAZ 1102. That same year the showcase VAZ plant at Togliatti, after toying with front-wheel-drive concepts in the early seventies, had officially started work on its own front-wheel-drive project. Being a hatchback helped the ZAZ get an official green light. Orders from the highest levels of Soviet government had decreed that almost all new passenger cars produced by AZLK, VAZ, IZH and ZAZ were to be hatchbacks, which explained the thinking behind the shape of the new Moskvich, Lada, IZH and ZAZ cars that were launched during the 1980s.

Several prototypes were successfully tested in Siberia during 1978, giving the project another welcome boost.

ZAZ first planned to produce its new cars in 1981 but official sign-offs for both the car and its engine weren't actually given until 1982. The new water-cooled engine for the car had been ready for production since 1979. The first six Tavrias were eventually made in 1986 with a few more following in 1987, but full-scale production didn't get under way until 1988, with sales across the Soviet Union starting in 1989.

The first delays were caused by the revamped Ford Fiesta being announced in 1981. The head of Minavtoprom, Viktor Polyakov, wanting to make sure that the socialist car was just as good as the capitalist product so the Tavria was benchmarked against not only the Fiesta but also the newly introduced Austin Mini Metro. Then in 1983 came the Fiat Uno and Peugeot 205, and in 1984 the new Renault 5. Each time the Soviet authorities held back while each new competitor was benchmarked against the ZAZ – all of which seemed eminently sensible to make sure that the Tavria didn't miss a trick, but in reality it left ZAZ constantly playing catch-up against the latest Western cars.

↓The ZAZ 1102 Tavria was a major step forward from the ZAZ 968M. As these pictures from 1988 show, it was an extremely stylish car even allowing for the high ground-clearance dictated by the needs of Soviet motorists. *(Avtoexport)*

→ Some of the first ZAZ 1102 Tavrias had these non-flush headlamps, although the original cars used in publicity shots had flush light units. The latter type didn't become standard on all models until 1991. *(Avtoexport)*

Conspiracy theorists in the former Soviet Union have suggested that Polyakov, who formerly worked for VAZ, deliberately held up work on the new ZAZ to make it easier for the Togliatti team to develop and launch its front-wheel-drive VAZ 2108 Samara. By holding back the Tavria, there was less chance that foreign currency to pay for technical help from western motor companies would be diverted away from VAZ, who were developing their car with help from at least ten Western firms, including Porsche. ZAZ in contrast developed their car with virtually no outside help. Only the design of the driveshafts came from abroad, courtesy of British firm GKN.

The ZAZ 1102 Tavria itself was a sound piece of design, combining all the qualities of a supermini – economy, compact dimensions, hatchback practicality – with the need to accommodate Soviet conditions – high ground clearance and easy maintenance features. It had a specially designed four-cylinder, overhead camshaft 1,091cc MeMZ 245 engine. There was a five-speed gearbox, front disc brakes, electronic ignition and a three-door hatchback body with energy absorbing bumpers. Front suspension was by McPherson struts. The 50bhp engine gave the aerodynamic car – its coefficient was 0.37 – enough oomph to reach 90mph. There was also a low compression model, the ZAZ 1132 Tavria, which could run on low grade 76-octane petrol. In 1988, just to add a bit of spice to the mix, there were even rumours of a powerful rally version being unleashed, powered by a 16V turbocharged engine derived from the VAZ 2106, producing 180bhp. Pictures of such a car did eventually surface but it seems unlikely that it ever competed in earnest.

In 1988 the Tavria took part in a promotional tour to showcase new products of the Soviet auto industry, a 13,000km endurance trial that ran from Riga through Petropavlovsk to Kamchatka. The two ZAZ cars needed nothing more than replacement shock absorbers.

On release the Tavria immediately encountered the same problems as it had done with the ZAZ 966 and ZAZ 968 – demand for what was one of the lowest-priced cars then available to Soviet buyers was colossal and production capacity simply couldn't meet it. At a selling price equivalent to $5000 there were many more customers wanting to buy Tavrias than there were Tavrias. The Soviet government had established the price at which the Tavria would be sold – as indeed it did for every Soviet car – and even with demand way above supply the price remained at its comparatively low level, which fuelled demand even further. Tavria buyers joined the waiting lists that prevailed for every Soviet car and bided their time until a car became available. Even so, in the first couple of years 150,000 Tavrias found homes all over the Soviet Union, helping the plant to build its three-millionth car in June 1989. Total ZAZ production though was down following the introduction of the 1102 – from 167,495 in 1987 when the 968M dominated the lines, to 138,700 in 1989 when the Tavria joined it on the tracks.

The Tavria was easy to drive. It had sharper reactions than the VAZ 2108 Samara and was much more sensitive to drive – indeed, some might even say that it was a little nervous. Handling was safe with a tendency to understeer and at high speeds the rear end could drift a little on corners. The 1.1-litre engine pulled rather well but the strengths of the engine were hidden by the strange choice of gear ratios. A very low first gear was useful only for getting under way, which helped to hide the lack of torque in the engine. A rapid shift to second was necessary to maintain acceleration. Fifth gear was really an overdrive ratio and fourth was quite high too – to get any real acceleration a shift down to third was required. Even so, the Tavria was a fun car to drive with lots of character.

Quality control was sadly not a strong point – indeed, ZAZ cars had often suffered variable quality. East Germans referred to them as 'Stalin's last revenge', which was perhaps a little unfair as a well-sorted ZAZ was reliable and sturdy. The early Tavrias suffered many teething troubles, though, which in the absence of a full-scale aftercare programme owners had to put right themselves.

Exports, which used the Tavria name, were limited outside of the Eastern Bloc although Avtoexport had high hopes for it, and even produced a catchy television commercial in which a driver ran out of fuel in his Tavria. Stopping to contemplate his fate, he lights up a cigarette with his Zippo. Then, a brainwave – he drains the petrol out of his lighter into the Tavria and happily sets off again, accompanied by the catchline: 'Sometimes you forget about petrol you need so little of it. The Tavria car from the Soviet Union.' ■

↑→The main export markets for the ZAZ 1102 Tavria were the Eastern Bloc countries. This example was seen in Bulgaria in 2006, complete with an East German IFA W50 truck. *(Author's collection)*

GETTING BOGGED DOWN

LuAZ started the 1980s quietly and could have gone out on a real high if history had taken a slightly different course. It continued to produce the LuAZ 969M Volin without any changes, but did develop a number of models that didn't make it into large-scale production. One was the LuAZ 2403, a tractor unit designed for use at airfields, and the only VAZ-powered LuAZ. The ZAZ 2320 was a dump-truck based on the LuAZ 2403 but with the mechanical components of the LuAZ 969M. The Volin itself was imported into Italy in the late 1980s by Martorelli. For the Italian market the air-cooled MeMZ engine was replaced by a Ford 1,117cc unit, more commonly found under the bonnet of a Fiesta.

In the summer of 1989 LuAZ unveiled the Proto, with plastic coachwork and the same engine as the ZAZ 1102 Tavria. Work on the Proto had started early in 1988 at the NAMI design centre in Leningrad, but it never made it into production – which was a shame, because if any single Soviet car summed up the spirit of glasnost it was this one, with its cheeky, funky styling and its explicit focus on driving for fun. Indeed, it was rumoured that the whole project started at the instigation of President Gorbachev, who wanted to encourage young designers and prompted the establishment of a small NAMI unit – initially with just six staff – in Leningrad which historically had gained a reputation as one of the most western orientated of Russian cities. Minavtoprom asked the new unit to create a small jeep for use by rural people with a view to production starting at the LuAZ plant. That the LuAZ plant was itself working on a similar machine

↑A LuAZ 969M shows off its prowess by dealing with driving conditions that would leave many other machines standing. *(Avtoexport)*

was not an issue, as by this time competition between Soviet enterprises was the spirit of the age. The Proto wasn't just the first product of the Leningrad NAMI studio, it was also the last, as the promising offshoot in what was soon to become St Petersburg once again was a victim of post-Soviet economic contraction.

The bonnet and front wings of the Proto were a single unit, opening up to give amazing access to the engine – rather like the Triumph Herald or the BMW Mini. The engine was the MeMZ 245 unit used in the Tavria but the transmission was completely new. The gearbox had six gears, the lowest two of which were effectively a low-range selection. The front axle took its drive from the second shaft of the gearbox – there was no transfer box. Front suspension was independent by McPherson struts, at the back, also independent, by a de Dion axle. The rear diff was fixed to the chassis on rubber mounts to reduce vibrations. The engine, front suspension and front drivetrain were fitted to a subframe so that the whole assembly could be removed in a single unit without any need to dismantle the body.

The body itself was made up of a solid structure welded together from pressed steel panels with detachable external panels made from plastic – a technique used most effectively in 1990 by General Motors on the original Saturn. The advantages of this were that the car could be more easily assembled and facelifts would be easier. The interior was designed for four passengers under the so called '95 per cent percentile', under which 95 out of every 100 adults would find it very easy to get comfortable. The seats could all be folded flat to create a passable bed for two or folded up and forwards to create a large luggage area. However, the use of the angular VAZ 2108 Samara steering wheel was a little incongruous when set against the smooth, rounded shapes of the dashboard.

The Proto was undoubtedly a clever vehicle – it also looked great and could have been a serious competitor to the Suzuki Vitara, but only one prototype was finished. A second, using VAZ 2108 mechanical components that would have offered more power than the Tavria-engined car, was never finished.

In 1989 the finished MeMZ-powered prototype was driven to the NAMI headquarters in Moscow, but a week later it was returned to Leningrad, no tests having been carried out at all during its time in the capital. No reasons were given but it was felt that there was little point in testing a vehicle that LuAZ simply wouldn't be able to put into production.

As well as the Proto disappointment LuAZ was also unable to get its own in-house designed LuAZ 1301 into production, development of which had started in 1984. This vehicle was superficially similar to the Proto, both being small, SUV-type vehicles with a similar chunky appearance and a Tavria power plant. Both also used plastic in their body construction. The LuAZ 1301, however, would have been a more complex car to build. It originally had air suspension, a completely new area of technology for the plant, to improve its off-road abilities, but later versions developed in the post-Soviet era had more conventional suspension.

Sadly, development of new products by LuAZ after 1990 was seriously hampered, primarily due to the poor economic climate that engulfed the Ukraine following the collapse of the USSR. During Soviet times LuAZ had built about 16,500 vehicles a year, including those made for the Red Army, but it would be another ten years before they would again drive as many cars off the end of their production line. ■

↓The LuAZ 1301 would have been a true European challenger to the host of micro-SUVs that Japan produced, but it didn't progress beyond the prototype phase. *(Paul Raiser)*

KEEPING THE FAITH

UAZ trod water during the 1980s. Its main customer was the Soviet military complex, which was generally quite happy with the rough but ready and steady UAZ 469 and 452. In the 1980s the Ulyanovsk designers created several interesting vehicles that were not put into production usually due to a lack of financial resources. In 1980 they came up with an electrically-powered vehicle, and a 1.5-ton mini-truck with a diesel engine, the KiAZ 3727 – of which more later – was designed for a vehicle plant in Kirovabad. In 1983 a team of UAZ designers was awarded the highest of State prizes for designing an amphibious vehicle, the UAZ 3907 Jaguar. This model was designed for the Red Army, in particular for frontier guards. On water it could reach 9 knots and there is still no similar vehicle in production anywhere in the world.

The company's mainstream vehicles remained largely unchanged, although a series of running alterations were made to both the 469 and the 452 families throughout the 1980s to try and keep them competitive.

In 1985 the UAZ 451 two-wheel-drive versions of the forward-control van and pickup series were dropped and only four-wheel-drive vehicles were made thereafter. The range was renamed to bring it in line with the new Soviet system of vehicle identification: the UAZ 452 van became the UAZ 3741, the UAZ 451D pickup the UAZ 3303, the UAZ 452B minibus the UAZ 2206, and the UAZ 452A ambulance the UAZ 3962. Besides these formal changes to their index codes, the engine was changed from the 2,445cc UMZ 451M 72bhp unit to the 80bhp UMZ 414.10, also 2,445cc. Top

↑The ambulance version of the UAZ 452 was renamed the UAZ 3962 in 1985. Apart from some small mechanical changes, designed to improve the vehicle's longevity, little else was altered. *(Author's collection)*

↑The UAZ 469B was renamed the UAZ 31512, and although its appearance didn't change a number of small but important mechanical changes were made beneath its skin to improve the reliability of this extremely capable off-road vehicle. Even so, it remained very much a utilitarian vehicle with little attention paid to creature comforts, retaining tubular seats and a practical metal-and-rubber interior. *(Author's collection)*

➔The UAZ 469 was renamed the UAZ 3151 in 1985. At the same time useful but rather minor mechanical changes were made to what remained a crude but extremely effective off-roader. *(Avtoexport)*

speed went up a little from 59mph to 62mph. Power-assisted dual circuit brakes were installed, and new, more reliable drive axles had changed gear ratios. The vehicles equipped with screened electrical equipment and a pre-operational heater for the engine were called the UAZ 33031 (pickup), UAZ 37411 (van) and UAZ 39621 (ambulance). In 1989 the engines were again changed to another update of the UMZ 451 series, the UMZ 4178.10, which produced 92bhp and boosted top speed to 68mph. And until the introduction of a larger engine option in the mid-1990s, followed by fuel injection in 2006, that was pretty much it for the Loaf and Tadpole. In 1990 four examples with a completely new body style, the UAZ 3972, echoing some of the styling themes seen in the RAF 2203, were built in ambulance trim. They remained as prototypes following the collapse of the Soviet Union.

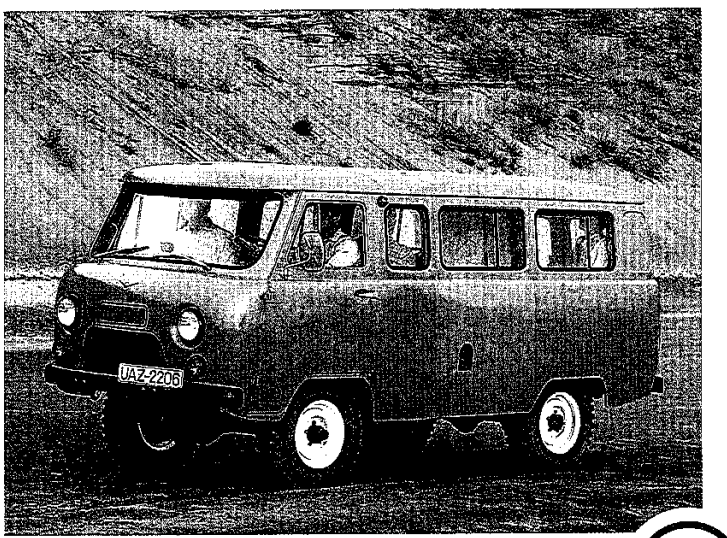
In essence the UAZ light commercials remain, to this day, pretty much unchanged since the first examples rolled out of the factory in 1958. The cab is very tight and the heater is surprisingly weak, so the heat that comes from the centrally mounted engine is quite welcome in winter. The steering column is fixed and no adjustment is provided. Proper seats with contoured padding didn't arrive until the turn of the century. Steering is without any assistance and the instruction manual specifically recommends drivers not to turn the wheel when the vehicle isn't moving. The design of the front suspension allows only the track and not the camber to be adjusted. The first examples of the UAZ 450 family did not have proper sealed joints so after passing through water drivers had to lubricate them – the tool kit thoughtfully included a grease gun. Improved steering joints were quickly introduced, which extended their life from 10,000km to 20,000km at least, and with regular servicing they now last for considerably longer.

Driving a UAZ light commercial is not difficult, if the driver is in good physical shape – both the gearshift and the steering require a lot of effort. To bring the front axle into play, not only must the transfer box be used but on examples made before the late 1990s the front wheel hubs have to be locked using a special hexahedron spanner. This is not a quick job and later models have simple Elmo-type clutches that can be turned by hand. On road fuel consumption, with just one axle engaged and travelling at 60km/h (37mph) was about 10 litres per 100km (28mpg). However, under urban conditions this increased to 18 litres (15.6mpg) and when off-road to 25 litres (11.2mpg).

Minimal changes were also made to the 469 series. In October 1984 these vehicles were renamed to bring them in line with the new Soviet vehicle numbering system, and the UAZ 469B became the UAZ 31512. In 1985 a military version with wheel reducers to increase ground clearance, the 3151, replaced the UAZ 469. The medical UAZ 469BG became the UAZ 3152.

At the same time a whole raft of minor changes came on-stream, not least of which was that the original 2,445cc UMZ 451M 72bhp engine was replaced by the 80bhp UMZ 414.10 unit for civilian vehicles while the UMZ 4.414.10 replaced the UMZ 451 MI in military versions. Both still displaced 2,445cc, but top speed was now 68mph compared to 62mph with the previous models.

The appearance of the capable little jeeps was changed only slightly. However, because of the design of the revised dual circuit brake system, which involved changes to the bodyshell, it wasn't possible to swap bodies between pre- and post-facelift models. To look at, the new vehicles had larger front and rear lamps, separate number plate light and a reversing lamp – part of upgrading the lighting equipment to meet international standards. Mechanically, the clutch and brake pedal mountings were changed. All forward gears



The UAZ 2206 was the post-1985 minibus of the UAZ range. It offered very basic accommodation with tubular seats for all occupants. *(Author's collection)*

↑The drop-side pickup continued as the UAZ 3303, complete with its wooden body. *(Author's collection)*

➔In 1985 the two-wheel-drive option for UAZ's light commercials was dropped. After this there were just two mass-produced Soviet medium panel vans – the ErAZ 762 and the four-wheel-drive UAZ 3741. *(Author's collection)*

gained synchromesh. The battery was relocated to the right-hand side of the engine bay, and the steering column was a collapsible one so as to be safer in a crash. The rear-view mirror gained an anti-dazzle feature, seat belts were fitted, and the heater was more powerful. Hazard lights were added and the wiring loom gained plastic plug connections. Improvements were made to the drive shafts and axles, improved seals and gaskets being part of a programme to extend the lifespan of these components. There was a more economical carburettor. Other changes included telescopic shock absorbers and, for civilian models, seven- instead of nine-leaf rear springs to improve ride comfort. Transitional models made during the model changeover – which lasted until 1989 – and incorporating elements of both pre and post 1984 models had the suffix '-01' added to their new four and five digit index codes.

In 1989 the transitional models were dropped altogether and so was the -01 suffix. The engine was changed to the more powerful 92bhp overhead-valve UMZ 4178.10 (UMZ 4179 on military models), although at 2,445cc its displacement was unchanged. A servo-assisted braking system was added and the civilian model's drive axles were modernised in 1989. To increase the dynamic capability of the UAZ, the gear ratio of the final drive was reduced from 4.625 to 5.125. An improved gear change was also achieved by subtle changes to the transmission (modified axles can be identified by the letter 'M' stamped into the casing). Top speed remained unchanged at 68mph but flexibility and economy were improved.

The UAZ 469 was sold in Europe during the 1980s, cashing in on the off-road market explosion, but its worst enemy was found to be rust. Several improved versions were put together by importers – for example, Italian importer Martorelli offered an Italian VM turbodiesel engine, a Peugeot 2.5 TD 90bhp unit or a Fiat 2,000cc DOHC motor.

In 1989, UAZ took part in UNESCO's Great Silk Road International Expedition, part of a project to explore and chart the culture and history of the ancient trade link between Europe and Asia. The UAZ vehicles travelled the entire 10,000km route over the often treacherous Central Asian roads, showing such illustrious companies as Mercedes-Benz how it should be done. They climbed mountains to more than 2,000m above sea level, where they showed clear advantages over the German vehicles in both speed and general performance.

In the 1980s the Soviet military finally got round to thinking about getting itself a new jeep, no doubt prompted by the revamped Land Rover 90 and 110, which had taken off-road ability – and with it the prowess of the NATO forces who used the British 4x4s – to a whole new level. An order was therefore passed to UAZ to develop a replacement for the UAZ 469/3151. The plans were impressive: new models, the latest factory equipment and mass production in ever greater

The UAZ 3171 was developed at the end of the 1980s as a replacement for the long-running UAZ 469 series, with both military and civilian prototypes being made. This is an example of the latter, which had rectangular rather than circular headlamps. *(UAZ)*

↑The drop-side pickup continued as the UAZ 3303, complete with its wooden body. *(Author's collection)*

➔In 1985 the two-wheel-drive option for UAZ's light commercials was dropped. After this there were just two mass-produced Soviet medium panel vans – the ErAZ 762 and the four-wheel-drive UAZ 3741. *(Author's collection)*

numbers. Fortunately, UAZ had already been thinking a little ahead of the game.

In 1975 the company had begun working on a new SUV, and the first mock-up was unveiled in 1980 as a sharply styled three-door. By this time the project had gained the working title of UAZ 3170. At 325mm road clearance was greater than the 215mm of the UAZ 469, while its height was lower – 1,960mm compared to 2,050mm. It had non-independent leaf spring suspension. Military examples were officially tested between 1982 and 1983 and led, between 1985 and 1987, to the next development, the UAZ 3171, aimed firmly at military users. By 1990 four working prototypes had been built. A civilian example was revealed in 1990 but the focus remained clearly on the military variant.

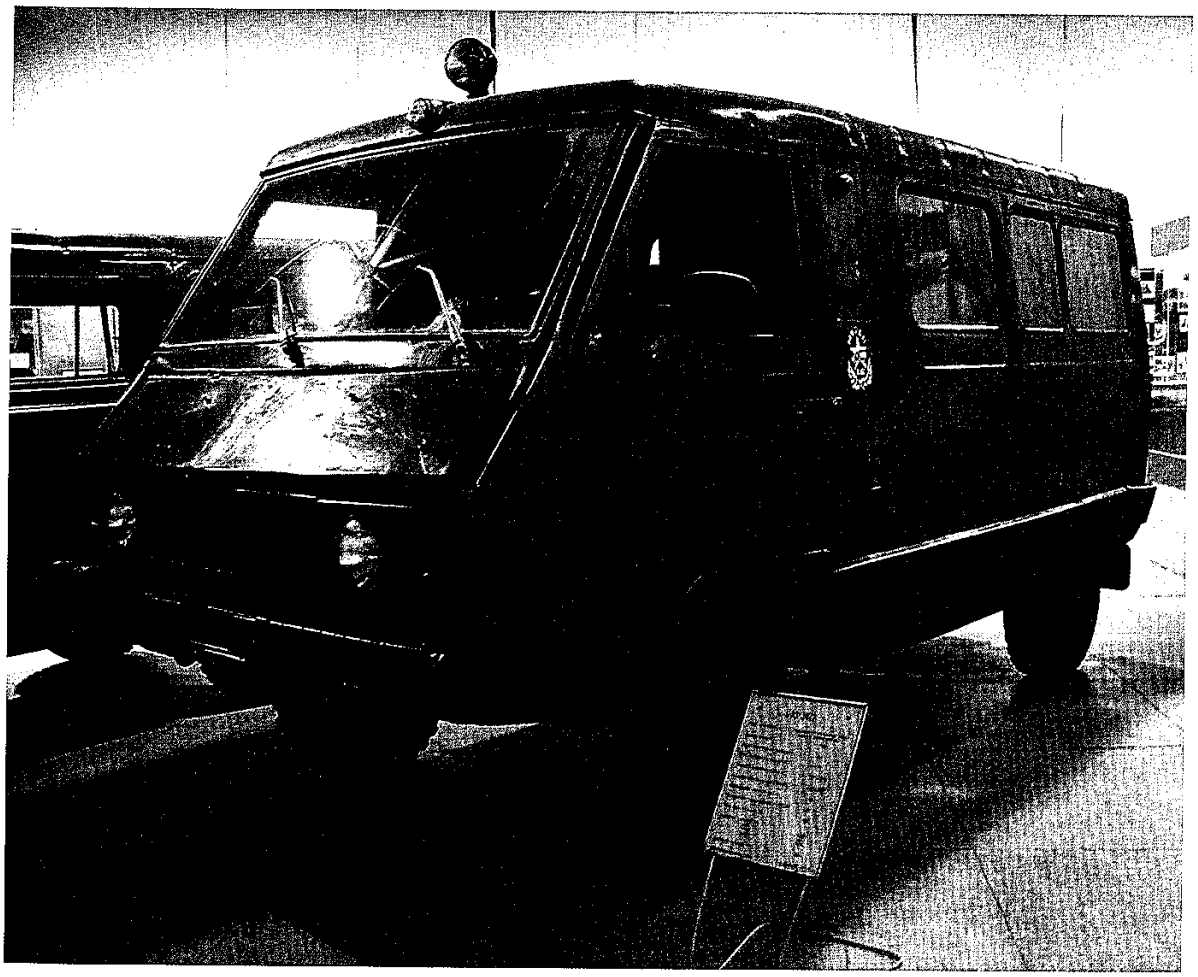
The next prototype, drawing upon the lessons learned from the UAZ 3170 and 3171, was the UAZ 3172. By this time its designers had a clear idea of what was expected of their new vehicle. It had to be capable of carrying a ton of equipment or ten fully-equipped soldiers. Fuel consumption for petrol models was set at 15.7 litres per 100km (18mpg) and for a projected diesel version 14 litres per 100km (20mpg). Top speed was to be between 71mph and 81mph. Coil springs were chosen for the suspension, as they offered far greater off-road ability than leaf springs, a point proven by Land Rover's 90 and 110 series. Thanks to wheel reducers in the hubs ground clearance was a staggering 330mm.

Nine UAZ 3172 prototypes were built, the first in 1992. The engine was essentially the same UMZ 4179 used in the UAZ 3151 but boosted in size to 2,886cc and capable of churning out 103bhp. There was also provision for a diesel-engined option which with a snorkel could travel in water up to a metre deep. All could climb gradients of 50 per cent.

UAZ tested their new jeep against the best the rest of the world could offer – the Land Rover Defender 90 and 110, the Toyota Land Cruiser, the Land Rover Discovery, the Mercedes Benz G-wagen, the Chevrolet Blazer and the Ford Bronco. Off-road, the UAZ 3172 outperformed them all – even, according to UAZ, the Land Rovers! Intended for a massive production run, it passed its final pre-production tests in 1993. However, the financial crisis that gripped the Red Army after the fall of the Communist government prevented the UAZ 3172 from making it into production.

Looking back with the benefit of today's knowledge, the UAZ 3172 was indeed a promising design. It could seat a full crew of soldiers, steering was easy and visibility was good. To drive, it was a vast improvement over the UAZ 3151.The simple body shape was attached to an extremely strong chassis. All three differentials – front, back and centre – could be controlled by the driver using a hydraulic drive system. Both axles were solid in the finest tradition of the best off-roaders but the brakes remained drums all round. The power steering was fitted with a damper to absorb jolts. ■

➔The final evolution of the stillborn replacement for the UAZ 469/3151 series was the UAZ 3172, designed at the end of the Soviet era. The picture shows a military specifaction model. The prototypes were built in 1992. *(UAZ)*



↑The UAZ 3972 was intended as a possible replacement for the long-running UAZ forward-control light commercial series, but only ambulance versions were developed, as replacements for the UAZ 3962. Although mechanically very similar to the older vehicle, the prototype featured a much more driver-friendly interior with a full dashboard and sound insulation. The project, which was starting to come together at the end of the 1980s, was a victim of the collapse of the Soviet Union. To this day UAZ are still fielding what are essentially the same forward-control vehicles that were offered at the end of the 1950s! *(Vladimir Varaksin)*

←This is the short-wheelbased military version of the stillborn UAZ 3171, the proposed replacement for the long running UAZ 469/3151 series. The interior was surprisingly luxurious for a military vehicle, with a fully equipped padded dashboard. *(Vladimir Varaksin)*

MOSKVICH

ALL CHANGE

↑Metallic paint was offered on the Moskvich 2140SL to complement its new, stylish interior. *(Avtoexport)*

During the 1980s Moskvich and IZH went their separate ways, with Moskvich eventually adopting front-wheel drive. Moskvich introduced its final variation on the long-running 408/412 theme in June 1981. This was the Moskvich 2140 SL, sometimes known as the 2140 Lux or 1500 SL, which was only built for a short time and primarily for export, although some were sold within the Soviet Union. It wasn't that successful at rescuing Moskvich's precarious position in non-Eastern Bloc markets but did have some success in markets such as Finland, where it was sold as the Elite. It was instantly recognisable by its large plastic bumpers, which at the front incorporated the indicator lights, and plastic rubbing strips along the lower door panels. Other changes over the standard Moskvich 2140 included improved electrical systems, a modern, moulded plastic dashboard, high-quality seats, inertia reel seat belts, new door trims, one-piece front door windows and the option of metallic paint. Rear lights were bigger and bolder too. The bumpers along with some of the other trim components were sourced from abroad. Generally these spare parts were not readily for sale in the Soviet Union, and if repairs were ever needed they were often replaced with parts from the standard Moskvich 2140 series.

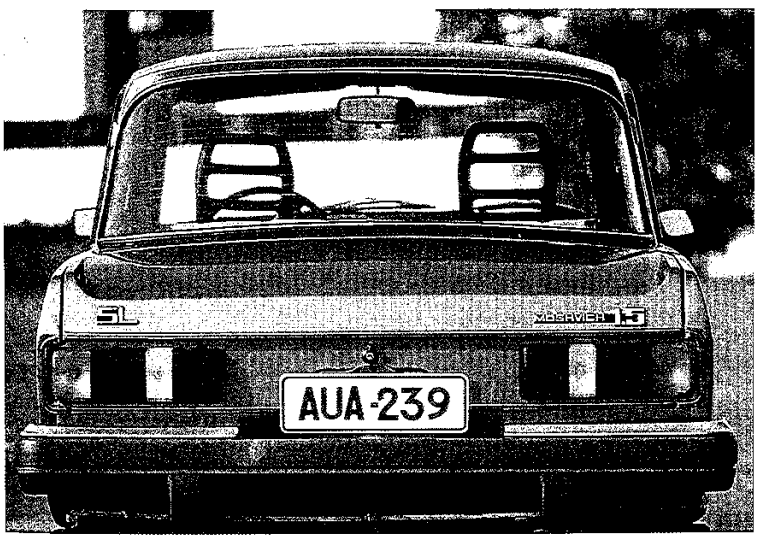
A number of the changes first seen on the Moskvich 2140SL – large chrome hub caps being replaced with chrome-plated nuts and a decorative hub centre cap, an improved heater, single glass front doors (also adopted by IZH), the modernised gearbox and a final drive ratio reduced to 3.89 – were quickly introduced to

the Moskvich 2140 series. In addition the one-piece chrome bumpers were replaced by ones with plastic end caps, the radiator grille lost its chrome surround and the central badge was simplified. The headrests became the frame type that allowed for better vision.

The Moskvich 2138 1,360cc saloon was dropped in February 1983 while the Moskvich 2137 estate car was built until 1985. The Moskvich 2140 lasted until 8 July 1988 – not bad for a basic design that had first seen the light of day in 1964. AZLK had certainly squeezed every drop of potential out of it. However, the company had long been acutely aware of its desperate need for a new car to keep the Moskvich flag flying. By the beginning of the 1980s Moskvich exports were down to 20,000 a year, and even in the car-starved Soviet Union a Moskvich could be bought off the shelf. Quality control suffered too as a result of falling sales, which did nothing for the reputation of the brand either in the Soviet Union or in export markets.

In spite of the promise shown by the C range of prototypes, AZLK decided to make an even bigger leap forward for its new car. Following completion of the Moskvich 2140 modernisation programme, the company appointed a new chief designer, Yuri Tkachenko, who was interested in moving forward with front-wheel drive. The C series of prototypes had, of course, been rear-wheel drive.

Tkachenko had been trained at the Moscow Higher Technical School, from which he graduated in

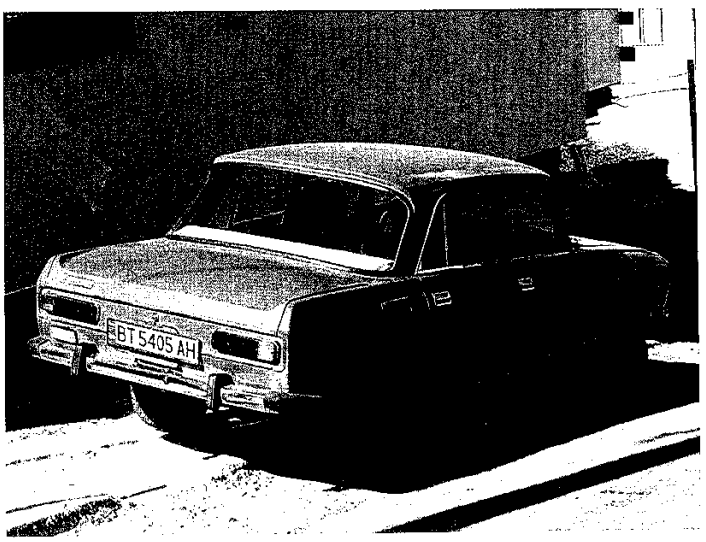


The Moskvich 2140SL of 1981 was a top-of-the-line upgrade of the standard 2140. It was intended primarily for export markets, where it was usually sold as the Moskvich 1500SL. Some, however, were sold within the Soviet Union. *(Author's collection)*

The biggest external change to the Moskvich 2140SL was its huge plastic bumpers. The rest of the bodywork remained largely the same, including the revised rear end with its rather untidy fuel-filler cover partially hidden by the number plate. *(Author's collection)*

↑Some of the features introduced on the 2140SL were also included on mainstream models. This is a 'series two' version of the Moskvich 2140 – note the absence of front door quarter-lights and a new style of bumper with plastic end caps. *(Author's collection)*

→The styling changes introduced for the Moskvich in 1976 were actually quite effective, especially bearing in mind the limited extent of their scope. This is a later 'series two' variant, seen in Bulgaria in 2006. *(Author's collection)*



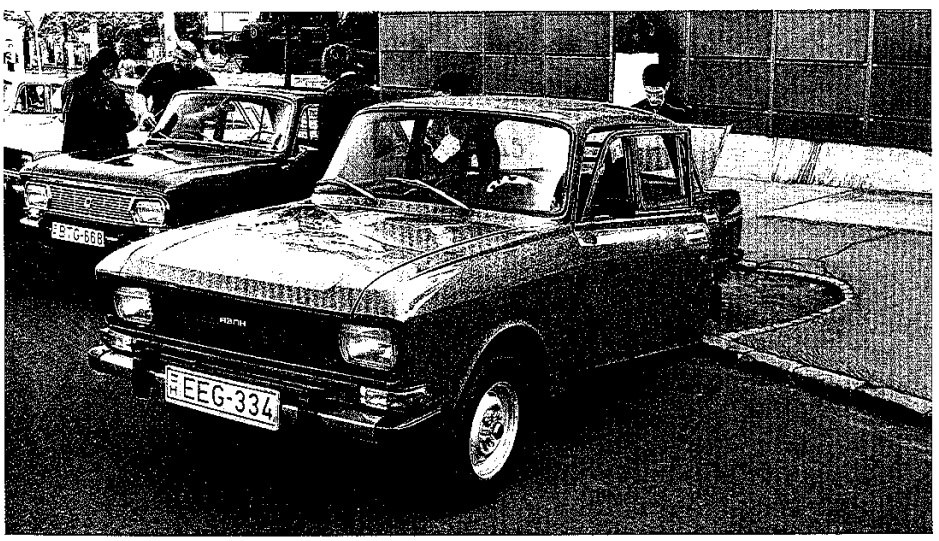
1955. In 1972 he became the deputy chief designer at ZIL and from 1977 to 1985 was chief designer at AZLK. In 1985 he returned to ZIL, where he stayed until 1991. Besides his work on ZIL trucks and Moskvich cars he also developed the transmission units for the KamAZ truck range. He was in charge of the AZLK 2141 programme, the car which was destined to replace the 2140, from 1977 until 1984, when it was signed off for production. It was his decision to use the Anglo-French Simca 1308/ Chrysler Alpine as a 'mule' to test components for the new Moskvich 2141 series.

To reduce the development time for the new Moskvich, the AZLK team opted to use some of the less dated components from the 2140. These included the UZAM 412 engine, the clutch and the brake system. A running mock-up was built, which for the sake of speed combined these components in a front-wheel-drive format with the body of the Simca 1308/Chrysler Alpine. The five-door hatchback body of the Anglo-French vehicle had received plenty of plaudits for its styling.

The 1308/Alpine had an interesting history, having been developed by the British arm of Chrysler using a Simca drivetrain that had first been seen in the Simca 1100 in 1967. Originally there was a proposal to also develop a rear-wheel-drive version of the car, specifically for the more conservative British market which, in the 1970s, still wasn't fully convinced of the benefits of front-wheel drive. This was abandoned when it became clear that to create two mechanically different cars for the same market sector would not be financially viable, especially when the British arm of Chrysler Europe was losing money hand over fist. The front-wheel drive 1308/Alpine was announced in 1975 and was built at first only at the Poissy plant in Paris. In 1976 it won the Car of the Year award and started to be assembled by the British arm of Chrysler at the Ryton factory just outside Coventry.

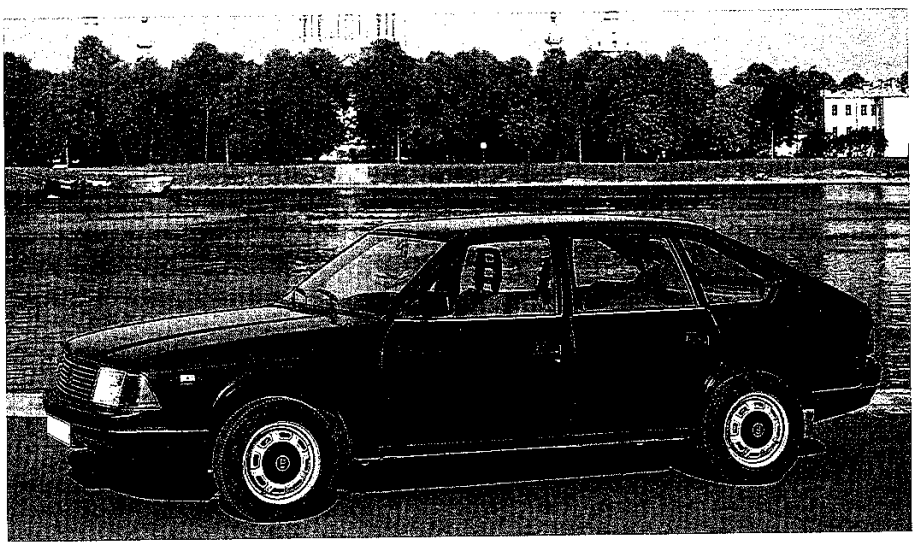
The Moskvich mock-up, combining Russian mechanical components with a 1308/Alpine body, named 'Maksimka' took just four months to build and was demonstrated to ministers at the AZLK sports stadium in October 1977. They liked what they saw and gave the car a green light for production – complete with its Simca/Chrysler bodyshell! While this decision helped to cut development costs, the engineers and designers – who had their own in-house styled mock-ups ready to roll – felt snubbed, and they never really took the 2141 to heart as they had earlier Moskvich cars.

Under the skin, though, the 2141 and the 1308/ Alpine turned out to be completely different. The Russian car had a longitudinal engine instead of the transverse layout used in the 1308/Alpine. Although the AZLK designers had looked at both transverse and longitudinal layouts, the UZAM 412 motor was too long to install transversely when mated to a five-speed gearbox. However, Renault and Volkswagen both used longitudinal engines with front-wheel-drive – the Renault 20/30 of 1975



←The similarities between the Moskvich 412 of 1970 and the end-of-the-line Moskvich 2140 are clear from this picture – the visual changes were restricted to modifications in trim, but were nonetheless surprisingly effective. *(Hungarian Moskvich Club)*

↑The Moskvich 2140 was lightly facelifted at the start of the 1980s. The grille and the front windscreen lost their bright trim work. *(Hungarian Moskvich Club)*



➔In 1987 Moskvich finally got a new car. The Moskvich 2141, a five-door hatchback, was announced with a great fanfare, coming as it did on the 60th anniversary of the October Revolution. Red, then, is an appropriate colour for this example. *(Avtoexport)*

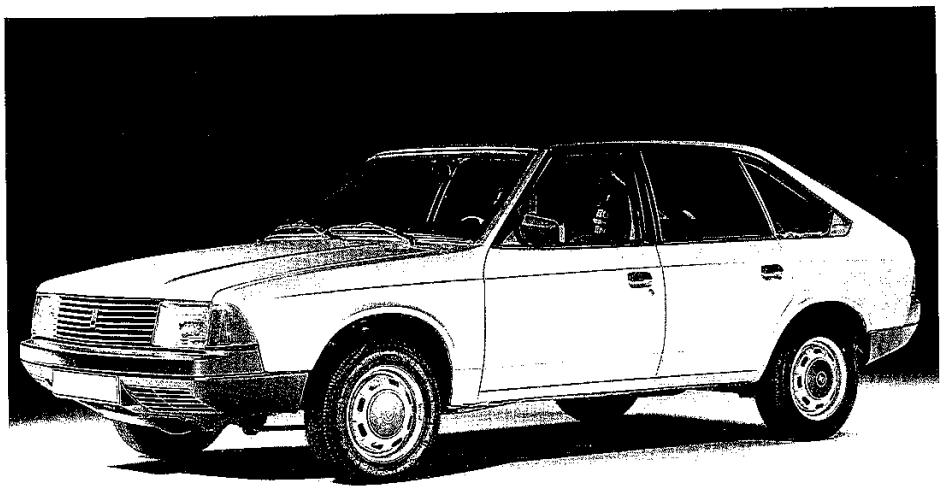
and the Volkswagon Passat of 1973. The designers at AZLK came up with a fine design that made the best use of the longitudinal engine layout. This included making sure that weight distribution was balanced, 62 per cent on the front axle and 38 per cent to the rear. They also ensured ease of access for maintenance and repair – it was possible to dismantle and remove the gearbox, complete with final drive unit, without taking out engine.

One additional advantage of this layout was discovered by AZLK's engineers. In the event of an accident the engine would absorb frontal impact and, by moving backwards and downwards under the passenger compartment, reduce the energy of the impact considerably and help to prevent serious deformation of the passenger area. The longitudinally-located motor was also helpful in paving the way for future possible variants, including a 4x4 option.

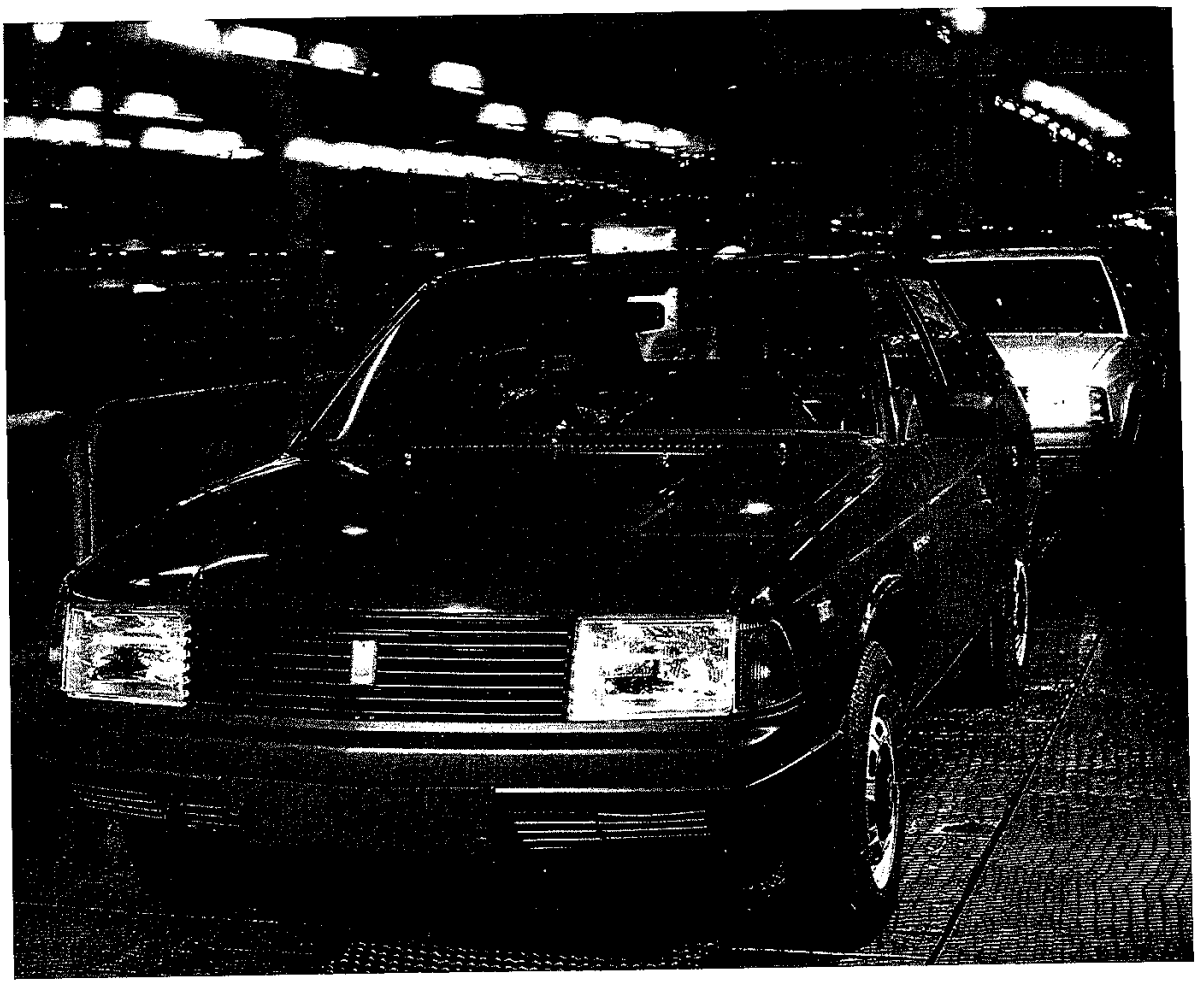
Coil spring independent front suspension by McPherson struts and coil spring non-independent rear suspension were used instead of the torsion bar system in the Simca/Chrysler. The rack-and-pinion steering gear was mounted directly onto the front scuttle directly above the gearbox. The unique Moskvich designed drivetrain led to the development of a body that turned out to be very different from the Anglo/French car. Larger diameter 14in rather than the Alpine/1308's 13in wheels required larger wheelarches, the wheelbase was slightly shorter, the rear overhang was also shorter and the front overhang was longer, although cleverly disguised by the rounded nose profile. The interior was an entirely original design too. All that eventually remained of the Anglo-French car were some elements of the roof construction and the window profiles!

The AZLK 2141 series was shaping up to be a thoroughly contemporary car apart from one thing – its engine. Various attempts were made to upgrade and enlarge the UZAM 412 unit. Designing a new engine wasn't a problem but finding the investment necessary to get it into production was virtually impossible. At the time the Soviet motor industry was in the throes of introducing three entirely new cars from ZAZ, VAZ and AZLK, while GAZ and ZIL were developing new trucks, so resources were stretched to breaking point. Long negotiations with companies as varied as Peugeot, Mitsubishi, Alfa Romeo and Renault to supply engines and a licence to permit their eventual construction by AZLK all failed, wasting valuable development time.

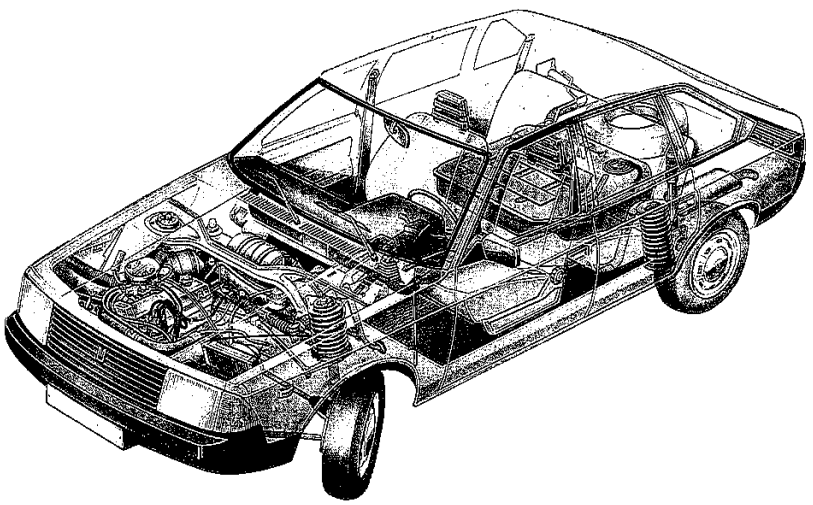
Finally, in September 1986 Minavtoprom organised a competition for the development of a new engine for the new Moskvich. Teams from VAZ and AZLK picked up the gauntlet, and the ministry's technical review board considered their proposals during March 1987. VAZ had adapted an existing engine – the recently announced 2108 Samara unit already in production, while AZLK had opted for the clean sheet of paper approach. The Moscow plant's engineers had been working on a new engine since 1983, prompted by a growing



←The Moskvich 2141 may have looked like a carbon copy of the Chrysler Alpine/Simca 1307-8 but in reality it was an entirely original design. *(Author's Collection)*



↑The first Moskvich 2141s roll off the Moscow production line in 1987. *(Avtoexport)*



➔This cutaway picture shows the longitudinal mounting of the engine in the Moskvich 2141, positioned very close to the front of the car. The result was handling that was rather prone to excessive understeer, making the car less nimble than, for example, the VAZ 2109 Samara, also a five-door 1500 hatchback. *(Avtoexport)*

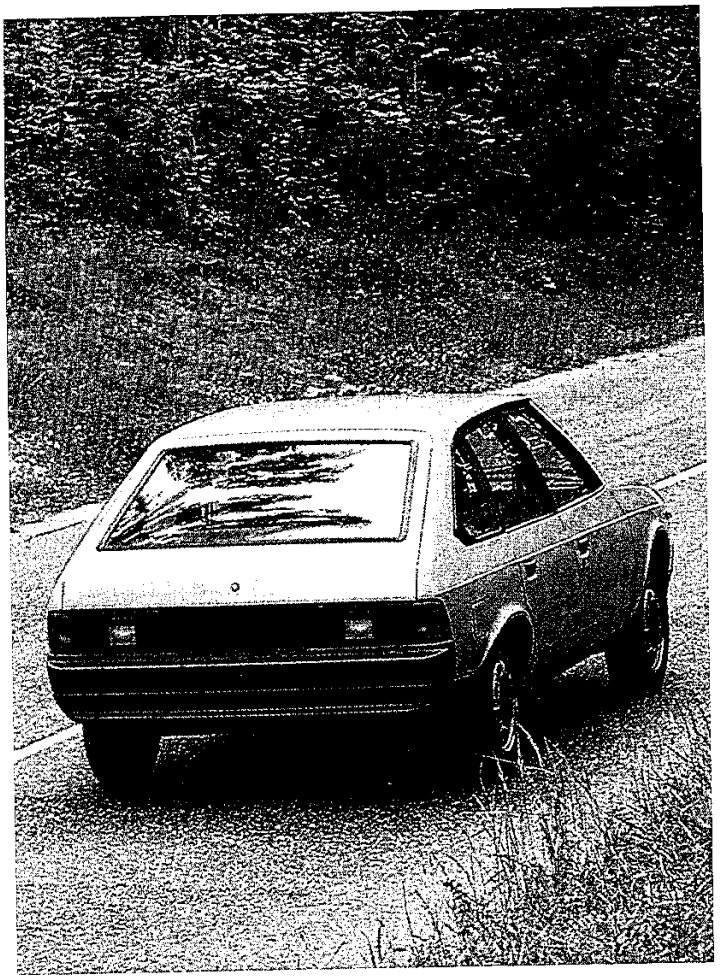
realisation that the larger engines promised by the Ufa plant were not likely to be ready in the foreseeable future and that in any event they would be reworked versions of an increasingly obsolete power unit. The AZLK engine was lighter and offered greater scope for future development, especially in the area of lean-burn fuel technology. Moreover, the AZLK engine had been developed as a range of both petrol and diesel models. Minavtoprom gave a green light in May for AZLK to take their proposals forward, and the company brought in the British engineering firm Ricardo to help with development and production of the new family of engines.

Petrol and diesel versions of the new AZLK engine, designated the 21414 and 21423 respectively, were officially unveiled at a special Moscow exhibition held in 1988 to mark 70 years of Soviet engineering. It bore no similarity to any single foreign engine. It had four cylinders in line, tightly placed relative to each other. The petrol model had a capacity of 1,795cc and a belt-driven overhead camshaft. The block was cast iron and the cylinder head aluminium, marking a break with the past as the 2140 and its predecessors all had aluminium blocks. Electronic ignition was also included in the design despite Russian motorists' preference for more old-fashioned but more easily maintainable contact breakers. Using a simple Lada carburettor the engine developed 95bhp – an impressive performance by anyone's standards. The diesel engine, of 1,890cc, was based on the same block and cylinder head as the petrol version but had a rather modest output of 65bhp. There was a high level of commonality between the two types to reduce the cost of production and to simplify the supply of spare parts. Compared to the VAZ 2106 engine, the AZLK was claimed to be ten per cent easier to build, more compact and more economical.

Production was pencilled in for 1991, the 21414 first and then the 21423, and by 1988 AZLK was already installing new equipment in its engine assembly unit. The intention was to build 240,000 motors a year, including 80,000 diesel types. However, the engine became another victim of the collapse of the Soviet Union in 1991, when the new Russian Federation's Finance Ministry was unable to continue funding the project. When the chequebook slammed shut AZLK had already spent just over half the investment necessary to build the engines. New equipment had been installed in the Moscow works and in plants owned by component makers. The cost of these and all the other investments needed to introduce the new car totalled $358,900,000 – transferred as debt to AZLK's balance sheet, crippling the company's chances of surviving in the post-Soviet era from day one.

All these delays in developing a new engine meant that AZLK had had no choice but to launch their new car with two existing engines, the 1,478cc UZAM used in the Moskvich 2140 and the 1,568cc VAZ 2106 used in the VAZ 2106 Zhiguli, VAZ 2107 Riva and the VAZ 2121 Niva. Both engines had to be offered because the Togliatti plant couldn't supply the extra 200,000 engines that would be needed if all the new Moskvich cars were to have the higher powered VAZ engine.

↑The original sales brochure for the Moskvich 2141 was an exuberant affair, no doubt reflecting the joy that the company finally had a car to sell that wasn't a veritable antique. *(Author's collection)*



↑The Moskvich 2141 was not sleek, but as can be seen from this rear view it was a solid-looking machine. *(Avtoexport)*

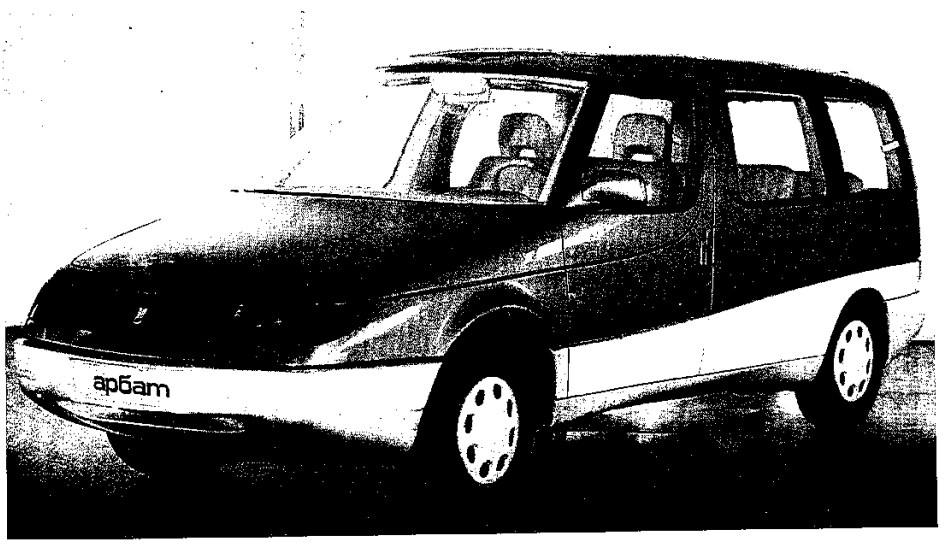
Using the existing engines wasn't a simple job, however. The 2141 had a much lower bonnet line than either the AZLK 2140 or the VAZ cars and changes were needed to the engines themselves to get them into the available space. The AZLK 2141 was fitted with the VAZ 2106-70 unit. Changes had been made mainly to the lower parts of the engine – the mountings themselves, the sump and the oil pump. To further reduce height, the air filter was relocated away from the top of the engine to the right-hand side wheelarch.

The AZLK 21412 was built with the UZAM 331.10 engine, a thoroughly reworked UZAM 412 unit, albeit still 1,478cc. It produced 72bhp. To decrease its height, the designers developed a new inlet manifold, the flange of which under the carburettor was lowered by 26.5mm. The air filter was relocated to the front panel and changes were made to the sump, oil pump feed pipe and the cover for the distributor gears. The changes aimed at increasing the engine's efficiency were directed towards making it work with a weaker fuel mixture over as wide a range of loads as possible. To do this the combustion chambers were changed to create swirl as the mixture entered, creating a far more effective mix of petrol and air that resulted in more efficient use of fuel.

To keep the bonnet line low the long-running Moskvich gearbox had to be redesigned too, with the shafts arranged almost horizontally. This allowed the engine itself to be mounted lower down, to bring the crankshaft in line with the gearbox, and to be located 60mm to the right of the car's central axis.

Unusually for the Soviet era the AZLK 2141 was subjected to 'customer clinics'. These revealed both good and bad aspects – the rear window design did not collect a lot of mud, removing the need for a rear wiper, but the driver's seat was condemned as being less comfortable than the one in the 2140. Even so, the 2141 was a definite step forward. It was quite smart, with its black plastic bumpers and radiator grille matched by matt black door-window frames, and with its five-door body it was also practical – for instance, the spare tyre was located underneath the boot, which didn't need to be unloaded in order to access it. Even without entirely new engines, it was lighter than the Chrysler-Simca, used less fuel, had better ground clearance (essential for Soviet users) and a larger interior.

The new car was signed off for production in April 1983, and finally, in 1986 – when the four-millionth Moskvich was made – the AZLK 2141, branded as the Moskvich Aleko for export markets, started to trickle off the production line, its launch neatly coinciding with the 27th Congress of the Communist Party of the Soviet Union. The first Moskvich 2141 was completed on 12 February that year, but full-scale production didn't get under way until July 1988, when the final 2140s rolled off the line. Thanks to the emerging policy of glasnost the car's shortcomings soon became well known and widely publicised, not least of which was its lack of performance. Top speed of the UZAM-powered car was 90mph, with 0 to 62mph (100km/h) taking a mind numbing 18 seconds. The VAZ 2106 engine



↑AZLK always felt that its cars were cut above Lada and IZH models – as this Soviet advertising shot for the Moskvich 2141 clearly shows! *(Avtoexport)*

←Another lost opportunity was the forward-looking AZLK 2139 Arbat, a people carrier developed by NAMI. *(Julian Nowill)*

improved things a little – top speed went up to 98mph and three seconds was shaved off the 0–62mph acceleration time. Neither of the engines available at launch was really up to shifting what was a heavy vehicle, even though its aerodynamic coefficient was one of the best ever achieved by a Russian car. The export name Aleko, incidentally, was derived from 'Automobile Plant Lenin Komsomol'.

A huge amount of money had been invested in upgrading AZLK's production facilities in readiness for the new car, introducing new levels of technology, automation and flexibility. There were computer-programmed machine tools, robotised carts delivering components to work stations, an automated warehouse complex, and an enormous new panel plant that could rapidly change the dies on its presses from one type of panel to another. In theory the plant could easily cope with rapid and painless transitions between different models of car. The flexible production system was intended to produce a wide range of models and modifications, including an estate car and an MPV-like microbus. However, what actually happened was that a single model was made for 15 years, the quality of assembly was consistently low and, thanks to a combination of circumstances – some of which were admittedly beyond the control of the plant itself – annual production did not rise above 106,000 cars even in its best years, though the official target was 200,000. Indeed, in 1989, the first full year of 2141 production, AZLK built just 74,058 cars – well down from 182,030 in 1987 the last full year of the 2140.

The Aleko was never seriously exported in the way that the Moskvich 408 and 412 had been, other than to former Eastern Bloc countries, even though there were plans to start exports to Western Europe in 1987 followed by a launch in the USA by 1991. The few cars that were sold outside of the Soviet Union were usually fitted with the VAZ 2106 engine.

The lack of a suitable power unit was the main reason why export sales didn't take off, especially the lack of a diesel. With the prospect of its own diesel engine seeming to recede ever further into the distance, AZLK looked to foreign firms to fill the gap. They turned first to Ford, from whom they chose the 1,753cc 60bhp XLD418 diesel in the hope that it would attract budget-conscious Western customers by offering them an economical and spacious car at a very affordable price. At the 1990 Berlin Motor Show an AZLK 2141 with the German-built diesel engine, first seen in the Ford Sierra range and thereafter in the Escort and Fiesta, was presented as the Lada Aleko-141. The engine produced both its maximum torque and power at lower revs than the UZAM 331.10 and VAZ 2106 engines, offering the AZLK 21411 Moskvich diesel a high degree of flexibility. So as not to lose too much acceleration AZLK combined the engine with a fifth gear ratio of 0.732 and a final drive of 4.1:1. At a steady 56mph the diesel Moskvich used 5.7 litres of fuel per 100km (49mpg) and at 75mph it used 7.0 litres (40mpg).

➔The front-wheel-drive Moskvich 3733 minivan is perhaps the least well-known Moskvich. It was developed as part of a proposed joint venture with the Bratislava vehicle plant in Czechoslovakia. *(Julian Nowill)*

That economy came at the expense of top speed – a less than sprightly 84mph. Acceleration to 62mph (100km/h) took 25 seconds.

The gearboxes in the first cars had had problems with fifth gear, so a revised gearbox was quickly developed which was launched in April 1990. These models had the suffix '-01' added to their main model designation. Improvements were also made at the same time to the master brake cylinder, final drive, bodyshell and 29 other components. AZLK claimed the new car was good for 200,000km without any problems and thus well worth a 38 per cent price increase!

In 1987, as part of his programme of economic changes, Soviet leader Gorbachev decided to allow enterprising individuals to complement the state sector by starting up small businesses, and the long-running Soviet restrictions on private ownership of light vans and pickups were lifted. AZLK responded very quickly by developing the front-wheel-drive Moskvich 2335 pickup, based on the 2141 hatchback. The first examples were seen in 1988 at the Autodesign-88 exhibition in Moscow, which showcased the latest ideas from the Soviet motor industry. Production didn't finally get under way though until December 1993, as the AZLK 2335 when powered by the VAZ 2106 motor and as the AZLK 23352 with a UZAM 331.10 engine under the bonnet.

The AZLK 2141-KR was perhaps the most extreme development of the Moskvich. It was built in 1989 for Group B rally work and had its 1,995cc engine located centrally. With two Weber carburettors it produced 175bhp, but didn't cover itself in glory on the motorsport circuit.

There was also a special car built for use by the militia, the AZLK 21418-01, and a special export version, adapted for Latin America, the AZLK 2141-131. Plans were announced in 1990 for the introduction in 1992 of a four-door version, the AZLK 2142, development of this saloon having started in the mid-1980s. In 1992 an estate car prototype, with a severe vertical rear end, was spied at a Russian motor exhibition.

In 1987 and 1988 the NAMI Institute developed a Moskvich people carrier called the AZLK 2139 Arbat. It had a very modern design and came just four years after the square-shaped Renault Espace was launched. The 2139, which had shades of the original Pontiac Trans Sport about it, came with seven seats, a sliding door on the right side and 180° seats, just like the all best American and European models. This Soviet multi-purpose vehicle was scheduled to be built at a new plant in the Kaluga province, but the plant was never finished and the AZLK 2139 remained a prototype. At the same time AZLK got involved in a joint project with the Bratislava vehicle plant in Czechoslovakia, which had been building Skoda Rapide Coupes, to develop a front-wheel-drive light van, the Moskvich 3733. This was planned to be built as both a one-tonne van and a microbus but the plans were yet another victim of the collapse of the Soviet Union. ■

IZH

MAKING ITS OWN WAY

↑Until the new IZH 2126 was ready for production IZH continued to manufacture its own take on the long-running Moskvich 408 theme. This is an example of the post-1982 facelift model, the IZH 412IE-028, seen in excellent condition in 2006. Note the lower door handles and the lack of front door quarter-lights. *(Vladimir Varaksin)*

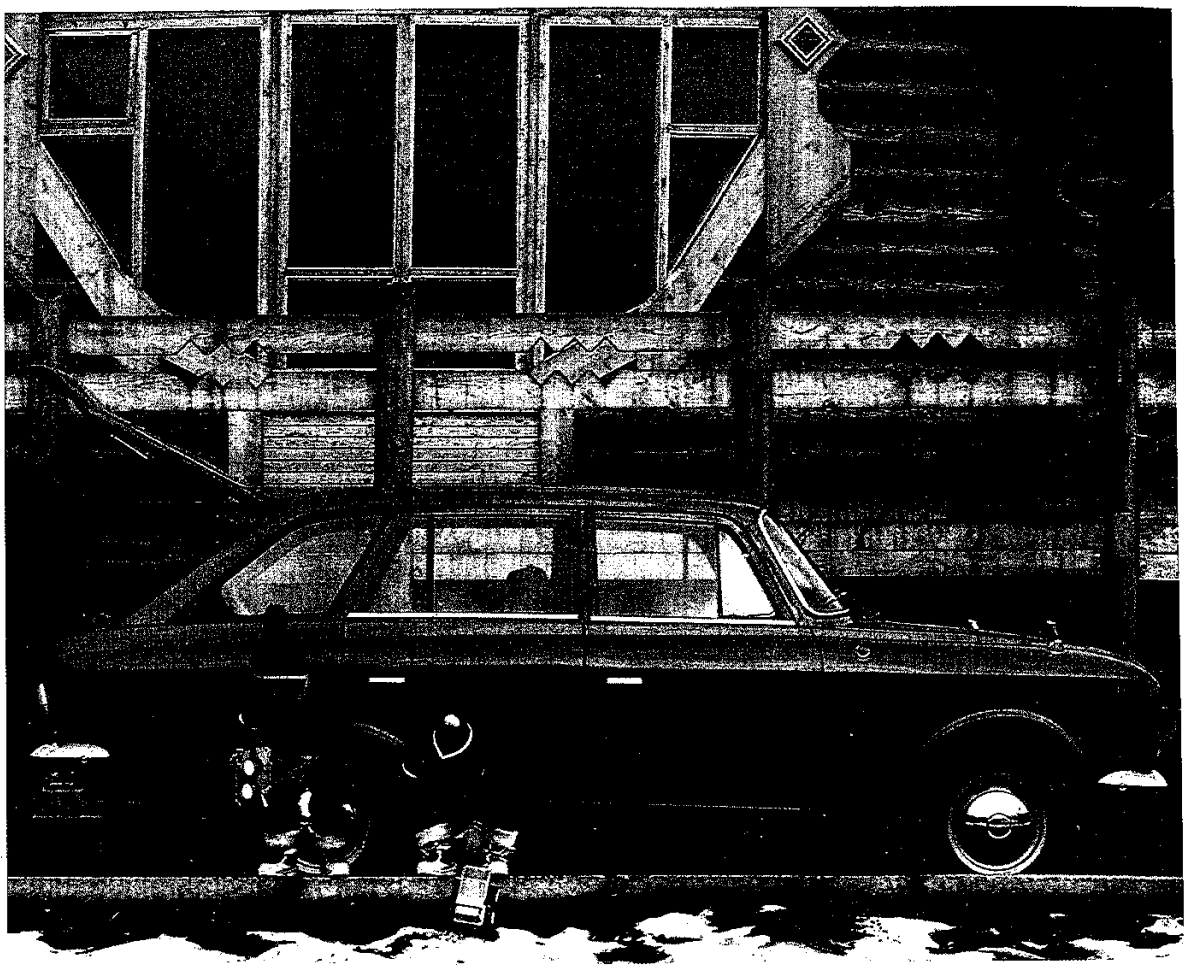
In the last decade of the Soviet Union's existence IZH not only updated their existing Moskvich-derived 2125 and 412 IE range but also worked on a new model, for which planning had begun at the end of the 1970s. Several designs for a hatchback were produced between 1978 and 1982, with aerodynamic ideas developed in collaboration with the Moscow University and Renault engineers. Definitive prototypes appeared in 1984, when the car passed government tests and production was agreed – at least in principle. Finally, in 1987, nearly ten years after the first sketches had been penned, the car-buying public finally got to see the new IZH 2126 Orbita. Its name, like others used by IZH, such as the Planeta and Jupiter motorcycles, was inspired by the successes of the Soviet aerospace industry.

The IZH 2126 had a smart, unpretentious five-door hatchback bodyshell, with a very respectable aerodynamic coefficient of 0.36. It shared a number of components with its predecessor, including its UZAM 331 1,478cc engine (an update of the long-running UZAM 412 unit) and its rear-wheel-drive live rear axle, but the front suspension was new, featuring MacPherson struts. Brakes were servo-assisted, discs up front and drums at the back. Several components were also common to other Russian cars (for example, the front headlights were the same as the Lada Samara). However, the promising IZH found its fate mixed up with that of the Soviet Union itself and mass production did not start until 1991.

IZH maintained its place in the market with the IZH 2125 hatchback and 412IE saloon, which

The IZH 2126 was the factory's first entirely self-penned car. Full-scale production didn't really get going until 1991, although the car was regularly publicised after its official unveiling in 1987. *(Author's collection)*

The IZH 2126 cleverly combined the latest body-styling with hatchback practicality and a well-engineered rear-wheel-drive mechanical layout. The simplicity and rugged nature of rear-wheel drive was appreciated by many Soviet motorists as being far better suited to the unmade roads that prevailed in rural areas. *(Author's collection)*



↑The facelifted kombi IZH 21251 featured flush-fitting door handles alongside a new grille, front wings and bonnet. Rear-end styling of this car and its saloon counterpart were unchanged. *(Avtoexport)*

were destined to remain in production until 1997. Production levels hovered around the 130,000 per year mark throughout the eighties and into the first couple of years of the nineties. A number of changes were introduced during the 1980s to improve the venerable duo's driving characteristics, similar to but not exactly the same as the changes introduced by Moskvich in 1976 to the AZLK 2136/7/8/40 series. The Izhevsk cars had originally been marketed both under their own IZH brand name and the name Moskvich, but the latter was dropped as IZH's own identity developed. Indeed, Izhevsk workers were quite put out if 'their' car was called a Moskvich.

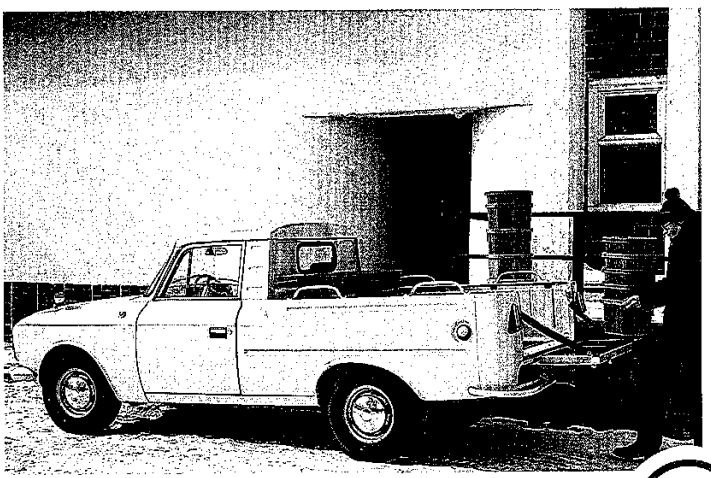
In January 1980 the IZH series gained front disc brakes, a sealed cooling system with an expansion tank, a more effective heating system and front seats with headrests. Externally there were no changes. But two years later, in March 1982, substantial improvements were made to both the IZH 2125 Kombi and the 412 IE, which considerably changed their exterior appearance. The new cars got slightly tweaked front panels and bonnet lid, flush door handles relocated further down the side of the car, one-piece front-door windows, new instrument panel and switches and a changed radiator grille in black, with revised round headlights and sidelights and indicators mounted vertically at the end of the grille (a little like the British Ford Cortina Mk 2). The overall dimensions stayed pretty much the same,

←This is an IZH 27151-01, the facelifted pickup truck announced in 1982. The grille design was shared across the full IZH range; cars and hatchbacks got chromed bumpers, however. *(Author's collection)*

↓The bed of the IZH 27151-01 was fitted with grab handles to aid loading. The rear reflectors are from the Moskvich 412. *(Author's collection)*

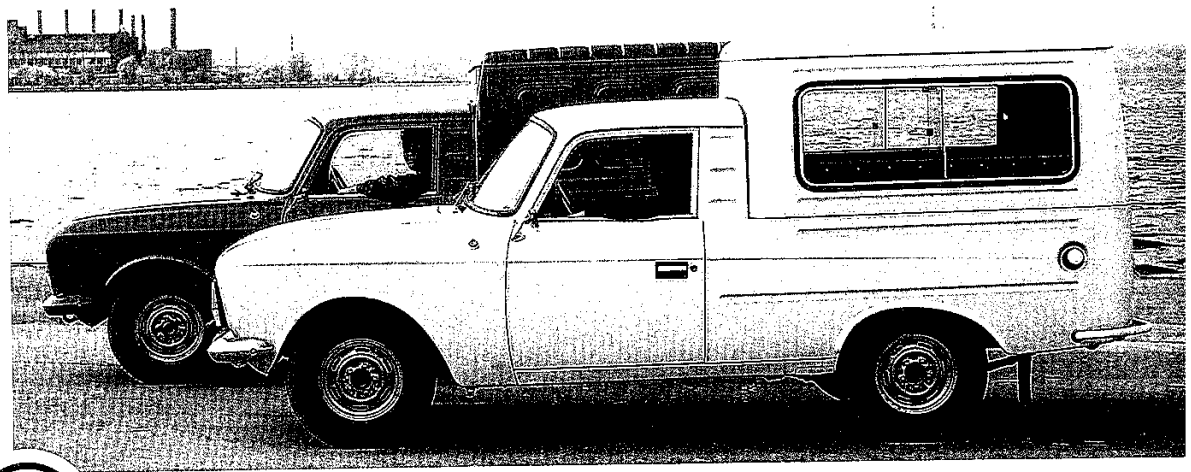
although the new car looked very different from both its predecessor and the still current Moskvich 2136/7/40 series. However, the public designation of the IZH saloon model remained the same, although according to the in-house classification records the revised model was actually called the IZH 412-028. However, the Kombi was renamed the IZH 21251.

The pickup and van models received the same changes and were renamed the 27151-01 and 2715-01 respectively. They also gained stronger rear springs, boosting their payload by 50kg. In 1987 a version of the van was introduced with windows and longitudinal rear seats, designated the IZH 27156. ■



The IZH 27151-01-013 was an extended pickup truck with the load bed extended by welding on an additional rear section. IZH started to develop the model in 1978 in response to requests from their Finnish concessionaire. *(Author's collection)*

In 1987 IZH added the 21756 to its range. To create it, they took the mainstream IZH 2715-01 van and added side windows and longitudinal seats to what had been the load area. *(Author's collection)*



OF VANS AND MINIBUSES

The other main Soviet builders of light commercials – RAF and ErAZ – changed little during the 1980s, although in the case of the former it was not for want of trying. The RAF 2203 minibus, marketed by Avtoexport as the 'Baby Bus', continued in production throughout the decade. A number of rare special editions were also built. One interesting variant came from the Finnish company Tamro, who created a special ambulance with equipment to resuscitate patients. These vehicles had a high roof that made it possible for doctors to work more easily on their patients. This concept proved to be very successful and was later adapted by RAF for its own medical versions. In 1988 a high-roofed mobile resuscitation vehicle, the RAF 2914, and an ambulance, the RAF 2915, superseded the Tamro-modified RAFs. Tamro models, which were used in Moscow as well as Finland, can be recognised by their brilliant yellow paint with red strips along the sides. The French firm Labbe built armoured vans for bank collections. Other specialist versions built by RAF itself included the RAF 2912, a mobile laboratory for use by law enforcement agencies.

A number of extremely specialised models were made especially for the 1980 Olympic Games held in Moscow. The articulated RAF 3407 road train was designed to take athletes and guests to and from the capital to the Olympic village, which was located to the south-west of Moscow. At the end of the Olympics these vehicles were sent to the Exhibition of Achievements of the National Economy of the USSR, where they were used to carry tourists. The RAF 2907 was a minibus with

↑ In 1987 RAF updated their mainstream minibus with a more powerful engine and improved brake system, including front discs, from the GAZ 3102 Volga. The new RAF 22038 featured a revised front end with a matt black grille and inside there was a new dashboard. *(Avtoexport)*

an extremely well-equipped salon, intended for use as transport for Olympic competitors, while the RAF 2909 metal-sided pickup was built in small numbers to provide a fleet of service vehicles for the Games. Electrically-powered models, the RAF 2207 and RAF 2210, were built for use by judges at the competition and there was even a special example designed to transport the Olympic flame without allowing it to go out!

In the mid-1980s RAF took a close look at how it could modernise the 2203. The need for this – the only vehicle in its class in the Soviet Union – was enormous, since the vehicle's deficiencies were legion: short suspension life, poor handling and road-holding and ineffective brakes in spite of a hydraulic booster for each brake circuit.

The Riga designers who planned to bring the RAF 2203 up to an acceptable level were influenced by the Byelorussian engineer Vladimir Mironov, who worked for NAMI. He designed a simple and reliable suspension layout that drew upon the principles enshrined in McPherson struts but could be fitted onto the RAF 2203. Working with the chief designer of RAF, Ivan Danilkiv, Mironov also planned a radical upgrade of the braking system complete with servo assistance. They also worked up a new steering column and refreshed the exterior with a new radiator grille, front-door windows and mirrors. The first prototypes were up and running by 1983 – some even included the front disc brakes and high-performance engine first seen on the GAZ 3102 Volga. The changes improved not only the reliability, but also the driveability of what was by now called the RAF 22038-30.

To keep the cost of making these changes down, the designers made savings wherever they could. They opted to make the new suspension components themselves in Jelgava rather than outsourcing them to another factory, which was quite radical as RAF had always relied very much upon bought-in components. Not that they had much choice – RAF production numbers were too low for any other plant to consider making the necessary investment to build the revised components. The final cost of introducing all the improvements into production models was relatively

→The RAF 22038 featured one-piece front-door windows and larger mirrors compared to its predecessor. *(Avtoexport)*

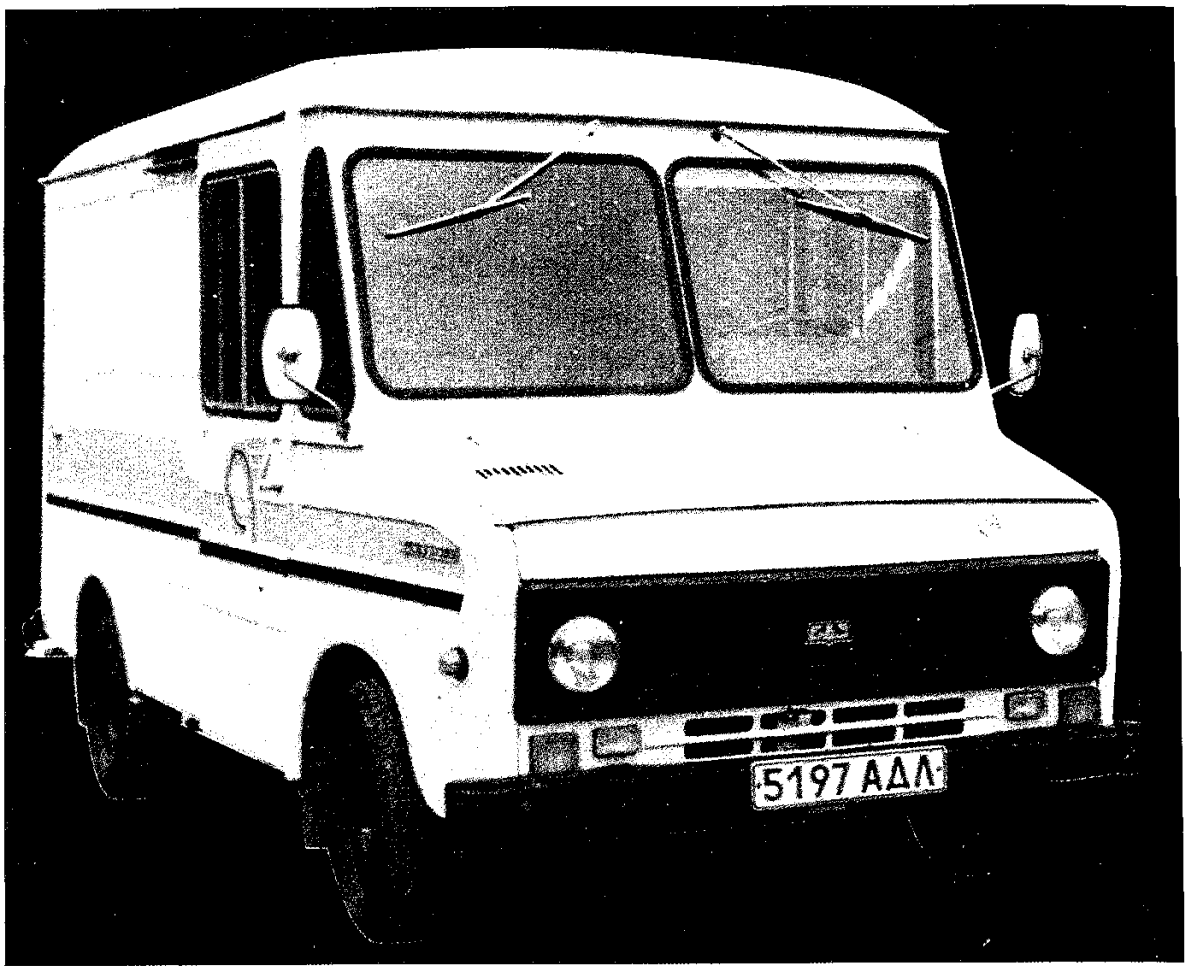
small. However, the final decision to invest had to be taken by both the senior management of the plant and, more importantly, Minavtoprom, which had ultimate control of the purse strings.

As an interim measure to hold the fort until the 22038-30 was given a green light, in 1987 RAF had introduced the RAF 22038-02, a mildly upgraded version of the RAF 2203, which drew upon the updates made in 1985 to the GAZ 24-10 Volga. The RAF 22038 inherited from the Volga the ZMZ-402 100bhp engine and dual circuit brake system, and could be identified by its restyled plastic radiator grille and new wheel trims. Inside there was a more stylish dashboard with round instrument dials. RAF also strengthened the body, improved the anti-corrosion treatment and made some detail improvements to the suspension.

In 1989 two examples of the RAF 22038-30 were sent on a gruelling test run without any serious problems to Vladivostok. One of them passed the full state testing programme, which was a requirement for any new vehicle to go into production in the Soviet Union. In spite of all this, there was still no authority or support for its production. The RAF 22038-02 interim solution became the permanent answer to RAF's quest for a new product and was to be the last vehicle that the company mass-produced. In 1990 the RAF 22039 appeared, a 13-seat variant with longitudinally mounted seats.

At the end of the Soviet era RAF is believed to have started experimenting with expanding its mainstream range to appeal to people other than its traditional users. Many of the vehicles

↑This is the RAF 2194, a purpose-built mobile resuscitation vehicle. The high top was unique to this model. *(Avtoexport)*



↑Although first unveiled in 1973 and seen by sports fans the world over thanks to a few examples being hand built to serve the 1980 Moscow Olympic Games, the practical ErAZ 3730 still didn't go into production during the lifetime of the Soviet Union. *(Avtoexport)*

→This is one of the small number of ErAZ 37305 box vans especially made to service the 1980 Moscow Olympic Games. *(Author's collection)*

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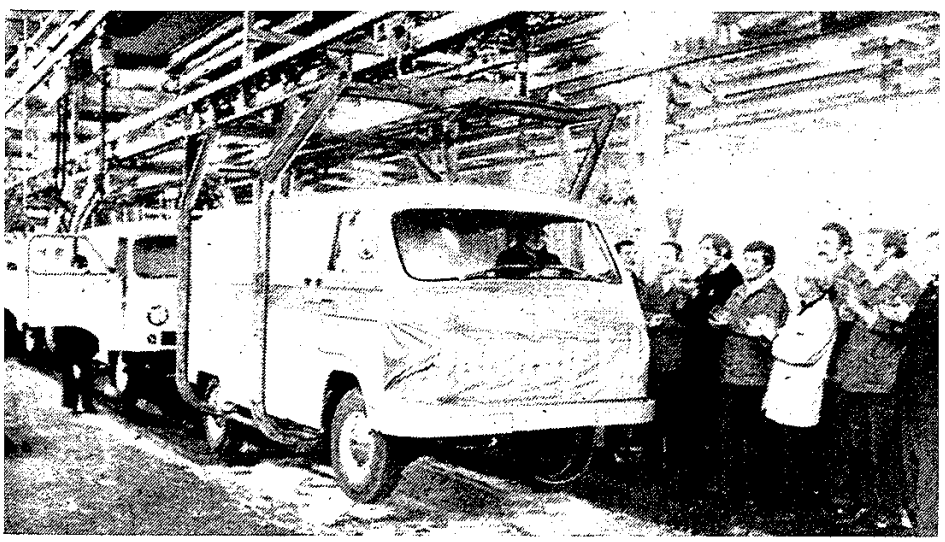
➔This is one of the small number of ErAZ 37305 box vans especially made to service the 1980 Moscow Olympic Games. *(Author's collection)*

developed, which were all based on the RAF 2203 series chassis and body, didn't see the light of day until the early 1990s, including the RAF 33111 drop-side pickup one-ton truck and its double-cab sister, the RAF 3311, both of which are thought to have been running as prototypes in 1989. Two purpose-built vans were also reported to have been tested in 1990, the RAF 2920 with an insulated box van body and the RAF 2924, the latter kitted out for use by vehicle maintenance mechanics.

ErAZ continued to make the ErAZ 762 series and built its 100,000th van in 1982. The ErAZ 762B upgrade had been introduced in 1976 and the ErAZ 762V followed in 1987. A five-seat kombi version, the ErAZ 762VDP, was introduced in 1988. By 1988 ErAZ was building 16,000 vehicles a year.

In the middle of 1983 work started again on preparing for mass production of the ErAZ 3730 parcel van. Being a box on wheels and tall enough for a man to walk around inside, the high and capacious body of the ErAZ 3730 made it ideal for a wide range of tasks: passenger vehicle, commercial van, taxi, mobile laboratory and disabled persons' bus.

Between 1984 and 1987 the Yerevan body shop and assembly lines were rebuilt, including the installation of new welding equipment and a system of overhead conveyors with a total length of 3.5km. The press room was also re-equipped. In 1984 ErAZ signed a co-operation deal with the Polish Lublin factory, at the time also looking to introduce a new light van. In 1985 the ErAZ 3730 – although still not in production – was awarded the bronze medal at the Soviet Union's Auto-prom Exhibition '85, which celebrated achievements by Soviet automotive enterprises. In 1986 ErAZ built their first isothermal van, the ErAZ 37301, demonstrated at the international exhibition in Poznan in Poland. In spite of all this, progress on getting the new van actually into production was painfully slow, and full-scale production still hadn't started at the end of the Soviet era. Consequently the company entered the free market era armed with no more than its ancient but nevertheless extremely rugged ErAZ 762. ■



←The 100,000th ErAZ 762 leaves the production line. The factory was the first and to date remains the only motor plant in Armenia. *(Author's collection)*

THE ONES THAT GOT AWAY

↑This NAMI 3305 was the prototype light truck developed to spearhead a new range of Soviet light commercials. It was passed to the UAZ plant for further development, where for a brief time it was renamed the UAZ 3727. *(Avtoexport)*

The USSR was extremely proud of its enormous volume of truck production. However, the country made very few commercial vehicles in the 1.5-tonne range that was popular across Europe. The need for such a vehicle was considered at no less a forum than the 26th Congress of the Communist Party of the Soviet Union, after which work began at NAMI in 1984 and a meeting with Minavtoprom was held every week to ensure that the project stayed on track. The project was keenly supported by Geydar Aliyev, the First Deputy Chairman of the Council of Ministers of the USSR. Aliyev wanted Azerbaijan to become a vehicle production centre like Georgia and Armenia, where the Kutais (KAZ) truck and Yerevan (ErAZ) van plants had introduced automotive industry and the accompanying jobs, technology and prestige to what were generally less developed parts of the Soviet Union.

In 1985 engineers from UAZ joined the project. The team bought examples of the Renault Master, Iveco Daily, Mercedes Benz 307 and Ford Transit in order to learn from the best in the business. The design of the Soviet vehicle was simple but no less up-to-date than its European competitors, with live axles front and rear, 15in wheels and, initially, drum brakes all round, later replaced by discs at the front. The engine was to be that old Soviet stalwart the UMZ 2,445cc, used in other Soviet commercials such as the UAZ series and the RAF range.

One of the first models, built by NAMI in Januar 1986 as the NAMI 3305, was passed to UAZ with the instruction to develop a new engine for it a quickly as possible. A non-turbo 70bhp Iveco

diesel was chosen as the template and prototypes fitted with this engine were very successful.

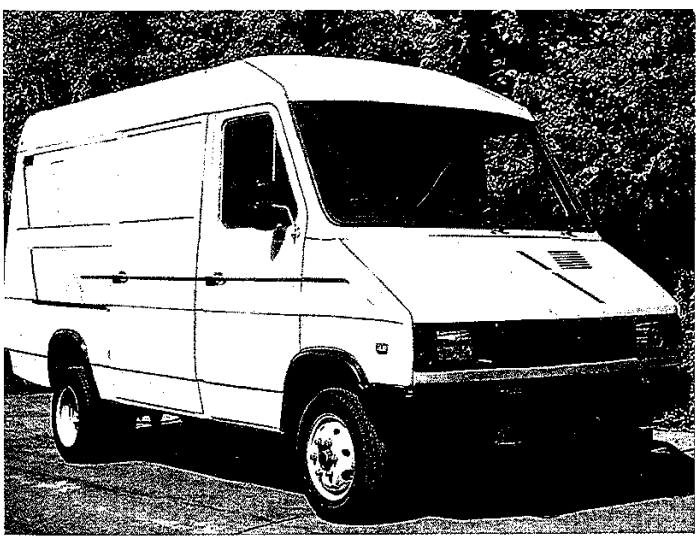
The core of the small-capacity truck range was to be a massive van. The ministry insisted on this: the Soviet light truck must have more space and bigger doors than its European rivals. The first running models were made with NAMI; the second and third series of prototypes were made entirely in Ulyanovsk.

By 1986 what had become the UAZ 3727 vans were being tested by the factory's engineers and planning had even started on building a diesel engine plant. Production was intended to start within four years. The designers developed a wide range of models, including low- and high-top vans, a pickup truck and a microbus. However, the management of UAZ refused to have anything to do with the project. They had a stable product line in demand by existing customers – production during the eighties was running nice and steadily at around 53,000 units a year. The factory simply didn't want the hassle of introducing a new range, especially as past experience told them that there would be insufficient funds available from the government to produce it. Aliyev's idea about setting up a factory in Azerbaijan started to look increasingly attractive to the new vehicle's supporters back in Moscow.

In 1987 work began on building a new factory – KiAZ – in Kirovabad, now Gyandzha, which would be capable of producing 40,000 vehicles a year. To cope with the lack of experienced labour, robots were to be used as much as possible to make the bodyshells, while mechanical components, such as engines and gearboxes, would be shipped in from Ulyanovsk. Other Soviet factories were also asked to get involved, including GAZ and VAZ; the latter helped out with plastic components.

In autumn of the same year, with design work all but complete, the British IAD firm was called in to cast its eye over the new vans. They made changes to the basic design and developed independent front suspension, which naturally was more complex and more expensive. Back in Great Britain they tested the sole prototype and even printed brochures advertising the van as the Multi-2500 or BAZ 3783.

It was expected that the new KiAZ plant would be ready to build its first vehicle in 1989. This would be the KiAZ 3727, which was the long wheelbase, high-roof version of the range. However, construction of the new plant was, as was usual for the Soviet Union, running behind, so a decision was taken to also build the new vehicle – in its low-roof, short wheelbase version – at the Bryansk motor vehicle plant (BAZ), in both van (BAZ 3783) and ambulance (BAZ 3778) forms. The short wheelbase, low-roof van design was also restyled – it was nowhere near as angular as the KiAZ 3727, adopting slightly 'softer' themes including round headlamps and more rounded window profiles. Power came from the ubiquitous UMZ 4178 2,445cc engine. BAZ, however, was



The KiAZ 3727 light van was only built as a prototype. The factory that was under construction to build this useful-looking vehicle was a victim of the collapse of the Soviet Union and was never completed. *(Avtoexport)*

better known for its special multi-wheeled chassis and off-road truck tractors with 16- to 34-tonnes load capacity, and was not really geared up for producing something like a light van.

A UAZ team was sent to BAZ to help out. By this time though, those in power were having second thoughts about the whole idea of building a new factory for the van, be it at Kirovabad or at Bryansk, partly due to the high cost of equipping what were in practice two entirely new plants to build two new products. Minavtoprom, which was now led by the former Director-General of GAZ Nikolai Putin, was inclined to favour the Gorki works, which could take on the new small truck more easily and without such a high investment. Some of the design blueprints for the BAZ series were reportedly passed to GAZ. Even so, half-hearted production took place at Bryansk for several years, with few vehicles being made – certainly not enough to cover the cost of the investment made to enable BAZ to expand its catalogue. Mass production never got under way and the quality of the vehicles that were made was very poor. Production petered out in the early 1990s and BAZ returned to its successful work as a maker of multi-axle heavy vehicles for use on- and off-road. Light commercial vehicle development in post Soviet Russia was concentrated at the GAZ works in Gorki, leading to the introduction in 1994 of the phenomenally successful Gazelle which never-the-less shared much of its DNA with the BAZ product.

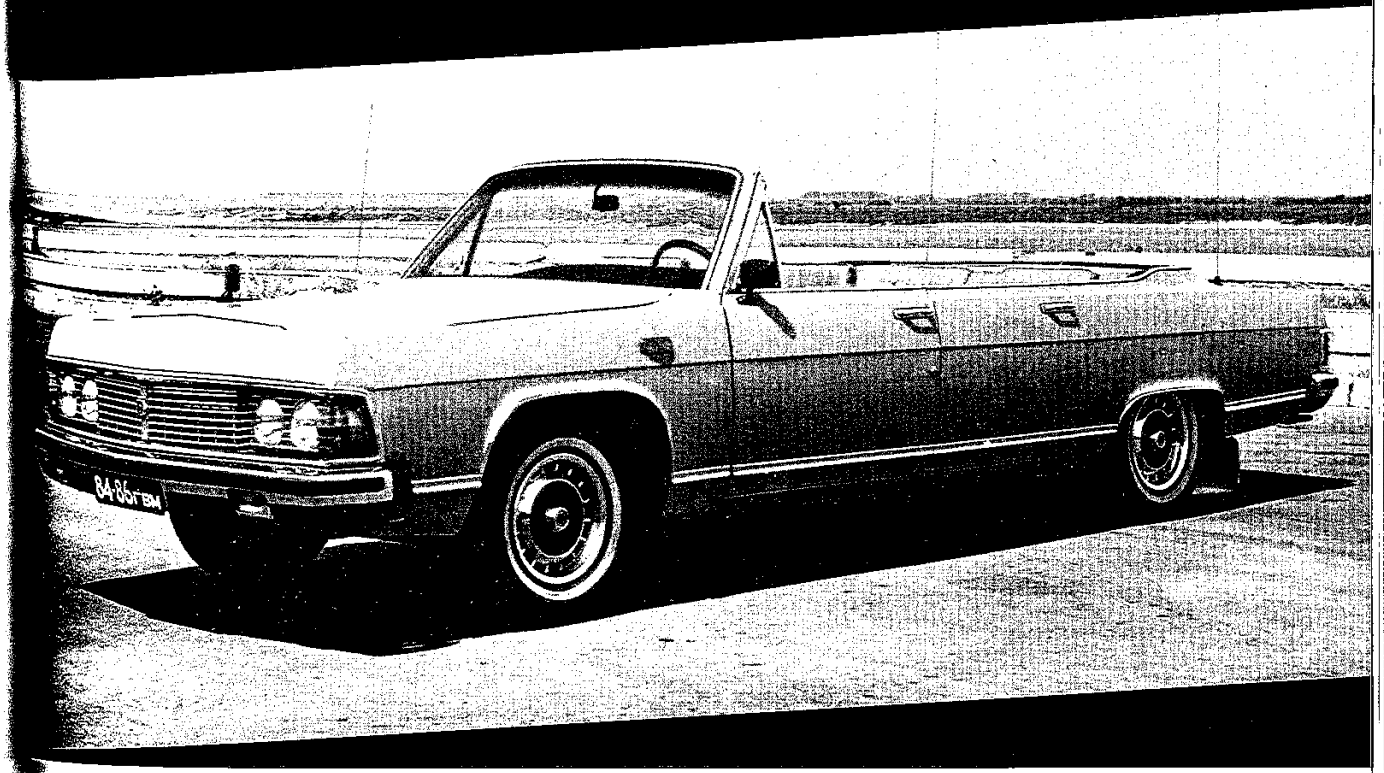
Meanwhile, in Kirovabad approximately 95 per cent of the plant had been built and 70 per cent of the production equipment installed by 1991. Then came the collapse and break up of the Soviet Union and the plant was left high and dry with nothing to build. A newly independent Azerbaijan, together with Turkish partners, tried to organise the assembly of Land Rovers before setting its sights a bit lower with the production of bicycles, sewing machines and lawnmowers. The KiAZ 3727 itself remained a rarely seen prototype, a vehicle that today is largely unheard of even in Russia.

The basic design of the Soviet Union's answer to the Ford Transit was shared with Poland to help strengthen 'fraternal and industrial connections' between the two Soviet bloc countries. Besides having political motives this collaboration had a technical imperative too: the Poles had a licence to build a British based diesel engine, known in Poland as the Andoria CT90. There was little chance of UMZ getting its own diesel into production in time to power the new van, so the Poles provided the means by which UMZ could offer a diesel option while it got its own engine designed and into production. However, the project fell by the wayside as the Iron Curtain was drawn back. The Poles went their own way, developing the vehicle as the Andoria-powered Lublin range, in size close to the BAZ interpretation but in style much nearer to the KiAZ take on the project. ■

The BAZ 3783 ambulance, shown here, and its panel sister the 3778, were both products of the Soviet era, but production really only took place at the BAZ heavy engineering works – and then on a very sporadic basis – from the start of the 1990s until about 1995. Power came from the ubiquitous UMZ 4178 engine. The plant itself is still a successful maker of heavy-duty multi-axle vehicles. *(Julian Nowill)*

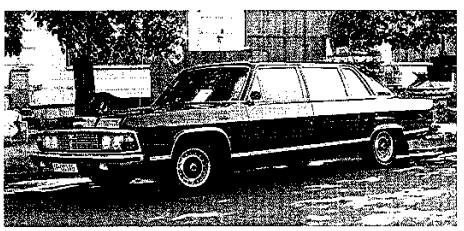
GAZ 14

THE SEAGULL MAKES ITS LAST FLIGHT



The flagship of the GAZ range remained the GAZ 14 Chaika, introduced in 1977. The four-door convertible, the Chaika 14-05 was introduced in 1982 and remained part of the Chaika line-up until all production came to an end in 1988. For parades in Red Square, cabriolet ZILs were used; for similar events away from Moscow, cabriolet GAZ 14s took their place.

Each year about a hundred GAZ 14s were built – more than the ZIL, but still not mass-produced in the normal sense of the word. At the end of the 1980s the Soviet authorities decided that they couldn't really justify keeping such an elite car as the Chaika in production any longer. Manufacture ended as part of the perestroika 'fighting privileges' campaign. A total of 1,114 had been built, the last being assembled from parts held in stock in 1989. President Gorbachev not only ordered GAZ to cease production, but also told it to destroy all the blueprints and technology used to produce the limousine so that production could never begin again. In 1996 GAZ considered resurrecting the Chaika for the benefit of collectors after a slice of Soviet nostalgia, but this proved to be impossible because Gorbachev's orders had been executed to the letter. ■



↑The GAZ 14-05 was the last new Chaika. It was a soft-top based upon the saloon. *(Group GAZ)*

← Production of the GAZ 14 Chaika came to an end in 1988. The cars remain extremely sought-after by motoring enthusiasts, as can be seen by this superb example photographed in Hungary in 2007. *(Hungarian Moskvich Club)*

ZIL

STILL TOP OF THE PILE

There were few orders for the ZIL series as it made its stately way through the final decade of the Soviet Union. This is a pre-1983 example of the ZIL 4104. *(Autocar)*

During the 1980s ZIL concentrated on truck production. A major investment programme, ready for the launch of its ZIL 4331 series, created a factory capable of making 200,000 trucks a year. The length of its production lines reached 60km, and in 1988 the company achieved its highest ever annual output of trucks – 209,650! The ZIL car range took a back seat, with the ZIL 4104, introduced in the late 1970s, flying the flag.

The ZIL 41045, made from 1983 to 1985, was the first facelift of the 4104. Changes were extremely small, comprising some styling alterations to the front lights including the deletion of the wraparound indicators. The ZIL 41045 was used as the basis of the ZIL 41046, which was equipped with special equipment for use on parades, such as a roof that could be rolled back to allow the VIPs to stand up and be seen. The armoured variant of the 41045 was the ZIL 41051.

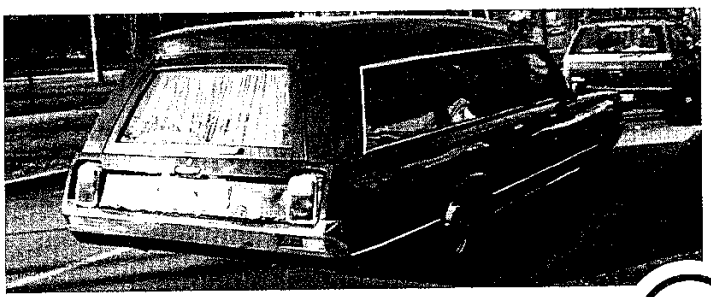
The next change came with the ZIL 41047, first made in 1986. This model can be distinguished from its predecessors by its rectangular Bosch headlamps, complete with washers, and its slightly restyled rear end. Other changes included electric door mirrors, the deletion of the front door quarter-lights and redesigned bumpers. The range incredibly enough included a total of seven models: the ZIL 41047 seven-seat limousine; the ZIL 41052 armoured limousine; the ZIL 41042 estate car, usually equipped as an ambulance; the ZIL 41049 equipped with special equipment for use on parades; the shorter (at 5,750mm) and lighter (at 3,560kg) five-seat ZIL 41041 saloon, with

a wheelbase 580mm shorter than the mainstream 41047; the open-top ZIL 41044, on the same shorter floorpan: and the ZIL 41072, known as the Scorpion, designed to carry escorting security service men, with wide external running boards, external handrails alongside the body and a hatch in the roof.

In 1988 ZIL revealed the prototype for a new car, the 4102. Although based on the 41041, this had front-wheel drive. Two examples were presented to Soviet leader Mikhail Gorbachev, but the project was canned – a victim, it would seem, of Gorbachev's campaign against the ostentatious privileges enjoyed by the Soviet elite. The ZIL 41047 remained in production as the company's last passenger car until the axe fell in 2003. ■

The 1983 ZIL 41045 was the first facelift of the ZIL 4104, being most easily recognised by the deletion of the wraparound front indicator lamps. *(Julian Nowill)*

One the rarest of ZIL body styles was this estate-like machine, the ZIL 41042. These were usually equipped either as ambulances for use by the Soviet Union's most senior officials or, if the ambulance proved to be too late, as a hearse. *(Julian Nowill)*



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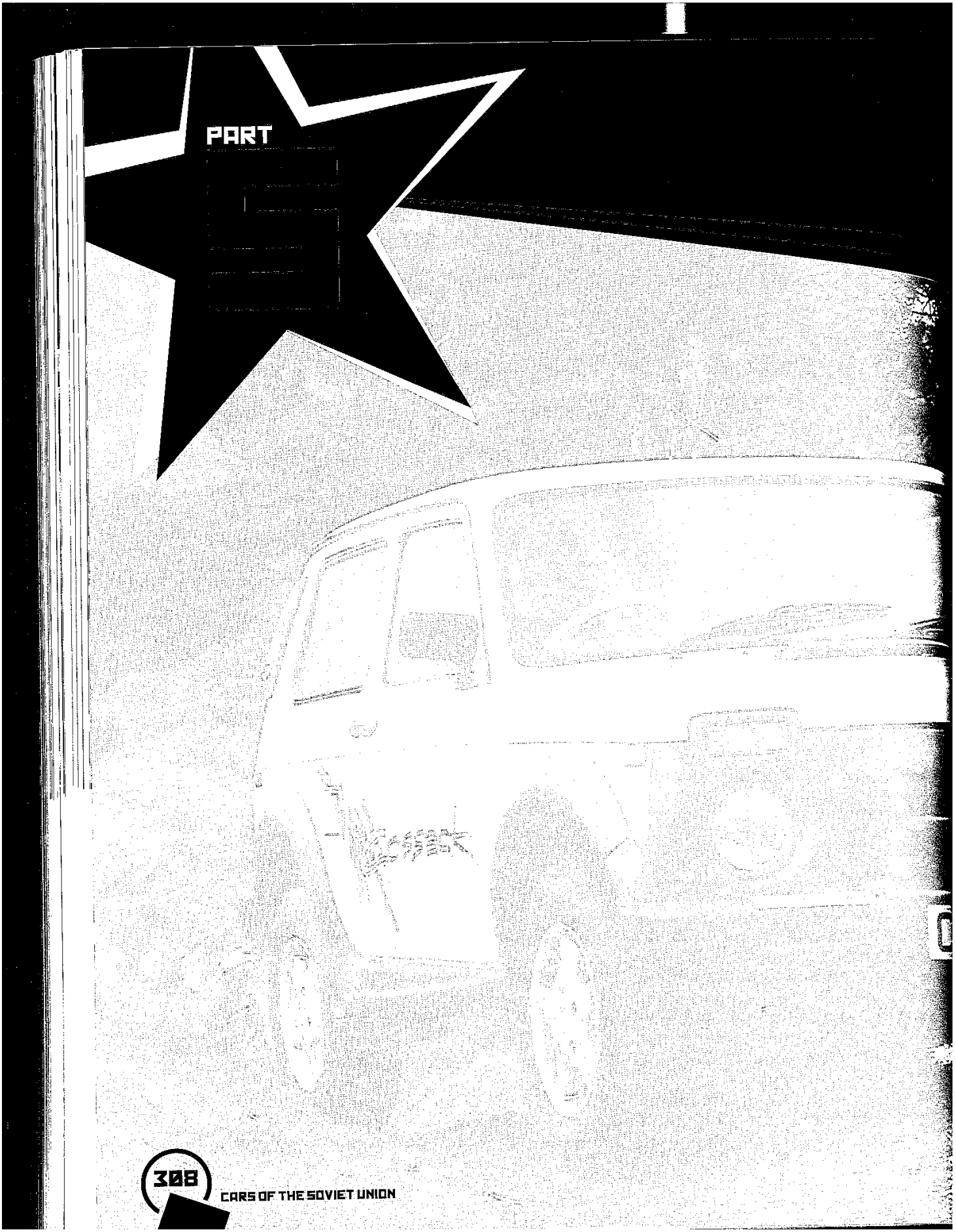
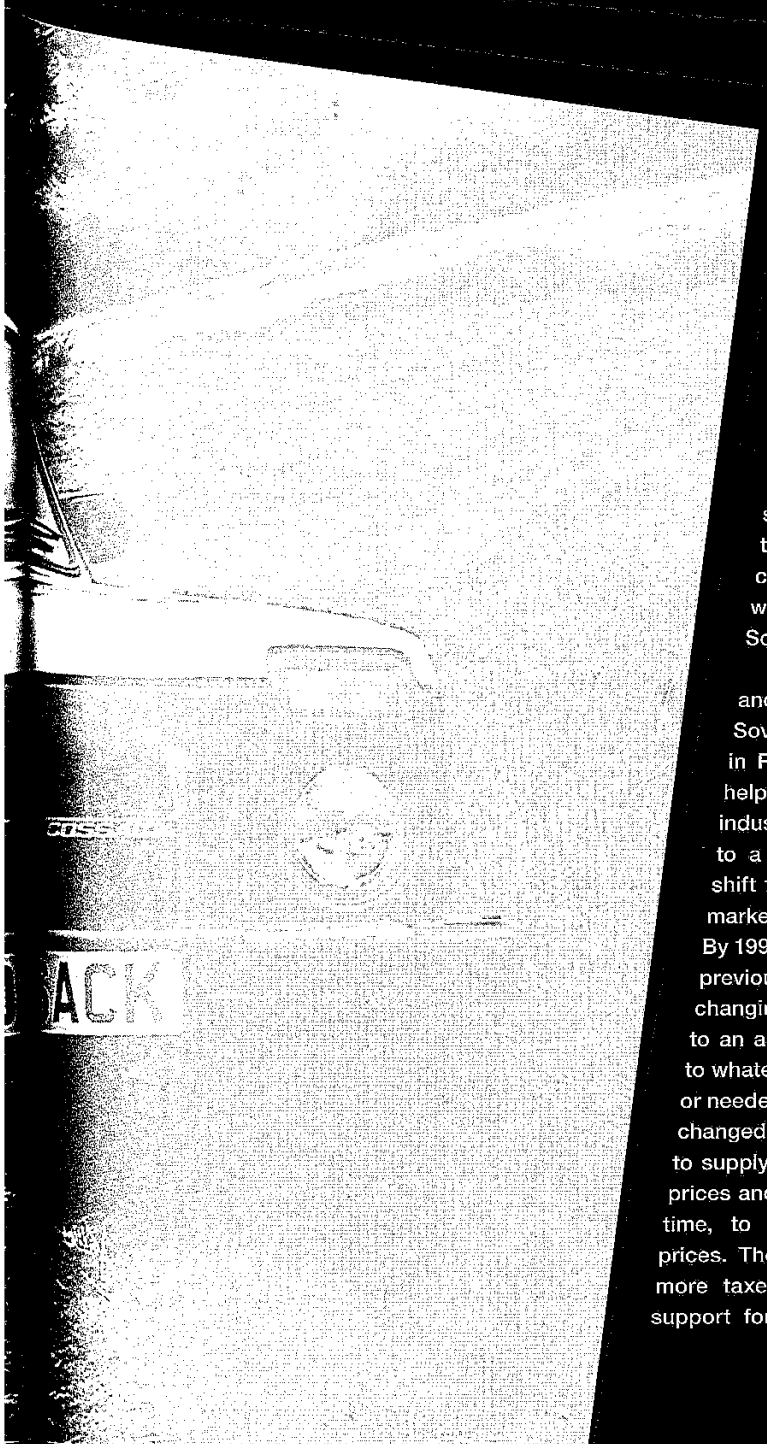


1991 ONWARDS



The collapse of the Soviet Union between 1990 and 1991 and with it the planned socialist economy had a serious impact on all Soviet enterprises, including the car industry. What had been one country was from December 1991 a Commonwealth of Independent States (CIS) comprising 11 separate countries, an associate member of the CIS and the three Baltic republics. Each state developed its own social, economic and trade policies that in many cases featured a clear move away from the influence of Russia, which had been the dominant member of the Soviet Union.

Apart from RAF in Latvia, ErAZ in Armenia and ZAZ and LuAZ in the Ukraine, the Soviet car industry had been concentrated in Russia itself, which to a certain degree helped protect the bulk of the Soviet auto industry from the post-Soviet fallout – only to a limited degree, though, because the shift from communism to a completely free market took place with breathtaking speed. By 1992 all of the motor companies saw their previously close relationship with the state changing rapidly. No longer did they work to an agreed plan – now they had to work to whatever the market dictated was wanted or needed. Their relationships with suppliers changed from centrally planned agreements to supply materials and components at set prices and, in theory at least, at a specified time, to contracts based on fluctuating prices. The state itself started to demand more taxes from business and as state support for industry was axed previously

reliable component suppliers went out of business.

Inevitably the car market inside the former Soviet Union also changed. The independence of what had been former Soviet states complicated the sale of cars in these now self-standing countries, which imposed customs duties and looked towards the west for new suppliers. While a strong manufacturing infrastructure was a legacy of the Soviet era, the same could not be said for sales and service. The manufacturers for the first time had to deal not with carefully constructed centralised plans for distribution but with private sales networks, companies and organisations.

As foreign cars, both new and second hand, started to trickle onto the Russian market, domestic firms started to look uncompetitive. In the case of new cars, the competition from Korea was particularly worrying – the Japanese brands that had conquered so much of Europe with the their low-price and high-value strategy had by this time moved firmly away from the budget sector. Indeed, it was purely the low price and relative ease of maintenance of Russian cars that kept the Russian firms going through these difficult times as they tried to develop new product lines. A flood of imported second-hand cars also distorted the market for domestically produced vehicles. After years of comparatively limited choice, a ten-year-old Ford Escort Ghia, Volkswagen Golf GTI or Opel Astra CD looked remarkably attractive to a motorist brought up on a diet of Ladas, Moskvichs and ZAZs. In the far east of Russia, many of these cars came from Japan – even with the steering wheel on the 'wrong' side, the lure of a five-year-old Corolla seemed to be almost irresistible to many Russian motorists. The imported cars offered features not available on Russian cars but which were ideally suited to Russian driving conditions, such as power steering, ABS systems and air conditioning.

Having to set up distribution networks, to negotiate sales and supply contracts, and to learn the black arts of marketing and advertising were difficult enough without having to confront one of the biggest problems that afflicted post-Soviet Russia – the fact that the sudden and chaotic change from a planned to a free-market economy allowed criminality to flourish. Even former Soviet President, Mikhail Gorbachev, who once travelled only in heavily guarded ZIL limousines, was a victim of the crime wave. His car was stolen from a guarded office car park while he was away on a tour of Germany – one of 40 car thefts a day in a country that just a few years earlier had an extremely low crime rate.

By 2001, car thefts in Moscow had fallen to 9,126, from a staggering 16,531 in 1995, and statistically speaking the average Muscovite was by the start of the 21st century less likely to have their car stolen or be a victim of crime than their counterpart in London or New York.

It wasn't just car owners who faced growing villainy. The carmakers themselves caught the eye of the local hoodlums. VAZ in particular had to face plundering, theft and organised crime with all the consequences this had on the volume of production and the quality of its cars. By the mid-1990s, a mass of different criminal groups controlled much of the distribution of cars and parts, making attempts to try and recover profits and revenues to invest in new cars problematic. Any serious effort by the firm's management to introduce some order to the distribution system resulted in increased violence and criminal activity. Cars disappeared without trace and re-emerged on the forecourts of dealers who didn't really care how they came by cars to sell or who were 'expected' to sell the cars supplied by certain 'unofficial' distributors. Sales of cars to dealers and distributors, both legitmate and those from the wrong side of the tracks, were often by barter. The manufacturers swapped cars for cash or materials, not all of which made it back to the factories.

The concentration of assembly-line workers on the task in hand could no longer

be taken for granted as long-standing social benefits and certainties – low rents, free health care, relative freedom from crime – evaporated. Assembly quality in Soviet cars had already been below Western standards when the priority under the communist system had been to fill the numeric objectives of the state plan. Now it slumped further as the Russian car industry wrestled with an unregulated, chaotic and often lawless free market in which erratic supplies of components, of variable quantity, had to be assembled into cars by a demoralised and in some cases petrified workforce. Try as it might, the Russian auto industry seemed unable to capitalise on the massive demand for cars in post-Soviet Russia. Car production declined by 28 per cent between 1990 and 1996.

Overseas companies started to plot their exploitation of what was one of the last great untapped global car markets, which would soon – if the former Soviet auto industry continued to fall apart and not invest in new cars – have no domestic players at all. By the mid-1990s automakers and suppliers were looking at Russia the same way that in the first decade of the 21st century they would eye up China. Virtually every global automaker had some sort of production plan for Russia. The Soviet automotive industry had always been more vertically integrated than in Western or Asian countries, with domestic manufacturers traditionally satisfying 80 per cent of their component needs from internal sources. Now overseas component suppliers began to invest in plants or joint ventures to supply high-quality, high-technology components to foreign brands setting up factories in Russia and in time to Russia's own manufacturers, which started to cut back on in-house parts production.

The economic collapse in August 1998, in which the value of the rouble slumped and Russia's economy came close to meltdown, ironically offered breathing space for Russian manufacturers – cheap cars were back in fashion again as people simply couldn't afford imports, be they new or second-hand. The foreign manufacturers cut back their plans now that Russia looked too risky and uncertain profits in a devalued rouble no longer looked so tempting. Russia's own manufacturers, especially AvtoVAZ, were able to find buyers again for cars that were familiar to Russian motorists, could be serviced and maintained cheaply and easily, and were affordable to buy.

In the aftermath of the economic collapse, the Russian government finally got a grip on the anarchic state of much of the country's businesses and social life. The election of President Vladimir Putin in 2000 heralded a new era, the laissez-faire attitude of Boris Yeltsin's regime being replaced by a far more organised and structured approach to industrial policy that recognised Russia's need to retain control over the essential parts of a modern industrial society. What a contrast to the British government, whose policy was and still is that car manufacturing – indeed any kind of manufacturing – and any kind of strategic ownership of any national assets are simply not important!

Real efforts were now made by the Russian authorities to rein in the mafia bosses and criminals who had for too long held sway over too much of the country's economic base. By the middle of the first decade of the 21st century, the policies and actions of the new government had created a much more favourable climate for industry. As a result, investment by both domestic and foreign firms in manufacturing facilities in Russia had by the second decade of the century helped build up the industry again so that the tide of imports was finally held back. Exports began to revive, although there was still a heavy reliance upon former Soviet satellites such as Belarus, Kazakhstan and the Central Asian republics that still had a loyalty to traditional Russian brands such as Lada, which were seen as affordable and easy to keep on the road. What was perhaps more encouraging was that some of the other Soviet export markets, especially those in Africa, South America and Europe that looked as though they had been lost for

ever, were starting to prove once again to offer real opportunities for sales of Russian-made cars.

A glance at a typical Russian street scene, more than 25 years after the fall of the Soviet Union, shows motorists have taken advantage of the free market to shop around for their wheels. The Russian market has been opened up to imports since the end of the 20th century although the government under Vladimir Putin has since 2010 been actively encouraging local production to reduce imports. One example was Russia's scrappage scheme, which paid people to scrap their old cars and buy new ones. It was specifically limited to cars made in the country. The programme gave a real boost to sales of Ladas and encouraged Russian production by global manufacturers.

The story of the post-Soviet motor industry is every bit as fascinating and unique as that of the Soviet era – and far too complicated to record in a single chapter. Not all the Soviet plants survived and some came pretty close to collapse before finding their feet again. Substantial investment by global firms Renault, Hyundai, Kia, Volkswagen, Toyota and Ford has brought new capacity to the Russian motor industry. By 2016, Russia was producing just over 1,300,000 cars a year, putting it well in the premier league of top 20 car-making countries. Most of the Soviet-era cars have now retired but some still live on, either in the form of updated designs or in the guise of components underpinning new models introduced by Russia's own car makers. And of course, millions of Soviet cars remain hard at work on the roads of Russia.

Here, then is a 'where are they now' guide to the Soviet cars that motored on into the post-Soviet era.

FIGHTING BACK AGAINST THE ODDS

At the end of the 1980s VAZ, now more commonly known as AvtoVAZ, was one of the few profit-making enterprises in the Soviet economy. The plant's yearly output was running at 740,000 cars, and it employed about 130,000 workers. However, at the beginning of the 1990s VAZ started to encounter serious problems. The prices charged for components went up and the purchasing power of impoverished Russian consumers started to fall. Within a couple of years, production dropped to 674,000 cars. Even though the company's profits had evaporated, on 5 January 1993 VAZ was privatised as the Russian government strived to show just how committed it now was to capitalism, even if that meant putting the future of the country's industry in jeopardy. By 1995 the debt owed to VAZ's creditors was 1 trillion roubles and the firm faced serious problems not just at home but in its export markets.

The export success of the VAZ 2108/9/99 Samara at the end of the 1980s and beginning of the 1990s was in part due to the lack of comparable products at the same price being available. The Korean budget brands of Kia and Hyundai, which drew upon Japanese technology, and Skoda, now backed by the might of the Volkswagen empire, had made life much tougher for the aging Samara at the price-sensitive end of the European car market. AvtoVAZ simply couldn't afford to invest in the car to keep it competitive. The firm's distribution networks in Europe decided to concentrate on the VAZ 2121 Niva, still largely unchallenged as a budget SUV, all but ignoring the rest of the firm's range.

By 1997, although annual production had recovered to 730,000 AvtoVAZ now owed more than two trillion roubles. Money became so short that at one point the group was able to survive only by barter! Even though AvtoVAZ was now in private hands, the Kremlin realised it was simply too big an employer to be allowed to go to the wall. Import tariffs were raised for used foreign-made cars, which were the main competitor in Russia for Ladas.

The general situation at AvtoVAZ started to get a little bit better by 2000, when increased production after the Russian economic crisis in the autumn of 1998 drove buyers back to budget brands like Lada. By the beginning of the 21st century, the law-enforcement agencies were even able to lower the crime level surrounding AvtoVAZ. In 2002, the firm was finally able to start to develop the kind of coherent distribution and marketing strategy that was taken for granted by Western manufacturers. VAZ products in Russia were rebranded as Ladas, creating a single name plate the world over for the Togliatti factory's products.

AvtoVAZ was finally able to really exploit the potential of its first post-Soviet design, the VAZ 2110 series, which went into production in 1996. Development of the new car had started in 1987 with production originally planned to start in 1992. The economic turmoil that accompanied the end of the Soviet Union meant that the launch had to be delayed for four years. An estate version, the VAZ 2111 arrived in 2000 and the VAZ 2112 hatchback the following year. The VAZ 2110 was

a mid-sized front-wheel-drive range powered up until late 2004 by the 1,499cc engine introduced in the Samara. The gearbox and some parts of the suspension were borrowed from the Samara as well. From 2005 onwards, a 1,596cc engine in both 8- and 16-valve versions was used. The Lada Priora, coded VAZ 2170, a heavily revamped 2110, went on sale in April 2007 as a saloon, a hatchback following in February 2008 and an estate in May 2009, replacing the 2110 range completely by 2009. The Priora remains in production in 2018, attracting 15,000 buyers during 2017 – a car with its roots in communism doing rather well under capitalism.

One new car that AvtoVAZ wasn't able to introduce was a new Niva, even though it developed such a car. Designed in 1995 as a replacement for the original VAZ 2121, the new car, which was initially known as the VAZ 2123 was presented officially in 1999 at the Moscow Motor Show. A lack of cash meant the Russian firm simply couldn't afford to get it into mass production, so it entered into a joint venture with General Motors and the European Bank for Reconstruction and Development to build a new plant in Togliatti to make the car under the Chevrolet brand. Called the Chevrolet Niva, it was launched in September 2002 with the drivetrain largely borrowed from the original VAZ 2121 Niva. Indeed, most of the components were made by AvtoVAZ. So good was the design that the only non AvtoVAZ parts were the Chevrolet badges. When in 2015 General Motors pulled its Opel and Chevrolet brands out of the Russian market, as the American firm refocused its once global operations on the Americas and China, the only mass-market Chevy left on sale in Russia was the Niva, where it continues to sell strongly.

During 2006, AvtoVAZ was at the centre of continued speculation over its future approach to working with international companies with the plant itself regularly announcing talks with major companies including Fiat, Volkswgaen, General Motors and Magna. Local motoring and business experts became increasingly cynical about the validity of any of the stories, but in December 2007, AvtoVAZ silenced the naysayers by announcing that it had chosen to link up with Renault, the French arm of the global Renault-Nissan Alliance.

Renault and AvtoVAZ agreed to form a strategic partnership to share technology with a particular focus on strengthening and growing the Lada brand. Renault saw the deal as a way of bolstering its position in the potentially lucrative Russian market. The deal progressed to Renault in March 2008 buying a 25% share of Lada followed by the Alliance taking a controlling stake in Lada in June 2014.

Away from the financial columns of the press, the link-up yielded some new products rolling out of AvtoVAZ's Togliatti plant, which started to assemble the second-series Dacia Logans, sold as Renaults in Russia, in March 2014, the Logan's sister car the Sandero in May 2014 and Nissan Almeras in December 2012, all three cars sharing the same platform. Dacia, once a fellow traveller in the communist motoring world but since 1999 a subsidiary of Renault, donated its series-one Logan MCV to the Russian firm to make as the Lada Largus, premiered at the 2011 Moscow Motor Show and going into production in March 2012. Lada was now a relatively small but important part of what had by 2017 become the world's biggest automaker. ■

AN OLDIE BUT A GOODIE

The rear-wheel drive Ladas were still at the start of the 21st century a mainstay of AvtoVAZ's output. Toward the end the 1980s the VAZ 2106 had remained an extremely popular car, even when the revised VAZ 2105/2107 and front-wheel-drive VAZ 2108/2109 were available. Its success continued well into the post-Soviet era. Certainly, it was no longer considered to be a prestige car, but good memories about the first Zhiguli series supported steady demand for the VAZ 2106. Between 1998 and 2002 it was produced by RosLada, a vehicle assembly company established in Syzran in Russia's Samara region by private investors who saw an opportunity to relieve pressure on the main Lada production lines. The 2106 was also made from 2001 – the car's silver anniversary – until the very end of 2005 by IZH in Izhevsk. The last one rolled out of the IZH works on 28 December 2005. Apart from less chrome and more matt black trim outside, a padded steering wheel inside and fuel injection under the bonnet, it differed little from the the first one that roared out of the factory in 1976. A staggering 4,388,000 VAZ 2106s had taken to the roads over its 29-year life.

The rest of the rear-wheel-drive Ladas, the VAZ 2104/2105/2107 series, also continued on into the post-Soviet era with few fundamental changes although by the late 1990s the Zhiguli name tag had been abandoned in favour of the simple model codes. This lasted only until October 2004 when the range was renamed Lada Classic.

The engine choice for the range was reduced in 1994 when the 1,294cc VAZ 2104 estate car

↑In 1992 the VAZ 21074 was sold in Britain as the Lada 1600L. *(Author's collection)*

➔The VAZ 2105 Riva continued into the post-Soviet era, remaining, with its more luxurious VAZ 2107 sister, the firm's highest selling car. *(AvtoVAZ)*

was dropped. Further cutbacks in the range took place in 1995 when the 1,198cc VAZ 21051 saloon and the 1294cc VAZ 2105 and VAZ 21072 were axed, leaving the 1,452cc and 1,568cc engines as the principle power units. In the autumn of 2004 AvtoVAZ offered Russian buyers the chance to buy a Classic with contemporary fuel-injection systems that, complete with an exhaust catalyst, could meet Euro-II standards. The last Lada with a carburettor left Togliatti in July 2006. The Classic range, which by 2007 was made up of the 1,452cc VAZ 2105 and the VAZ 2107 with a choice of 1,452cc and 1,568cc engines, on its own took 12 per cent of the entire Russian car market. The 2107 wasn't only popular in Russia; assembly in Egypt began in 2004 where Ladas had long been popular as taxis.

Production of the classic VAZ 2105/2104/2107 cars wasn't just undertaken at Togliatti during the post-Soviet era. The 2107 was assembled at Roslada from 2002 until 2006, using kits supplied by the parent factory. AvtoVAZ officially confirmed in July 2003 that full production of one of its longest running models, the VAZ 21043 estate, was to be transferred to the IZH factory in Izhvesk. In 2006, the estate car was joined on the Izhvek production lines by a 2104-based van, the IZH 27175, created by combining the front section of the VAZ-2104 with parts of the rear section of the IZH-2717. By July 2006, the 21043 had been replaced by the Euro-II compliant, fuel-injected 1,568cc VAZ 21041 version. In May 2007, IZH offered buyers the option of having their estate car with the VAZ 2107 style grille and bonnet. Production of the VAZ-2104 and the IZH-27175 at IZH stopped in May 2009 when the factory filed for bankruptcy but resumed in September 2010 after a rescue package was put together by Sberbank, the main creditor of the works, to get the plant up and running again and so improve its value to

potential buyers and investors. Sales were further bolstered by the IZH assembled VAZ-2104 and IZH-27175 officially going on sale in March 2011 through Lada's Russian dealer network.

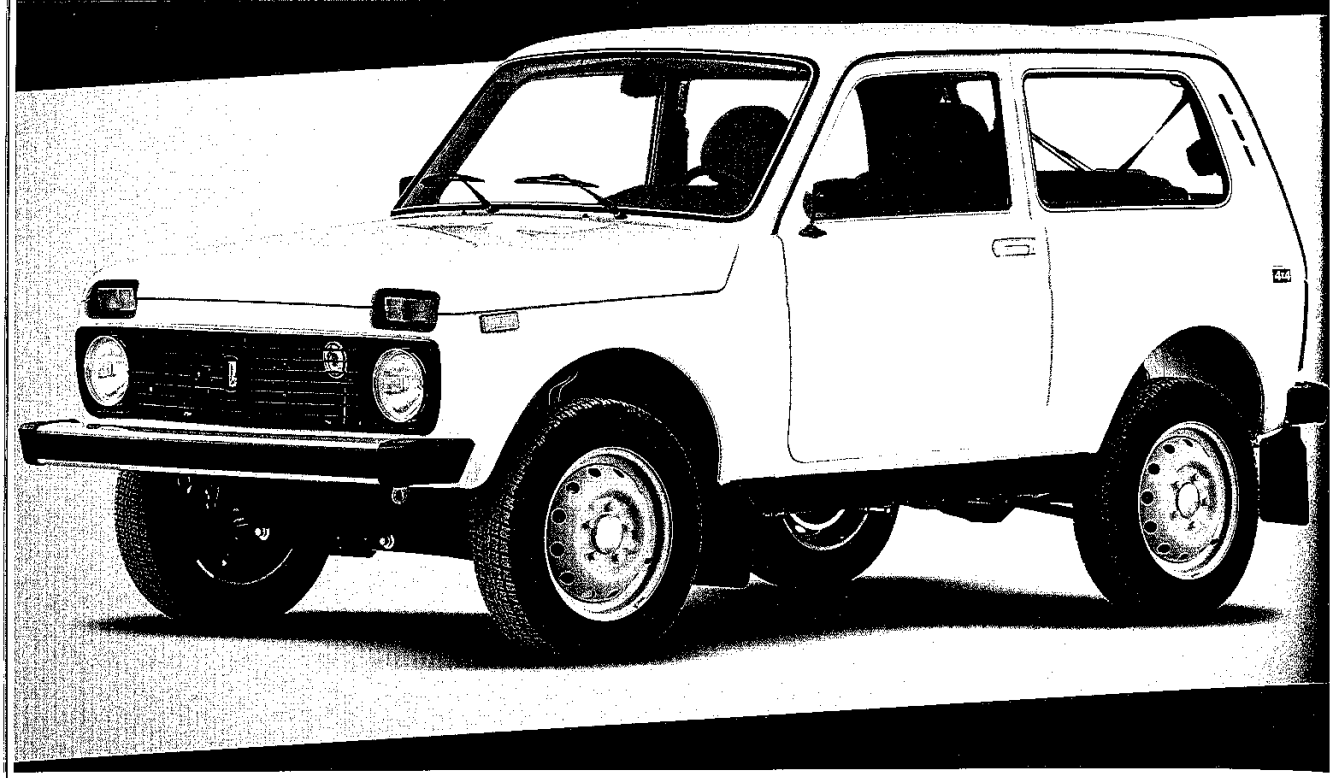
That same month, assembly of the VAZ-2107 began at Izhevsk, with all production transferring to IZH in August 2011. The last VAZ 2105s were built in March 2011, after just over 2,090,000 had been made. European production of the classic Lada eventually came to an end in 2012, the 2017 luxury saloon leaving the Izhevsk line in April and the final 2104 estate car and IZH-27175 van in September. The total number of VAZ-2107s built since the beginning of production in 1982 came to 2,912,500. A grand total of 1,063,000 VAZ-2104s were produced, and 38,500 of the IZH-27175 van were made in its short life. Supply of Lada 2107 component kits to Egypt continued until 2013, when 1,728 were shipped out to the land of the pharaohs, the last being assembled there in early 2014. Around 17,500,000 classic Ladas of all different versions had been made since the first VAZ-2101 Zhiguli was pieced together in Togliatti in spring 1970. It is one of the world's most produced cars, topping the Ford Model T and not too far behind the Volskwagen Beetle, and is still the car most commonoly associated with Lada. With that many made, it is not surprising that Lada Classics are still a common sight across the former USSR.

As well as cars, the classic Lada inspired some interesting commercial variants, developed by Vaz Inter Service (VIS), a specialist firm set up in 1991 to make components for the Togliatti company and to produce low-volume vehicles based on mainstream VAZ models. The first of these appeared in 1993, a pick-up based on the 2014, of which 203 were made that year. Large-scale production of the VIS 2345 dropside pick-up and, using the same chassis, VIS 23452 box van, began in 1997. The VAZ 2345 chassis cab was made by chopping a regular VAZ 2015 in half, just behind the front doors, and welding in a strong traditional chassis and a rear panel to the cab, while the rear axle was suspended on leaf springs. VIS ended production in 2006, turning its attention to a commercial version of the Lada Samara. ■

↓The 2007 VAZ 2107 looked little different from the 1982 original. *(AvtoVAZ)*

LEGEND

THE LEGEND LIVES ON



↑ By 2008 the VAZ 2121 Niva was a true automotive classic. The car doesn't look out of place in any setting and its off-road ability remains at the top of the class. *(AvtoVAZ)*

Lada's international success story, the VAZ 2121 Niva, continued into the post-Soviet era, making new friends everywhere it was sold. The basic concept was so right that little was needed to keep the car competitive. In fact, the unchanged appearance and image became just as much a part of the car's appeal as its undoubted ability on- and off-road.

In 1994, the original 1,570cc engine was replaced by a 1,690cc unit, created by stretching the original. For a brief period, the VAZ 21219 was built, using the new engine and the original body shell. Later in 1994, however, the VAZ 21213 Niva was announced. This had the 1,690cc engine, but the rear of the body was redesigned to create a tailgate that opened to bumper level. The interior was revised as well with a new more stylish dashboard.

In 1995, a single-point fuel-injection system from GM was fitted for European export markets. The fuel-injected cars took the code VAZ 21214, with throttle body single-point fuel injection being identified by the suffix '-10'. In 2000 this was replaced by a multipoint injection system, producing 80bhp, and using Russian-made fuel-injection components. These cars took the suffix '-20'. Sales started soon afterwards in Russia. Continual changes were made to the fuel system to meet European emmissions standards as they were introduced to Russia, with Euro-III cars getting the suffix '-30', Euro-IV cars '-40' and for 2018 when Euro-V was adopted, '-50'.

In 1997 at the Moscow Motor Show, VAZ unveiled Russia's first MPV, the 2120 Nadeshda ('Hope') people carrier, based on the Niva drivetrain.

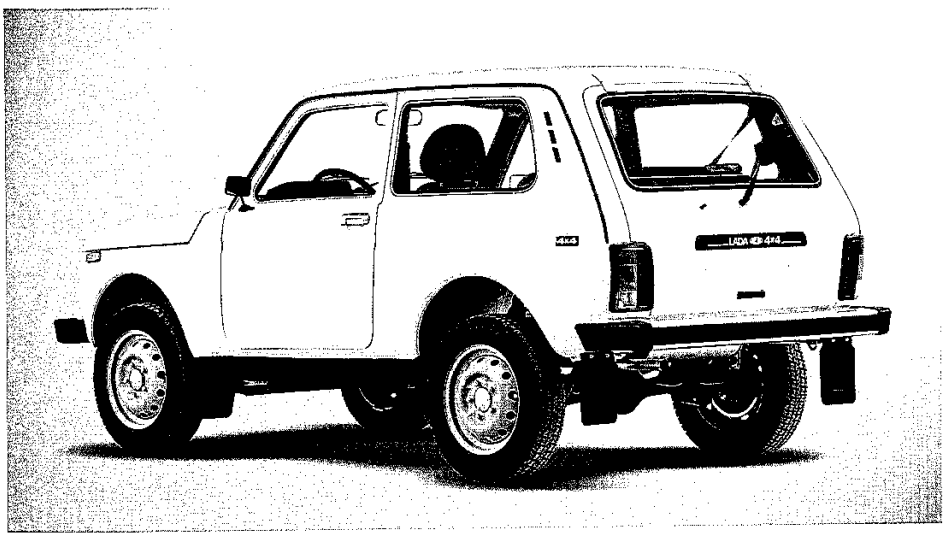
In spite of its inoffensive design and its distinctive special feature of a sliding side door, it was not a success and production, which started in 1998, came to an end in February 2006. Its development gave rise to another, more successful, mainstream version of the Niva, the VAZ 2131. Produced since 1995, the VAZ 2131 has a wheelbase 50cm longer and five doors. There was also, for a limited time between 1993 and 1995, a three-door car, using the same wheelbase as the VAZ 2131.

The VAZ 2131 is now an important part of the Lada range. It retains the basic engine and transmission of its little brother but due to its longer length and its extra weight is slightly less able off-road. Even so, the VAZ 2131 is still highly capable – it was a VAZ 2131 that managed to reach an altitude record of 5,360m in the Himalaya Mountains. Engines offered were the 1,690cc carburetor, coded VAZ 2131-01, and later a 1,774cc version, the VAZ 2131-21. The VAZ 21310-41 had the 1,690cc multipoint fuel-injected engine and was first made available in 2003, while the 1,774cc engine, which was developed by stretching further the original motor, gained fuel injection for 2007 as the 21310-21. The larger engine was later dropped from production when Russia moved over to Euro-III emissions standards in January 2008 – so low was production of the 1,774cc unit that it wasn't worth an upgrade.

It wasn't until the 21st century was well under way that the Niva again received attention from the rather busy Togliatti design team. February 2006 saw the introduction of hydraulic power-assisted steering for the Niva, and in that year the Niva was renamed LADA 4x4. Part of the deal with General Motors to make the VAZ-2123 as the Chevrolet Niva meant Lada itself could not use the Niva tag it had made famous the world over...

Major upgrades to the Lada 4x4, aimed at improving refinement and reliability, were announced in September 2008 although the improvements didn't make it to production cars until July 2009. The body remained unchanged apart from a new grille, larger front indicators and bigger door mirrors, as did the 1,690cc engine apart from being able to meet Euro-IV emissions regulations. Drivetrain changes were more comprehensive and included new and better aligned driveshafts that reduced vibrations from the transmission system. Suspension and shock-absorber mountings were changed to improve stability. A larger clutch and brake master cylinder were fitted to make the little Lada easier to drive and the transfer box had new gaskets to cure the long-standing bugbear of 4x4 owners – oil leaks. Inside, the instrument panel was now the electronic package from the Samara, giving lucky drivers a clock and an outside thermometer.

In the absence of firm plans to build a new SUV, AvtoVAZ reaffirmed its commitment to the strong-selling Lada 4x4 by starting a constant programme of incremental changes, starting in April 2010 with



← In 1994 the VAZ 2121 Niva was treated to its only body revision – the rear end was altered to allow the tailgate to open to bumper level. *(AvtoVAZ)*

↑At the end of 1995 the British Lada importer announced this ham-fisted attempt at an updated style for the Niva – the grotesque plastic fascia panel did absolutely nothing to improve the car's looks. *(Author's collection)*

subtle but effective changes to the transfer case and rear driveshafts. Just over a year later, in August 2011, the interior got new door trims to make it just a little less utilitarian while in November that year an Anti-lock Brake System (ABS) became available on the 4x4. Safety was further enhanced in June 2012 when a Brake Assist System (BAS) was offered. March 2013, when the two millionth Lada 4x4 was built, saw the traditional universal joints in the drivetrain replaced by constant velocity joints, which significantly reduced noise and vibration at high speeds. All the windows were now tinted. A new cataphoresis-based painting system was brought into use in May 2013, improving corrosion resistance and allowing metallic paint to be offered. Alloy wheels became a factory-fit option while air conditioning was offered from August 2014.

An interesting development took place in October 2014. While the 4x4 was still a popular choice with those into serious off-roading, or people whose job needed go-anywhere capability, there was a potential to attract new buyers. These were people who needed a second car for excursions to the countryside but didn't want to sacrifice creature comforts as well as younger people who wanted a 4x4 to cut a dash on the city streets. For these new buyers, Lada introduced the 4x4 Urban. Outside, the Urban featured integrated body-coloured plastic bumpers, a new grille, heated and remotely adjustable door mirrors and alloy wheels as standard. Inside there was more sound insulation, special seat trim, electric windows, air conditioning and a new centre console with those all-important cup holders. The marketing people were clearly on the ball – three-door Urbans in 2014 accounted for 37 per cent of all sales of the Lada 4x4. For those who wanted some of the extra toys, but wanted to keep the rugged look of the original 4x4, a 'Lux' trim version of the regular car was introduced, with air conditioning. Heated seats were also soon to be introduced – an essential piece of kit for Russian winters. After all this, the new look to the radiator grille introduced in January 2015 was barely noticed.

Urban assembly started at VIS but in April 2015 moved to the Togliatti factory, following concerns by Lada management about both the quality and quantity of cars made by VIS. Less than a year later, in January 2016, another Lada 4x4 was moved to the main plant. The five-door VAZ 2131 had been built at Lada's experimental production unit, created in the late 1980s for the production of prototypes, pilot batches of new cars and low-volume versions of mainstream cars. In spite of being a small-scale operation the unit was apparently profitable, but the top bosses at AvtoVAZ wanted to make more use of the underutilised main lines in the massive Lada factory. Production of the standard 2131 was added to the Priora line, being joined in March 2016 by a five-door Urban.

AvtoVAZ was on a roll because in May 2016 a whole range of changes, many small but significant, were announced to improve the way all the Lada 4x4s performed on and off the road. The introduction of an independent mounting of the front axle differential, no longer with the engine mounting but now on the suspension assembly, reduced vibrations and set the car up to receive different engine types in the future. New front wheel bearings ended the need for them to be adjusted every 15,000km. For the first time on the Lada 4x4 gas-filled shock absorbers were fitted – quieter and longer lasting. This was coupled with some subtle tuning of the front suspension springs and changes to the lower ball joints to help make the car more stable when braking. New dies were installed for the sidewall panel pressings. For years, Lada had had problems with doors not closing properly, water leaks and rust traps. The new dies allowed for tighter panel gaps and better alignment of the door with the body. The tailgate got new interior trim and better window seals to end rattles when on the move and cut out water leaks.

To improve build quality, production of the three-door Lada 4x4, which had been carried out in a separate production building since April 1977, was transferred to one of the three main AvtoVAZ production lines in November 2016. The equipment in the dedicated Lada 4x4 building was by this time seriously out of date and thoroughly worn out, in spite of several upgrades. The line chosen was that which had been rebuilt to standards set by the Renault-Nissan Alliance to make the Lada Vesta, production of which had instead been assigned to Izhevsk.

It was perhaps timely that the Lada 4x4 should find a home at the heart of the Togliatti factory – in April 2017 it celebrated its 40th birthday. AvtoVAZ didn't miss out on this marketing opportunity and announced a special Fortieth Anniversary model, with unique paint colours, special alloy wheels, two-tone eco-leather trimmed seats colour keyed to the exterior, leather-trimmed steering wheel with contrasting stitching and a new instrument panel. Just to make sure motorists knew they had been passed by something special, a unique 'Fortieth Anniversary' badge was fitted to the front wings and tailgate. Inside, there was a special badge with the unique serial number of the car from 0001 to 1977 – this number being the year when the first Lada 4x4 was built.

In July 2017 AvtoVAZ introduced the option of a 'Camouflage' paint job for the Anniversary models made up of a combination of three metallic colours: light green, dark green and black. Bumpers and alloy wheels were painted in black. That month another trim level was also introduced, the Bronto. This was a seriously macho makeover, for die-hard mud-pluggers: reinforced springs and shock absorbers, reinforced rear axle, self-locking front-rear differential, heated seats and running boards. An exterior trim package, called 'Image', added extended wheel arches, fog lights and big, chunky black plastic bumpers. Naturally enough for such

↓For British Niva buyers who didn't want to cover their car with a big paper bag, the unadorned Niva Hussar was thankfully still available. This picture shows how useful the new full-length tailgate was. *(Author's collection)*

↑The VAZ 2120 Nadeshda was based upon a lengthened Niva wheelbase. In spite of offering seats for seven and full off-road capability, it was not a success. *(AvtoVAZ)*

a brazenly outdoor machine – harking back to the Lada 4x4's roots – buyers could order the Bronto with the camouflage paint job, which in an effort to attract urban warriors to Lada showrooms was an option offered from April 2018 to buyers of regular three-door models. September 2018 saw Lada making further changes to keep the 4x4 fresh – a new instrument pack and smarter alloy wheel options, including for the Urban one called 'Grizzly' featuring a black background and polished silver spokes. Very stylish!

Most people outside Russia know of the 4x4 only as a three-door SUV. A huge variety of different versions have in fact been produced by specialist outfits, not all of which are formally part of AvtoVAZ but whose products are made and in some cases marketed with the firm's blessing.

Lada Tool, part of Motorica, a specialist component manufacturer that was involved right from the beginning in producing components for the VAZ 2131, produced high-roof versions of the VAZ 2131: the VAZ 2131-02 and VAZ 2131-22 with 1,690cc and 1,774cc engines respectively. The VAZ 2131-05 and VAZ 2131-25 were ambulance versions of these two cars.

The extremely stylish VAZ 2329, a long-wheelbase pick-up with a double cab, was developed by Lada Tool with production taking place at specialist vehicle maker Super-Auto from 1995 using components supplied by AvtoVAZ. There was a hiatus in production between the end of 2015 and November 2016 when AvtoVAZ's in-house low-volume production unit was closed down. It had built the bodies for the 2329, but from the end of 2016, with the transfer of three-door 4x4 production from its own workshops within the Togliatti complex to the main factory production lines, 2329 bodies were built by Lada and sent onto Super-Auto for final assembly. Renamed Lada Pick-up at the end of 2016, mechanically the diminutive truck follows in the tyre tracks of the mainstream Lada 4x4, sharing all the upgrades that the parent vehicle enjoys. Sales and marketing are now part of the Lada brand.

VIS, which by 2011 had been formally absorbed into AvtoVAZ, adopted a more utilitarian approach to its 4x4-based pick-ups, replacing the rear half of a regular 4x4 with a simple frame-style chassis,

➔The VAZ 2131 Niva was a long wheelbase version of the standard car. Although made by the Togliatti plant's low volume production unit, by 2007 more than 85,000 had been produced. *(AvtoVAZ)*

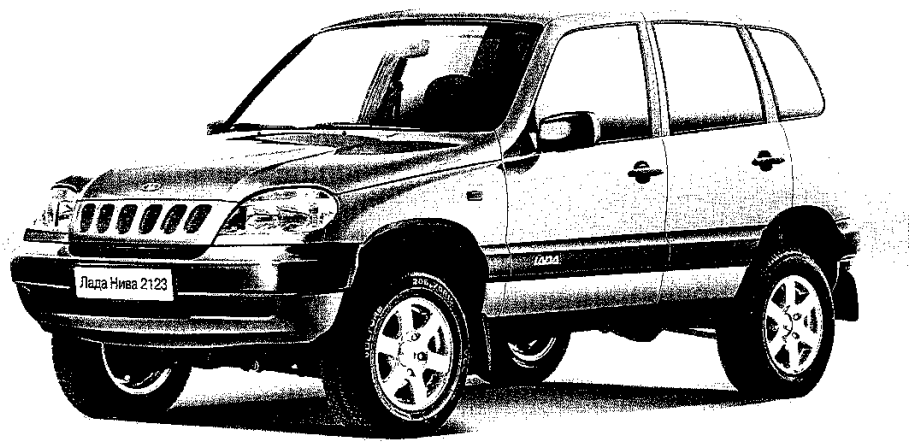
leaf springs and a dropside body or box van. Introduced in 1998, the single-cab variant, based on the original Niva, was the VAZ-2346, the double cab – still with two doors – the VAZ-23461 and for a short time a three-seat king-cab, the VAZ-23464. The 2346 and 23461 remain in production, being marketed as an integral part of the Lada brand and adopting all the mechanical improvements made to the mainstream Lada 4x4.

Various attempts were made to equip the Niva with a diesel engine, including a number of unsuccessful attempts using Russian-developed enignes. Slightly more successful were the Peugeot-diesel-engined models, the three-door VAZ 21215-10 with a 92bhp turbo 1,905cc engine and the VAZ 21215-20 with the 64bhp non-turbo version of the same engine. The lower-powered model was offered sporadically from 1993 to 1998 and the turbo after 2001 until 2007, for a limited number of markets, including France, Belgium and Spain. These Peugeot-engined Nivas were made in such low volumes as to be little more than footnotes in the long and illustrious history of the Niva.

The diminutive but sturdy Lada was the first vehicle to be driven under the sea, when in 1991 it was chosen for contruction-site use by British and French engineers working on the Channel Tunnel. During the following months no less than 45 Nivas were used without one ever failing. When the construction work was finished, the Eurotunnel companies who built the tunnel reckoned there was still enough life left in the cars that they resold them onto the second-hand car market. One was retained and can now be seen in the Eurotunnel museum; another can be found in the Lada museum. Britain received its last Nivas in 1997. The last right-hand-drive Nivas were built in January 2001 with sales continuing in South Africa and Australia from stocks already held into 2002.

Born as the VAZ 2121 Niva, and now known as the Lada 4x4, the first all-Russian Lada remains a top seller in its home market – 32,949 in 2018, up 13% on the previous year – and the mainstay of AvtoVAZ's overseas sales, being its biggest selling export model. Attracting a strong global following among off-road enthusiasts, the Lada 4x4 is in every sense a true automotive classic. ■

↑Made by an official sister company of AvtoVAZ, the VAZ 2329 is a king cab derivative of the mainstream Niva. Specially equipped examples are used by Russian natural disaster relief teams. *(AvtoVAZ)*



←The VAZ 2123 was designed as the replacement for the VAZ 2121 Niva. A shortage of investment funds meant that it was eventually put into production by a joint venture owned by VAZ and General Motors. On sale since 2002, it is branded as the Chevrolet Niva. *(AvtoVAZ)*

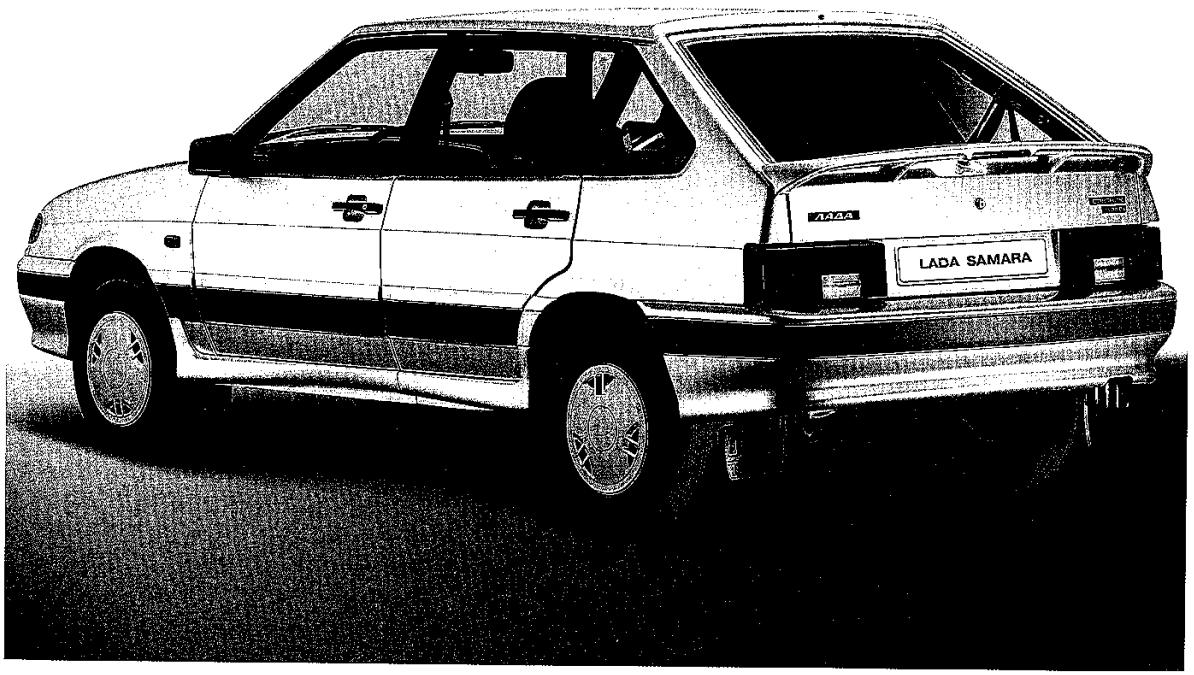
AN UNDERSTATED HERO

↑The VAZ 2113 was a revamped VAZ 2108 Samara three-door. It very nearly didn't go into production but dealer demand persuaded VAZ to add it to the Samara 2 line-up. *(AvtoVAZ)*

The VAZ 2108/2109/21099 Samara models remained very much on the Russian car buyers' radar. On 12 November 1990 the 13-millionth Lada car, a 21099, rolled out of the Togliatti gates. The 15-millionth Lada was also a Samara – a VAZ 21093 built on 21 October 1993. Since 1992, all Samaras had received the streamlined front end premiered on the VAZ 21099, with the front wings running right to the front of the car and the full-width plastic front panel now limited to the grille between the unchanged headlights.

The 1,499cc gained a fuel-injection system in 1994, originally made by GM but later replaced with a Russian system, to comply with Western exhaust standards. The fuel-injected cars were initially only made available to export customers, but in 2001 were offered to Russian buyers. The carburettor-equipped cars were finally dropped in 2004. In 1997 the 1,099cc and 1,288cc engines were dropped, but in the same year the VAZ 415 twin-rotor 135–140bhp rotary engines were made available to the public.

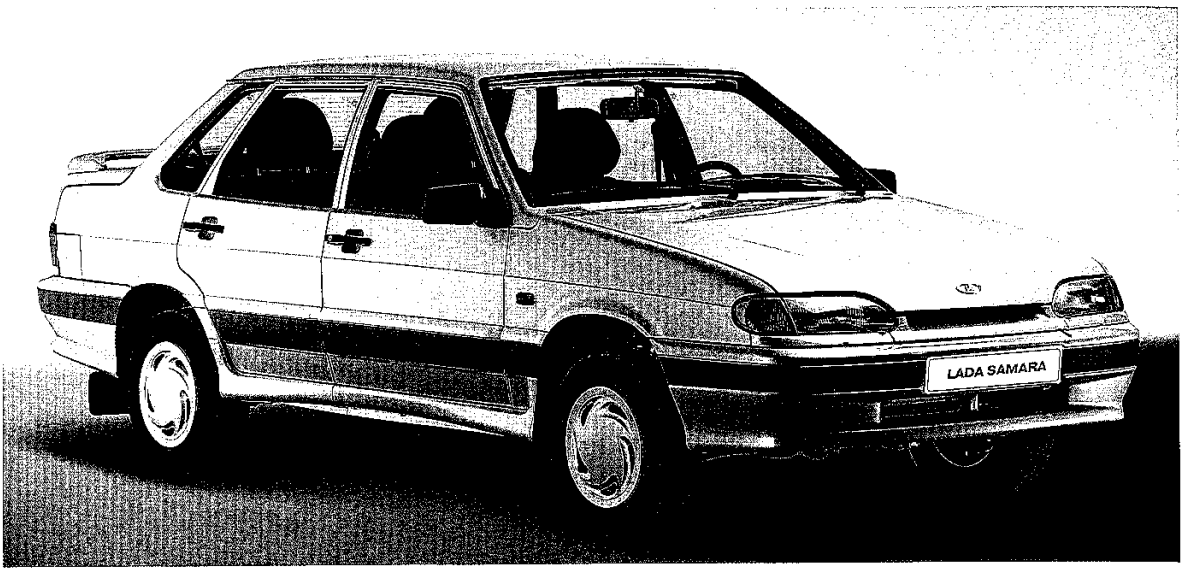
In September 2003 the last VAZ 2108 left Togliatti. Retailers increased the prices of their remaining stock of the popular model. The final Togliatti-made VAZ 2109 left the plant in March 2004, but production continued at Roslada in Syzran until January 2006, where the first cars had been assembled in 1999. Just three months later, in June 2004, the last VAZ 21099 and thus the very last of the original Samaras rolled off the Togliatti production line. It wasn't the end of the line though for the VAZ 2109 and 21099. ZAZ in the Ukraine signed a deal with Lada to produce the



two cars at its factory in Zaporozhets. Production equipment was shipped to ZAZ from fellow Ukrainian motor company LuAZ, which had been assembling the Samaras since 2000. Assembly at Zaporozhets used components shipped out from Russia, supplemented by Ukrainian parts such as wheels, tyres and batteries. Production ran from December 2003 when the first VAZ 2109 bodies were welded together until October 2011, when AvtoVAZ stopped producing the kits ZAZ needed to make the cars. In all, some 884,657 VAZ 2108s were made, a grand total of 1,615,995 VAZ 2109s were built and 1,040,475 VAZ 21099s rolled off the production lines.

Back in Russia, the replacement for the original Samara was the facelifted Samara 2, on which work had started in October 1994 although buyers had to wait until 1997 to see the first model, a four-door saloon, coded VAZ 2115. The front end was new with slimline headlights, revised wings and reshaped body-coloured bumpers with rubber strips. A higher boot lid opened down to bumper level, adorned by a full-width trim panel and topped by a spoiler, and was flanked by new rear lights. The sides of the car had relatively discreet plastic sill extensions and full-length door mouldings. The mechanics of the new Samara barely changed, although the 1,499cc engine on all Samara 2s had fuel injection and the gearbox was slightly modernised. Brakes too were upgraded to the system fitted to the VAZ 2110 series. The steering wheel itself came from the VAZ 2110 and was positioned further forward, improving the driving position for really tall drivers. The instrument panel

↑The VAZ 2114 was the five-door derivative of the Samara 2 range. *(AvtoVAZ)*



↑The first of the Samara 2 line-up was the VAZ 2115 four-door saloon. The only sheet metal changes to all the models in the range were to the front, allowing for slimmer headlamps to be fitted. The saloon also had a revised rear boot lid and light cluster. *(AvtoVAZ)*

had both a softer feel and more curvaceous look.

The new car was unveiled at the 1997 Moscow Motor Show at the end of August although production had begun in June in the AvtoVAZ prototype workshop. Outside, the Samara 2 was rather stylish although the plastic trim on the body sides was not always as carefully fitted as it could be. Production of the VAZ 2115 on the main Togliatti production line began in 2000. Its price was above the VAZ 21099 but below the VAZ 2110 and the car sold especially well in large Russian cities.

The VAZ 2114 five-door hatchback, which arrived in 2002, had to be satisfied with the fifth door and lights of the 2109, although prototypes with a new hatchback and lights had been developed. The 21-millionth Lada, produced by AvtoVAZ in 2002, was a 2114. A three-door derivative, the VAZ 2113, was not planned at the beginning of the Samara 2 project, but in September 2004 production began to replace the 2108, production of which had ended 11 months before. It was dealer demand that pushed AvtoVAZ to build this model to satisfy a market for compact, affordable, three-door hatchbacks.

In October 2006, AvtoVAZ announced that the Samaras would be getting an engine upgrade. The Samara was the last of the front-wheel-drive Lada family to get what was the brand's most up-to-date mass-produced power unit, the 81hp 1,596cc engine, coded VAZ 11183-20 and first seen in October 2004 in the VAZ 2110. The first re-engined Samaras went on sale in January 2007. The cars were redesignated VAZ 21134 (three door), VAZ 21144 (five door) and VAZ 21154 (four-door saloon). The 1.6-litre engine also appeared in the VAZ 2109 and VAZ 20199, being built by ZAZ in the Ukraine, along with the dashboard from the Samara 2, a height adjustable steering wheel and electric front windows.

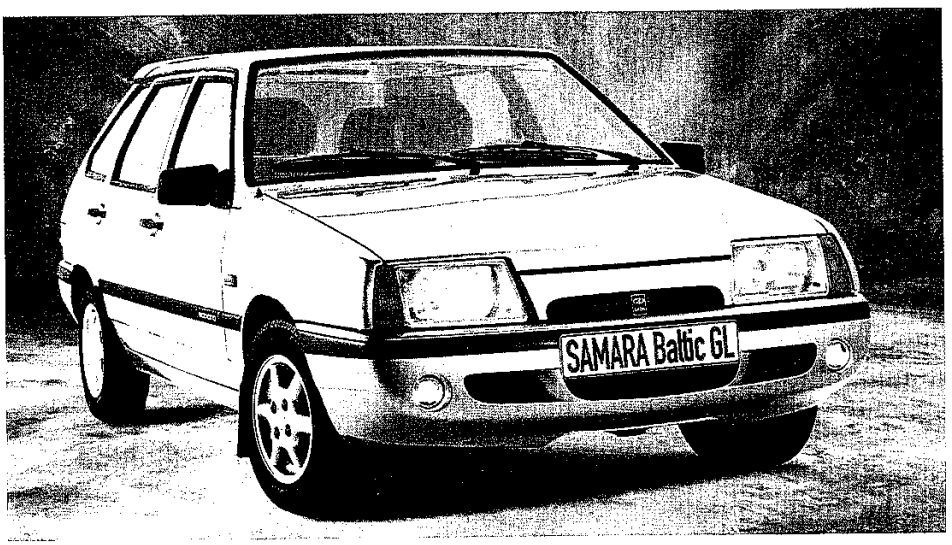
The exterior was tweaked slightly at the start of 2008 when the light-grey side mouldings introduced as part of the Samara 2 package were painted in the same colour as the body before being replaced at the end of 2008 by a new narrow style of trim that was arguably a visually retrograde step as the new look no longer extended the bumper styling lines along the sides of the car.

Samaras gained a better gearbox with a more robust synchromesh at the start of 2010, but by this time, they were entering the final lap of their long life. First to go in December 2012 was the VAZ 2115 saloon of which 752,957 were made, followed by the last of 73,039 three-door VAZ 2113s in June 2013 and then the five-door VAZ 2114 in December 2013, after 923,930 had been produced. The career of the first mass-produced front-wheel-drive Soviet car had finally come to an end, although its engineering legacy lives on in the Priora and to a lesser extent the Lada Kalina, first seen in 2005, and the Granta, introduced in 2011.

Production of Samaras wasn't limited to Russia and the Ukraine. Between summer 1996 and July 1998, 14,000 Samaras were built, with Russian parts accounting for 85 per cent of the vehicle's content, at the Finnish Valmet plant, now the source for such cars as Mercedes GLC. The idea behind the plan was to try and raise the quality of Samara destined for some west European export markets and to produce at least a few cars away from the chaos and criminality that was wreaking havoc at Togliatti. The Samara bodies were made, painted and trimmed by Valmet and the 1,499cc cars could be distinguished by their revised bumpers, grilles and better trimmed interiors.

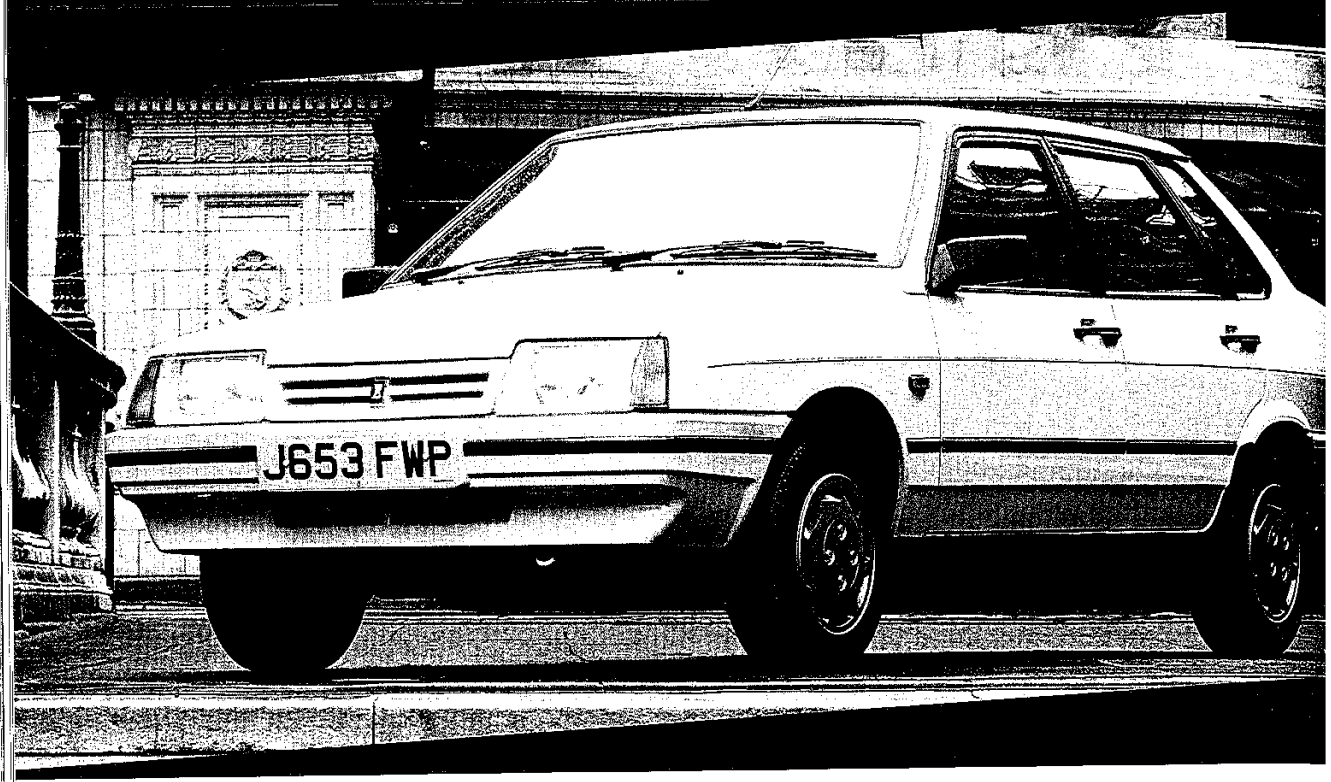
Specialist manufacturer, Togliatti-based VIS, saw great potential in the Samara for a new range of commercial vehicles, aiming to meet the needs of the increasing number of small traders in post-communist Russia. The VIS 1705, introduced in 1998, was Russia's first front-wheel-drive van. It added an integrated and boxy load compartment, a composite construction made up of a steel frame with plastic panels, to the rear of a VAZ 2109. The floor width of the loadspace, accessed by double rear doors, was somewhat limited by the intrusion of the Samara's suspension turrets, but total volume was a useful 2.25m³ although payload of 450kg was not so good. All in all, it was a sound design that was easy to maintain, nice to drive and cheap to run. What held the little VAZ van back was a combination of the lack of a diesel engine, limited production capacity at VIS and the fractured nature of the post-Soviet vehicle distribution network. Production ended in 2002. VIS had another crack at the light-van market in 2000 with the VIS-1706, this time based on the VAZ 2108, which meant it had longer front doors. However, the rear loadspace was aesthetically a lot less successful than the 1705, looking like a crude aftermarket conversion. Few were sold and it faded away in 2003.

Alongside the vans, VIS introduced a Samara-based dropside pick-up, using its tried-and-tested approach of hacking a car in half and welding on a commercial rear end. Called the VIS 2347, the first examples were made in 2002, based on the VAZ 2109. The vehicles were not entirely successful, twisting out of line where the cab joined the rear chassis. Production was stopped in 2004 and VIS set to work resolving the problem, adding load-bearing side members to the area where the chassis mated with the back of the cab. Satisfied with the changes, in 2007 VIS re-introduced the pick-up, this time based on the Samara 2 and offered as a pick-up or box van, with a payload of 450kg. It was made until 2012. An interesting variation on the four-wheel-drive theme from VIS mated the drive train of a Lada 4x4 with the body of the VIS-2347. Launched in 2005, it was called VIS-2348 and offered buyers a more stylish and comfortable off-road pick-up than the Niva-based models. It survived until 2010. ■



← Made in Finland from parts supplied by the Togliatti works, the Lada Samara Baltic or Euro-Samara was created to try and maintain the firm's position in its European export markets. It was a bit of a curate's egg – good in parts but bad in others. The exterior facelift worked well but the grafting on of a crude plastic moulding to streamline the angular facia didn't.
(Author's Collection)

A VICTIM OF CIRCUMSTANCE



↑The 1992 Lada Samara 1500 GL saloon, an extremely tasteful and elegant presentation by the British importers of the VAZ 21099. *(Autocar)*

The Lada range available in Britain in the 1990s was, ironically, one of the most comprehensive ever offered by the brand to British motorists. The Samara family offered an even lower entry price when the VAZ 21081 three-door and VAZ 21091 five-door 1,099cc models came on line in July 1990 as a Select three-door and an L three- or five-door. Priced at £4,245, the 1100 Select was a lot of car compared to the Fiat Panda 750L at £4,549 and a lot more up to date than Yugo's Fiat 128-based 513 at £4,154. Next up was the 1300 SL with three or five doors, and at the top of the range the 1500SLX which came complete with a body kit of dubious taste. The Riva range comprised the VAZ 2105-based 1300 Select or L or the VAZ 21074-based 1600 SLX, with a choice of 1300 (VAZ 2104) or 1500 (VAZ 21043) estate cars still available.

In April 1991, the entire Samara range was realigned. There was an 1100E three-door, an 1100L three- or five-door and a GL with three or five doors and a 1,288cc or 1,499cc engine. At the same time, the bottom of the Riva range was renamed the 1300 E model, followed by a 1300 L, and the 1600 SLX was called the 1600L. The two estate cars remained.

April 1992 saw the 1300 GL Samara replaced by a 1300L. Four-door Samaras arrived in July 1992 as either a 1300 L, based on the VAZ 210993 or a 1500 GL, based on the VAZ 21099. The 1100 L was dropped. The four-door and five-door Samaras shared the same facelifted front wings and bonnet first seen in Russia in 1990. In November of that year the 1100 E was replaced by the 1300 E. The Riva range was cutback in April 1992 to a 1500 E and L saloon, both based on the VAZ 21053, and

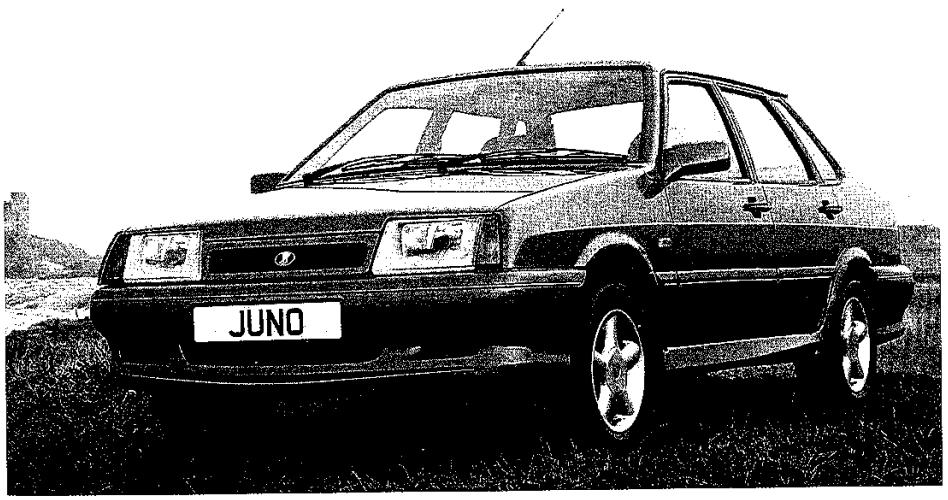
a 1500 L estate, the VAZ 21043, although the grille was now painted in the same colour as the rest of the body. Lada still dominated the market for decent-sized cars available for a budget price. The top-of-the-line Lada Samara 1500 GL, which sold in April 1992 for £6,165, had few rivals that could match it for performance and size. Neither was it off the pace when it came to driving, being able to hold its head up in the company of the Peugeot 106 and Kia Pride.

In March 1993, a catalytic converter was standardised across the range and in April the Riva 1500 L estate was replaced by a 1500 E estate. The Riva 1500 L saloon was dropped. By the autumn of 1993 the Riva was the cheapest new car available in Britain, at £3,905, undercutting the next cheapest car, the Seat Ibiza 900 Special by £390. However, the Seat was cheaper than the lowest-priced Samara, the 1300 E at £4,580. Further up the price scale competition for budget buyers was starting to emerge that could match the Samara's mix of front-wheel drive, spacious bodyshell and relatively crisp, modern styling. The Sao Penza 1300, a South African-built Mazda 323 clone, was a flash in the pan but the Hyundai and Proton ranges, although still a little more costly, were starting to make their presence felt.

The VAZ 2121 Niva, however, was without competition – at £6,495 there wasn't another 4x4 available until a buyer spent £7,754 – and that was for the horrendously built Mahindra CJ3 soft-top, a Willys jeep built in India that was virtually unchanged from the jeeps landed in Normandy in 1944! Even the Niva Cossack, a tarted-up version of the basic car that cost a staggering two grand more, faced little real competition. The cheapest Suzuki Vitara, the car inspired by the Niva, started at £9,250.

By 1994 competition was starting to hot up. Superminis from major manufacturers were getting more and more refined – the Renault 5 was replaced by the extremely competent Clio, the Skoda Favorit

←The front cover of the British Lada Samara brochure for the 1995 model year. The range of cars offered was the largest ever, with three different engines, three different body styles and three different trim levels. *(Author's collection)*



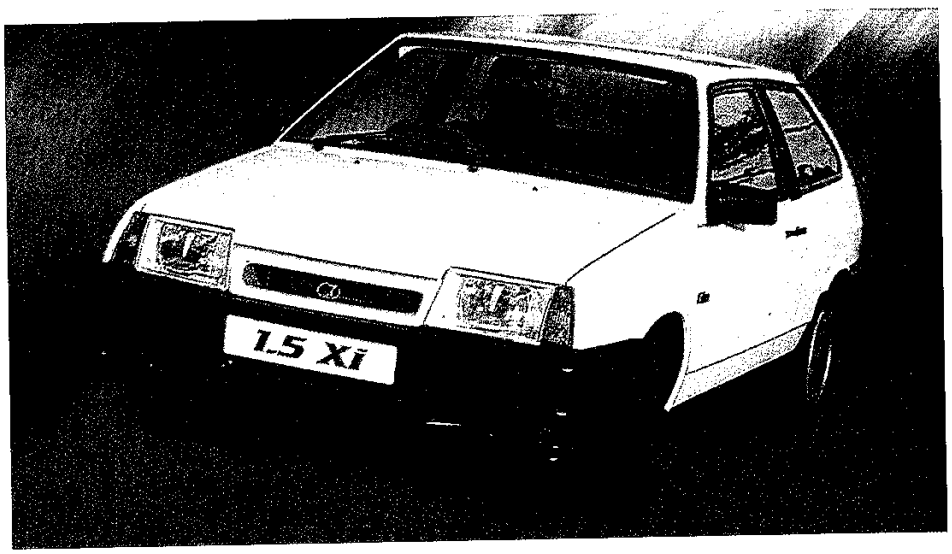
←Announced for the 1995 model year, Britain's Lada Samara Juno featured new UK-only bumpers and sill extensions of dubious provenance that were completely out of character with the sharp lines of the rest of the car. Inside, the dashboard was re-trimmed in a suspect felt-like material. *(Author's collection)*

was now benefiting from Volkswagen's input, and a new Fiat Punto could be bought for the same money as a top-of-the-line Lada Samara Flyte, a special edition with lots of extra kit launched in October 1992. In November 1994, a new Samara range was announced. It was yet another mix-and-match job by the British importer. There were now three trim levels, S, SX and GSX, and the 1,099cc engine made a return to Blighty in three-door form only with basic or SX trim. The 1,288cc and 1,499cc engines could be ordered with any of the three trim levels and any of the three available body styles. Top of the range was the new Juno, based on the 1500 GSX four-door, which saw the return to Lada of dubious body kits. It also had alloy wheels, a soft fascia trim and luxury cloth trim. Priced at £7,995 it faced some pretty stiff competition from the Hyundai X2 and the Proton 1300 GL. The rest of the range, though, remained extremely competitively priced and cheaper than the competition from the Far East.

In September 1995 the Samara range lost the 1100 SX but otherwise was unchanged. For less than £6,500 buyers could choose between a Riva saloon or estate, a choice of 17 Samaras, the reborn FSO Polonez (now offered as a Caro for £6,287), two Fiat Cinquecentos, the Mini Sprite, a Renault 5 Campus or a Kia Pride. At the same time the Niva gained the 1,690cc fuel-injected engine and full-length tailgate. The basic car was renamed the Hussar, and the top-of-the-line Cossack got a full-face black plastic frontal moulding that completely spoiled its appearance. On the positive side, all Ladas now got a three-year warranty.

In April 1996, the Samara range was marketed without the S trim level and with the SX and GSX offered as equipment packs that the buyer could add to whichever basic Samara they chose – a three-door with 1100, 1300 or 1500 engines or four- and five-doors with the two larger power units. The 1,499cc fuel-injected Samaras – the VAZ 21083-20 three-door, VAZ 21099-20 four-door and VAZ 21093-20 five-door – were officially announced in August 1996 in either Xi or GXi trim and any of the three available body styles. The bumpers were the same as those first seen on the Juno, but on the Xi they were coloured a shiny charcoal grey and looked like something bought at a dodgy motor accessory shop. The two smaller engines, with carburetors, remained listed by Lada. At the British Motor Show in October 1996 Lada displayed what were reputed to be the first two fuel-injected right-hand-drive Samaras ever made. It was the last time Ladas were seen at a British show.

In late 1996, rumours surfaced that the future of Lada in Britain was in jeopardy. What were to be the final deliveries of new cars from Russia arrived at Carnaby just before Christmas that year. The importer, MVI UK admitted early in 1997 that there



→The fuel-injected Samaras unveiled at the 1996 British Motor Show were the last throw of the dice for Lada in the United Kingdom. The Xi trim was the cheaper of the two options, and with its ugly black bumpers certainly looked the poor relation. The cars were equipped with GM fuel-injection systems. *(Author's collection)*

might only be stocks to last three months following supply problems over right-hand-drive versions of the mainstay Samara. The shortage of supplies was put down to a lack of General Motors-made fuel-injection systems at the Togliatti plant. GM was rumoured to be reluctant to hand over components because of concerns about AvtoVAZ's ability to pay for them.

AvtoVAZ, threatened by this time with bankruptcy and fending off accusations from the Russian government over unpaid tax, could not update its production lines to make the type of vehicles demanded by Western environmental standards. Those it could build, using expensive imported GM equipment, it made with left-hand drive to provide more sales flexibility, especially for France and Germany, where AvtoVAZ owned the Lada concessionaires and could retain more of the profits for itself. Negotiations between the British importer and VAZ to try and find a solution failed and on 4 July 1997 it was officially announced that Lada cars had finally reached the end of the road in Britain. After over 350,000 sales, Lada in Britain was consigned to motoring history. At its peak in 1988, more than 30,000 Lada cars were sold in a year, although almost 10 years later, this figure had fallen to around 4,500 cars.

Fourteen years after the last officially imported Lada was sold in Britain, the brand made a low-key return to the United Kingdom, thanks to the skiing holidays of Mark Key, a London-based businessman who had made a business of importing vehicles that weren't available in Britain. Key had noticed new Lada 4x4s tackling the snowy roads of Alpine ski resorts and realised that there could be a market for such an unpretentious yet thoroughly capable car in Blighty. In May 2010 he started importing European-spec 4x4s, aiming sales at people in rural communities who wanted a cheap, honest and effective SUV. With only limited marketing and hampered by being available only in left-hand drive, sales were low – about 20 a year – and by 2015 putting a new Lada onto Britian's roads would mean the buyer opting for a personal import.

A fully fledged formal return by Lada to Britain is occasionally rumoured in the motoring press. Around the time of the Renault-AvtoVAZ link up, there was some speculation that the Russian brand may be brought to the United Kingdom by Renault as a way of increasing its coverage of the British market, but in 2012 Renault instead launched Dacia on the British market as a no-frills budget brand, leaving little room for Lada – still associated by Brits with cheap'n'cheerful motoring. However, as Lada develops its range and reputation with cars as accomplished as the all-new Lada Vesta, introduced in 2015, and 2016's Lada XRAY, it would be unwise to bet that new Ladas may not once again be capturing the hearts of British motorists. ■

←The GXi trim level of the final British market Samaras had body-coloured bumpers that were the same as those introduced at the end of 1994 for the Juno. *(Author's collection)*

VAZ 1111 OKA

PUNCHING ABOVE ITS WEIGHT

The VAZ 1111 Oka came into its own in the post-Soviet era. In 1990, many of the original design faults were sorted out, including the addition of a heated rear window, soft cloth seat inserts and a parcel shelf to cover the boot area.

In December 1991 the KamAZ Oka plant was reorganised into a separate company, ZMA. In February 1994, the first Oka left ZMA's new production facility, which from September 1994 became officially separate from the KaMAZ truck works. The Oka's tiny engine was boosted in 1996 from 649cc to 749cc, power going up from 30bhp to 36bhp and it was given a new index code, becoming the VAZ 11113. In the middle of 1995 AvtoVAZ transferred its own Oka production to SeAZ.

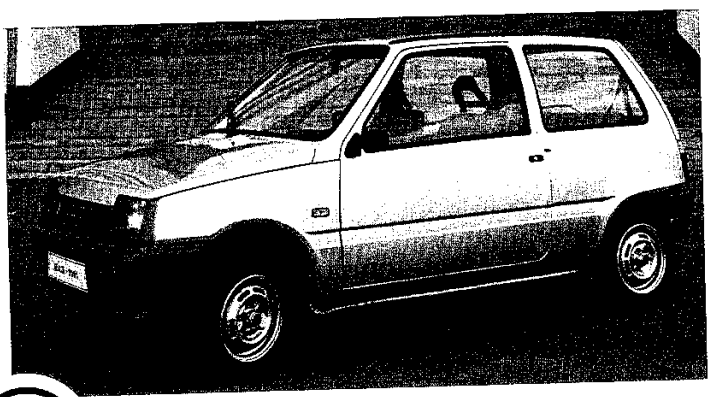
On 3 November 1999, the 100,000th Oka was made with the 200,000th being made just three years later in 2002. In 2000 ZMA began the operation of a new welding complex with an annual capacity for 44,000 bodies, but the biggest constraint on production was building up capacity at VAZ to supply enough engines. In 2003 ZMA was able to build 40,013 cars. In the same year SeAZ built 20,005.

The 300,000th Oka rolled off the ZMA production line in February 2005. However, that May, Severstal Auto, owners of UAZ, spent $50 million to buy 99.6 per cent of ZMA shares from KamAZ. Severstal clearly saw the long-term future of ZMA as an assembly plant making higher-margin overseas brands, such as Fiat and Ssangyong, for sale in Russia. ZMA built its last Oka a year later in May 2006.

A few months earlier, in March, AvtoVAZ sold its shares in SeAZ to Samara-based Avtokom, which announced that it would continue production of the Oka. Now free of any ties with its prodigy, AvtoVAZ advised that it wanted to bring to an end production of the two-cylinder engines – the firm claimed that the work was unprofitable. SeAZ responded by unveiling a new Oka at the 2006 Moscow Motor Show. It had a three-cylinder 52bhp 993cc Euro-II compliant engine, made by the Chinese FAW motor company under licence from Daihatsu. Sales of what was called the SeAZ 11116 finally started in earnest in April 2007, when the two-cylinder model was finally dropped from the catalogue. The three-cylinder car had a new five-speed gearbox, revised suspension and 13in wheels to improve its ride and handling. Its bigger engine was faster, smoother and, thanks to the motor having a larger cooling system, warmer to ride in. External changes were limited to mildly tweaked bumper profiles, available to match the body colour on the luxury Oka.

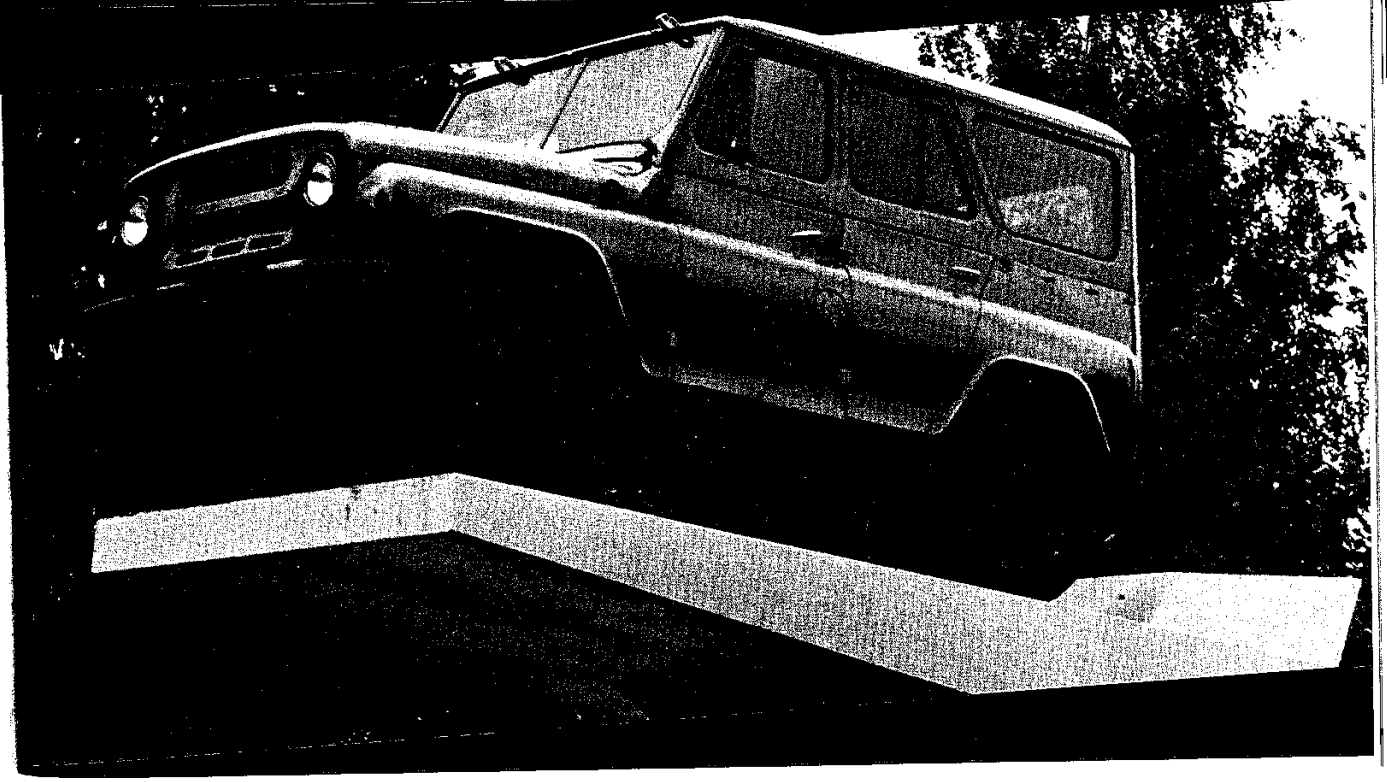
The only fly in the ointment was the price – nearly twice as much as the two-cylinder version, which meant the little SeAZ faced some stiff competition from larger cars, such as the Lada Classic. It did, however, use a lot less petrol than the Lada – just five and half litres to cover 100km – retaining one of the long-standing strengths of the Oka, but that wasn't enough to guarantee sufficient sales to make production financially viable and in November 2008 the last Oka rolled out of the SeAZ factory gates. Just 1,300 had been made that year. SeAZ had hoped to carve a future for itself manufacturing cars for other brands wanting to break into the Russian market, but in spite of talks with a number of Chinese firms, the plans came to nothing. The factory finally closed its doors in 2010. ■

↓The Oka didn't change its appearance at all until the summer of 2007, when minor styling alterations were made to the bumpers and lights. As the cheapest and most economical car on the Russian market it has always had a loyal market. Indeed, when rumours of its demise were rife in 2006 owners organised a 'Save-the-Oka' protest run across Russia. *(AvtoVAZ)*



UAZ

3151 SERIES AND LIGHT COMMERCIALS: TOUGH ENOUGH TO SURVIVE



UAZ had perhaps the hardest journey of any Soviet vehicle maker after the fall of the USSR. Its production had been almost entirely based upon sales to the military in the case of its 3151 series, and to state agencies for its forward-control light commercials. It was no secret to anyone that the entire UAZ range was designed and built to military and state requirements. UAZ had no export business to speak of outside the Eastern Bloc and its products were mechanically largely unchanged since the launch of the light commercials in 1958. The future did not look particularly bright.

In the immediate post-Soviet era the firm made small changes and additions to its range, starting in 1992 when defence contracts slumped to all but zero. In the summer of 1993 the mainstream soft-top UAZ 31512 was joined by the UAZ 31514, which had – for UAZ – revolutionary new features such as a metal roof, scuttle- rather than roof-mounted windscreen wipers and adjustable seats. It was followed in 1994 by the UAZ 31512-010 and UAZ-31514-010, which were the soft- and hard-top models respectively, with coil-spring front suspension. Even with these revisions though, UAZ products remained fundamentally unchanged from those built for the Red Army and the Soviet state. In 1995 the company introduced the UAZ 31519 hard top, which was the 31514 powered by the 98bhp 2,886cc UMZ 4218.10 engine.

From 1997 onwards, thanks to investment in new technology, UAZ was able to introduce shorter production runs of a wider range of vehicles than it had been able to do in the past, when production had been based on long runs of a limited range

↑Still standing guard outside the UAZ factory in Ulyanovsk is the first-ever UAZ 469. *(Julian Nowill)*

of products. One of the first was a car that could meet customer demands for a UAZ with greater load capacity. The problem was easily solved by creating a long-wheelbase version of the 3151, the extra length being added behind the rear doors so avoiding any need to alter the most complex part of the body, the doors themselves. The UAZ 2930 appeared with a well-made tarpaulin top and was built on a wheelbase stretched by 380mm, which made it possible to bring the number of seats up to nine. UAZ announced a more comfortable hard-top version, the 3153, with rounded-off plastic bumpers with built-in fog lights and a plastic grille. Powered by the UMZ 4218.10 engine, it was announced in February 1997 before being officially launched later that year in August at the Moscow Motor Show.

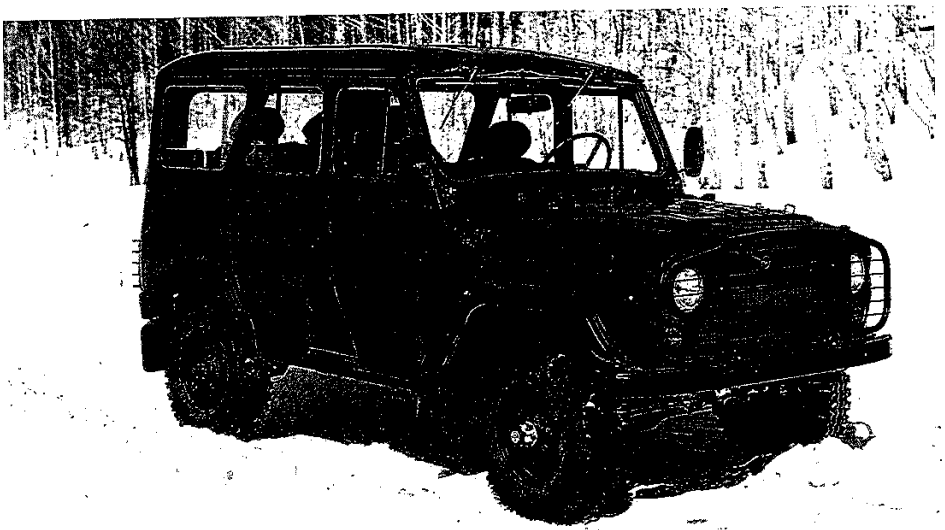
The long-wheelbase UAZ 3153 provided the basis for more new UAZs, including the UAZ 3159 Panther, first seen in 1999, which drew upon the work done to design and develop the UAZ 3160 SUV series, the firm's first really new product since the UAZ 469 debuted in December 1972. The UAZ 3160 could trace its roots back to the stillborn UAZ 3171/2, developed at the end of the 1980s and in its turn gave rise first to the UAZ 3162 and then the still current UAZ 3163 Patriot.

In October 2000, UAZ became part of the Severstal Group, a metallurgical conglomerate, giving the Ulyanovsk factory the financial muscle it needed to develop its products. The first fruit of the extra cash arrived in 2002 when UAZ announced its first oil burners, the UAZ-315143 hard-top and UAZ-315123 soft-top with a Polish four-cylinder 2.4-litre turbo diesel Andoria 4ct90 engine, producing 86bhp.

The UAZ 3159, announced in August 1999, was the first serious attempt at bringing the 3151 fully up to modern standards of comfort and on-road ability without, of course, compromising UAZ's legendary competence in the rough stuff. It drew a lot of its components from the 3160 series as well as acting as a vehicle for ideas which came in time to be added to future UAZs. What set the UAZ 3159 apart from the rest of the UAZ range was its wider track, luxurious interior and high-performance engine.

The UAZ 315195 Hunter was the next attempt to breathe new life into the 3151 series. A very visible change was that the Hunter's name was displayed prominently in Roman rather than Cyrillic script for both Russian and overseas markets, UAZ arguing that Japanese cars didn't come with their names in Japanese pictograms on the boot lid. No matter how unpatriotic it might have seemed to Russian motorists, the Roman alphabet was becoming the lingua franca of the motoring world, and as UAZ was trying to develop an international image it had decided to follow in the footsteps of the successful Japanese auto industry.

The new car represented the most radical



➔The first 'new' UAZ in the post-Soviet era was the UAZ 31514, a hardtop version of the venerable UAZ 31512. *(Author's collection)*

The UAZ 3153 was a long-wheelbase derivative of the UAZ 3151 series. *(Author's collection)*

The limited production UAZ 3159 mixed the body of the UAZ 3153 with up-to-date mechanical components, including a fuel-injected multi-valve engine, setting the scene for later updates of the long-running UAZ theme. *(Author's collection)*

Announced in 2003, the UAZ 315195 Hunter included plenty of hitherto unknown features for a mainstream UAZ – front disc brakes, coil spring suspension, power steering, a fully trimmed interior and a five-speed gearbox. It was still virtually unbeatable off-road and now a whole lot nicer to drive on the highway. *(Author's collection)*

➔ Germany was one of the first Western European markets to receive deliveries of the UAZ 315195 Hunter. Sales started in 2005 and by 2007 nearly 200 had been bought. Initially it was sold as the Tigr, as shown here, but General Motors claimed that this was too close to Tigra, the name-tag on a diminutive little Opel coupe that could hardly be mistaken for something as solid as a UAZ. Germans now get their UAZs badged 'Baijah'.

(Author's collection)

upgrading ever of the long-running UAZ jeep – indeed there were so many changes that only the styling linked it to its predecessors. Coil-spring front suspension, Spicer axles and an anti-roll bar along with gas-filled shock absorbers made this UAZ the best ever to drive both on- and off-road. Power steering too was included in the specification. Ventilated front disc brakes and self-adjusting drums at the back, along with standard radial-ply tyres, also helped bring the Hunter's dynamics right up to date. Newly designed seats all had soft cloth upholstery with the front ones having reclining, rake and lumbar adjustment. Improved door seals, sound insulation, interior trim on the doors and carpet on the floor reduced noise to a level never before experienced in a UAZ. The first UAZ Hunter rolled off the production line in November 2003, with a paint finish comparable with the world's best thanks to the firm's new German Eisenmann paint shop. It even came with a seven-year anti-corrosion warranty.

In its standard form the Hunter was equipped with the 2.7-litre 16-valve fuel-injected ZMZ 409 engine with a power output of 128bhp, this model being the UAZ 315195-095. The Polish diesel Andoria engine was offered as an option, the UAZ 315143-095, and for drivers who wanted to keep things simple and were concerned about having to try and repair electronic engine-management systems in the depths of Siberia there was the UAZ 31519-095 with its UMZ 4128 2,890cc carburettor engine, able to run on 76-octane petrol.

In January 2006 production and sales began of the UAZ 315148-095, equipped with a 2,240cc 91bhp ZMZ 5143.10 direct-injection turbo diesel. This had two chain-driven overhead camshafts and hydraulic valve adjusters. This was the first Hunter to get the Korean five-speed Dymos gearbox, which UAZ had introduced on its UAZ 3163 Patriot SUV, launched in August 2005, the latest iteration of the UAZ 3160 series. Its revamped body styling was bang up to date and inside it was as luxurious as any other vehicle in its class. Mechanically, it shared much with the Hunter, such as the Spicer axles that were more reliable and allowed for tighter turning circle than the previously used Timken design. However, the Patriot unlike its predecessors was now fully able to compete in the market for people who wanted, and could pay for, comfort when they motored out onto the steppes and into the forests to fish, camp and explore. That meant that UAZ had to keep the Hunter in its catalogue to avoid losing the important market of cost-conscious buyers who just wanted the basics – go anywhere at anytime with no fuss.

Regular but small updates were all that were

needed to keep the Hunters rolling out of the showrooms. By the start of 2007 the Hunter range had been reduced to just three mainstream hard-top models: the ZMZ 409.10-powered UAZ 315195-030, labelled the Comfort; the ZMZ 5143.10-powered UAZ 315148-095; and the UAZ 315194-010, branded the Classic, with a 99bhp fuel-injected 2,886cc UMZ 4213 engine. The terms Classic and Comfort for the Hunter were relative. Compared to the Comfort, the Classic had a split tailgate rather than a side-hung rear door, metal bumpers, no front fog lights and the original five-speed Russian gearbox with its reverse-shift pattern. Other than that, it was no less spartan inside than the Comfort – which was pretty spartan. For example, neither had a dashboard control for the heater temperature – the owners manual suggested using the fan instead to control the temperature if the heater valve had been turned on, which itself usually meant digging out a screwdriver.

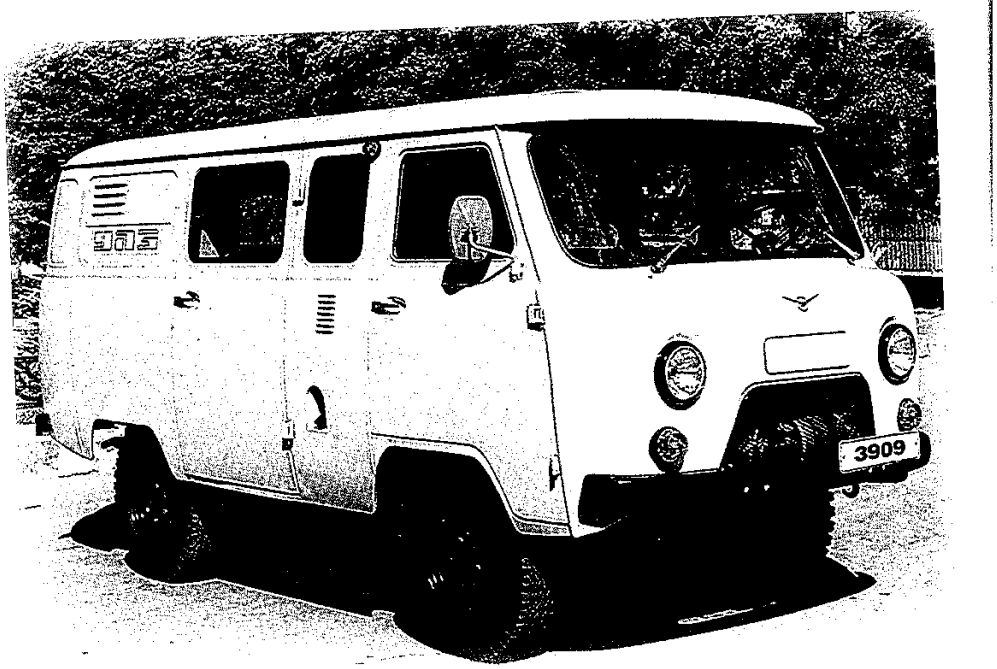
In January 2008, all UAZs were upgraded to Euro-III to make them compliant with Russian law. March 2008 saw the introduction of a new form of front wheel hub to both the Hunter and the UAZ light commercials, which allowed four-wheel drive to be engaged simply by operating the interior transfer-box levers. No longer did the driver need to jump out, often into mud or snow, and use a spanner lock in the front hubs to put four-wheel drive into operation.

In April 2008, Severstal Auto changed its name to Sollers, the Latin for clever and skilful, as it aimed to increase the firm's presence on the Russian market and to mark its break away from the parent Severstal Group to become an independent firm in its own right. UAZ vehicles themselves, with the exception of the Patriot, remained resolutely traditional.

What Sollers did do was develop Severstal's joint ventures, including the short-lived link-up with Fiat that had been born in 2006. Fiat Lineas and Doblo vans were assembled from component kits at the ZMA plant in Naberezhnye Chelny, which had built the Oka before Sollers bought the factory from KAMAZ in 2005. The old Oka plant was also used by Sollers to assemble Korean Ssangyongs for the Russian market. The partnership with Fiat ended in February 2011 when Sollers forged a new joint venture with Ford to assemble the American firm's products, including the Transit van, for the Russian market.

In a second joint venture, also created in 2006, the Russians linked up with Japanese firm Isuzu to produce light trucks, such as the Isuzu N-Series, in UAZ's home city of Ulyanovsk. Production began in 2009 and has continued ever since, although in December 2015 Sollers sold its stake in the business to Isuzu. A third partnership with Mazda was inked in April 2012, with Sollers and Mazda

←The UAZ Hunter Jubilee of 2017 celebrated 45 years of the iconic Soviet-designed off-roader. *(UAZ)*



➔ One of the first-post Soviet developments of the UAZ light commercial series was the 1994 UAZ 3909, which offered a separate load area behind an enlarged cabin that included seats for five around a table.
(Author's collection)

opening a factory in Vladivostok, the most easterly city in Russia.

While Sollers was busy forging deals to spread its automotive risks and expand its exposure across different markets and partners, the core UAZ products simply kept on trucking, getting nips and tucks as and when necessary to keep them legal and respond to market conditions.

For the Hunter that included a cut-price variant, released in 2009, to help UAZ buyers take full advantage of the Russian government's post-financial-crash subsidised car-loan scheme. It applied only to cars costing less than 350,000 roubles to make sure the programme benefited Russian manufacturers and those who were hurt most by the fallout from the greed and mismanagement of the global banking sector. The UAZ 315195-057 cut its costs by cutting out the roof – instead of a steel roof, it brought back the soft-top, which for many years had been the only option for buyers of what started life as the UAZ-469. Bumpers were metal, but the drivetrain was that of the mainstream Hunter, complete with 128hp ZMZ engine and Spicer axles.

Also with a soft-top was the new military-spec UAZ-315108, announced in September 2009. Powered by a 106hp version of the 2.2-litre ZMZ turbo-diesel engine, it featured additional heating systems for both the interior and the engine to make sure that operations in cold climates were not hampered by chilly troops or iced-up motors. It was to be last military UAZ from the 469 family because in October 2011 the Kremlin announced that it would no longer be buying the vehicles other than for specific tasks unable to be accomplished by more modern vehicles.

UAZ's foray back into military markets where it had started its life prompted a back-to-the-future moment in February 2010 when it reintroduced the UAZ-469. Formally called UAZ 315196-110 with a soft-top and 315196-010 with a metal roof, it had steel bumpers, Timken axles, a four-speed gearbox and a 2,693cc ZMZ 4091 engine, producing 112hp. Inside there was an all-metal body-coloured dashboard. Offered with either white or olive green paintwork, it was 23 per cent cheaper than the Hunter with which it shared coil front springs, disc brakes and power steering as well as the interior carpets and sound insulation but not the cloth-trimmed seats. Instead the practical 469 had easily washable vinyl trim.

Open-air motoring was at the same time extended to Hunter Classic buyers with a soft-top option now being offered as the UAZ 315195-057.

The hard-top Classic had the suffix '-157' while the plastic-bumpered Comfort continued as the '-051' with a 128hp petrol engine and '-053' with the diesel motor. From summer 2009 Hunter Classics were fitted with ZMZ-40904 engines as supplies of the UMZ engine had dried up following a breakdown in the relationship between GAZ, the owners of the UMZ engine plant, and Sollers which had owned the ZMZ motor factory since 2001. The two firms could not agree a deal over the prices of supplies of engines to each other. From then on, GAZ used only UMZ motors on its GAZelle light commercials and UAZ turned to ZMZ for all its engines.

The reborn UAZ-469 seemed to becoming a permanent member of the UAZ catalogue and in August 2010 two more versions were introduced. The UAZ 315196-130 soft-top and the UAZ 315196-030 hard-top had a five-speed Dymos gearbox rather than the rather clunky and difficult-to-operate Russian unit that dated back to the 1950s in its core design.

Special editions of the Hunters started to appear as UAZ played upon the retro charm of the vehicle to keep showrooms buzzing, and one such was the Trophy, introduced in September 2013. Available with petrol or diesel engines, it was easily distinguished by its taupe metallic paint, chunky off-road biased Contyre Expedition tyres on unique alloy wheels, and spare wheel cover. Underneath there were protective shields for the track rods and a rear towing hook for hauling things out of the mud that any serious expedition should hope to encounter.

Even so, by December 2014, the Hunter range had been reduced to two hard-top models – the diesel-powered UAZ-315148-066 and the petrol-driven UAZ-315195-066. In February 2015 the end seemed nigh when the firm announced that production of the car, of which more than 1,650,000 had been made, would end that year thanks to falling sales. A special farewell edition was announced in May, called the Victory Series, which also commemorated the 70th anniversary of the end of the Second World War, better known in Russia as the Great Patriotic War. These rather special UAZs were painted a dark green, similar to that used on Soviet military vehicles during the war and had a special decal on the sides, showing a musical stave and the word 'Maestro', inspired by a cult Soviet war film in which the hero used the call sign 'Maestro'. More practically it had a sump guard, shields for the steering gear, off-road Contyre rubber on black alloy wheels and a special pack containing an army cape, duffel bag and a military shovel. Only a petrol engine was offered, ZMZ having wound down production of its diesel engines due to low demand.

Tales of the death of the UAZ Hunter were exaggerated because in February 2016 Ulyanovsk announced that, in fact, production of the iconic SUV would continue. Loyal buyers and new customers who wanted something pretty rare in the automotive world – a totally unpretentious off roader – had shown that sales were still there for the taking. The new Hunter did get a new safety feature – 'seat belt undone' warning light for the driver. Three versions were offered on the Russian market: Classic, Trophy and the Victory Series. One famous communist took his last journey in December 2016 thanks to UAZ. Cuban leader Fidel Castro's funeral cortege saw his ashes taken through the streets of Santiago de Cuba on a trailer behind a UAZ.

UAZ hadn't lost the special-edition bug and in April 2017 announced the Hunter Jubilee (UAZ 315195-068-04), to celebrate 45 years since the 469 was introduced. Ulyanovsk said that the Hunter Jubilee had been designed for UAZ connoisseurs, after meeting with enthusiast clubs and holding special forums with fans of the car. The result was the first tricolour UAZ – a lovely shade of peppermint green below the window line, gloss black around the glass house and a white roof matching white wheels. The bright paints were chosen because they reflected away heat, as did the white roof – once de rigeur on rally cars back in the 1960s, as fans of Mini Coopers know all too well. Another defining feature was the split tailgate, the lower half

↓One of the long-wheelbase UAZs was the double-cab UAZ 39094, which also included a fully trimmed cabin, high-backed seats and a new 2,890cc engine. It was introduced in 1997. *(Author's collection)*

↑A less successful long wheelbase derivative was the king cab UAZ 39095 which included a fold-down bunk bed behind the front seats. Very few were made and the vehicle was soon dropped from the official UAZ line-up. Behind it stands the perennial UAZ 3303 drop-side pickup. *(Author's collection)*

of which could be transformed into a picnic table. Naturally, bumpers were metal. Inside – just the basics: power steering and seats trimmed with a breathable but waterproof cloth instead of vinyl and double-stitched to match the exterior colour. There was, however, a special 45th anniversary badge on the dashboard to remind the driver and passengers that they were in a rather special UAZ. The engine was a 128hp ZMZ unit driving through a Chinese five-speed gearbox to Spicer rather than Timken axles. A locking rear differential was an option. The Jubilee became a permanent addition to the range and by January 2018, as the UAZ 315195-070, was one of just two Hunters left in the UAZ line-up, the other being the UAZ 315195-071 Classic which had Timken axles. By 2019, the Classic was offered with a rear differential lock as the UAZ-315195-070 while the Jubilee had lost that option and was recoded UAZ-315195-070-04.

The venerable Ulyanovsk SUV, possibly the last in the world that stay true to the no-frills ethos of go-anywhere motoring, continued to sell to a small but diehard band of loyalists. It continued to figure strongly in UAZ's export programme, with sales beginning in Chile of both hard- and soft-top variants in 2019.

In February 2019 it officially became a truck, being redesignated as such to avoid new rules introduced in Russia requiring all cars to have airbags and other new-fangled pieces of kit. Now officially called UAZ-2924 – reviving a code number used in the nineties for a series of 469-based pickup prototypes – the Hunter gained ABS. It also came with the ERA-GLONASS (ЭРА-ГЛОНАСС) on-call emergency rescue system, which uses Russia's GPS (Global Positioning System) network to allow drivers in distress to signal their location to the emergency services. The hard-top Classic was coded UAZ-2924-013.

The UAZ Hunter née 3151 née 469 is one the world's most enduring cars. That is a tribute to its original design that, in spite of many changes, remains conceptually just as it was when the USSR designed an all-purpose off-roader to meet the needs of motorists who really did to get to the ends of the earth.

It wasn't just the Hunter that not only survived the collapse of the USSR but managed to thrive in the brave new world. The forward-control van, minibus and pickup light commercial vehicle (LCV) range, based on a design that first saw the light of day in 1958, was by the 1990s long overdue for some modernisation. However, unlike the rest of the UAZ range it remained fundamentally unchanged throughout the post-Soviet era right up until the introduction of fuel-injected engines in autumn 2006, about which UAZ had no choice as it was the only way the range could meet the Euro-II emissions standards adopted in Russia.

However, the range was the most profitable part of the UAZ's product line, so it wasn't entirely ignored after the events of 1991. First up, in 1992, was the UAZ 39625 crew-cab with hinged rear seats, a derivative of the UAZ 3962 ambulance. In 1994 the UAZ 2206 minibus range gained two luxurious variants, the nine-seat '04' and the eleven-seat '033'. These models had soft trim in the passenger area and proper padded seats rather than the rudimentary tubular units that had been de rigeur for UAZ since time began. Also in 1994, UAZ announced the UAZ 3909, a kombi based on the UAZ 3741 van, with five additional seats and a table behind the cabin, and behind that a separate luggage area. It could carry, with the driver, seven people and 475kg of cargo and was aimed at farmers and other people, such as hunters and engineers, who needed to go out into the wilds with loads of equipment.

In 1996 UAZ offered the option of a larger 2,890cc 98bhp engine, the UMZ 4218. This retained an aluminium block but had cast-iron cylinder liners, which increased the strength of the engine as well as reducing friction loss. Existing vehicles equipped with the larger engine gained a '9' to their model

index – so, for example, the 3741 became a 37419, and the 2206 a 22069. The larger-engined models also gained luxurious cloth-covered adjustable front seats, with headrests, a viscous-coupled cooling fan and standard-fit radial-ply tyres. Freewheeling front wheel hubs, lockable by hand, were also added to the larger-engined models.

A series of long-wheelbase pickup models in which the wheelbase grew from 2,300mm to 2,550mm and the payload increased to 1.3 tonnes, further extended the range. The first of these was the UAZ 33036 announced in 1996, which also had an all metal load platform. The regular-wheelbase UAZ 3303 retained its wooden load bed. In 1997 UAZ developed a long-wheelbase UAZ-39094 double-cab pickup with a load capacity of 625kg. The UAZ-39095, announced a year earlier in 1996, also on the longer wheelbase, had a king-size two-man cab with a fold-down bunk bed and two storage bins behind the seats. This model was only ever produced in small numbers and was dropped from the range early in the 21st century.

Fuel-injected 2.89-litre UMZ 4213 engines, producing 99bhp, were introduced across the range in September 2006, each model gaining an additional '4' to its index to identify the new engines. Top speed went up from 110km/h (69mph) to 127km/h (79 mph). The rest of the drivetrain remained unchanged – all-round drum brakes and leaf springs, no power steering and the same four-speed gearbox and twin-lever transfer box first seen in 1966. In August 2007, however, the Spicer-type axles, first used on the Hunter, started to be introduced to the venerable UAZs along with front disc brakes, a new smaller two-spoke steering wheel and steering column-mounted minor controls also first seen on the Hunter.

In March 2008, the UAZ LCV range was renumbered to denote Euro-III compliant engines. The suffix '-310' meant Spicer axles and '-312' the slightly cheaper Timken axles, the latter having a smaller profile and so less likely to impede progress in deep snow.

A more fundamental change arrived in July 2009 when all the UAZ LCVs got a detuned version of the 16-valve 128hp ZMZ 40904.10 engine fitted to the Hunter and Patriot. Called ZMZ 4091.10 in Euro-III spec, the new motor produced 112bhp. These vehicles had the new codes 330395 (pickup), 220695 (minibus), 374195 (van), 396295 (ambulance), 396255 (crew bus), 390995 (kombi), 330695 (long-wheelbase pickup) and 390945 (double-cab pickup). Euro-IV engines arrived in June 2011 ready for January 2012, when that standard was introduced for new vehicles sold in Russia. At the same time ABS was added to the 2206 minibuses and 3962 ambulances and crew buses, again because domestic legislation dictated such an improvement to improve safety in vehicles used to carry multiple passengers.

←The UAZ 3165 was the long-awaited but yet to be produced replacement for the UAZ light commercial range. This is the original version, first seen in 1999. *(Julian Nowill)*

The UAZ LCV has never officially been made with a diesel engine other than for the Russian defence ministry. In November 2009, a new ambulance, the UAZ 396218, specifically designed for military use and equipped with a ZMZ-5143.10 turbocharged diesel engine, was supplied to the armed forces. It featured power steering, engine pre-heaters and extra interior heating. The diesel option has never been sold to the general public because of the extra cost and the problems insulating the cab from the noisier engine, which of course on the UAZ is right in the centre of the cab. The simplicity of UAZ's regular 3962 ambulance attracted attention from North Korea – a number were exported there during 2011.

The UAZ LCV was not left out of the firm's new-found enthusiasm for special editions. In September 2013 the wraps were pulled off the UAZ 3909 Trophy painted a striking aqua blue. It was equipped with an expedition roof rack, accessed by a body-mounted ladder, an in-cab 12 to 220V power convertor and Contyre off-road tyres.

In October 2014, UAZ introduced a new system of designating its models which marked a break with the Soviet system it had been using – and confusing customers with – for time immemorial. The 33065 for example was called the XT4GMD and the 220695 the XB4GMD. However, as far as the public were concerned, the well-known USSR-era indices were preferred and they remained in use alongside the new numbers. Around the same time the 3741 panel van faded away. There was no formal announcement, even though the vans got a new code of UAZ XV4GMK. The 3741 tag had, however, returned by 2017 for a van with windows, the UAZ XV6GMD, which was not that far removed in design from the by then officially discontinued 396255 crew bus with its side-mounted folding seats.

It was in February 2016 that the UAZ light commercials got their most significant changes since fuel injection had been introduced a decade earlier. To avoid the risk of losing sales – 22,102 were sold in 2015, a not insignificant part of Ulyanovsk's total production – UAZ realised it couldn't just rely on the model's go-anywhere reputation and low price. Even the hardiest of souls wanted a little more comfort when they went about their business or hobbies.

For the very first time, the driver's seat could be moved back and forward. Not only that but the redesigned front seats with integral headrests, could have heaters fitted. The dashboard, while still painted metal, had an electronic multi-function instrument panel mounted in the centre and an integral slot for the radio in front of the driver. The interior was now fully trimmed with sound-absorbent, soft fabric trim, which made it possible to actually hear a radio when driving. There was now a 12V power outlet for charging cell phones and powering sat-navs and all models got a new, soft-feel padded steering wheel with column-mounted switches for wipers and indicators.

One of the main complaints from UAZ users had been cracks where the body was mounted on the chassis. UAZ introduced additional strengthening of the affected chassis members. In addition, the chassis and body gained a plastic and rubber insert where they joined, effectively absorbing the vibration that had contributed to the cracking of the metal. In October 2016 the off-road capability of the UAZ LCV was further enhanced when an Eaton-differential-lock-equipped Spicer rear axle was made available as an option.

In July 2018 a special Jubilee version of the UAZ-2206 minibus was launched to commemorate 60 years of continued production. The most distinctive feature was a duo-tone paint scheme, glossy white above the waistline and a refreshing mild green below, complemented by white 16in wheels, a white radiator grille and special badging. Underneath were Spicer axles and a locking rear differential. There was even a single key for both the doors and the ignition. In December that year, all the UAZ LCVs were offered with the ERA-GLONASS system.

Still known in Russia by their Soivet-era nicknames of Loaf (in Russian: bukhanka – Буханка) for the vans and minibuses, which looked like a loaf of bread, and Tadpole (in Russian: golovastik – головастик) for the pickups, there UAZs remain very popular. They really have no competition and remain unique in offering serious off-road capability with plenty of space for cargo and passengers at a genuinely affordable price. In 2018, the UAZ-3909 Kombi was the fifth best selling light commercial in Russia, with 8,505 being bought – up 19 per cent on the previous year. Also in the top ten that year was the 2206 minibus, which sold 2,451 examples. It wouldn't be too far fetched to say that the UAZ LCV is as close to immortal as any vehicle can get. ■

ZAZ

BACK FROM THE DEAD

The collapse of the Soviet Union left factories in what were now independent states in a parlous position. They were cut off from the bulk of their traditional markets and faced problems getting hold of components, which had been sourced from across the vast Soviet empire. The ZAZ plant in the Ukraine was no exception although it did have the advantage of having just launched a new car, the ZAZ 1102 Tavria. It also had its Soviet-era rear-engined air-cooled ZAZ 968M still in production, which managed to cling on until July 1994 when the last one rolled off the Zaporozhets production line.

The Tavria wasn't left unaltered. Versions made after 1991 had changes to the front wings; the original rectangular headlamps, recessed into the grille, were gradually replaced by units that fitted flush; and in 1994 a new electric fan and driveshafts were introduced.

However, a financial crisis at the beginning of the 1990s forced ZAZ to buy components on the cheap, which resulted in a fall in build quality. Politics got in the way of car production too – after the collapse of the USSR some politicians and some elements of the media attributed all Ukrainian misfortunes to Russia, and collaboration with enterprises in the former 'sister republic' was no longer encouraged. More than half of the Tavria's components came from Russia and the shift to using products from Ukrainian subsidiaries led to a sharp drop in standards. The quality of its assembly also went downhill. Production which had stood at 91,000 cars in 1994 fell to 1,030 in 1997.

Even in the face of such financial adversity, ZAZ engineers worked on expanding their product

↑ One of the very few right-hand-drive ZAZ 1102 Tavrias made – this example was rescued from the British Lada importer's yard, where it had been left after testing work to decide whether or not to import the car into the United Kingdom. *(Ed Hughes)*

range. A five-door Tavria-based estate car, the ZAZ 1105 Dana, was first shown in 1994. Production was extremely limited and the car remains one of the rarest products of the Zaporozhets plant. The extra weight of the ZAZ 1105 did, however, highlight the need for a more powerful power unit. A few trial examples (ZAZ-1122 Tavria three-door and ZAZ 1125 Dana estate) with a VAZ 2108 1,288cc engine and four-speed gearbox were built but didn't go into production. Instead, to go with the larger Tavria range, in 1994 MeMZ started work on larger engines, which were revealed in 1997. The two additional engines, the 1,197cc MeMZ 2457 and the 1,299cc MeMZ 301 were stretched versions of the original MeMZ 245 unit. While the smaller engine went into production fairly quickly, the larger one didn't really become available until 2001. Fuel injection was offered from 2002.

As a way of bringing in both cash and technology, ZAZ formed a joint venture in 1998 with the Korean firm Daewoo. The Korean partner announced its intention to not only build its own cars at the ZAZ factory but also to invest in a modernised Tavria. That year the first CKD kits of the Daewoo Lanos started to be assembled at the ZAZ plant. During June 1998 at the Kiev Motor Show, the improved ZAZ Tavria made its public debut. According to what was now known as AvtoZAZ-Daewoo the new Tavria Nova incorporated 300 changes, all directed towards bringing quality to an acceptable level. These included higher-quality metal for the body, new engine components to increase the life of the

↑The ZAZ Tavria very nearly didn't make it into the post-Soviet period but thanks to some timely investment by Daewoo it not only survived but gave birth to a larger five-door notchback model, the Slavuta. *(Author's collection)*

→The rear-engined Zaporozhets 968M continued in production until 1994, leaving Porsche and Tatra as the world's last outposts of rear-engined production cars. *(Avtoexport)*

motor and tighter panel gaps thanks to improved assembly techniques. The Tavria Nova replaced the original Tavria of which 326,500 had been made.

Even the Korean influence couldn't end ZAZ's faith in the Soviet-era vehicle indexing system. The three-door Tavria Nova was coded ZAZ 110206 with the 1,081cc engine, the 110207 with the medium-sized unit and 110208 with the larger engine. A '1' in place of the final 0 denoted luxury trim.

In May 1999, the first pre-production batch of five-door liftback ZAZ 1103 Slavutas was built, after being unveiled at the 1995 Moscow Motor Show. The ZAZ 1105 Dana estate car was by now officially a built-to-order model – few were actually made and once Daewoo took control of the firm the estate was allowed to fade away. However, the ZAZ 1103 went on to become a major part of the Tavria family, with full-scale production starting in 2001. Changes on the production models were at first glance minimal although the bumpers were body coloured. The engine range of the five-door was the 1,197cc and 1,299cc MeMZ units (ZAZ 110307 and ZAZ 110308 respectively).

During July 1999 ZAZ began limited production of the Tavria-based ZAZ 110550 pick-up, first seen in November 1994 and based on the ZAZ 1105 Dana estate car platform. It was powered by the 53bhp 1,091cc MeMZ 245 engine. It was joined in 2000 by the ZAZ-110557, powered by the 1,197cc 58bhp MeMZ 2457 engine and the ZAZ 110557-51 with a plastic superstructure fitted to the pick-up to create a light van with a payload of 390kg. In comparison with the previous commercial models, these vehicles featured a strengthened beam rear axle, new rear bumpers and new rear-view mirrors.

The relationship with Daewoo was short-lived, a victim of the collapse of Daewoo itself in 1999. Founded in 1967 Daewoo and had grown at breakneck speed, involved in shipbuilding, heavy engineering, electronic and carmaking. By the 1990s, the group was heavily in debt and its major markets were either stagnant or shrinking. Once considered a top-ten motor company in terms of production, in 2001 it was forced to sell off its automotive arm, Daewoo Motors, to General Motors. Following the sale Daewoo lost interest in its overseas offshoots, none of which, with the exception of the Vietnamese operation, transferred to GM's new Korean subsidiary. Components were still shipped out from the South Korean factories to the scattered remnants of the Daewoo empire, which were now all fighting to survive as independent entities following the death of their parent. ZAZ managed to get support from the Ukrainian government to survive the demise of its former partner.

However, the relationship with Daewoo had left ZAZ a much stronger company. It had undergone a series of structural changes including the introduction of advanced production facilities, all of which put it in a good position to go out and find new products to fill its assembly lines and develop new models of its own. In the summer of 2002, production of the

←One of the very few ZAZ 1105 Dana estate cars produced by the Ukrainian firm. Poor production standards spoiled what could have been a very successful compact estate. One of the problems reported was persistent water leaks into the interior. *(Julian Nowill)*

Daewoo Sens started – this was a Lanos powered by the 1,299cc 70bhp MeMZ 307 engine. It included some components shipped in from the former Daewoo car plant in Poland, which eventually fell under the control of ZAZ.

The name of the company was changed in January 2003 from AvtoZAZ-Daewoo to just plain ZAZ. A focus on assembling cars for other companies meant that ZAZ was building 148,000 cars a year by 2005 – nearly back to its Soviet heyday. By 2007, the plant was building its own ZAZ Slavuta range, the Daewoo based ZAZ Sens and ZAZ Lanos, various Ladas, some Opels and Chrysler 300Cs and a range of Chevrolets, based on Korean designs.

The ZAZ team did begin work on a Tavria replacement, the ZAZ 1106, but it didn't progress beyond mock-up stage. By 2003 all work on the ZAZ 1106 had come to an end as the firm focused on the Daewoo designs it inherited from its ill-fated partnership with the doomed Korean carmaker.

ZAZ exports in the post-Soviet era were extremely limited. In 1992, however, a batch of at least three right-hand-drive Tavrias arrived in Britain at the headquarters of the Lada importer, Satra Motors. Pleasant to drive and promising a low price, sales in the United Kingdom were stymied by the inability of post-Soviet ZAZ to guarantee a reliable supply of cars and spare parts.

Production of the original three-door ZAZ 1102 Tavria ended in September 2007. However, the five-door Tavria-based ZAZ 1103 Slavuta and the commercial versions remained in production. ZAZ was concentrating its efforts on its successful MeMZ-engined versions of the Daewoo Lanos-based cars, and the lucrative business of assembling cars for other makers who wanted to sell their products in the Ukraine and elsewhere. It even re-entered the Russian market under its own name in June 2007 with the ZAZ Sens, having supplied a Chevrolet branded Lanos to Russia since 2005.

Plans to axe the Salvuta in July 2008 were cancelled in the wake of the worldwide financial crash. Budget-priced cars were suddenly back in demand and in the Ukraine the ZAZ represented cost-effective motoring. Thanks to its Tavria roots, it could be maintained anywhere in the country and investment in quality control by ZAZ gained it a reputation for being sturdy and well made for the price. It wasn't until January 2011 that ZAZ finally ended production of the ZAZ 1103 Slavuta and the ZAZ 110557 Tavria commercials. At the end of its life the Slavuta, of which more than 140,000 had been made, was the cheapest new car made and sold anywhere in Europe. It was also the last car to be developed and designed by the Ukrainian motor industry. ZAZ marked the end of production by offering the last car built in an online auction. The firm received 650 bids and the car was won by a motorist living near Kiev. The MeMZ engine line, used throughout the life of the Tavria and Slavuta, and which like them had its roots in the USSR, continued until 2018 under the bonnet of the ZAZ Sens.

Output at Zaporozhets in 2011 was down to just under 61,000, but the Sens and Lanos kept the ZAZ production lines humming gently away until 2014 when there was breakdown of relations between Russia and the Ukraine. A move towards closer alignment of the Ukraine with the European Union sparked opposition in the eastern half of the country, which had close links with Russia. Armed conflict and a change of government in Kiev disrupted the Ukrainian economy – total car sales fell from 623,000 in 2008 to 80,000 in 2017. With imports of both new and second-hand cars from the European Union now flooding into the country, by 2017 ZAZ found itself producing just 1,674 cars – in a factory able to build more than 150,000. Production stopped in December 2017, but sales continued from stock through 2018 until the following December when the final new ZAZ took to the roads. Assembly of Korean LS tractors, using component kits supplied from South Korea, started in early 2019, taking ZAZ back to its agricultural roots, but the long-term future of the factory remains bleak. ■

After the break-up of the Soviet Union the ZAZ Tavria was no longer widely sold in Russia. Here's one of the few that slipped through. *(Vladimir Varaksin)*

IZH

GRACEFULLY FADING AWAY

The first new Russian car to emerge in the newly capitalist Russia was the Soviet-designed IZH 2126. Development had started in 1978, with Moscow University helping out on the aerodynamics and Renault engineers offering words of advice on the production side. The new car was first seen at the 1985 Exhibition of Achievements of the USSR but did not make it into serious production until 1991, missing out on the final Five Year Plan of the Soviet Union. It was developed as a replacement for the Moskvich-based IZH 2125 Kombi, which finally went out of production in 1997. It was also used as the basis for van and pickup replacements for the IZH 2715 and 27151 respectively.

The IZH 2126 was a rear-wheel-drive five-door hatchback and was originally called the Orbita, in recognition of its ability to go faster than the preceding IZHs and Moskviches. It displayed the pragmatic and practical touches that were typical of Soviet cars, designed with rough roads, a dispersed service network and durability all uppermost in the designers' minds. It retained rear-wheel drive, partly because it was seen as more durable, partly because doing so would speed up development of the new car and partly because the designers wanted to allow for the option of four-wheel drive. The original engine used was the 1,478cc UZAM 412. However, the prospects of what was a promising car fell foul of the post-Soviet chaos. From 1991 until the end of the 1990s the Izhevsk plant built the car largely in response to firm orders.

The IZH 2126 was really a parts-bin special, borrowing a lot from other Russian cars. From the

↑Designed during the Soviet era, the IZH 2126 didn't really go into production until the USSR had passed into the history books. It was a remarkably well-sorted car, making clever use of many existing components to create a rugged and durable compact hatchback. It deserved better than its fate of being an automotive also-ran. *(Author's collection)*

old IZH it took the hydraulic clutch mechanism, the bearings for the half axles (although the half axles and rear axle itself were completely new), rear brake shoes and servo system, differential bearing and clutch. From the AZLK 2141 Moskvich came the master brake cylinder and instruments. The classic VAZ 2105 Riva contributed the control arm for the rear suspension. The GAZ 3102 Volga donated a windscreen wiper motor and a differential housing. Part of the steering column came from the Ural motorcycle. The VAZ 2108 Samara offered up front wheel bearings, front disc brakes, electric fan motors for both the radiator and heating system, safety devices and relays, steering column switches and headlights. Original designs included the body, the interior, the five-speed gearbox, the shock absorbers and the suspension springs.

The full selection of engines available in the IZH 2126 has been quite extensive. The initial choice was restricted to products of the UZAM engine plant. The first power unit offered was the 73bhp 1,478cc UZAM 331.10, derived from the UZAM 412 used in the IZH 2125, the 86bhp 1,699cc UZ 3317, a 99bhp 1,816cc UZAM 3313.10, reputedly fitted with fuel injection, and, available to special order in 1997, the 99bhp 1,946cc UZ 248. This wide choice of engines was made possible by the IZH 2125's conventional drivetrain layout. In reality, the majority of early IZH 2126 cars were fitted with either the 1.5- or 1.7-litre UZAM motors. From the end of 1998, IZH had added the option of the VAZ 2106 engine, clutch and gearbox. Engine choice had settled down by 2002 to the 1,568cc VAZ 2106 unit or the 1,699cc UZAM 3317, with larger engines offered in the 4x4 models first introduced in 2001. By the end of 2005 the UZAM engines had been dropped as they couldn't meet emissions regulations and IZH buyers were offered a choice of VAZ units, the 1,570cc VAZ 2106 and the 1,690cc VAZ 21213, instead.

After flirting with Hyundai and Skoda, in 1997 IZH relaunched the 2126 as the IZH 2126 Oda and attempted to begin production of the IZH 21261 estate car. The relaunch was hampered by the deteriorating situation at the Izhevsk works – enormous debts and real problems coming to terms with the move to a market economy in Russia. In 1999 the SOK Group became the main shareholder of the IZH factory and completely reorganised production, investing in new equipment. Very soon there was an improvement in the quality of the cars and sales started to move upwards. To make best use of the plant's capacity, IZH began assembling VAZ models alongside its own IZH 2126 range. The VAZ 2106 joined the IZH family in 2001 followed by the VAZ 21043 estate car in 2003. In 1999 IZH built 9,370 cars and vans. By 2000 this had grown to 27,400 and by 2003 was up to 93,505 vehicles, including 35,700 IZH 2126 cars and 15,200 IZH 2717 vans and pickups. The factory developed a close relationship with Kia and began assembling the 1.6-litre Kia Spectra in March 2004, using kits supplied from South Korea. It was followed in 2007 by the Rio and the Sorento.

At the beginning of 2001 the IZH 27171 pickup and IZH 2717 van finally went on sale to replace the old but still popular IZH 27151-01 and IZH 2715-01. Officially, the long-running IZH 2715 series ended its production run in 1997, making way for the new vehicles that were officially announced in 1998, but the final examples were not built until 2001. In 2002 at the Moscow Motor Show, IZH at long last formally announced that it would begin production of a 4x4 Oda, the IZH 2126-062. The first cars had been on the road in 1995 and some limited small-scale production had started on an ad hoc basis in 1997. The car was aimed at filling the gap between the normal IZH hatchback series and traditional off-roaders, such as the VAZ 2121 Niva. Full-scale production of the IZH 21261, by then called Fabula, finally began in March 2004.

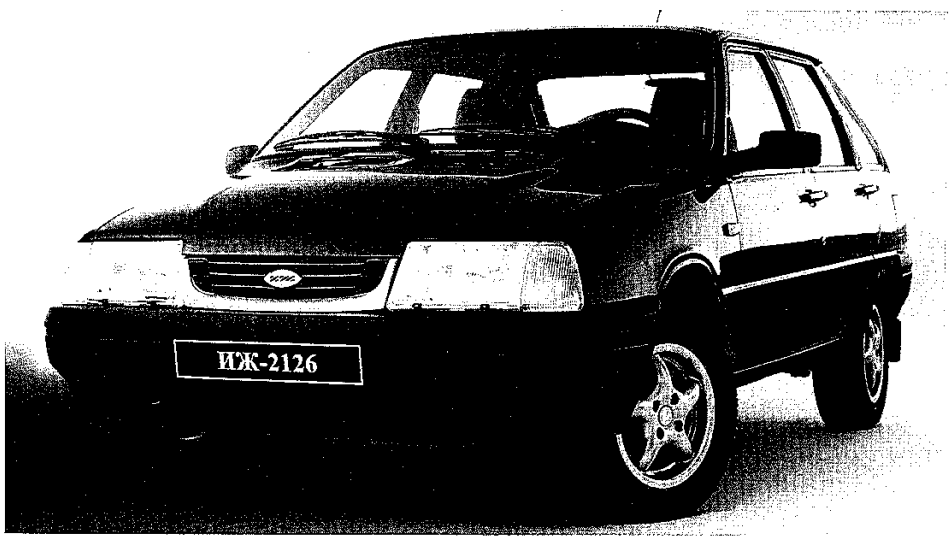
In spite of its conventional design, the IZH 2126 was a capacious and competent hatchback. It was well adapted for Russian driving conditions and was considerably cheaper than the VAZ 2105/6/7 or 21093 models that were its natural domestic competition. Contemporary Russian road tests also reckoned the IZH was a much nicer car to drive than the classic rear-wheel-drive Ladas. However, sales faltered after their early 21st century rally

and by 2004 production of IZH 2126-based cars seemed to have reached a plateau of 26,200 cars and 13,900 vans and pickups.

In August 2005, the IZH 2126 reached the end of the line. In spite of their best efforts to create a cheap car for the post-Soviet era, IZH's attempt failed. Although the Oda was in its final years on sale for a price equivalent to less than £3,500 – much less than the price of the most inexpensive foreign-produced brands on sale in Russia – the firm simply could not make production pay at such prices. It wasn't the end for the IZH brand though. On 22 December 2005, IZH began production of a new IZH vehicle although it really wasn't a new, self-penned vehicle at all. The IZH 27175 van was introduced to maintain IZH's market niche for small commercial vehicles, abandoned when the IZH 2717 had been dropped as part of the demise of the 2126. The IZH 27175 used the mechanical components and front end of the VAZ 2104, by now built exclusively at the Izhvek works, and the rear end of the out-of-production IZH 2717. In effect, it was a Riva van!

In July 2006, IZH started offering the VAZ 2104 with the 1,568cc VAZ 2106 engine, an option never offered by Lada itself. This car, equipped also with fuel injection, was called the VAZ 21041. By the end of 2006 the two VAZ-based products were selling extremely well, accounting for nearly half the total production at IZH. In the spring of 2007 IZH went one step further and offered buyers the option of having a VAZ 2107 front end on their VAZ 21041. Incidentally, by this time the IZH-built cars were the only VAZ-designed cars bearing the VAZ name rather than Lada.

The relationship between IZH and AvtoVAZ got even closer in August 2008 when news leaked that IZH may be sold to AvtoVAZ. The Izhevsk firm, even with the VAZ 2104-based models and its contract to build Kias had been struggling financially for some time as the car market in Russia collapsed in the wake of the global financial crisis. IZH was forced to file for bankruptcy in August 2009, production of cars having ground to a halt in May. The factory was eventually scooped up in November 2011 by a newly buoyant Lada. Following a comprehensive update of its production facilities, IZH in July 2012 began building the Lada Granta saloon followed in May 2014 by the five-door Granta liftback. The plant was chosen to be sole site for manufacturing the Lada Vesta, a car designed entirely by AvtoVAZ, which went on sale in September 2015 and soon topped the Russian market. Perhaps not surprisingly, in April 2017 IZH was renamed Lada Izhevsk. ■



←The IZH 2126 was dropped by its makers in 2005, the claim being that it couldn't be produced profitably. The plant opted instead to assemble Kias and VAZ 2104 estate cars. This is a 2004 IZH 2126 hatchback. *(Author's collection)*

GAZ 31029

SEEMINGLY IMMORTAL

↑The GAZ 31029 was the first Volga of the new era. It combined the GAZ 3102 rear end with a restyled front, but apart from those modifications nothing was changed. It was made from 1992 to 1997. *(Group GAZ)*

GAZ went through some hard times during the 1990s as it adjusted to becoming a private company, to the loss of major state-run customers that had been its principle source of business and to the economic instability that accompanied Russia's move from a socialist to a capitalist society. In November 1992 GAZ became a quoted joint stock company. Thanks to the far-sighted approach of its management and the introduction of the GAZelle light commercial range in 1994, GAZ managed better than most to weather the post-communist-era storm and to increase its output. In 1997, the works turned out more than 220,000 motor vehicles, a 30 per cent increase compared with 1994.

In August 2000 a subsidiary company of Oleg Deripaska's Siberian Aluminium group, started to buy shares in a number of leading Russian motor vehicle manufacturers, including GAZ, to create its own automotive division, Ruspromavto. A focus of attention on improving the quality of production paid off and GAZ, as part of what was renamed Group GAZ in 2006, became one of the strongest players in the Russian motor industry.

The GAZ 24-10 Volga stayed in production until April 1992 when, after 417,481 had been made, it was replaced by the GAZ 31029 Volga, the first post-Soviet revamp of the GAZ 24 Volga series. It ran until 1997 when it was replaced by the GAZ 3110 Volga. The GAZ 31029 had a restyled front end with a slight reverse slant to the grille, bigger headlamps with wraparound indicators, larger plastic bumpers and the tail end of the top-of-the-line GAZ 3102. Under the lightly retouched skin, the GAZ 31029 was to all intents and purposes the same as the GAZ 24-

10, but from the beginning GAZ slowly and steadily introduced changes and improvements to keep the car attractive to buyers who now had choices when it came to what car they bought.

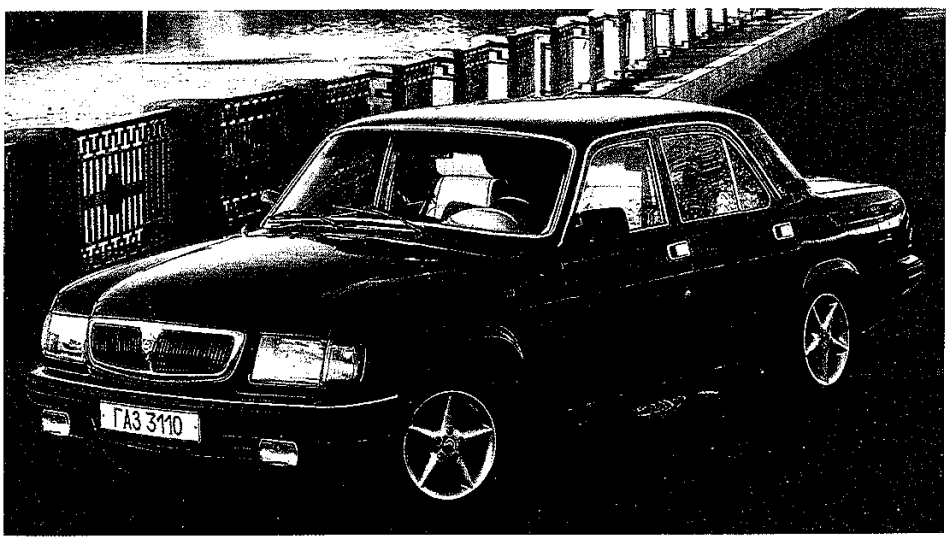
The basic engine for the GAZ 31029 was the same as the previous GAZ 24-10, a carburettor-fed 2,445cc ZMZ 402.10 unit. This was offered in two versions – one for use with 92-octane fuel and one, called the ZMZ 4021.10, for use with lower grade 76-octane petrol. In 1995 the front suspension was improved and disc brakes, power steering and five-speed gearbox were offered as options along with the first fuel-injected ZMZ engine, the 4062.10. The estate cars were also upgraded in 1992, with the GAZ 31022 replacing the GAZ 24-12 and the GAZ 31023 ambulance variant replacing the GAZ 24-13.

Even though production soared from around 64,000 a year to a high of 124,000, thanks to the GAZ 31029 offering a lot of familiar metal for comparatively little cash, it sacrificed Volga's reputation for quality in pursuit of quantity. Owners reported such gems as bent half axles, bolts missing from the front suspension, rust-streaked body work within a year, leaking brake master cylinders and high oil consumption caused by poorly assembled piston rings and leaking gaskets. The factory's corrosion protection was now inadequate, a sad turn of events after the almost legendary care given by GAZ to making early Volgas rot proof. Some apparently were painted without a primer coat! Not surprisingly, exports of Volgas came to an end apart from shipments to some countries within the CIS, mainly those in the Caucasus regions where the low price of the Volga remained enough to outweigh their appalling build quality.

In 1997 the GAZ 31029 was replaced by the GAZ 3110. The new car was announced just after GAZ and the European Bank of Reconstruction and Development signing a credit agreement worth $80 million to help finance the development of a new range of thoroughly modernised Volgas. Scope for fundamental changes to the original GAZ 24 formula was constrained by the need to achieve a high level of component interchangeability between the new car and its predecessors. That was because the cash wasn't there to do anything more radical but also a recognition that across much of the CIS most of the automotive servicing and repair infrastructure was still geared up to deal mainly with Soviet-era cars. Anything too different would be out of its depth in the more remote regions of the area.

Servo assisted front disc brakes were fitted as standard to the GAZ 3110 and modifications were made to the front and rear suspension, including changes to the rear axle, to make driving the car quickly a little easier than the earlier cars. The gearbox was at first a four-speed unit, but very soon the five-speed gearbox became standard kit.

The body itself was shortened by 100mm, the cuts being made to the rear, which had a less angular appearance, wraparound rear lights and a boot lid with a lower opening. Styling changes



←The GAZ 3110 Volga was a vast improvement over the previous 31029. It looked much better and offered far more performance and refinement, although its basic GAZ 24 structure and suspension remained unchanged. *(Group GAZ)*

included a new front grille that cleverly incorporated the light units and wings of the GAZ 31029. Inside, there was a new curvaceous dashboard with a rev counter. The switches and steering-column stalk controls were much more elegant and the ignition, still mounted below the steering column, at least now made it possible to put in the key without having to make sure it was the right way up! The seats were vastly improved over the old car although tall drivers still found space limited and the odd off-centre steering-column angle remained. A centre console with armrest was fitted between the front seats. Doors had new-style moulded trim panels.

Hydraulic power steering was standard. Other equipment included tinted glass, the option of air conditioning and velour upholstery. Anti-lock brakes remained on the wish-list, as did an automatic gearbox. According to tradition, all GAZ cars, beginning with the Pobeda, had a radio fitted as standard. The GAZ 3110 was no exception with a tape player being added for good measure.

The new Volga was definitely better to drive. The new fuel-injected ZMZ 406 2,300cc 16-valve engine meant that for the first time the words 'Volga' and 'sporty' could be used in the same sentence. Acceleration was now quicker than a VAZ 2108 and the Volga retained its famous low-speed pulling power, something buyers had been worried would be lost with the more highly tuned engine. However, steering reactions at speed were still vague and slow, although the car could zip round corners, squealing as it went, without losing grip unless the road was made from cobblestones or some other slippery material. Not bad for a pretty basic suspension set-up.

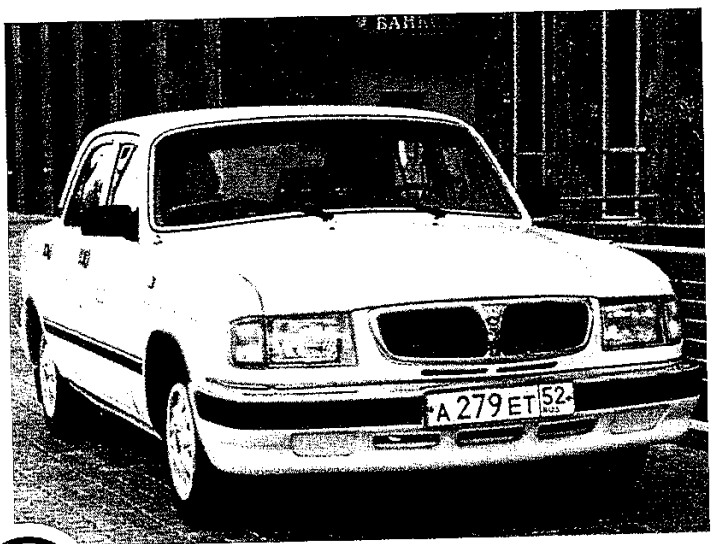
The original GAZ 3110 Volga was produced from 1997 until 2002. It was equipped with a choice of ZMZ petrol engines – the 2,445cc ZMZ 402.10 and ZMZ 4021.10 both with carburettors and the 131bhp fuel-injected, 16-valve ZMZ 4062.10 unit. It remained resolutely a Volga, retaining both the good and the bad of its predecessors but also acquiring several new strengths, not least of which was a feeling of being more up to date and better built than before – not too difficult after the horror story that had been the GAZ 31029! Production levelled out and sales remained steady in Russia and the core CIS markets.

In 1996, GAZ launched a project to build diesel engines under licence from the Austrian company Steyr-Puch. The first trial run of four-cylinder, turbocharged 2,134cc GAZ 560 engines was made in 1997. In 1998 the Canadian Magna company acquired a controlling interest in Steyr-Puch and a formal agreement was signed with GAZ to set up a joint venture to build the engines in Russia. Full-scale production built up during 2000, with local content getting higher as the year progressed. Engine blocks were made in Russia and the Yaroslavl engine plant started to produce fuel equipment.

The new engine made a positive impression, not least for its frugal appetite for fuel. In a Volga, if the speed was kept to 100km/h (62mph) just 8.1 litres was needed to cover 100km (34.8mpg) compared to 13 litres (21.7mpg) in the ZMZ 4062-engined model – which in the aftermath of the 1998 Russian economic collapse was most welcome. The solid diesel proved to be an ideal match for the Volga and was offered as an option across the range although its extra cost meant the owner would need to cover at least 100,000km (62,000 miles) more in the diesel car to recover the additional purchase price. In 2004, production started of the GAZ 560.1, a Euro-II compliant version of the engine that had an intercooler and produced a little more power.

In May 2003, the second version of the GAZ 3110 Volga left the GAZ factory after debuting at the Moscow Motor show in August 2002, when GAZ had promised the new car would be ready for sale the following May. Unlike so many Russian

↓The second series of the GAZ 3110 Volga ran from 2003 until 2005. It introduced some important mechanical changes, including new grease-nipple free front suspension. *(Group GAZ)*



car debuts, this one had indeed run to schedule! Interestingly, there was nothing much to distinguish this new GAZ 3110 model – no new badges nor even a new serial number.

Outside, the second series GAZ 3110 looked to be little more than a minor facelift of the original GAZ 3110. Revised single-piece headlamps, new back light units and slimline door handles were the most obvious features of the new car. Eco-friendly Volga buyers could now order the ZMZ 4062.10 engine with a catalytic converter. However, quality was dramatically improved, impressing even hard-nosed Russian motoring journalists. New-style door locks worked smoothly, central-locking systems locked and unlocked to order, door mirrors didn't move about in their casings. The controls and switches all operated with an almost Germanic smoothness.

How did the new Volga behave on the road? The engine and transmission were familiar, but suspension modifications could be felt in the quicker, more controllable steering although the car was still a little vague in a straight line and the power-assisted steering was extremely light. This was thanks to updated front suspension, which everyone had been asking for since the 1970s. The old-fashioned and imprecise kingpins that dated back to the GAZ 21 were replaced with sealed-for-life ball joints, which also eliminated the need for a grease gun. Private drivers had found this need for constant greasing to be a pain but professional drivers, such as taxi drivers, liked the tough suspension system, which if greased regularly rarely if ever failed. When the first GAZ 3110s went on sale with the new suspension, taxi drivers went round

↑The estate car Volga continued to run alongside the saloon, sharing the same mechanical upgrades. This is the 310221, which was introduced at the same time as the 3110. By the time the GAZ Volga 31105 was ready to be launched, however, it was only available to special order. *(Group GAZ)*

showrooms looking for unsold versions with the original suspension system.

Roll was substantially decreased due to increased stiffness of the rear suspension and the now standard rear anti-roll bar and thicker anti-roll bar up front. Ride comfort remained excellent and Volga drivers still didn't need to slow down for rough road surfaces. Potholes, tramlines, road surface joints – all this the Volga as before passed over at any speed without the least hint of trouble. A revised gearbox made the gearchange much more accurate, being slick and with a short shift both at rest and when on the move. A major change from the loose, notchy, long-throw shift of the old Volga.

The Volga engineering team must have got something right because around 1,500 Volgas were now being made every week. Sales may have been helped a little by the GAZ 3110 Volga in yellow taxi trim starred in the amazing chase sequence in the 2004 film *The Bourne Supremacy*, in which hero Jason Bourne (Matt Damon) driving the Volga comprehensively beats a Mercedes-driving hoodlum in a hair-raising race through the streets of Moscow.

The Volga estate car shared in most of the changes of its saloon counterparts, the 1997 model sharing its front-end styling and interior upgrades with the 3110 saloon model and being renamed the GAZ 310221. Mechanical changes, too, paralleled the saloon with the estate cars benefiting from all the same drivetrain updates. However, updating the estate car aft of the front seats was never really taken forward, partly because sales of estate cars in Russia had traditionally been low, as the station wagon body style had no prestige at all in the minds of Russian buyers. Indeed, even hatchbacks played second fiddle to traditional saloon cars.

The primitive, albeit well-made, rear seats were extremely thin and very uncomfortable for long trips. The third seat row lifted up from under the luggage compartment floor and was really only suitable for children. In reality, the Volga estate was a 2+5 rather than a 5+2 as only the front seats were worthy of the name. Only 888 GAZ 310221s were made in 2003.

A matter of months after production started of the second series 3110, GAZ pulled the wraps of its next update of the Volga. The GAZ 31105 was showcased in Moscow in August 2003. It was destined to replace the series two 3110, which it did in February 2004. The most noticeable change was that the GAZ 31105 featured an entirely new front end with a new grille integrated into the bonnet, and new front wings with oval indicator side repeaters moved to the their lower part. Single-piece Osvar headlight units incorporated all the front-end lighting needed for the car. A new front bumper was completely integrated into the front-end styling and was not superimposed on top of the original wings as the last new bumper had been on the 3110.

Inside, new 'soft feel' switches were fitted along with a relocated ignition lock on the side of the

➔The GAZ 31105 was yet another upgrade of the long-running Volga theme, featuring radically revised front-end styling and major changes to improve comfort, including a new steering column that for the first time offered larger drivers the space they were entitled to expect from such a large car. Sales remained steady at a not unrespectable 50,000 plus per year. *(Group GAZ)*

steering column, which was itself of a new design that, at long last, corrected the slightly offset driving position that had been a feature of the Volga since 1968. No longer did it seem to lean away slightly from the driver's left arm but was now firmly in line with the centre of the driver's seat. It was crowned by a new-style steering wheel and the column switches resembled two joysticks, directly under the driver's fingers – not too close but not too far from the rim.

The seats were thinner but offered more lateral support and better, adjustable lumbar support for the driver's back. They were also positioned lower than before, providing more space above the head, between the bottom of the steering wheel and the seat pad, and between the steering wheel and the seat back. This finally addressed a long standing fault of the Volga – that for a large car, room for drivers bigger than average had been surprisingly limited. The seats seemed at first harder than in previous Volgas, but after a while they were found to be extremely comfortable, while headrests were new. Standard kit included seat belts for all passengers, tinted glass and power-assisted steering. There was a catalytic convertor that helped the ZMZ 4062.10 engine in the GAZ 31105 meet Euro-II emissions regulations. Servicing was required every 10,000km and more than 60 per cent of the body parts were galvanised.

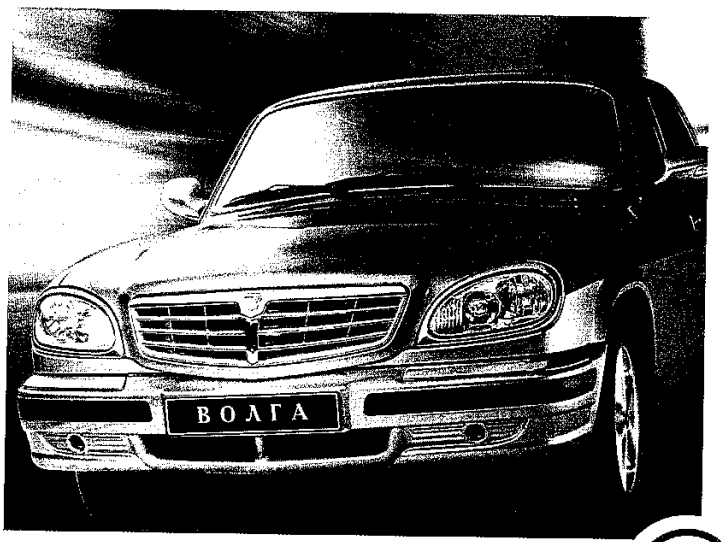
At the 2005 Moscow Motor Show a revised GAZ 310221 estate car was shown, with the new interior, front lights, bonnet and radiator grille first seen on the 31105. The GAZ 310221 was by now built to order, but buyers could now decide whether they wanted a 3110 or a 31105 style front end.

At the start of 2005 GAZ had faced a major hiccup in the resurgent Volga programme. The firm was forced to suspend production in January after its long-term main engine supplier, the Severstal-Auto-owned ZMZ, raised engine prices by 24 per cent, increasing the cost of a ZMZ engine to $1,700. GAZ suspended its orders to the Russian firm and started negotiations for the supply of Daimler-Chrysler engines. GAZ had already tested several foreign engines on the Volga because the range offered by ZMZ was rather small. The V6 and turbocharged units long promised by ZMZ were judged by GAZ to be likely to be too expensive and not reliable enough. ZMZ retorted that it could not continue further development and agree a fall in costs if GAZ did not buy larger volumes.

Although a deal to restart supply from ZMZ was finally patched together, the first Daimler-Chrysler-engined Volgas were made in July 2005, GAZ having announced in April that they had concluded a long-term agreement for the delivery of the engines from the Daimler-Chrysler plant in Saltillo in Mexico. The engine chosen was the 2.4-litre 152bhp unit used in the Chrysler Neon, Dodge Stratus and Chrysler Pronto Cruiser. The external design features of this engine were very close to the ZMZ 406 series, making it relatively easy to adapt this engine for the mass-produced GAZ-31105/3102 Volgas models and also for the Sable and GAZelle commercials.

It wasn't, however, an entirely simple exercise to drop the American engine into the Volga. Modifications had to be made to the car, including changes to the shape of the crossbeam for the front suspension and the bonnet as the Daimler-Chrysler unit was slightly larger than the ZMZ. A new engine-management system for the fuel injection was designed for the Volga in the USA, Chrysler not wanting to place its software at the disposal of the Russian engineers.

From the outside only the grille design made it possible to distinguish the Daimler-Chrysler- and ZMZ-engined cars, the former having prominent horizontal bars and the latter a waterfall effect. On the road, the new engine made the Volga feel more sprightly than before, with the quieter engine making



↓The Daimler-Chrysler-powered Volgas had this simpler but bolder type of radiator grille to identify them from their ZMZ engined sister cars. *(Author's Collection)*

➔The GAZ 3102 remained the Volga to have if you wanted to impress the neighbours. Long after the Soviet Union had entered the history books and the 3102 became available to anyone who wanted to buy one, the car retained its Soviet-era cachet of being driven by those who were something special. *(Group GAZ)*

the traditional Volga noises, caused by its less-than-smooth aerodynamics and ancient transmission, far more noticeable. Acceleration was better and the clutch was lighter. The GAZ 31105 with the Chrysler engine was priced about £300 more than a ZMZ-powered model and was officially launched at the 2005 Moscow Motor Show. Sales began en masse in December 2005.

In the same month GAZ dropped a bombshell. The firm announced that during 2007 production of the Volga would come to an end, claiming that production, which peaked at 100,000 a year at the start of the 1990s had fallen to about 50,000 a year.

Russian spending power had increased with the growth of the country's oil-fuelled economy, and foreign carmakers had finally started tapping into what analysts claimed was by then one of the world's fastest growing markets. Anyone who was anyone in post-Soviet Russia, it would seem, wanted to drive Mercedes, BMWs and Audis, with Bentley, Porsche and Range Rover showrooms selling cars for the truly rich. For the rest of the population, Asian imports had made inroads into the Volga's market because of their low prices and lower maintenance needs. The low selling price of the Volga – and indeed of other Russian cars such as the Lada – were no longer such a major selling point to an increasingly affluent market, especially as the cost of imported cars was steadily falling. Moreover, an increasing number of overseas brands had started to build cars in Russia, combining lower Russian labour costs with the latest car designs.

The passion of current owners and the public at large took the firm by surprise. Sales of Volgas climbed by 18 per cent in the two weeks following news of the car's imminent demise. In March 2006 Maxim Avday, the General Director of RusPromAvto, owners of GAZ, announced during a conference in Turkey that not only would the Volga remain in production but that GAZ would continue its modernisation programme. The Volga's stay of execution followed representations from dealers who emphasised the high demand for the car in rural Russian regions where its rugged simplicity was far more sensible than the latest low-slung, high-tech foreign car. Production in 2005 amounted to 55,000 cars.

In 2006, the carburettor models were dropped across the Volga range as they no longer met exhaust emission regulations. At the Moscow Motor Show in the summer of 2006 GAZ presented the so-called 'Euro-Volga' with a new

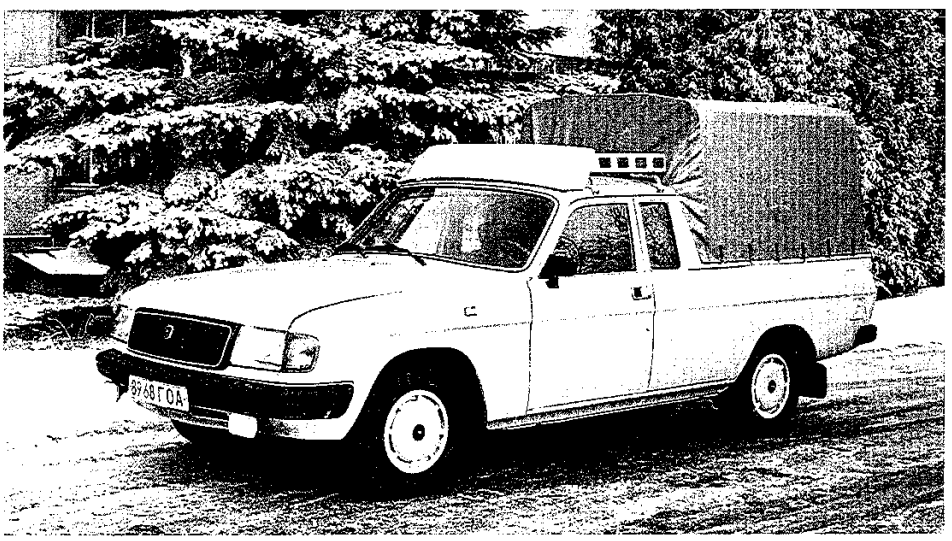
dashboard with electronic instruments controlled by microprocessors. Other ideas presented on the vehicle included height-adjustable seats, a steering column adjustable for height and reach, and two-tone door trims – the Volga still had a few tricks up its sleeve. Production of new-look Volga started in May 2007, replacing the previous interior style completely by December 2007. A Euro-III ZMZ 4062 engine was also announced at this time, suggesting that the venerable Volga still had a long future ahead of it.

What of the GAZ 3102, traditionally the most prestigious and expensive car in the Volga range? To look at, a 2008 GAZ 3102 Volga looked pretty much identical to a 1988 model – and compared to the increasingly incongruous styles being adopted by other makers, there was a sense of calm and stability in the lines of the 3102. Technically, the 3102's mechanical development generally paralleled the mainstream Volga – for example, the second series 3110 suspension changes were incorporated at the same time into the 3102. The two Volga ranges shared engine options, too. Speaking of motors, the last of the V8 Volgas, the GAZ 31013 was made in 1994. With high-performance BMWs and Mercedes-Benz machines now freely available to the police and security services, there was no longer any need for the most powerful Volga of all.

Equipment levels on the 3102 improved progressively and by the 21st century, on some models at least, tinted glass, velour upholstery, power steering and air conditioning were on the equipment list. Alloy wheels were offered as an option and really did set off the car's rather stately lines, while from 2003 pressed steel wheels with a unique sporty style were also made available. Indeed, what the 3102 did best was to retain the prestige it had earned during the Soviet era when it was only officially available to a very limited pool of buyers and unofficial black-market sales commanded double and even treble the official sale price. Long after the end of the Soviet Union, GAZ could still charge 20 per cent more for a 3102 on a specification like-for-like basis against any of the visually updated Volgas introduced after 1991. Driving a 3102 and bread-and-borsch Volga side by side revealed very little if any difference in road behaviour – both were remarkably competent and comfortable large cars and both sold for a price way below anything else of comparable size.

There were still differences between the two cars, though. The 3102 had driving lamps and headlight washers, generally not available on the 31105. The 31105 boot lid opened to the bumper whereas that on the 3102 did not. Both shared the same space-consuming spare wheel location – suspended in a tray underneath the rear parcel shelf.

By the start of the 21st century, no Volga, not even a GAZ 3102, received quite so many envious glances as it once had been. Even with competition from more modern cars growing all the time, a surprising number of buyers still wanted what a Volga offered – honest, reliable and comfortable



←GAZ worked on some commercial variations on the Volga theme. This is the GAZ 24-80 pickup – it didn't go into production. However, a Russian motor business, Trofim, offered its own coach-built Volga pickups to cater for the small market niche for luxurious two-wheel-drive trucks. *(Group GAZ)*

motoring no matter what the road conditions, with room for all the family, at an extremely reasonable price. By the time the 31105 was heading to market, the quality of assembly had undoubtedly improved, as is confirmed by unofficial repair statistics and the experiences of Russian motoring magazines. At the end of 2005 GAZ proudly announced that the number of repairs under guarantee had fallen by 40 per cent between 2001 and 2005, and that the cost of the work itself had fallen by 70 per cent. Problems did occur, but while they were still more frequent than on foreign cars, they were not very serious. Gearboxes and rear axles were much better than before and even the new components, such as the fuel-injected engines, had by 2007 long since ceased to be problematic.

Dealers reported that the majority of Volga buyers were people who had loved the car in the past and who wanted to drive a Volga again, and the car seemed set fair to continue into the second decade of the 21st century. The Volga was not a car to drive in a detached way like so many modern cars; it was one to be actively driven and to get involved with. The answer to its continued success long after the hammer and sickle had flown for the last time over the Kremlin was probably psychological – you got a special feeling travelling in a Volga that you just couldn't get from other cars.

Unfortunately, sentiment wasn't enough to keep the aging Volga in production. In November 2008 the last Volgas sailed majestically off the Nizhny Novgorod production lines, bringing to an end the life of a Soviet icon. It was to be replaced by a new executive car, and like the first ever GAZ, this one too would come to Russia from America.

In April 2006, Daimler-Chrysler and GAZ signed an agreement for GAZ to buy both the production equipment at the Sterling Heights plant in Michigan used to make the Chrysler Sebring and Dodge Stratus and a licence for GAZ to make the cars in Russia. They would be modified to suit Russian market conditions and the first batch of equipment from Daimler-Chrysler's Sterling Heights plant in Michigan arrived at the Gorki works in October 2006. Production of what was called the GAZ Siber began in March 2008 but only lasted until November 2010. It was the last car made with a GAZ badge. The cost of making the Siber, which relied heavily on imported components such as the engine and gearbox, made the car expensive on the Russian market, which was suffering in the aftermath of the financial crisis. Just 9,000 were made.

GAZ now saw its future in developing the phenomenally successfully GAZelle light commercial series and producing cars for other makers who wanted local production in Russia. The first of these was the Skoda Yeti in 2012 followed in 2013 by the Chevrolet Aveo, Skoda Octavia and Volkswagen Jetta. The GAZ brand would in future be for commercial vehicles only. ■

Another Volga variant worked up but not produced was the GAZ 24-82 light van. *(Group GAZ)*

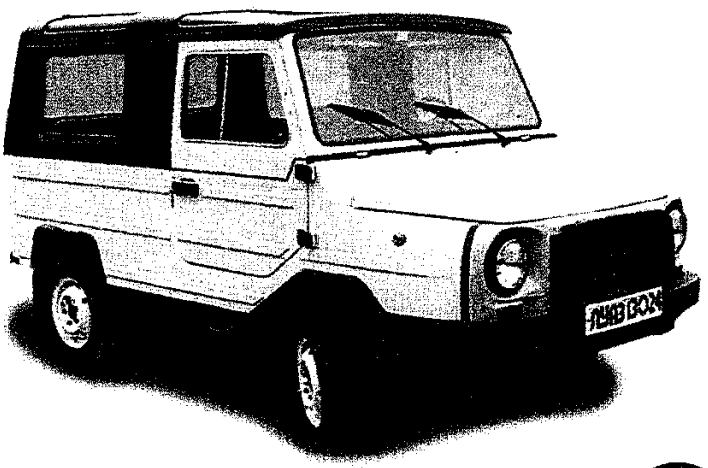
LuAZ

A NEW ROLE MAKING CARS FOR OTHER PEOPLE

In 1990 the LuAZ 969M was renamed the LuAZ 1302. Externally they looked very similar indeed, but under the skin were extremely different. The new model received a 53bhp four-cylinder 1,091cc water-cooled MeMZ 245-20 engine, first seen in the ZAZ 1102 Tavria. The gearbox had four speeds. With this engine fuel consumption was reduced by 16 per cent and the car became quieter. The front seats came also from the Tavria, the cockpit was revised again and the cars got some sound insulation. Performance on the road remained poor with a top speed of just 100km/h (62mph) but off-road, the LuAZ 1302 was an accomplished mud plugger. This was in part due to a foot of ground clearance, which was better even than the UAZ 31512 series.

The LuAZ 1302 formed the basis for a wider range of vehicles than LuAZ had ever offered before, although none were made in large numbers. The LuAZ 13021 drop-side pickup was one such vehicle, built in small numbers by the Waletta company of Moscow, and took advantage of the development work undertaken on the LuAZ 2403. The front-end components were taken from the original LuAZ, but the wheelbase was extended to create a large loading area. These little trucks were equipped with a two-man cab, had a payload of 500kg and could be supplied with a canvas top. Offered for sale for £3,000, production was barely 20 cars a month due to problems with the supply of components from the Ukraine.

In 1991, the Lutzk plant itself took on production of the LuAZ 13021 and tried to expand the range. The LuAZ 13021-02 had a canvas top, while the LuAZ 13021-03 had a roof hatch. The LuAZ 13021-04 of 1995 was designed for maintenance workers. The double cab had four seats and a shortened load bed, with a payload up to 250kg. LuAZ 13021-07 delivery vans of 1997 had a longer body with aluminium side walls, a plastic upper section and a metal door at the back. The LuAZ 13021-08 was designed for medical use in rural areas. To create this vehicle, the body was extended by 600mm to create space for a patient's berth. None of these variations sold enough examples to save the little off-roader – indeed just 27 LuAZ vehicles were made in 1999 and by May 2002, the LuAZ 1302 was out of production. LuAZ started to assemble Ladas and UAZs, building production up to more than 22,000 in 2004. The following year LuAZ became part of the Ukrainian Bogdan company, which now builds buses and assembles cars for international companies, including Hyundai, Kia and China's JAC, for sale in the Ukraine. In 2006, the LuAZ factory in Lutzk was turned over to bus production and manufactures a full range of buses using components from manufacturers such as Iveco and Ashok Leyland. ■



↓The LuAZ 13204 was one of many variations on the LuAZ 1302 theme that the factory tried to generate interest in the post-Soviet market. In this case, the main change was a glazed hard-top to create a compact van able to deliver small things to just about anywhere. *(Author's Collection)*

THE DECLINE AND FALL OF A SOVIET LEGEND

↑Moskvich 2141s are still seen across Russia and also in Bulgaria, where they were assembled for a brief period at the end of the 1980s. These two were spotted in Bulgaria in 2006. *(Author's collection)*

Not all the Soviet motor plants enjoyed the success of AvtoVAZ or GAZ. The giant Moskvich plant suffered the steepest fall from grace.

The AZLK 2141 Moskvich had suffered right from the start of production from low assembly quality. Headaches for owners included defective window seals, ill-fitting and squeaky instrument panels and, on early examples especially, interior trim panels and seat and door trims that simply came unstuck. One feature sorely missed by long-standing Moskvich owners was the starting handle – which, of course, could have been incorporated into the car thanks to its longitudinal engine layout. It was a feature that the 2141 really needed as it was plagued by starting problems. The distributor was prone to getting damp too, having no effective shielding from moisture.

The plant ignored reports of assembly problems and design faults for too long, spoiling the 2141's reputation irrevocably. Not surprisingly, the AZLK 2141 did not sell very well and found life very tough in the post-Soviet marketplace. Export markets, even in the CIS and the former Eastern Bloc, all but disappeared. Even the Bulgarian assembly line closed down. Moskvich cars had been assembled in Lovech in Bulgaria since 1966 following the trends set by the parent factory in Moscow.

It wasn't all bad news though. The Moskvich 2141 was spacious and comfortable although the convenience of its rear hatch was rather spoiled by the high loading lip. Using high-quality oils and additives in the engine could prolong its life, so while a 2141 may have looked and sounded tatty before its time, it would generally keep going. Even

so, second-hand the cars lost value quickly – which was another black mark them, especially for buyers on a budget.

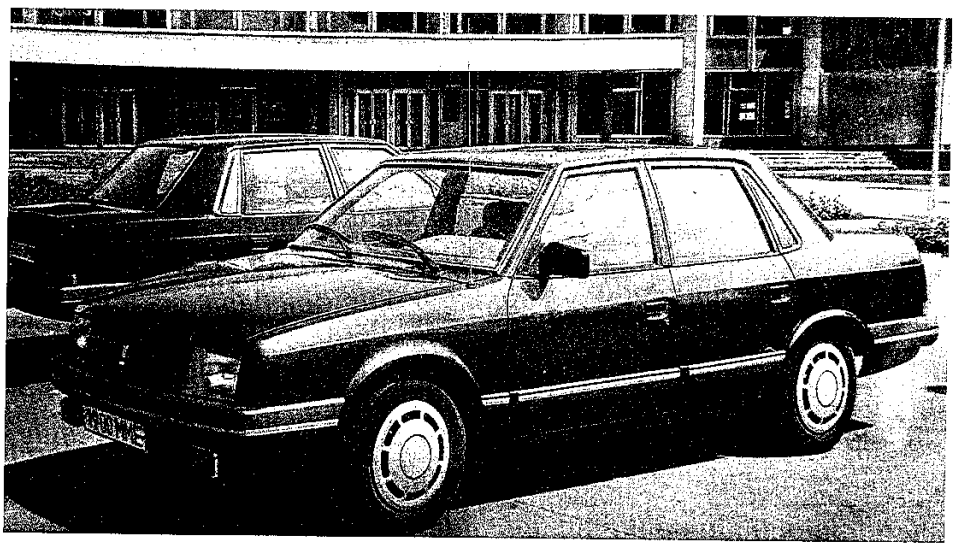
Changes to the 2141 in its early days were few. The lower plastic trim under the bumper was deleted (it used to get ripped off when the car was reversed!). From December 1993 microprocessor electronic ignition systems started to be fitted. The pickup model first seen in 1988 finally made it into production in 1993, initially with the 1,478cc UZAM 331 engine as the AZLK 23352. This option was deleted in 1995, when the VAZ 2106 engine was offered as the AZLK 2335. The pickup was capable of transporting a payload of up to 500kg. Rear springs were leaf on a live axle and the front were independent coils.

AZLK's biggest challenge was giving the car an engine that would give buyers the performance they expected from such a large car. Many buyers of the early Moskvich 2141 cars preferred the VAZ 2106 engine, which offered more power than the 1,478cc UZAM 331 unit and was generally believed to be built to a higher standard. In 1991, AZLK and VAZ signed a deal for the Togliatti plant to supply 65,000 engines a year. The agreement started out as an example of inter-company co-operation supported by the centrally planned Soviet Union, but by the time it came into effect the two firms had become competitors in the new market economy. Eventually VAZ no longer supplied the specially adapted VAZ 2106-70 engines. AZLK got round this by designing a new sub frame so that a standard 2106 unit could be used. The majority of cars sold were therefore the AZLK 21412, powered by the 1,478cc UZAM 331 unit, even if it was, compared to the VAZ engine, underpowered for the car.

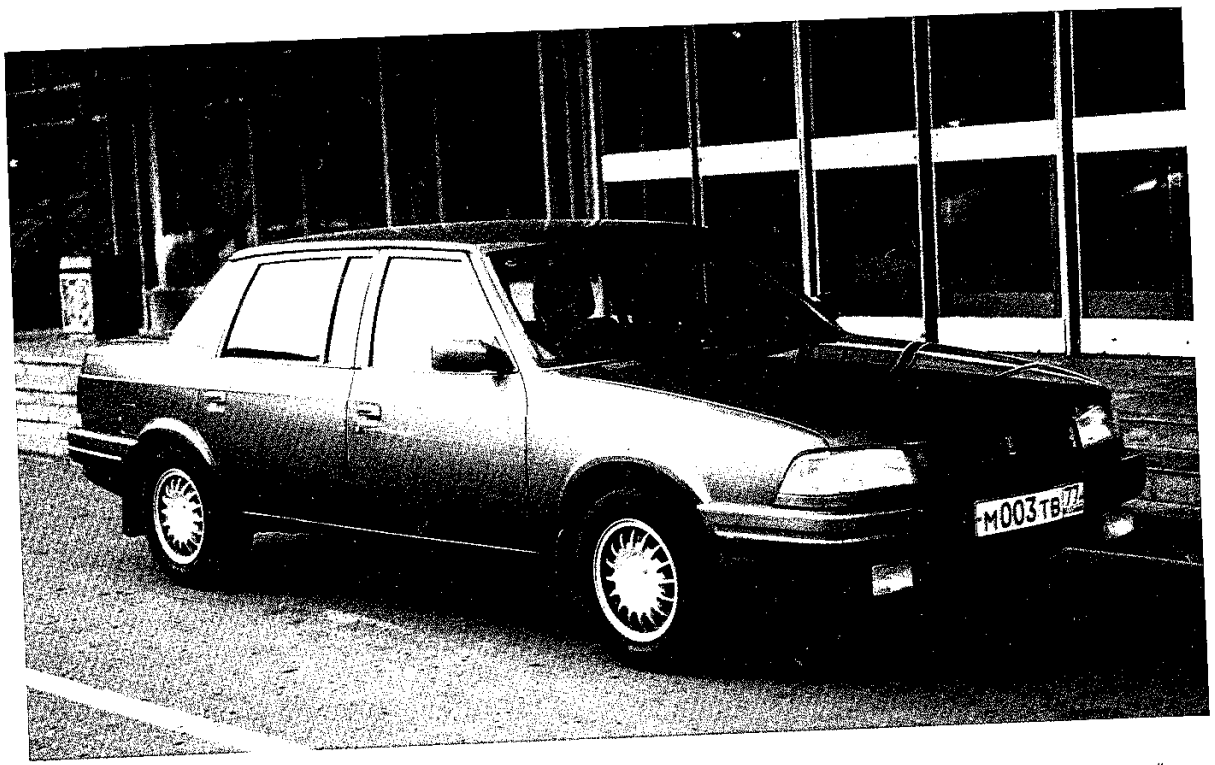
A diesel Moskvich was not sold in its home market. Diesel engines were not popular in Russia as they were more prone to problems in the extremely cold weather that prevailed across much of the country. However, three years after its announcement the diesel AZLK 21411, with a 1.8-litre Ford XLD 418 engine, was offered in Germany between 1993 and 1994, under the Lada Aleko badge.

The lack of a suitable power unit became an even bigger drag on sales in the post-Soviet era, when buyers could opt for imported second-hand cars with bigger engines and when AvtoVAZ pushing its own slightly smaller but much more sprightly VAZ 2108/9/99 series. Even GAZ started to show signs of intruding into the top end of the Moskvich market by developing a more powerful, 16-valve engine for its venerable Volga. AZLK was facing a squeeze from all directions, at a time when the resources for investment were now entirely dependent upon the ability of the firm, which was privatised in 1993, to make a profit.

Sales plummeted and in 1994 production at AZLK practically came to a standstill, and it wasn't until 1995 that the plant managed to produce cars again in any quantity, thanks mainly to orders placed



←If Moskvich had focused its attention on the 2142, a smart and stylish saloon derivative of its 2141 hatchback, instead of being sidetracked into such dead ends as the rather silly Duet and the distinctly odd-looking Ivan Kalita series, it might still be with us today. Production was originally planned for 1992 but the cars remained prototypes. *(Julian Nowill)*



↑The Moskvich AZLK 214241 Prince Vladimir, first seen in May 1997, had a longer wheelbase than the regular Moskvich series. There was also a hatchback version, called the Moskvich 214141 Yuri Dolgoruki. For 1998 the front-end styling was introduced onto the standard wheelbase Moskvich 214145 Svyatogor hatchback series, and then across the mainstream Moskvich 2141 car range. *(Julian Nowill)*

by state agencies and Moscow city authorities offering welcome lifelines.

What AZLK desperately needed to get sales moving again was a more powerful petrol engine. The UZAM engine was not, in itself, a bad power unit – indeed, Moskvich enthusiasts swore by it. It also had plenty of built-in potential for development – the unit could be increased in size from 1.5 litres to 2 litres! Faced with a decline in demand for their 331.10 engines from both AZLK and IZH, UZAM developed a larger engine, completing design work in November 1993. During January 1994 the modernised engines underwent their official certification tests and in July production began of the new 1,699cc UZAM-3317 powered AZLK 214122. The bore was increased from 82 to 85mm and the stroke from 70 to 74.9mm. Power increased by 18 per cent and torque by 23 per cent. A pickup using the same engine, the AZLK 233522, appeared in 1995.

The taxi version used an 1,816cc version of the same engine, the UZAM 3318, designed to run on 76-octane petrol. It produced 80bhp and was painted yellow with vinyl seats for the passengers while the driver got a soft cloth seat trim. It didn't last long as it proved to be incapable of standing up to the hard life of a cab – taxi drivers preferred their reliable Volgas!

In 1996, a more powerful Moskvich, the AZLK 214123 appeared, powered by the 1,816cc UZAM-3318.10 engine complete with an electronic ignition system. A very small number of cars, the AZLK 214103, were also built with the 1,770cc VAZ 2130 engine, developed for the VAZ 2131 Niva, but it was the UZAM engines that became the mainstream production options alongside the VAZ 2106 engine in what was now called the AZLK 214100.

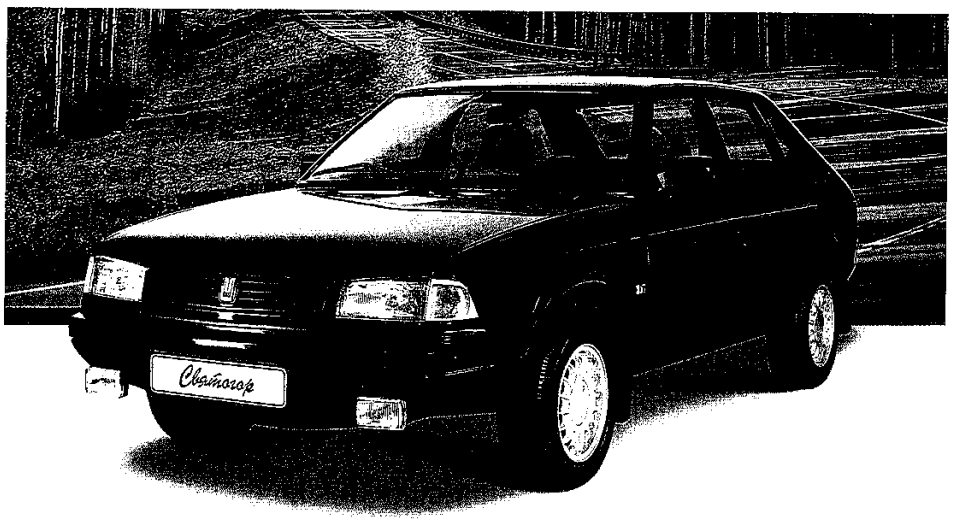
The arrival of the new UZAM and VAZ engines did not stop AZLK from casting around for an even more powerful engine option. In the autumn of 1995 the search for a more dynamic engine turned to international firms. For nearly a year AZLK tested numerous different foreign engines in the 2141. A 1.6-litre Renault power unit was sourced from Argentina. Its performance in the Moskvich was quite good because it matched up well to the gearbox ratios. However, this engine failed pollution standards thanks to its ancient carburettor. AZLK tried the motor from the Tofas 131, the Fiat 131 Mirafiori built under licence in Turkey, 1.6-

and 2.0-litre English and Turkish Ford engines, a 130hp 1.8-litre Hyundai motor – which turned out to be a real disaster when slotted into a Moskvich – and a 1.6-litre Toyota engine. In the end, an intergovernmental deal between the French and Russian governments to open up lines of credit and access to technology for Russian firms eventually led to the Moskvich being offered with a 2-litre fuel-injected Renault engine.

In 1997, after an 18-month period of virtual inactivity caused by a collapse in sales and a financial crisis that made it almost impossible for AZLK to operate its factory at all, rather unexpectedly a new range of cars appeared. That year, AZLK started to build in small numbers the AZLK 214141 Yuri Dolgoruki, still a 2141-based hatchback but characterised by its stretched rear doors and a wheelbase longer by 200mm – the same in fact as the 2335 pickup. The result was a rather oddly proportioned car that didn't really offer a great deal over and above the standard bodyshell. However, the AZLK 214141R5 Yuri Dolgoruki had a more luxurious interior, a high-quality paint job and a 1998cc Renault F3R engine that produced 113bhp and was supplied from South America. The name was the first of a series of names chosen by AZLK that came from famous Russian princes – Yuri Dolgoruki was the founding father of Moscow itself. The car premiered the first major upgrade of the 2141 series since it had been introduced and saw AZLK replace many Russian components with imported parts, a decision made due to supply shortages in both external suppliers and in-house components. The brake master cylinder came from Lucas, the driveshafts from GKN and the clutch from Valeo or Luk.

After failing to introduce a mass-produced 2142 saloon version of the basic 2141, Moskvich decided to build in small numbers a long-wheelbase version. Using the same technique developed for the hatchback Yuri Dolgoruki, an extra 200mm was added to the wheelbase of the stillborn saloon to create the AZLK 214241R5, which was first seen in May 1997. It was called Prince Vladimir and shared its slimmer front-end styling with the 214141 Yuri Dolgoruki with new, slightly slanting, headlights in the style of Peugeot, and a new bonnet and radiator grille.

As part of a plan to standardise production, Moskvich decided to adopt this new front end across the entire Moskvich range. First up was a new version of the standard-wheelbase 2141 five-door hatchback model, originally called AZLK 214102-164, powered by a 2-litre Renault engine. For 1998 it was renamed the AZLK 214145 Svyatogor. One problem with the Renault-engined cars was that they tended to be too powerful for the Moskvich gearbox, causing yet more reliability problems. The larger engine also exacerbated a long-standing AZLK 2141 handling problem caused by having the engine mounted a little too far forward, which led to fairly severe understeer.



←The Moskvich Svyatogor was the company's last serious attempt to remain an active player in the motor industry. It was a subtly revamped version of the Moskvich 2141 but was sadly too little too late. *(Author's collection)*

The Renault engine was reserved for the top-of-the-range models whose relatively high price restricted sales so there was also a cheaper model, the AZLK-214100 five-door hatchback with the VAZ-2106-70 engine and the body and trim of the Svyatogor. Later the UZAM 3317 engines were offered with the Svyatogor trim as the AZLK 214122. By this time the 1,478cc UZAM 331 engine had been dropped from the range – the smallest engine UZAM had available was now the 1,699cc 3317 unit.

The 1997 upgrade had managed to address most of the earlier design flaws and the only cloud in the sky was the erratic quality of workmanship put into the cars. AZLK seemed to have weathered the post-Soviet storms and looked set fair for the future. The Svyatogor, complete with imported engine, luxury upholstery and metallic paint, was cheaper to buy than the traditional middle-class Russian car, the GAZ Volga with its new 16-valve engine, and was now definitely a cut above the VAZ Samara.

The economic crisis that swept across Russia in 1998 completely disrupted the plans of all of Russia's carmakers. The promise shown by the Svyatogor to rescue the AZLK plant evaporated. Following a drop in the exchange value of rouble it was all but impossible to sell a Russian-made car priced at £6,000. The price of the Svyatogor was slashed first to £3,500 and then to £2,000. At this price they began to sell like hot cakes – the only problem being that AZLK were making a loss on every car sold. The Renault engine cost more to buy than an entire car with a Russian engine! Although the selection of engines still included the UZAM 3317 and the VAZ 2106, and there were cheaper trim levels available than the Svyatogor, sales remained in the doldrums.

By this time, AZLK was heading rapidly into meltdown. There seemed to be no coherent product development or marketing strategy in place. Tracking the production of the firm after 1998 is difficult – new models appeared and disappeared and reappeared almost at random as the firm tried desperately to stave off collapse. It almost seemed as if the choice of cars available depended on what components the plant had to hand at the time!

Desperate times lead to desperate measures and at the 1998 Moscow Motor Show AZLK proudly pulled the covers off the Moskvich 214242 Ivan Kalita saloon. The Ivan Kalita was extremely strangely styled with an almost unbelievably crass chrome grille. However, the interior was extremely plush with wooden trim – it had to be as it cost twice the price of a regular Moskvich – and it was offered with a 16-valve Renault F7R engine, producing 140bhp. Production was believed to be less than 100. At the other end of the market, the Moskvich

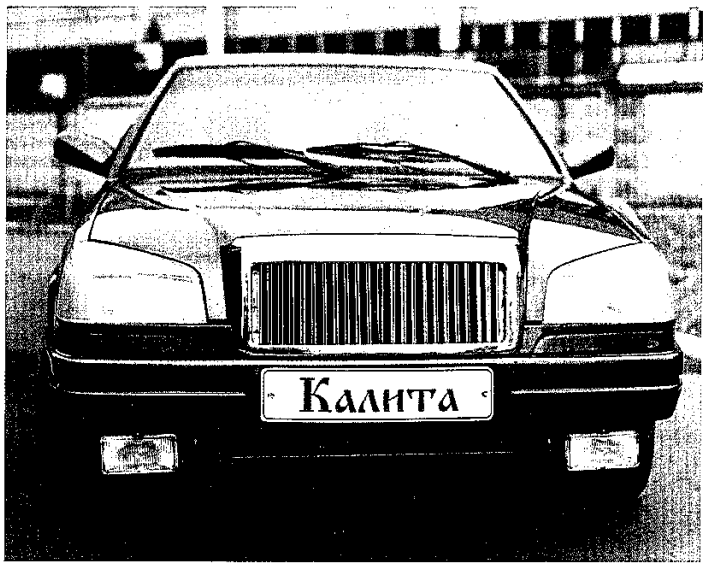
→ One of the many dead ends which Moskvich turned down during the 1990s was the hopelessly ambitious Moskvich 214242 Ivan Kalita saloon. Its interior was extremely luxurious but its exterior was a little odd to say the least, and by the time the car was announced in 1998 AZLK's build quality was appalling. Less than a hundred were actually made and put on the road. *(Julian Nowill)*

pickup range was by now built to order although buyers had the option of the 1,816cc UZAM 3313 engine in the AZLK 233523.

Around this time, the bizarre two-door short-wheelbase coupes, the Moskvich 2142S7 Duet, based on the Ivan Kalita, and the Moskvich 2142S0 Duet-2, based on the Prince Vladimir, were built, thankfully only in single numbers. The former was only ever listed as having a choice of two Renault engines whereas the latter could also be, in theory at least, ordered with the VAZ 2106 unit. Quite why AZLK spent time and effort developing these vehicles, with a much shorter wheelbase than its regular cars, is a mystery. They were neither elegant nor sporty. They were a distraction from what should have been top priority for AZLK – survival.

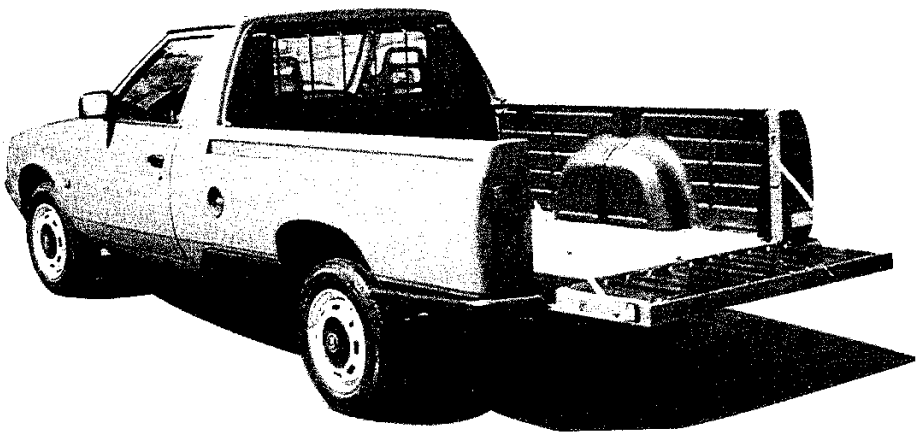
Another strange creation was the AZLK 2901, an all-metal van based on the chassis of the standard hatchback rather than the pickup. It retained the four side doors but had a high roof and extended rear overhang. The AZLK 2901 was an ambulance built using the 2901 body. Only a few of either are believed to have been made.

UZAM did develop its own 2-litre engine, the UZAM 248, and after 2000 a small number of 248-engined Moskvich hatchbacks were built as the AZLK 214125. The UZAM 248 90bhp 2,000cc engine was also, in theory at least, made an option on the pickup, although few were actually made and sold. In 2001 the AZLK 233521 was announced, a two-door pickup with the wheelbase increased to 2,900mm, which made it possible to offer a four-man cab. For access to the second row of seats, the backs of the front seats were hinged. Rear glass was protected by a metallic grille. A four-wheel-drive version was also shown. They both remained prototypes, but AZLK did start to list a 4x4 option for the 214141 Yuri Dolgoruki and 214241 Prince Vladimir saloons, with a choice of



↑The front end of the Ivan Kalita was not so impressive close up. The large light lenses were made out of low-grade plastic and the grille itself was a pretty flimsy affair. *(Julian Nowill)*

←The rear of the Ivan Kalita (and the Prince Vladimir) was no less shocking than the front end. Coupled with the strange treatment of the rear-door windows, the whole car was out of proportion. *(Julian Nowill)*



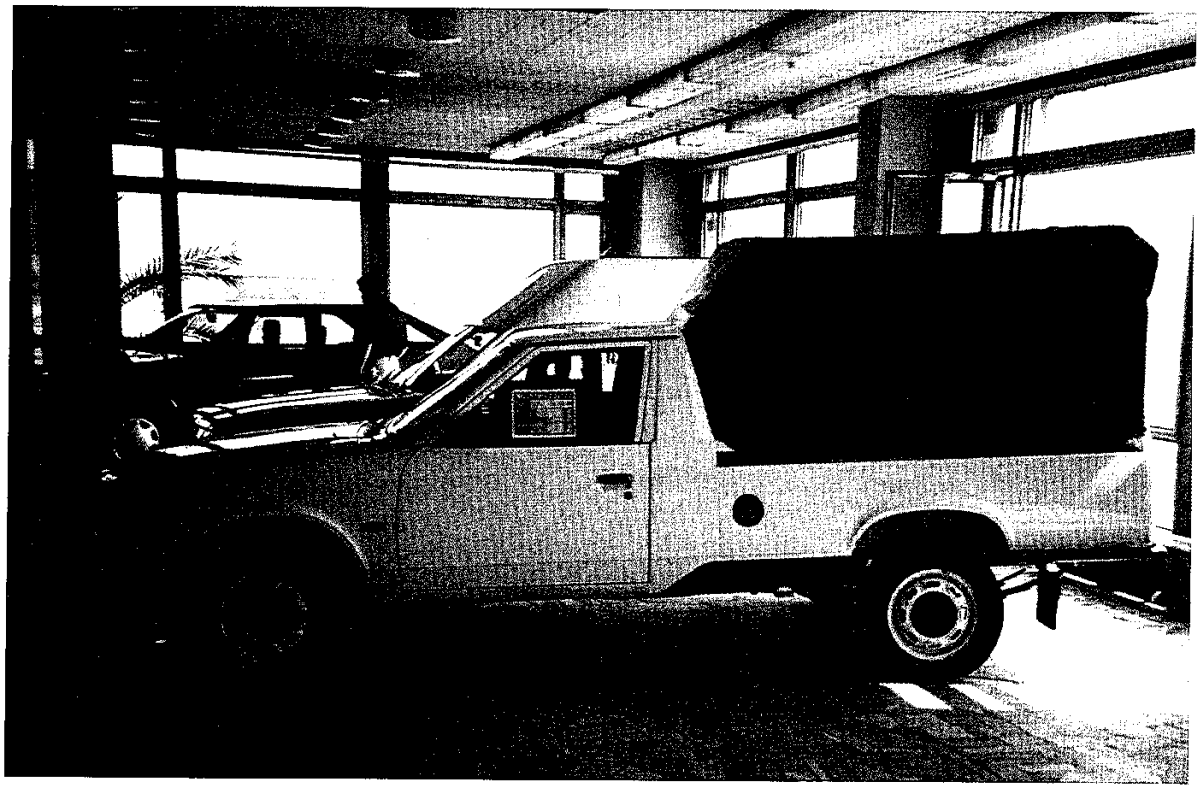
→Although first seen in 1989, the Moskvich 2335 pickup did not go into production until 1993. *(Author's collection)*

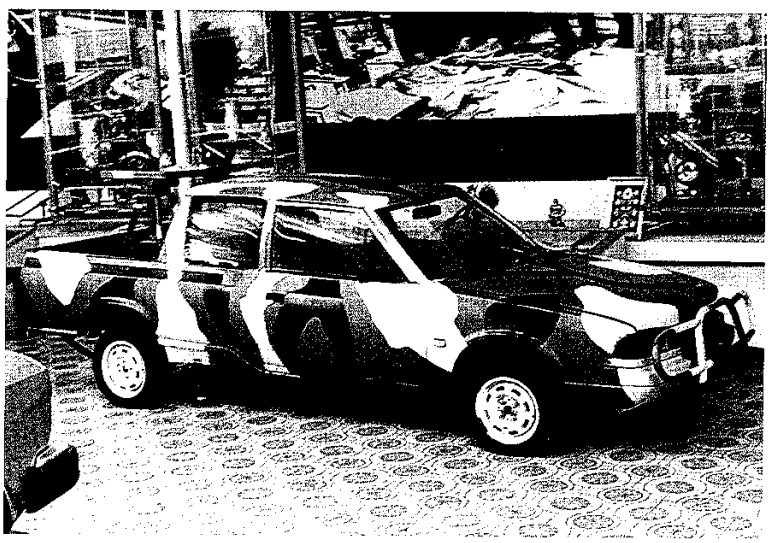
↓Without a doubt the silliest cars ever made by Moskvich, the Duet series – one based on the Ivan Kalita and the other on the Prince Vladimir – were a waste of the firm's time and energy, squandering resources that could have been better utilised developing the mainstream range of hatchbacks. Unsurprisingly, production of these two-seater coupes is not thought to have got into double figures. *(Julian Nowill)*

two Renault 1,998cc engines, one with eight valves and one with sixteen.

By 2000, production of all types of Moskvich at AZLK had fallen to 3,501 vehicles for the year. The ill-proportioned long-wheelbase models and the frankly hideous two-door coupes had done absolutely nothing to rescue the reputation of the brand, and by the summer of 2001, in spite of an impressive choice of vehicles on its price list, production of Moskvich cars had ground to a halt. The plant couldn't afford to buy components or pay its bills. When the English motoring author Julian Nowill visited the plant, he found rows of unfinished cars lined up outside the massive factory, their windows open to the elements. It was a truly sorry site. AZLK was all but bankrupt.

In April 2002, Moscow City Council managed to rescue from court bailiffs, acting on behalf of Moskvich creditors, the historic collection of Moskvich cars. These had formed the focal point of the AZLK museum, which had opened in 1981. The chairman of the court valued these unique vehicles at approximately £250 each! Thanks to the intervention of the Moscow city authorities, the cars were returned to the museum after a few days.





The Moskvich 2335 pickup series held out great promise but production was extremely low. This example was seen in a Moscow showroom just before the company's output finally ground to halt at the end of the 20th century. *(Julian Nowill)*

Moskvich developed a double-cab version of the pickup, albeit with only two doors, known as the 233521. Some were built with four-wheel drive and a UZAM 2-litre engine. Mainstream production, however, did not get under way. *(Julian Nowill)*

Another strange creation by AZLK was the Moskvich 2901, an all-metal van based on the chassis of the standard hatchback. It retained the four side doors but had a high roof and extended rear overhang. It was reputedly developed into an ambulance, although this example was intended for use as a taxi. *(Julian Nowill)*

By 1999 Moskvich was in dire straits. It could no longer afford to pay its bills and component suppliers cut off its supplies. The company therefore built cars using whatever components it had and stored them in the hope that the missing parts would eventually arrive. The storage arrangements were appalling – cars were left with windows open and bonnets up, even those with no cylinder heads. By 2001 people were openly walking into the plant and making off with half-built cars, components and even complete bodyshells, and building their own Moskvich cars using spare parts from whatever sources they could find. *(Julian Nowill)*

Various efforts were made to try and rescue the plant, which was gradually stripped of anything not bolted down or too heavy to load onto the back of a truck. By the end of 2005 the factory was literally a shell, with rain coming in through the roof and the production lines – and a few rusting Moskvich bodyshells – covered in dirt and grime. In February 2006, AZLK was officially and finally acknowledged to be bankrupt. By December, all the remaining assets – essentially the real estate – had been sold. Much of the site has now been redeveloped for a variety of uses.

The Moskvich story is now finished. There is no chance of the firm being reborn. However, car production has continued on a small part of the vast AZLK site thanks to the Renault Logan, which started production in 2005 in the AvtoFramos joint venture set up in 1998 by Renault and Moscow City Council on the site of the stillborn engine plant that Moskvich had in happier times hoped to use for its new engine range. At first, Renault supplied engines, transmission, trunk parts, interior and tyres from the Dacia plant in Romania, but over time local content has steadily increased to a very high level. The factory has grown and by 2010 was producing 160,000 cars a year, almost as many as the Moskvich works that by then was but a distant memory. Renault took full control of the factory in 2012, formally changing its name to Renault Russia two years later and using the works to build a full range of Renault models. ■

FADING AWAY

Even in the era of glasnost and perestroika, ZIL never thought of its cars as being mere commercial products and prior to the 1990s they were surrounded by secrecy. In the Soviet years the plant manufactured to order no more than two limousines per month for the Politburo and the Defence Ministry, its only two customers.

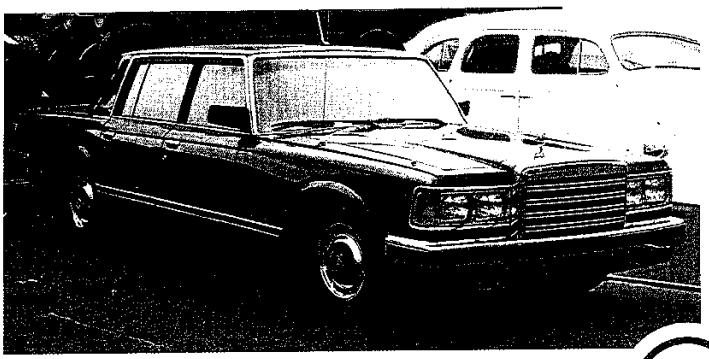
On 23 September 1992 the company was privatised, becoming AMO-ZIL. It retained the brand name ZIL for its products and put most of its effort into its truck operation, introducing the successful urban-orientated ZIL 5301 in 1994.

ZIL cars remained the official Russian limousine until the end of the 20th century, but as they became outdated more modern and less costly Mercedes and BMW cars were increasingly used by the Russian government. Production fell from its already low level of no more than 20 per year as the cash-strapped Russian government cut back on orders. In 1992, President Boris Yeltsin was the first Russian leader to abandon ZIL in favour of Mercedes although his successor Vladimir Putin, elected in 2000, did for a time return to the ZIL for official duties – he chose to use the armoured ZIL 41052 – before also opting for a Mercedes. Just 11 luxury ZILs were built in 1999 and even fewer in the first three years of the 21st century before production ground to a halt in 2003. The last versions could be recognised by the centre of the grille, which black and not chrome.

ZIL continued to list the car on its website, holding out the promise that if a sufficiently discerning and wealthy customer came along they would build them a shiny new ZIL. Three ZIL-410441 convertibles were built in 2010 in response to a request from the Russian Ministry of Defence for new cars in the traditional style for use by presiding generals at military parades. In a body blow for ZIL, the actual contract went to a company linked to the owners of GAZ, which used refurbished ZIL body panels on top of a Chevrolet Suburban chassis to create its own version of the ZIL, complete with ZIL badges. Undeterred, in 2012 ZIL revealed what was to be its last new model, the ZIL 4112R, which it intended to be a patriotic car for the top people in the Russian government. A single prototype was made, looking very like a ZIL-41047 but subtly updated with new lights and revised front and rear wings. Power came from a 400hp 7.7-litre V8 engine, all of which was needed to get the 3,600kg car up to a top speed of 124mph. The car did not find favour in the Kremlin and remained a one off.

From 2007 occasional, and usually discreet, orders were received for members of the ZIL 4104 family, either new ones or thoroughly rebuilt second-hand examples. These were made or rebuilt from the stockpile of components that had been stored at the factory, with about five a year taking to the road. Assembly, including hand-forming of body panels, took place in the original workshops where the USSR's cars for top comrades had always been made. The workshops have managed to remain in business after the collapse and closure of ZIL in October 2014, having by then become independent of the parent firm. The small team of highly skilled craftsmen continue to refurbish ZILs for people for whom nothing else will do. ■

ZIL continued making cars up until 2003. No changes had been made to the range since the last facelift in 1986, when the revised front light clusters with Bosch rectangular headlamps, seen here on a ZIL 41041, made their first appearance. *(Julian Nowill)*



RAF AND ERAZ

THE LOST ORPHANS OF THE SOVIET MOTOR INDUSTRY

↑RAF tried to capture new markets with commercial variations on its long running 2203 minibus theme. This was the single cab pick-up RAF 33111 which shared its front end with the mainstream RAF product. A five-man crew cab was also offered. Neither however was successful in the face of not only foreign imports but the Ford Transit-like GAZ Gazelle, launched in 1994. *(Julian Nowill)*

Although not as dramatic as the death of Moskvich, the collapse of RAF and ErAZ was also a blow to the two brands' local economies. After the disintegration of the Soviet Union demand for the RAF minibuses made in Latvia fell away and the economic chaos that followed the collapse of communism made it increasingly difficult for RAF to maintain production of those vehicles it did manage to sell. The plant launched two valiant efforts to survive in the brave new world of the free market, the RAF M1 Roksana and the RAF M2 Stils. Neither progressed beyond prototype stage.

Production of the RAF 22038 Latvia series came to an end in 1997. The range had been supplemented in 1990 by a 13-seat taxi, the RAF 22039, which lasted until 1995. A move into new markets saw the introduction of two pickup trucks, built from 1992 until 1995: the two-man cab RAF 33111 with payload of 860kg and a load-bed length of 3,300mm, and the five-man double-cab RAF 3311, with a slightly lower payload of 750kg and shorter load bed of 2,310mm. RAF offered an insulated van on the same chassis, the RAF 2920, which with a volume of 10m³ was very spacious. Various specialist vehicles were also built, such as the RAF 2925 for use by the police and luxury-trimmed versions of the mainstream RAF 22038 and 22039 minibuses. In 1990 RAF built 17,100 vehicles, but by 1997 production had fallen to just 66. At one time the plant employed 4,000 people.

In 1997, the last group of 13-seat RAF-22039s was made. Ironically, the last vehicle produced by the dying firm is reported to have been a

specialised vehicle designed to carry bodies to mortuaries. In April 1998 RAF was formally declared bankrupt. The plant was eventually demolished and the site now hosts a retail centre.

ErAZ's fate was inextricably linked to that of RAF, and it too suffered from the disruption to its supply chains and markets following the collapse of the Soviet Union. To keep going ErAZ tried to develop links with Moskvich, originally established when production of the ErAZ 762 van began. However, plans to assemble the Moskvich 2335 pickup were thwarted by the financial and trading problems that dogged Moskvich right through the 1990s. The plant continued to build the 2,445cc ErAZ 762B van, introduced in the mid-1980s as a mildly updated version of the ErAZ 762A, which lasted in production until 1996. A five-seat, crew-cabbed pick up, the ErAZ 762 VDP was introduced in 1992 and remained in production, like the ErAZ 762 VGP five-seat kombi, until 1996. In 1995, production finally started of the long-delayed ErAZ 3730, with live axles front and rear and a 2,445cc engine, and its ten-seat minibus derivative, the ErAZ 3218. In May of the same year the plant was officially privatised, but by March 2002 production at the Armenian plant had all but ground to a halt. In November 2002, creditors of ErAZ successful initiated bankruptcy proceedings in the Armenian courts and the plant was sold at auction to a local metalwork company. No vehicles have been produced by the plant since then. ■

POST-SOVIET CARS

Since the end of the Soviet Union in December 1991, the Russian motor industry has developed many new and variously exciting, interesting and idiosyncratic cars. They have been produced against a political and economic backdrop as challenging and as unique as that which began in October 1917. Most have remained as unknown beyond the country's borders today as their predecessors were in the days when the Iron Curtain kept curious eyes from getting a look at the more creative achievements of the Soviet Union's motor engineers. The story of how today's Russian car industry grew out of the ashes of the Soviet Union is a tale no less fascinating than the one told in this book. ■

GLOSSARY

AMO: Avtomobilnoe Moskovskoe Obshchestvo (or Moscow Automotive Enterprise) – vehicle factory in Moscow set up to manufacture trucks. Renamed ZIS in 1931.

AZLK: Avtomobilny Zavod Lenin Komsomol (or Lenin Komsomol Automobile Factory) – maker of Moskvich cars between 1968 and 2001. Komsomol was the Communist Youth League, the young person's wing of the Soviet Communist party.

Avtoexport: Soviet agency established in 1956 to manage the import and export of automotive products to and from the Soviet Union.

CMEA: Council for Mutual Economic Assistance, an organization set up by socialist countries to manage trade and encourage economic development and co-operation.

CIS: Commonwealth of Independent States – a loose grouping of countries, formerly in the Soviet Union, established to maintain essential trade and other links after the collapse of the USSR.

GAZ: Gorki Avtomobilny Zavod (or Gorki Automobile Factory) – maker of GAZ trucks and GAZ cars, including the Volga.

IZH: shortened version of IZHMash or the Izhevsk Mechanical Works, a major industrial complex which manufacturers not only cars but also motorbikes and small arms.

KGB: Komitet Gosudarstvennoy Bezopastni – (or the Soviet Security and Intelligence Service) – from 1954 until 1991 controlled all security, intelligence and secret police operations in the Soviet Union.

KIM: Moscow Komintern of Young People. Komintern was an organization set up after the October Revolution that created the Soviet Union to promote communism across the world. The name was adopted by the Moscow car factory set up in 1930 to produce GAZ vehicles and which was renamed MZMA in 1945.

LuAZ: Lutsk Avtomobilny Zavod (or Lutsk Automobile Factory) – manufactured LuAZ small off road cars, now a contract assembler of cars for the Ukrainian market.

MAZ: Minzk Avtomobilny Zavod (or Minsk Automobile Factory) – manufacturer of MAZ heavy trucks; based in Byelorussia.

MeMZ: Melitopolski Motorniy Zavod (or Melitopolski Motor Factory) – Ukrainian manufacturer of engines for ZAZ and LuAZ vehicles.

MZMA: Moscow Zavod Malolitratsjnij Avtomobilij (or Moscow Small Car Factory) – maker of Moskvich cars between 1945 and 1968.

Minavtoprom: the Soviet Automobile Industry Ministry which controlled all the Soviet era motor vehicle factories and suppliers.

NAMI: National Automobile Institute.

NKVD: Narodnyy Komissariat Vnutrennikh Del (or People's Commissariat for Internal Affairs) – the agency responsible for internal security in the Soviet Union between 1934 and 1946.

Pravda: The Truth – the leading newspaper of the Soviet Union from 1917 until 1991.

RAF: Riga Autobus Fabriku (or Riga Autobus Factory) – manufactured minibuses in Latvia until 1997.

UAZ: Ulyanovsk Avtomobilny Zavod (or Ulyanovsk Automobile Factory) – manufacturer of four-wheel-drive jeeps and light commercials.

USSR: Union of Soviet Socialist Republics – also known as the Soviet Union. Made up of 12 countries that came together following the communist October Revolution in 1917 in Russia with three Baltic states joining after the Second World War. Succeeded in 1991 by the CIS.

UZAM: Ufa Motorniy Avtomobilny Zavod (or Ufa Automobile Engine Factory) – maker of engines for Moskvich and IZH.

UMZ: Ulyanovsk Motorniy Zavod (or Ulyanovsk Engine Factory) – engine factory set up to make engines for UAZ vehicles. Part of Group GAZ since 2001.

YaMZ: Yaroslavl Motorniy Zavod (Yaroslavl Automobile Factory) originally a truck manufacturer when it was known as YaAZ but after 1959 a maker of large diesel engines.

VAZ: Volga Avtomobilny Zavod (or Volga Automobile Factory) – established in 1970 and more commonly known as AvtoVAZ from the 1990s onwards, the maker of the Lada brand range of cars and small SUVs.

ZAZ: Zaporozhets Avtomobilny Zavod (or Zaporozhets Automobile Factory) – Ukrainian maker of ZAZ cars.

ZIS: Zavod Imeni Stalina: the former AMO plant renamed in 1931 to honour Soviet leader Joseph Stalin. Manufactured trucks and limousines.

ZIL: Zavod Imeni Likhacheva: the ZIS factory was renamed in 1956 to honour the memory of its former director, Ivan Likhachev. Manufactures trucks and limousines.

ZMZ: Zavolzhsky Motorniy Zavod (or Zavolzhsky Motor Factory) – engine factory set up to build engines for Volga cars. Owned since 2001 by Severstal-Auto, owners of UAZ.

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I started collecting information about cars of all kinds back in the 1970s when I first realised that garages gave away free brochures. My Saturday job washing cars at Burton upon Trent's Volkswagen showroom gave me enough money to spend on a monthly copy of *What Car?* and regular infusions of *Autocar* and the now defunct *Motor*. I haven't stopped since!

I have collected lots of material of all kinds since then, long before I ever thought of writing a book about some of my favourite vehicles – the cars of the Soviet Union. Since the end of the 20th century the Internet has, of course, been a great if sprawling resource for any researcher.

A huge number of different sources were used in putting this book together. Unfortunately, because a lot of the material was collected way before the idea of writing it came to me, I can no longer remember, reference or credit all of my sources. If I have forgotten or missed anyone out, then I can only apologise sincerely, and assure them that the omission wasn't deliberate.

To everybody – the publications and websites listed below and those whose names I have forgotten or mislaid – I offer my thanks for your invaluable contributions to this book.

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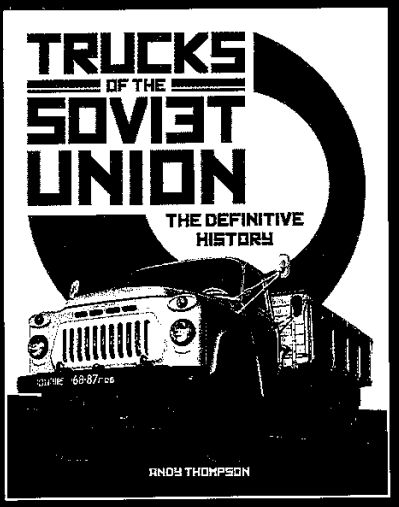

Trucks of the Soviet Union is the sister title to *Cars of the Soviet Union* and tells the equally fascinating story of the trucks built in the Soviet Union, between 1917 and 1991, complete with a comprehensive chapter describing the changes in the industry in the post-Soviet era. For more than 70 years, trucks in the Soviet Union were designed and built as part of a vast ordered transport system, interacting rather than competing with trains and waterways. Each factory built specific trucks with their own roles to play in the grand design of the planned economy. Politics and revolutionary expediency were never far from the design studio, or the shop floor, making this as much the story of a nation as one about an industry. The Soviet Union's huge natural environment also played its part. Service stations and motorways were few and far between, making reliability and serviceability far more important than driver comfort. Andy Thompson describes the development of the trucks and the industry in astonishing detail, supported by hundreds of photographs.

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CARS OF THE SOVIET UNION

This is the fascinating story of Soviet cars from the birth of the Soviet Union in 1917 until its demise in 1991, including a chapter dedicated to the post-Soviet era. It is the story of an insular, state-run car industry in which the carefully thought-out ideas of ministerial planners, rather than the fickle nature of customers in a free market, determined what cars were made. The cars of the Soviet Union therefore have a unique heritage: designed for a social purpose, influenced by politicians, built with military needs in mind and sold in a country where the open road could be a 300-mile track across a windswept steppe. The development of these cars is described in astonishing detail, supported by hundreds of photographs, making this the definitive history.

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