

# Small utility vehicles by BMW

Even connoisseurs of BMW history are frequently unaware that, in its more remote past, the company was also involved with utility vehicles. Two such models were the F 76 and the F 79 three-wheeler delivery vehicles of the 1930s, as well as the Farmobil, which was built after the Second World War.

By Kai Jacobsen



The Farmobil 700 at the Acropolis in Athens.

It was before the Second World War that the Bayerische Motoren Werke began to turn their attention to utility vehicles. In the early 1930s BMW developed a three-wheeled delivery van of the kind already on offer from other companies. But by the time this reached the marketplace, it had been overtaken by ongoing developments in that vehicle segment. As a result, production ran to just a few hundred examples. At the end of the 1950s the Fahr mechanical engineering company in Gottmadingen secured BMW AG as partners and engine suppliers for a lightweight transport vehicle. But the road to volume production proved a long one. In the end, the so-called "Farmobil" was not manufactured

in Gottmadingen but produced under licence in Thessaloniki, Greece, from 1962 onwards. Starting in the summer of 1965, BMW became the sole distributor for Germany.

## **BMW F 76 and F 79 delivery three-wheeler**

The BMW three-wheeled delivery vans designated the F 76 and F 79 occupy a special niche in BMW's model history – not only because of their unusual appearance but also on account of their genesis. Whereas previously all cars had been developed and manufactured in Eisenach, the development and construction of the prototypes of these car-like vehicles took place in Munich, with

volume production handled by Eisenach. The increase in production capacity at this plant also secured workplaces: in the winter of 1931/32, due to the general economic crisis, the workforce had had to be slashed to around 600, whereas by summer of 1932 it had grown back to 1,200.

Following the takeover of the Dixi plant in Eisenach, BMW had quickly managed to find a footing in the automobile market. During the Great Depression in the late 1920s, the BMW 3/15 PS car had proved a safe seller, and by the early 1930s there were already plans for far more luxurious cars. Sales of BMW motorcycles, moreover, already a byword for quality, were flourishing.



In the expanding sector of small delivery vehicles BMW had so far only launched a cube-van variant of the 3/15 PS, sales of which did not take off, however, on account of its fairly low cost-benefit ratio. Numerous companies, including Borgward and Tempo, had since the 1920s been offering so-called "front-loaders" – affordable three-wheeled vehicles featuring a motorcycle saddle over the single rear wheel and a large payload area on the front axle. By using the tried and tested BMW single-cylinder motorcycle engines of the R 2 and R 4, BMW was now also in a position to build such a vehicle from 1931 on.

In December 1932, the Type F 76 was launched: a BMW three-wheeled delivery van with a Cardan drive and a 200 cc fan-cooled engine giving 6 horsepower. It came with a price tag of 1,350 reichsmarks and boasted a two-seater driving bench – optionally fully covered – and a high load capacity of 650 kg. Steering was by means of a car steering wheel, and the rear wheel had a sprung suspension arm. The loading area measured 1,600 x 900 mm but could be increased to 1,600 x 1,400 mm. In 1933, an optically identical F 79 model was added, featuring a 14 horsepower 400 cc single-cylinder engine, for which BMW was asking 1,500 reichsmarks.

Another interesting and crucial aspect of the delivery three-wheeler was the fact that anyone over the age of 16



In Hamburg, Shell bought two of BMW's practical three-wheeler vans.

could drive it. It required neither a driving licence nor any kind of vehicle tax.

The loading area of the BMW three-wheeled van was optionally available as an open platform, a closed bonnet compartment or a wide payload area with tarpaulin and bows. In the standard version, the driver and passenger seat were open on all sides. Options included a front windscreen, roof, rear wall and canvas side doors.

Despite their high quality, neither variant succeeded in securing the hoped-for sales success. In the early 1930s, developments were already moving away from the motorcycle-like front-loader towards a more car-like enclosed three-wheeled delivery van with a fixed driver's cab and single front wheel. As a result, by the time production was phased out in mid-1934, sales had totalled just 600 BMW delivery three-wheelers.

An F 79 was added to the BMW Mobile Tradition collection back in 1997. In summer 2004 it was joined by an F 76. This came from the Mack family of Wernburg in Thuringia. Frau Mack's father had acquired the F 76 in Leipzig in the early 1950s from the Hermann Greiner car repair workshop. The Greiner

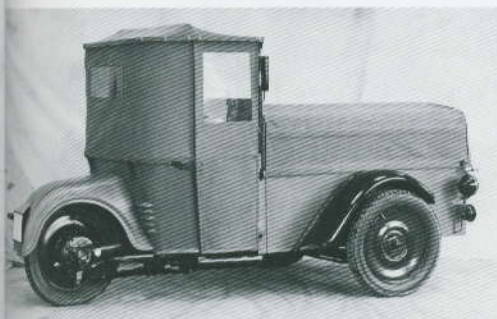
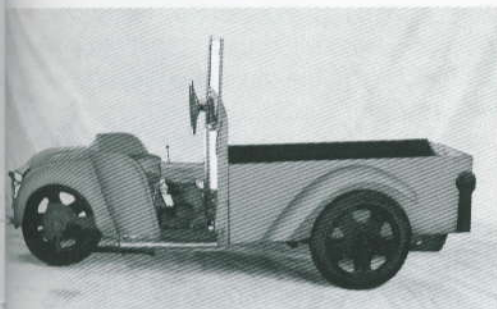
business had been using the three-wheeled delivery vehicle for a whole range of transport and supply requirements since 27th February 1939. Prior to that, on 11th November 1936 it had begun rendering good services to the magazine distribution business of Carl Fritzsche. Unfortunately there are no records to show by whom and for what purpose it was used between its production (1933) and November 1936.

### The BMW Farmobil

In 1955, in the then tractor division of the Fahr AG mechanical engineering factory in Gottmadingen near Lake Constance, a small development team was tasked with designing a light transport vehicle for agricultural use.

It was given the designation "Farmobil", a modification of "Farmmobil". The brief for this utility vehicle specified a maximum permissible weight of 1,000 kg, a wheelbase of 1,800 mm and a track of 1,300 mm. For the engine, an output of 20 horsepower and a five-speed gearbox were planned.

In spring of 1956 the first prototype was ready. Powering the vehicle was a rear-mounted 20 horsepower Horex twin-cylinder engine taken from the Imperator motorcycle. Horex had adapted the engine for use in small vehicles and had also offered it to Fahr. The transversely mounted power unit was coupled with a four-speed transmission. The



Top: BMW Mobile Tradition's F 76 three-wheeler delivery van in the condition in which it was acquired by the Mack family. Bottom: BMW F 76/F 79 with enclosed cab and tarpaulin over the load space.





A woodsman driving across his territory in 1965.

rear-wheel-drive unit was fitted with a rubber spring in front of the rear rocker arm on each side. A linkage connected the front and rear swing-arms.

Test drives showed that the chassis was not suited for its intended use, and the engine revealed major vibration problems. These negative test results led to the development of a vehicle with independent wheel suspension featuring spring struts with rocker arms pushed at the front and pulled at the rear. Power was again provided by a Horex engine – though this was an improved version. Gear-changing was handled by a Selectomat transmission, a five-speed preselector gearbox jointly developed by Getrag and Fahr.

The utilitarian, though elegantly designed vehicle was based on a tubular frame with welded panels and had – like the BMW Isetta – just one front-opening door. Between the axles there was a loading pan.

During the subsequent trials, largely on unmetalled country lanes, it emerged that neither the engine nor the gearbox were up to the rough demands of everyday use. At an in-house presentation the body with its front-opening door also came in for criticism. Only the vehicle's outstanding offroad capability earned any praise.

But since there was a demand for such a vehicle in the market, it was decided in 1958 to develop a new model – in collaboration with BMW. The basic dimensions were largely maintained while the new self-supporting body was given side access and fea-

tured removable doors and top. The engine and transmission (again rear-mounted) now derived from the BMW 600, as did the engine and transmission mountings and the gearshift. As before, it was a real-wheel-drive configuration, but the lack of all-wheel drive would prove a disadvantage in due course.

The individual wheel suspension remained unchanged, but the strut/rocker design was replaced by separate coil spring/damper units with lower wishbones. At the same time spring travel was increased to 250 mm, which significantly improved ride characteristics in all load conditions. Instead of rack-and-pinion steering, the designers now chose a ZF Gemmer steering system.

At the 45th DLG (German Agricultural Society) travelling fair in Frankfurt in early May 1959, the Farmobil 600 was introduced to the public at large for the first time. Test drives with the 20 bhp twin-cylinder Boxer engine by BMW revealed hardly any problems, but there were difficulties with the self-supporting body in relation to the chassis.

At the Hanover Industrial Fair, too, which had assumed even more importance in the light of the forthcoming European Economic Community, the Farmobil 600 was unveiled in spring of 1960. That same year, work began on a new prototype. The air-cooled Boxer engine along with the transmission now derived from the BMW 700 launched in 1959. The gearshift, brakes and wheel suspensions also came from the 30 bhp BMW. In Munich it was hoped that the

vehicle would enter military use, which was why they backed its further development.

Two vehicle versions with a rounded design emerged: one was the flatbed truck with removable half-doors and plug-in windows, and the other the version with a fixed driver's cabin. The body was much improved thanks to a stronger understructure. In order to improve the stiffness of the front wall, the tunnel cross-section was increased. The steering and suspension (spring travel front/rear 240/225 mm) were slightly modified. The loading area (1,652 x 1,470 mm) featured a recess to accommodate seats. Standard equipment now also included heating with defroster jets.

It is assumed that in early 1961 the plan was to dispense with the rounded body design in order to save on tooling costs for later volume production. Within a short space of time, a sharp-angled body, similar to the Steyr-Puch Haflinger, was developed and built. For this revised model the engineers included, as planned, front and rear power take-off, which could be engaged and disengaged from the driver's seat. A steady engine speed was ensured by a regulator attached to the power unit. With this, the Farmobil could now also be used as an implement carrier for trade and agriculture.

15 examples of the Farmobil 700 were built in the tractor testing division for endurance tests and extended trials. The original plan was to have the Farmobil manufactured by Fahr in Gottmadingen, but this did not materialize as Fahr signed a contract with Klöckner-Humboldt-Deutz (KHD) for the



A Farmobil 700 on offroad tests in autumn 1960.





An early version of a Farmobil 700 being put through its uphill paces.

manufacture of Deutz tractors. This went hand-in-hand with a 25 percent acquisition of Fahr by KHD. That left no more free capacity for the Farmobil, and so the Fahr mechanical engineering company granted a licence for building the vehicle to the Greek brothers Gerasimos and Peter Kondogouris. The latter had previously worked for the Fahr company. In the 1950s the brothers' business had played a major role in selling second-hand BMW motorcycles for constructing the "motorized donkey carts" so popular in Greece. In Thessaloniki they founded the company FARCO A.E. and set up a manufacturing plant. Production was very simple as only a few special tools were required. And so by 1962, the first Farmobil 700 models built there were ready for delivery. FARCO had not only taken over their production but also handled distribution for the Balkans and the Near East. In autumn of 1961 the company had already exhibited the Farmobil at trade fairs in Thessaloniki, Izmir (Turkey), Zagreb (Yugoslavia) and Damascus (Syria) – to great acclaim from the public and with healthy sales.

In 1963 the Chrysler corporation bought out the FARCO company and with it the Farmobil production lines. FARCO A.E. was renamed Chrysler Hellas S.A.I. The Americans hoped for successful sales in the USA after a test model had been successfully trialled in the state of Michigan. But ultimately the vehicle did not go on sale in the States.

Simca with its head office in Paris took over sales in France, while in

Switzerland the Farmobil was sold among others by BMW importer MOTAG, and in other countries via the Chrysler International S.A. sales organization. In 1965, BMW AG as general importer took on sole distribution of the Farmobil for Germany.

The Farmobil was roundly praised to the BMW dealers, who were also briefed on the exhibition of the BMW Farmobil programme at the 1965 Frankfurt Motor Show. The sales blurb for the Farmobil issued at the time was not short on promises: "A vehicle with many faces... and even more possibilities... This automobile is built for hard work and easy driving... A test drive with the BMW Farmobil will prompt surprised enthusiasm – on your part and on the part of potential customers. Its wide track allows it to 'stick' to the steepest slopes and to be securely manoeuvred. Its commendably strong and flexible individual wheel suspension ensures that obstacles 230 mm in height can be easily climbed, while 200 mm deep holes are simply swallowed, and 500 mm deep water is washed aside with bravura."

In September 1965, BMW went on to publish a brochure and price list in which the range of potential uses of the BMW Farmobil, now with 32 bhp, were listed along with the fact that the vehicle now had a payload capacity (616 kg) which was greater than its own weight (610 kg). Standard equipment included a front hood, removable doors with plug-in windows, 5x offroad tyres, heating and tools, all for the price of 6,400 deutschmarks.

Special options included fold-down side-walls, a wooden gate, rear tarpaulin and bows, rear hood with windows, rear bench, rear guard rail, power take-off and a creep-speed gear. In total, around 1,000 units of the Farmobil were built before production ceased in 1966/67.

The Farmobil also attempted to launch its career in Britain. The Chrysler-owned Rootes Group imported two Farmobil 700 models for test purposes and gave it the water-cooled engine of the Hillman Imp with front-mounted radiator. These two vehicles were apparently tested by the British Army.

In January 2005, BMW Mobile Tradition was offered a Farmobil. The American seller living in a Geneva suburb, Gregory Bradbury (owner of a BMW M1 and a very rare BMW 530 of the first South African-produced 5 Series), had bought the vehicle in Annecy, France. The model he was offering BMW was his second Farmobil. The French second owner of the vehicle now owned by BMW Mobile Tradition had purchased it from the first owner more than 20 years ago, but had no longer used it in the last years. It was for that reason, and for reasons of age, that he offered it for sale. Bradbury had intended to restore the Farmobil, but professional commitments left him no time for the task.

One can be sure that, in the not too distant future, the Farmobil will emerge resplendent in its old glory again and ready to be taken out on its first spin, perhaps even on "typical" Farmobil terrain – dirt tracks.