



**Commercial
Vehicles**

Volkswagen Transporter: 60 Years of Working with British Business





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A car-derived van, based on the Beetle.



The Plattenwagen or 'flat car' - a design that remained in use at Wolfsburg into the 1970s.



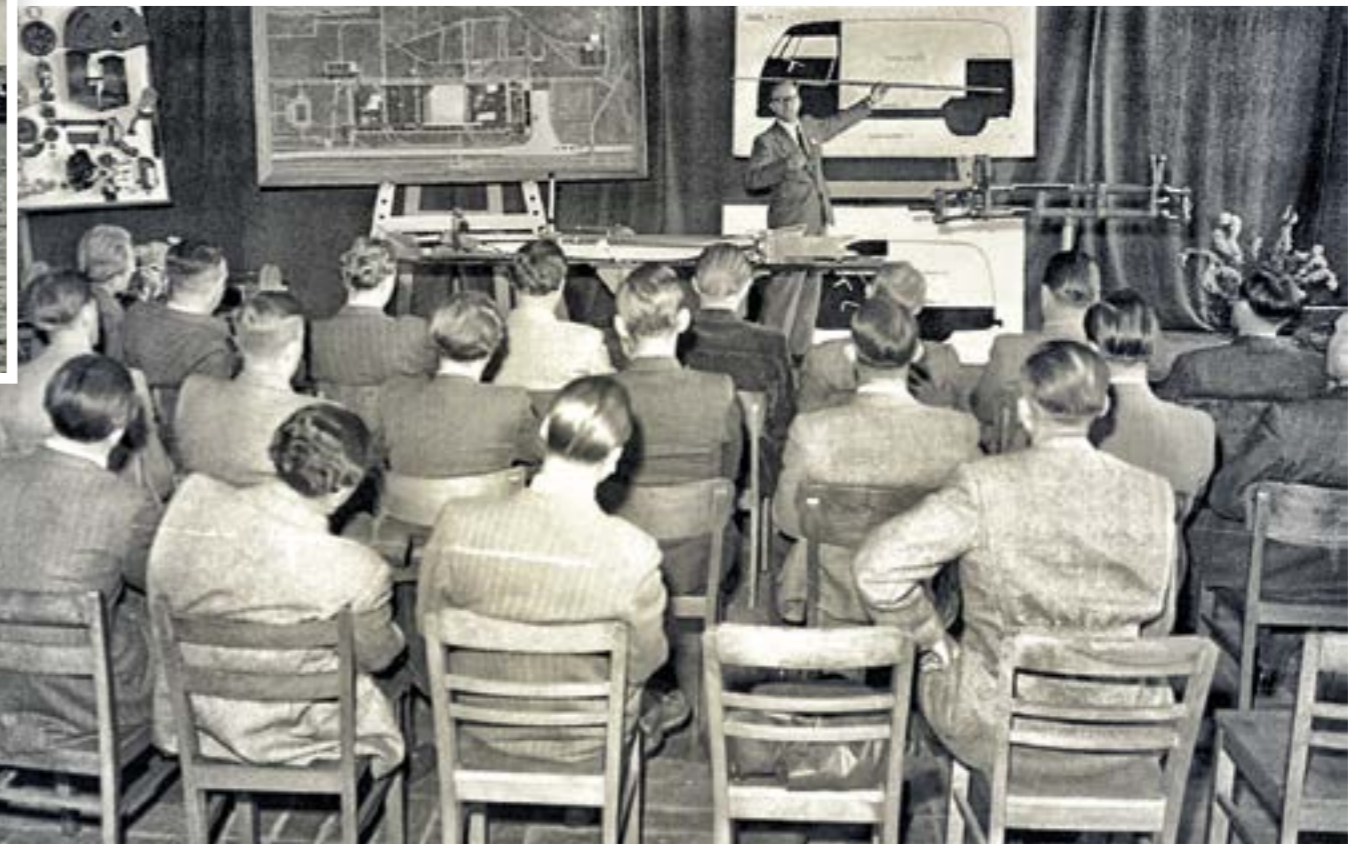
Ben Pon suggested a box van based on the Beetle chassis, an idea he famously encapsulated in a simple sketch that he showed to Volkswagen's management in April 1947.



Heinrich Nordhoff, Volkswagen General Director (1949).



Wolfsburg, Germany. Early years of Transporter production.



Genesis of the Transporter

How Volkswagen created the original commercial vehicle

Nordhoff explains how the load area lies between the two axles. A lot of effort was spent on educating importers, dealers and press about the new Transporter.

Genesis of the Transporter: How Volkswagen created the original commercial vehicle

'Just as our Volkswagen saloon is a car without compromise, so our van should also be without compromise.'

Heinrich Nordhoff
Volkswagen General Director
November 1949

In the ruins of post war Europe, the need for a compact, rugged and roomy commercial van very quickly became clear. Businesses were working on economic recovery, raw materials needed to be moved into factories and finished goods had to be transported to wholesalers and retailers.

The idea for the Volkswagen Transporter had been planted. However, the simple vision to create a revolutionary commercial van would yet take influence from many directions.

In fact almost as soon as hostilities ceased, the factory had created a list of possible Beetle

derivatives, including a design that now would be called a 'car-derived van'.

That idea, however, was shelved to allow the factory to focus on production of the Beetle saloon, more pressing as the need for basic transport to motorise the recovering Germany grew.

Meanwhile, the Wolfsburg factory where the Beetle was built required mechanical handling equipment to move components and machinery around the large site.

But with no industrial tugs or forklifts available, the factory improvised a small flatbed truck powered by a Beetle engine and steered from an open bench seat positioned above the rear-engine.

The Plattenwagen or 'flat car' remained in use at Wolfsburg into the 1970s.

Observing plattenwagens buzzing around the factory floor in the mid-1940s, the Dutch Volkswagen importer, Ben Pon, saw sales potential for the lightweight load carrier in his market. But that plan too was squashed, this time by the Dutch authorities who deemed the rear seat-position unsafe.

Not one to be put off, Pon then suggested a more sophisticated box van based on the Beetle chassis, an idea he famously encapsulated in a simple sketch that he showed to Volkswagen's management in April 1947.

The British role in the Transporter

Post-war, the Volkswagen works at Wolfsburg were in disarray and put under the control of the British Army, which resurrected production of the Beetle largely to supply itself with vehicles to aid the rebuilding of Germany.

The main British manager at the works was Major Ivan Hirst, whose role in the Transporter starts with his idea for a factory flatbed truck – the Plattenwagen.

Hirst came up with the idea when the borrowed British Army forklifts supporting rebuilding efforts at Wolfsburg had to be returned.

Hirst also appointed as General Director of Volkswagen, Heinrich Nordhoff, the man who later would champion the Transporter idea and make it a production reality.



Major Ivan Hirst, Senior Resident Officer.



Original blueprints for project EA-7. Wind tunnel testing which improved the drag coefficient to an impressive 0.4.



The Micro Bus De Luxe was the only model to receive a full-width dash, which included a clock.



Prototypes were extensively tested to arrive at this final iconic and efficient design.

The shape of the Transporter is clear to see with an upright, but gently curved nose, boxy profile and engine positioned at the rear.

Once again the idea was turned down, again with the same reasoning that the Beetle van was rejected, that the factory had to be kept at full tilt making the Beetle.

By 1948, however, Volkswagen had recovered sufficiently to re-consider Pon's idea for a box van and new General Director, Heinrich Nordhoff, gave the go-ahead for an engineering programme that autumn.

By November 1948 design drawings for development project EA-7 were already in circulation.

Under the control of engineering director, Alfred Häesner, designers and engineers began work on the 3.8m long, 1.84m high and 1.58m wide box-van, also known internally as the 'Type 29'.

Häesner was a new recruit to Volkswagen, arriving from Phänomen, a builder of air-cooled commercial trucks, and Nordhoff set him to work immediately to use his valuable experience on the new Type 29 Delivery Van.

Yet like many new vehicle programmes of the time, the van project experienced highs and lows.

Most notably, the project started out based on the Beetle's car platform, but endurance testing showed it to be too weak for the 750kg payload.

The first prototype also featured square-edged styling that proved disappointingly bluff in the wind tunnel with a Cd around 0.7, and so was put in for redesign along with the chassis platform.

To beef-up the chassis, Volkswagen engineered stiffening subframes that were welded into the floorpan to make a unitary construction monocoque body suitable for mass production.

At the same time, the front-end design was smoothed off to improve the drag coefficient, which eventually ended-up at a more impressive 0.4.

Also revised were the front axle, suspension

An early prototype finished in striking two-tone paintwork. Note the vertical rear cooling vents.



Genesis of the Transporter

How Volkswagen created the original commercial vehicle



Rear view of an early vehicle (pre November 1950), identifiable by the badge. Early vehicles did not have rear windows or rear bumpers.

and gearing. The front axle was strengthened to cope with the higher payload, uprated dampers were fitted all round and dual torsion springs incorporated into the rear axle.

The gearing was also usefully lowered to improve performance from the 23bhp flat-four Beetle engine by using hub-mounted reduction gears borrowed from the military version of the Beetle, the Kübelwagen.

These running gear improvements also increased ride height, which increased usability on some operations, like construction sites, farms and rural locations.

Myriad detailed revisions improved the design

through testing, with Nordhoff himself actively overseeing the work. Nevertheless, the engineering and design teams worked fast and revised prototypes were ready for testing just one month later, a time that even today's computer-equipped engineers would be proud of.

Production schedules were similarly tight, but unencumbered by swathes of legislative and safety requirements, Nordhoff was able to set the start of production just six months later, a turnaround inconceivable today.

Production was focused on four variants — Panel Van, Pick-up, an eight-seat minibus and Ambulance/post-van.

The ultimate aim was a launch at the 1950 Geneva motor show.

Then a last minute hold-up nearly delayed the media launch on November 12, 1949, when the large roof pressing proved difficult to make and deliver in time.

But in the end eight Transporters were built in 1949 and following the Geneva show launch, mass production began on March 8, 1950 at a rate of 10 vehicles per day, eventually adding up to just over eight thousand in 1950.

Genesis of the Transporter

How Volkswagen created the original commercial vehicle



Fully loaded it has a top speed of 47mph, a hill-climbing capability of 22 per cent and fuel consumption of 9 litres per 100km (31.4mpg).



A factory ambulance was available from December 1951.



The Single-Cab Pick-up joined the range in August 1952.



Volkswagen introduced the Micro Bus in May 1950.

What the new Transporter van offered

Nordhoff had a clear vision of what the Transporter should deliver to final customers – Europe’s businesses and fleet operators – which was famously outlined at the press launch in 1949.

Starting with market research in the absence of official data, Volkswagen interviewed hundreds of potential customers.

This pushed designers towards a three-quarter of a tonne payload (750kg), a significantly bigger load capacity than the half-tonne (500kg) car-derived vans typical at the time.

Working with the rear-drive Beetle powertrain also meant that to get the weight distribution right for neutral handling (when both empty and fully laden), the driving compartment had to be pushed to the front to counter-balance the rear-engine position.

This type of handling balance was deemed important at the time because the Volkswagen design team saw many crashes of conventional, front-engine rear drive, allied army trucks. These vehicles suffered when not carrying a load, because the unladen rear axle made them susceptible to skidding.

With the Transporter’s key components pushed to the extremities to balance the handling, the central section of the body could be allocated to cargo space.

And because the body was designed as a self-supporting unitary structure, without the separate-chassis of rivals, the floor was almost as low as kerb level, easing loading.

The unitary body was also more efficient in use of material, giving a light kerb weight for the overall load. At the press launch, Nordhoff claimed the 1:1 ‘weight-load’ ratio of an 875kg unladen weight and 850kg load as ‘best-ever performance.’

‘Fully loaded it has a top speed of 47mph, a hill-climbing capability of 22 per cent and fuel consumption of 9 litres per 100km (31.4mpg),’ Nordhoff said to journalists at the time.

Nordhoff also told the press that the ratio of load area to floorspace was 0.5, a significant 50 per cent better than conventionally-engineered rivals.

Naming the box van

Even in the 1940s, Volkswagen found it difficult to name its new creation.

Names said to have been considered were Dura, Felix, Jewel, Pilot and Bullybus. Nordhoff himself is reputed to have suggested and favoured Bully, however as the Lanz Tractor factory was already using the name Bulldog, Bully was deemed too similar.

Nordhoff announced the name Transporter at the press reveal on November 12, 1949. However, the workers in the Wolfsburg factory continued to call their product by the nickname Bulli (with an i); a name which is now synonymous with T1 Transporters across the globe.



History of the Transporter T1 in the UK. The Early Years. 1954–1967.



The Delivery Van.



The Transporter made its UK debut at the Commercial Motor Show at Earls Court in September 1954.



The Pick-up.



The Kombi.



The Micro Bus De Luxe, commonly known as the 'Samba'.



'If the competition is measured by the performance of the Volkswagen, the standard is high.'
Commercial Motor, 1954

History of the Transporter T1 in the UK
1954-1967

Although the Transporter went on sale in Germany and the rest of Europe in 1950, right-hand drive versions were only available to special order until 1954 when they became standard production line models.

British van operators were given a flavour of the vehicle in various reports around the original launch, and then in 1952 *Automobile Engineer* described the Transporter as 'of outstanding constructional interest'.

This taster led into a pattern that's familiar even today, so just as it happens now, a road test vehicle was made available to the press in advance of the UK motor show launch.

Industry bible *Commercial Motor* obtained the first British road test of the Transporter panel van,

published on April 2, 1954 (reproduced on page 14).

Setting a pattern followed today, the road tester, the impressively by-lined Laurence J Cotton, MIRTE (Member of the Institute of Road Transport Engineers), had previously driven the Transporter in Germany, but the full road test on UK roads had to wait.

Under the headline 'Newcomer Sets High Standard', *Commercial Motor* put the Transporter through its paces over 200 miles in London traffic and the roads and hills of Surrey. The Transporter was ballasted to replicate its working life as a loaded delivery van.

Commercial Motor commended the Transporter for its 'remarkable construction', 'performance', 'comfort', 'extraordinarily good suspension' and 'above average engine efficiency'.

The performance point is interesting, because from a modern perspective a 30bhp engine in a fully-loaded 1,800kg van doesn't sound very promising, but the Transporter was described as having 'spirited performance'.

It was also considered worthy of comparison with 'fast newspaper delivery vehicles', which were the quickest vans on the road in an era when rapid delivery from print press to news stand was essential for sales.

Summing up, *Commercial Motor* declared: 'If the competition is measured by the performance of the Volkswagen, the standard is high.'

Public Debut

After the road test, the Transporter made its public debut at the Commercial Motor Show in

Earls Court in September 1954, which featured 440 exhibitors, 38 chassis manufacturers and 70 bodybuilders, according to contemporary reports.

The show was well-attended despite the admission fee of 2s 6d, and the Transporter was the only German vehicle on display.

At that time, the British truck industry was at the height of its powers post-war and all the best stands were occupied with market-leaders like Atkinson, Albion, Commer and Thornycroft, names that haven't survived the test of time as well as Volkswagen.

In contrast the Transporter was squeezed to one side on a small stand, Number 102, next to less glamorous body-builders and trailer makers.

The formal writing style of the contemporary report shows little excitement at the new arrival,

despite the glowing road test published a few months earlier.

However, Volkswagen clearly had ambitions for the Transporter and displayed both panel van and pick-up bodies to target a wide selection of customers.

Worthy of mention in the Commercial Motor Show preview were the 'exceptionally roomy cab' and heater. The latter described in deadpan detail: 'Warm air from the engine can be diverted by pulling a control positioned in ducting running from the unit [engine] to the interior cabin'.

The timing of the British launch couldn't have been better because the haulage industry was being de-nationalised, a move very popular with operators, who disliked the shackles that came with government control and tied up the industry.

The UK launch in 1954 was, of course, the start of the Transporter story, which in T1 form would stretch for thirteen years to July 1967.

Production and the UK launch line-up was centred on six models – Delivery Van, eight-seat Micro Bus, Micro Bus De Luxe, Pick-up, Kombi and Ambulance.

The standard right-hand drive Delivery Van featured twin cargo doors to the load area positioned on the nearside, where it could be accessed from the kerb. A double door model, featuring twin cargo doors on both sides was also available. The base model van in the UK was priced at £668 and the double door option cost £27 extra.

The Micro Bus had space for seven passengers plus the driver and the option of a sunroof, while the De Luxe model had the sunroof as standard,



With sales and production in the UK rising in the economic boom years of the late 1950s, UK Prime Minister, Harold Macmillan, told fellow Britons they had 'never had it so good'.

plus 'all-round windows', a full-width dashboard and the distinctive roof lights, dubbed 'observation panels in the roof' in the contemporary brochure.

The Pick-up featured a 2.6m by 1.57m load bed and Volkswagen emphasised the benefits of the storage locker below the bed. Priced at £695, the canvas roof and support hoops were extra cost options for £36.

The Kombi — short for Kombination — featured a flexible interior with removable seats, a forerunner of the multi-purpose vehicle (MPV). The interior featured spartan trim with rubber mats and seats for up to eight (including the driver).

Aft of the passenger cabin, the luggage space was untrimmed to double-up for cargo carrying.

The seats were held in by wing-nuts, quick to undo, so a business owner could use the cabin as a

delivery truck in the week and a family carry-all at the weekend. The concept continues to this day in other Transporter models.

The flexibility of the Kombi interior also had a significant role to play as the kernel of the idea for a camper, which came about as a living module with bed, storage, sink and cooker that could be slotted into the Kombi to turn it into a weekend camper.

Coach-builder Westfalia first showed a full-blown camper conversion in 1952, but not until the T5 Transporter arrived in 2003 would Volkswagen produce its own leisure model.

During its 13-year life on sale in the UK, the T1 Transporter went through a number of significant changes, generally on a five-year model cycle.

In 1955, just after the UK launch, the factory

redesigned several important features – most notably the ventilation.

The roofline was extended forward and a short peak, perforated to flow air into the cabin, was added over the front windscreen.

Also the rear door was redesigned to be deeper to ease access for long loads, 15" wheels were replaced with 16", and telescopic dampers replaced lever-arm designs.

This version of the Transporter carved out its sales niche with new businesses and sole traders emerging from post-rationing Britain and the Transporter slowly built a strong following up to the Swinging 60s.

By 1960, the Transporter had been in production for ten years and was due a facelift to keep it competitive against newcomers, many

of whom offered better performance from higher powered engines.

The Beetle was also due for an upgrade with a new higher compression 1,192cc 40bhp engine, so the Transporter received the same new engine, helped by a new carburettor.

New convenience features added at the same time included an automatic choke, flashing indicators, fitted to US market versions from 1955, and revised gearing.

Six years after its UK launch *Commercial Motor* put the revised Transporter through the road test mill for a second time. Again the result was positive. Under the headline: 'Still a Winner After a Decade', the magazine praised the 'wide, uncluttered driving compartment', 'delightful gearbox', and 'pleasant braking characteristics'.

Also singled out for praise were the impressive ability to accelerate from 'low speed in top gear', 'above average' cornering ability and 'very good' ride comfort when laden.

Germany had built a total (for all markets) of around 40k units in the UK launch year of 1954, which had risen by the end of 1960 to just under 140k, a record at that time.

With sales and production in the UK rising in the economic boom years of the late 1950s, UK Prime Minister, Harold Macmillan, told fellow Britons they had 'never had it so good'.

With Heinrich Nordhoff firmly at the helm of Volkswagen, the Transporter continued on its programme of constant improvement — a replacement for the T1 was some years off yet.

In the meantime, Volkswagen was lobbied by

the US importer for a bigger capacity engine, partly to suit better driving conditions, but also to head off new competitors.

So Volkswagen extended the 1,192cc flat four to 1,493cc, a convenient capacity that also worked as a powerplant for the rear-engined Type 4 saloon and coupe models.

In 1964, the 1,500 engine was introduced, and in 1966 12v electrics finally arrived.

Production in Germany ended in July 1967.



(Above) Stop-start tests were accomplished on a 1 in 4½ gradient when carrying part load. The Volkswagen has a smart appearance with modern styling. (Right) The van is seen here approaching Ludgate Circus, with Holborn Viaduct in the background, during its trials in London traffic.

Newcomer Sets High Standard

German-built 15-cwt. Van has Four-wheel Independent Suspension and Rear-mounted Air-cooled Engine; A Cab Heater and Other Refinements are Provided

by Laurence J. Cotton, M.I.R.T.E.



THESE are few power units, for light commercial vehicles, that can compare with the efficient operation of the Volkswagen four-cylindered horizontally opposed petrol engine. In its entirety, the 15-cwt. van is remarkable both in construction and performance, as I found during a series of tests, totalling over 200 miles in one day. Much can be said for the driving comfort in that I felt far from weary at the end of the run.

Having previously driven a Volkswagen in Germany, its liveliness with light load was not surprising, but trying the van with a 15-cwt. payload on home ground confirmed that it is speedy and economical, and well equipped, in its lowest ratio, to soar over the 1-in-4½ gradient of Succombs Hill with power to spare.

In physical layout it is similar to the Volkswagen car, having the compact, four-stroke, overhead-valve petrol engine housed in a compartment at the rear. It is air cooled by a fan and a constant temperature is maintained by a thermostat which also passes a regulated flow of air over an oil cooler. No difficulties were encountered in cold-start tests after the van had been left out overnight on a parking ground during a period when several degrees of frost were recorded.

The engine is reached by lifting a



The wide forward-hinged door provides easy access to the cab, which has a bench-type seat. The heater duct is seen attached to the front panel.

hinged panel at the back of the body. In this compartment there are also the 6-v. battery, 8½-gal. petrol tank and spare wheel, the latter being

housed on a shelf above the gear unit. Accessibility to the dynamo, coil, distributor, carburettor and petrol pump, is excellent, which is to be expected with the small, flat engine being housed longitudinally in a compartment which is as wide as the body.

As my tests started before day-break, I appreciated the built-in illumination of the engine bay when connecting the petrol lift pump to its auxiliary supply. This small attention to detail is found in many other parts of the van.

The clutch and four-speed synchromesh gearbox are attached to the front of the engine and the final drive is through a spiral-bevel gear to swinging half axles, and then through a secondary spur reduction gear in the hubs. The Volkswagen power and transmission units are thus compactly grouped and arranged for easy change or major repair. The engine, of 1.192-litres capacity, and a compression ratio of 6.2 to 1, develops 30 b.h.p. at 3,400 r.p.m.

Like the car, the commercial version, which is available as a van, eight-seater bus, ambulance and as a

combination of a bus and van, is of semi-integral construction having a basic structure for all models but differing in the assembly of the upper sections.

The commercial versions are all forward-control types with the front axle situated directly below the full-width driving seat. Considering the 1-ft. wheelbase is about the same as many local-delivery electric vehicles, the suspension of the Volkswagen is extraordinarily good.

The independent front suspension units employ trailing links on laminated square-section torsion bars and the independent units at the divided rear axle have round-section torsion bars. Double-acting hydraulic shock absorbers are fitted at all wheels.

Good Suspension

Although tested with varying payloads up to 17 cwt. maximum, I found nothing to criticize in the springing, and even deliberate driving over a 4-in. kerbstone at 15 m.p.h. failed to "bottom" the buffers.

The wide cab doors, hinged at the front, give good access to the driving seat, but the gear and hand-brake levers projecting through the floor obstruct the driver so that he cannot get out on the rear side without some difficulty. There is a speedometer-milometer which is the only instrument provided, the head lamp beam, traffic indicators, dynamo charging and oil pressure being indicated by lights on the fascia panel.

No fuel gauge is provided, but the tank has a three-way tap affording a one-gallon reserve after the main supply is used. Although austere, the instrument-panel equipment is adequate for a van.

Built-in Heater

With the engine at the back of the body, the cab would be cold in winter without some form of heating. A built-in heater, therefore, forms standard equipment, hot air from the engine being suitably ducted to the cab.

This I found to be most effective within a few minutes of starting the engine, and the only possible fault that could be visualized is that fumes that are prone to emanate from an engine that has seen considerable service might also be forced into the cab. As it is, Volkswagen has provided an effective unit without additional cost.

The cab furnishing is severe, a compressed paper-board lining being used to window level, and, as already indicated, the instrumentation costs less. It is surprising, therefore, to



(Above) The Volkswagen climbed Succombs Hill, carrying full load, without stopping on the 1 in-4½ section. It is well geared for rapid local delivery and is economical under all conditions of load or duty.

find swivelling glass vents and sliding windows in the doors, twin wind-screen wipers, and cab and interior lights in the body forming standard equipment.

The low engine position does not prevent rear doors being fitted to the van body, but on the model tested there was a 3-ft. 10-in.-wide opening with two doors at the rear side and similar doors can be provided at the off side as an optional extra. For a 15-cwt. van the payload space of 141 cu. ft. in the main section of the body, plus another 21 cu. ft. over the engine bay, might invite overloading. The loading height, when unladen is 1 ft. 7 in.

After taking delivery of the van from V.W. Motors, Ltd., in London, I loaded 15-cwt. of ballast in the body and drove through the busiest part of the city to the suburbs. The engine idled and ran smoothly, but, like other Volkswagen models I have driven, could not always be guaranteed not to stall when pulling up sharply in traffic.

Although its acceleration, with load, could not equal that of the fast newspaper delivery vehicles, the van put up a spirited performance and with reduced payload it kept its place at the head of all other traffic.

Apart from being easy to control

Load	Non-stop	One stop per mile	Four stops per mile
15 cwt.	26.7 at 21.2	22.7 at 21.4	19.5 at 21.5
8 cwt.	19 at 21.4	18.6 at 21.7	17.4 at 21.9
Empty	13.3 at 21.4	10.5 at 21.4	14.6 at 21.9

in steering and general handling, the gear change was without fault and rapid movements of the lever evoked no protest from the box. It is preferable to pass through all four gears for the best acceleration with full load. On a quiet level stretch of road alongside the Thames I found the acceleration rate to be from rest to 30 m.p.h., 13.2 sec., and to 40 m.p.h., 22.7 sec.

No Wheel Locking

The maximum effort on the pedal failed to lock the wheels during braking, which is unusual for a vehicle of the light-van class. The Volkswagen has hydraulic braking which, when carrying full load, will stop the van in 43 ft., from 30 m.p.h., which corresponds to 0.7g. The excellent distribution of load, 18½ cwt. on the rear axle and 18 cwt. at the front, may have been contributory to the prevention of wheel locking although the brake frictional area corresponds to 81 sq. in. per ton with this load.

Before starting consumption trials from Godstone, I tried the Volkswagen on Succombs Hill to verify the maker's claim that the van will climb a 1 in 4½ gradient with full load. This it did without faltering, but I could not stage a stop-start trial on the 1 in 4½ gradient without abusing the clutch. With an 8 cwt. payload, however, the result was quite successful. The van made no fuss when starting from rest on a 1 in 5 gradient with a 15-cwt. load and a passenger. It was well geared for general work.

Extensive fuel consumption trials

09

MODEL: Volkswagen 15-cwt. van

	Ton	cwt.	lb.
Unladen	1	10	0
Driver, observer, etc.	0	11	0
	1	11	0

	Front axle	Rear axle
Front axle	18	0
Rear axle	0	18

ENGINE: V.W. four-cylindered horizontally opposed overhead-valve petrol engine; bore 77 mm. (3.03 in.); stroke 64 mm. (2.52 in.); piston-rod ratio 1.375; stroke 172.74 mm.; maximum output 30 b.h.p. at 3,400 r.p.m.; R.A.C. rating 14.4 h.p.

TRANSMISSION: Through single-dry-plate clutch to four-speed gearbox, and spiral-reduction gear in the hubs.

GEAR RATIOS: 3.60, 1.98, 1.23 and 0.8 to 1. Forward: reverse 4.61 to 1; rear axle ratio 4.1 to 1.

BRAKES: Hydraulically operated leaf wheels. Hand brake locked mechanically to rear-wheel frictional drive 81 sq. in., that is, 44.4 sq. in. per ton gross weight as tested.

FRAME: Integral with body.

STEERING: Worm and cast-iron follower.

SUSPENSION: Two square laminated torsion bars at front, individual solid torsion bars at rear. Double-acting hydraulic shock absorbers at all wheels.

ELECTRICAL: 6-v. compressed-air-voltage control system with 8½-amp. or battery.

FUEL CONSUMPTION: (a) Non-stop 26.7 m.p.g. at 21.2 m.p.h.; average speed: (b) one stop per mile 22.7 m.p.g.; (c) four stops per mile 19.5 m.p.g.; (d) 1 in 4½ gradient 19.1 m.p.g. at 21.5 m.p.h. (e) 1 in 5 gradient 17.4 m.p.g. at 21.9 m.p.h. (f) 1 in 5 gradient 14.6 m.p.g. at 21.9 m.p.h. (g) 1 in 5 gradient 10.5 m.p.g. at 21.4 m.p.h. (h) 1 in 5 gradient 8.1 m.p.g. at 21.4 m.p.h.

TANK CAPACITY: 8½ gallons, range approximately 140-200 miles.



ROAD TEST No. 513—VOLKSWAGEN 15-CWT. VAN

UNLADEN

WHEELBASE 91" OVERALL LENGTH 161"

WHEEL TRACK 37"

FRONT TRACK 37"

REAR TRACK 37"

ACCELERATION: Through gears, 0-30 m.p.h., 13.2 sec.; 0-40 m.p.h., 22.7 sec.

BRAKING: From 30 m.p.h., 19 ft. (22.5 ft. per ton, per sec.); from 20 m.p.h., 43 ft. (32.5 ft. per ton, per sec.)

WEIGHT RATIO: 0.823 b.h.p. per cwt. gross weight.

TURNING CIRCLES: 37 ft. both locks.

MAKERS: Volkswagenwerk, G.m.b.H., Wolfsburg, Brunswick, Germany. Commercial: V. W. Motors, Ltd., 7-9 St. James's Street, London, S.W.1.

were made, embracing varying degrees of load and making one- and four-stops-per-mile tests in addition to continuous running. The result of these trials is shown in the accompanying table, the speed for the one- and four-stops-per-mile tests being developed from the time the wheels were turning.

By running these trials early in the morning there were no traffic difficulties, and between 5.30 a.m. and 10 a.m. 18 runs were made with com-

parable conditions and reasonably equal average speeds. From the results it is apparent that the maker's claim that a consumption rate of 30 m.p.g. is not unreasonable at a steady speed with load. The course chosen was slightly undulating. As I did not spare the engine or brakes during the local-service trials, the return of 19.1 m.p.g. carrying full load and stopping every ¼ mile is an economical figure. It is upon the results of these trials that I acclaim

the Volkswagen engine to be above average in its efficiency. It is especially good for local delivery because of its rapid "warm up" from cold, no engine heat being lost in a water-cooling jacket. After 200 miles arduous work there was no increase in pedal travel; neither could the brake adjusters be taken up without binding the wheels. If competition is measured by the standard is high.



The Pick-up had a payload of up to one-tonne and 46.3 sq. ft. load surface.



The Double-Cab Pick-up had a 31.2 sq. ft. load surface and a payload of up to 2,094 lbs and six seats.



A High-Roof Delivery Van.



The Kombi had a 177 cu. ft load compartment or seats for two to eight people.

The T2 ended up as the best-selling Transporter with total production over 12 years eventually running to 3.9 million units.



The Micro Bus had 212 cu. ft. inside, with 35 cu. ft. for luggage space.



History of the Transporter T2 in the UK. The New One. 1967–1979.

The foundations for a new Transporter were set in the mid-60s when Volkswagen started building test prototypes of a new vehicle. Sitting on the same 2,400mm wheelbase as the T1, but 200mm longer, the T2 was an all-new vehicle.

Heinrich Nordhoff was still firmly in charge at Volkswagen and he appointed the brand's head of commercial vehicle styling, Gustav Mayer, to execute a new look for the second-generation Transporter.

The main styling change was to the upper body where a new wrap-around windscreen and three window design replaced the T1's split-screen and four-opening body to give a cleaner, more modern look.

These large openings required a different approach to the structural design, so Volkswagen adopted a stiff double-skin structure that allowed thin pillars between the large windows.

All was new underskin, too. The platform was stiffened with thicker gauge steel, the front axle design of the Volkswagen 1600 saloon adapted to the van and a new rear-axle design introduced semi-trailing arms in place of swing axles.

The front and rear tracks were widened, too, to the benefit of stability and handling.

The new longer and stiffer body was also heavier than the T1, the unladen weight up by about 100kg to 1,075kg.

Although the new 1,600cc engine was more powerful at 48bhp, and shared with the new Type 3 saloon, the maximum payload remained at 1,000kg and was known as a one-tonne on model.

The longer body, however, had the benefit of boosting cargo carrying capacity to 5m³, a useful increase of 0.2m³.

Also new was a standard sliding side door, that was a cost option on later T1 variants, and the side opening was enlarged slightly to 1,196mm (from 1,170mm) to aid loading.

Production started in August 1967 and hopes were high for the T2 so production capacity was increased for the new model, which reached UK shores in 1968.

The contemporary brochure for the launch shows five body variants available in the UK – Delivery Van, Kombi, Micro Bus, Pick-up and Double-Cab Pick-up (Doka), which had joined the T1 range in 1958 after the success of a coach built version.

A neat feature of the Double-Cab Pick-up was a removable rear seat, which offered workers a secure place to store equipment and valuables.

The automotive press at the time welcomed the improved standard of interior fittings and praised better visibility, more comfortable seats and better access.

In 1972, for 1973 model year, exterior revisions included relocated front indicators (squared-off and located by the air grille) and a larger rectangular tail light cluster.

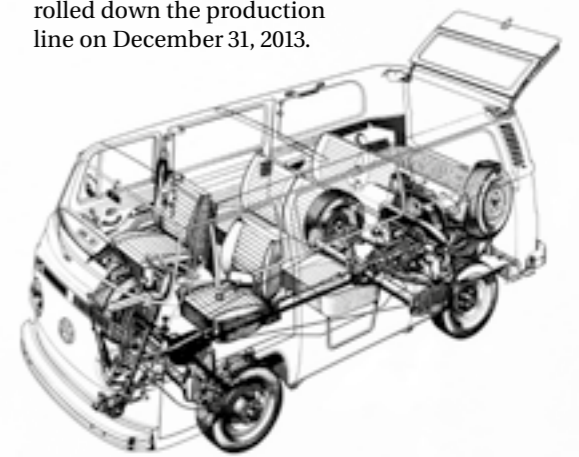
From 1974, a new 2-litre Type 4 engine was available. Changes included a bigger engine compartment and enlarged air inlets – to allow for increased cooling.

The T2 ended up as the best-selling Transporter model with total production over 12 years eventually running to 3.9 million units.

The T2 would also provide much-needed production and financial stability as Volkswagen adjusted in the early 1970s, in the wake of the first oil crisis and as its car range moved to front-wheel drive.

The T2 would, of course, also live on in production in Brazil latterly with a 1.4-litre water-cooled in-line engine.

Brazilian production alone totalled 1.5 million units and the last model rolled down the production line on December 31, 2013.



T2 Delivery Van with sliding door as a standard fitting.



History of the Transporter T3 in the UK. Bigger, better, boxier. 1979–1992.

Serious work on a replacement for the T2 kicked off in the early 1970s at a time when styling themes were moving towards flat surfaces and chiselled edges in place of soft corners and gentle panel curves.

This styling trend explains the radical shape of the third-generation Transporter, which burst onto the scene in 1979, four years after serious engineering design started.

The T3 also shared the same design language as the medium truck LT, which launched in 1975.

Another major influence on the T3 was the introduction of regulatory crash tests, particularly for the US market, which mandated roll-over and frontal impact tests for designs new to market.

Of course the big surprise was the retention of the rear-engine layout and air-cooled engines, but Volkswagen had achieved success with the T2, had experienced a painful transition to front-drive cars and was not yet ready to risk the future of its best-selling van on an untried front-drive or traditional rear-drive layout.

The new van was bigger which brought benefits to cargo carrying.

More internal volume came from a slightly longer wheelbase (now 2,460mm compared to 2,400mm) and much wider body (1,845mm compared to 1,765mm).

Overall the T3's length increased to 4,570mm, an extra 150mm, while the overall height dropped 5mm to 1,950mm.

The payload remained at the class-typical one-tonne, while cabin volume increased to 5.7m³, which usefully put the T3 ahead of rivals.

Under the skin was a new unibody chassis strengthened in a similar manner to the T2 by longitudinal and transverse stiffeners and suspended by front double wishbones, coil springs, telescopic dampers and anti-roll bars, while the rear featured semi-trailing arms, coil springs and telescopic dampers.

Also new was the rack-and-pinion steering, which had replaced the steering box as the industry standard. The fuel tank kept the same 60-litre capacity as the outgoing T2.

Power came from a choice of two carry-over flat-four engines — a 70bhp 2.0-litre or 50bhp 1.6 petrol, the former borrowed from the Porsche/Volkswagen 914 sportscar and the latter harking back to the 1950s. The standard gearbox was a four-speed manual.

The T3 is commonly referred to as the T25 in the UK.

Priced from £4,398, the T3 performed well in dynamic testing.

Singled out for praise were the variable rate springs, and precise, well-weighted steering.

The line-up of models at launch was also more extensive than that of either the T1 or T2, reflecting the growing sophistication of the Hanover manufacturing operation.

By 1981, Volkswagen was also ready to slot a diesel into the T3, the 1,588cc four-cylinder water-cooled in-line diesel being imported from the Golf, with the torque curve modified to suit the heavier van. The favourable 33mpg fuel consumption was a well received advance; the leisurely performance less so.

The next year the Transporter benefited from another significant improvement — a new range of flat-four engines, this time water-cooled to improve running refinement and fuel economy.

Available in 1.9-litre capacity with outputs of up to 89bhp and a 112bhp 2.1-litre version (introduced in 1984), the engines boasted improved fuel economy compared to the air-cooled petrol engines, but the diesel still offered the best economy.

The last major variant arrived in 1986 in the shape of the four-wheel drive syncro model, launched to compete with the growing numbers of Japanese 4x4s that were selling well around the globe.

The growing popularity of 4x4s also sparked the limited edition Tristar, a Transporter Double-Cab Pick-up syncro decked out with a luxury interior and available with a variety of roll cages and bull bars to add lifestyle appeal.

By the early 1990s, however, the T3 was ready to be replaced after total production of 1.7 million units.



The Pick-up had a large platform with compact overall dimensions.



The syncro had an intelligent four-wheel drive system. Available in all versions of Transporter and Caravelle.



A High-Roof Delivery Van.



The Double-Cab could carry up to six passengers, tools and materials.

Priced from £4,398, the T3 performed well in dynamic testing while fully-laden, and sped around the test route at a quicker pace than rivals.



The Caravelle was available as a seven, eight and 12 seater bus.

Delivery Van — designed as the all-purpose Transporter for all branches of trade, business and industry.



History of the Transporter T4 in the UK. The front-wheel drive generation. 1990–2003.



The T4's sloping nose, smooth body panels and wind tunnel honed shape recorded a Cd of 0.37, better than its closest rivals.



As the 1980s drew to a close, the T3 Transporter was in need of replacement. Not only had the bulk of the competition moved to a front-drive layout for their commercial van models, but airbag and catalytic converter technologies were approaching widespread adoption in the volume car market. It would only be a matter of time before they crossed over to commercial vehicles. The era of the rear-engined Transporter had to come to an end.

Engineering a ground-up new van family opened up opportunities for Volkswagen to widen its model offerings too, and the fourth-generation Transporter was designed with short and long wheelbase options, panel van and chassis-cab bodies and three different payloads, which covered a much-wider range of the market.

The new van was longer, lower and slightly narrower than the T3 at 4,707mm long (up 137mm), 1,940mm (down 10mm) and 1,840mm (down 5mm).

Although the wheelbase was considerably longer at 2,920mm (up 460mm), new crash protection laws required a significant crumple zone at the front, which pushed the driver cabin further back and ate up cargo space.

As a result the T4 offered marginally less cargo volume at 5.4m³ (down 0.3m³) than its T3 panel van predecessor, although in long wheelbase form, cargo carrying capacity was a major improvement at 6.3m³. With a high-roof that further increased to 7.8m³, it was one of the most spacious Transporters ever built.

Payloads of 800kg and 1,000kg were available in the short wheelbase panel van, while the long wheelbase offered 1,200kg.

The front-drive layout brought major advances in loading practicality with the 580mm high rear loading height feeding into a flat cargo area and accessed by a pair of wide-opening doors.

In its previous three incarnations, the Transporter had always benefited from a good balance of ride and handling and the T4 was no exception, particularly because the front-drive layout was designed around independent front and rear suspension — wishbones with torsion bars at the front and trailing arms with coil springs at the rear.

Contemporary magazine road tests praised the ride and handling.

Also rare on a commercial van at the time was the option of anti-lock brakes, although the cost of just over £1,200 made them a premium option.

Not only was the body re-tooled for the T4, but the new model also came with a range of five new engines, developed from Volkswagen's class-leading four and five-cylinder units.

All were mounted transversely at the front, meaning an end to the distinctive exhaust rasp of the air- and water-cooled flat-fours that had powered the T1, T2 and T3 for 40 years.

The workhorse engine was a 60bhp 1.9 diesel, which cost-conscious operators specified, while those looking for more load-lugging ability chose the 76bhp 2.4-litre five-cylinder diesel. Three petrols were available – a 66bhp 1.8, 83bhp 2.0-litre and 108bhp 2.5-litre, the latter reserved for the range-topping Caravelle executive people carrier, which boasted a top speed of well over the magic 100mph.

That top speed — more than double the first T1's genteel 50mph maximum — was helped by the new aerodynamic body.

The T4's sloping nose, smooth body panels and wind tunnel honed shape recorded a Cd of 0.37, better than its closest rivals. Volkswagen also offered a T4 chassis option, much welcomed by bodybuilders for special body variants.

Production of the T4 Transporter started on 6 January 1990 and would eventually total 1.9 million units.



History of the Transporter T5 in the UK. Market leader 2003–Present Day.



A

fter 13 years of T4 production, the fifth-generation Transporter went into production in 2003 at both the Hanover and Poznań plants.

Sticking with the tried-and-tested front-wheel drive layout, the new T5 has grown in all dimensions, a development that has boosted the cargo-carrying capacity and payload.

The styling has a familiar family look, following the trend established by Volkswagen Passenger Cars. To evolve its design, much of the styling focuses on perfecting the sloping nose and harmonising body proportions and surfaces.

Designers and engineers have created two separate skins for the Transporter Panel Van family and the passenger-oriented Caravelle family. As if to reinforce the importance of the new distinction between passenger model and the cargo carrier, the Caravelle was revealed first in March 2003 at the Geneva show, followed in April by the Transporter at Leipzig.

Just as the T4 grew over the T3 in terms of major dimensions, so the T5 has grown in length, height, width and wheelbase.

The standard wheelbase now measures 3,000mm (up 80mm), while the overall length is 4,892mm long (up 15mm), the height 1,990mm (up 50mm) and width 1,904mm (up 64mm).

The benefit of these larger dimensions is seen in the increased cargo volume, which reaches 5.8m³, a useful 0.4m³ improvement over the T4. More impressively, the long wheelbase variant

can carry 6.7m³, also a 0.4m³ improvement over its predecessor. The high-roof, long-wheelbase variant is sufficiently commodious to pack in 9.3m³ of cargo, enough to satisfy operators needing to lug spacious loads more than outright weight.

Payloads have also gone up; the heaviest duty T32 model — rated at a gross vehicle weight of 3.2 tonnes — can haul between 1,069kg and 1,340kg depending on engine and transmission.

At launch in 2003, the engine range included a mix of petrol/diesels units, but the UK range is now fully focused on four-cylinder diesel variants, the multiple advantages of the compression ignition engine pushing out the petrol engine.

Given the strong developments in driveability and refinement, the 37.7mpg from the standard 84PS 2.0-litre TDI, to the 48.7mpg in the BlueMotion variant, provides most operators with the economy and driving flexibility to suit daily driving cycles.

Four other 2.0-litre four-cylinder diesels offer power outputs from 102PS up to a heady 180PS when equipped with twin-turbos in the BiTDI model.

All-wheel drive 4Motion transmission has proved popular with operators frequently going off-road or in the northern reaches of Europe, while the sophisticated dual-clutch direct-shift gearbox (DSG) is the perfect self-shifting transmission for urban operations.

The push to develop the passenger-carrying Caravelle has also resulted in a more extensive range of trim options and interior seating layouts.

Offered in three trimlines, SE, Executive and Business, a floor-mounted rail system allows the rear bench seat to be moved fore and aft and for additional tables, seats or transport brackets to be fitted. In this sense the T5 carries on the flexibility of the very first Kombi from 1950.

In fact, when every variant of the T5 was added-up at launch, the number came to 375, when roof-heights, cab design and engine variants were included.

Two prestigious awards came its way soon after launch, too: *What Van?* chose it as 'Van of the Year' as did a jury of journalists who gave it the 'International Van of the Year 2004' Award.

Also new in 2003 was the first Volkswagen-built California camper, now decked out with an electrohydraulic pop-up roof.

Given the complexity of manufacturing the camper interior and roof, Volkswagen established a separate production facility in the Hanover suburb of Limmer.

In 2010, Volkswagen Commercial Vehicles launched a revamped and facelifted T5 range. Revisions included a sharper appearance, a showcase of new diesel engines which offer the latest fuel-saving technology, a number of safety enhancements and the introduction of a DSG gearbox – a world first for a commercial vehicle.



Prestigious awards came its way soon after launch: *What Van?* chose it as 'Van of the Year' as did a jury of journalists who gave it the 'International Van of the Year 2004' Award.



Volkswagen Transporter Timeline. 1947-1982.

Volkswagen Transporter Timeline
1947-1982

1947



Idea for a Volkswagen van emerges as a design sketch.

1949



Prototype shown in Germany.

1950



The Transporter is born. Full production begins and 'Bulli' is officially named Transporter.

T1 UK Launch
1954

1954



The 100,000th Transporter rolls off the production line, now a familiar sight on the British roads.

1955



The first fully-fitted Westfalia campers go on sale.

1967



Second-generation Transporter T2 is launched.

T2 UK Launch
1968

1968



Transporter sales hit two million and counting.

T3 UK Launch
1979

1979



The new, third-generation T3 Transporter is launched. 1.7 million will be produced.

1981



The Hanover factory is 25 years old. It's produced more than five million vehicles since opening.



1947 Ben Pon spots a Plattenwagen, this gave him the idea for a Volkswagen commercial vehicle, the future Transporter.



1948 Heinrich Nordhoff is appointed General Director of Volkswagen. He is the father of the Transporter.



1947 Ben Pon suggests a box van based on the Beetle chassis, an idea he famously encapsulated in a simple sketch.



1950 An early production Transporter.



1950 Transporter unveiled at Geneva Show in March; production starts same month. Kombi production starts in May and Micro Bus in June. 8k Transporters are built that year.



1952 Pick-up goes into production.



1953 Volkswagen trademarks the letters V and W contained in a circle. The design is by Franz Reimspies, an engine designer at Porsche.

1953 Volkswagen Motors Ltd is set up as the official UK importer based in London's Regent Street. The first order for 200 cars is placed.



1954 The Transporter makes its UK debut at the Commercial Motor Show at Earls Court.



1955 Five years into production and Transporter is revised with better ventilation, suspension and a larger rear door. Annual output reaches 49k units. Total Volkswagen output passes the 1m mark.

1956 The Hanover factory opens and production moves from Wolfsburg.



1959 Volkswagen embarks on ground-breaking US ad campaign by Doyle Dane Bernbach (DDB). Volkswagen increases US market share; European rivals lose share.



1960 Transporter is revised for second time with more powerful engine, and refinements like repeating indicators. UK imports of Volkswagen cars now 16k a year; total reaches 50k.

1963 Payload rises to 1000kg with new 1.5-litre engine, 14in wheels and radial tyres standard fitment.



1967 Volkswagen phases out T1 after 17 years in production.

1968 The bigger, faster and more modern-looking T2 is launched in the UK. Known as the 'Bay Window' model, it will go on to become the best-selling Transporter.



1971 Total production of Volkswagen hits 20m. A new UK import centre opens in Grimsby.

1977 Volkswagen signs up with truckmaker MAN to jointly develop and make commercial vehicles. Transporter production reaches 4.5m units.



1978 Volkswagen Group UK moves to Milton Keynes, its current home.



1979 The new, third-generation T3 Transporter is launched.

1980 The second oil crisis sets off a three-year decline in car sales; Japanese competitors also make market tough. The Volkswagen Audi organisation becomes known as VAG (UK).



1981 Transporter is offered with its first diesel engine - a 1.6-litre with 46bhp.



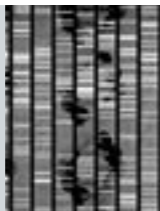
1982 A 1.9-litre water-cooled four-cylinder engine signals the end of the air-cooled Transporter. Carl Hahn takes over as Chairman.

World Events

1948 Berlin Airlift begins.



1952 Queen Elizabeth II crowned.



1952 NME publishes first record chart.

1953 Crick and Watson discover DNA.



1955 ITV launched.

1956 Suez crisis.



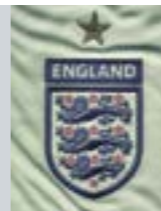
1957 Lennon and McCartney first meet.

1958 Munich air disaster.



1959 M1 opens.

1961 First man in space.



1963 President Kennedy assassinated.

1966 England wins the FIFA World Cup.



1967 Breathalyser introduced.

1973 Britain joins EEC.



1977 Star Wars movie opens in cinemas.

1979 Margaret Thatcher elected; Britain's first female PM.



1981 Prince Charles and Lady Diana Spencer engaged.

Volkswagen Transporter Timeline. 1983-2014.

Volkswagen Transporter Timeline
1983-2014

T4 UK Launch 1990

T5 UK Launch 2003

1983



Caravelle, a luxury people-carrying version of the Transporter is launched.

1985



Four-wheel drive Transporter syncro model launched.

1990



The fourth-generation T4 is launched. The 40th anniversary of the Transporter.

1998



Volkswagen UK creates a commercial vehicles division for van customers.

2000



50 years of the Transporter.

2003



The fifth-generation T5 is launched, winning What Van? Van of the Year.

2008



Volkswagen Group profits reach an all-time high. Global sales overtake those of Ford.

2011



UK Transporter sales set a record – 15,114.

2014



60th Anniversary of the Transporter in the UK.



1983 Caravelle variant added to the range as a luxury people carrier. Golf MkII is launched. New production line has Wolfsburg's first assembly robots.



1986 Global Transporter production reaches the six million mark. UK Transporter sales reach a record 4,617.



1993 Catalytic converters standard fit on petrol cars, vans follow in 1994.

1995 Volkswagen Commercial Vehicles becomes a Group brand co-ordinating global CV operations. A new UK distribution centre at Sheerness opens.



1997 The eight millionth Transporter is produced globally. Volkswagen Commercial Vehicles sales reach a record 15,067. Golf Mk IV launched.



2003 The fifth-generation T5 is launched. Last Beetle produced after more than 21 million built.



2005 Volkswagen produces its 100 millionth car. Volkswagen Group becomes number one best-seller in Europe.

2006 The Crafter replaces the LT and wins several awards.

2011 UK Transporter sales set a record – 15,114. Volkswagen unveils Bulli concept. Porsche merged into Volkswagen Group. Group global sales rise to eight million.



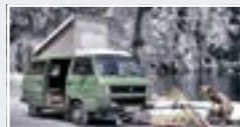
2012 Official factory-approved restoration service launched. Hanover starts building Amarok pick-up.



2014 60th anniversary of the Transporter in the UK. Revised Transporter BlueMotion model delivers 48.7mpg. Multivan Alltrack concept unveiled at Geneva Show.



1985 Four-wheel drive Transporter syncro model launched. Volkswagen sales in the UK break through the 100k barrier.



1987 California camper van is a new Transporter variant. Klaus Liesen takes over as Volkswagen Group Chairman.



1990 Launch of T4, first front-wheel drive Transporter. SKODA becomes Group's fourth brand.

1994 The front-wheel drive T4 Transporter passes the 500k production mark. Volkswagen workers go onto four-day week. UK Transporter sales peak at 5,993 – a new record.



2000 50 Years of the Transporter. Volkswagen buys stake in truck maker Scania; 20 millionth Golf produced.

1998 Volkswagen acquires Bentley, Bugatti and Lamborghini.



2001 Unveils Microbus concept. Opens glass-walled Dresden factory and Phaeton production starts.



2004 T5 wins UK's What Van? 'Van of the Year'. Global Transporter production reaches the magic 10 million level. UK Transporter sales break through 10,000 for the first time.

2008 Volkswagen increases its stake in truck maker Scania.



2010 The Transporter turns 60 years old with events to celebrate across Europe.



2013 The delivery of the future concept — the e-Co-Motion — unveiled at Geneva Show. Volkswagen Commercial Vehicles UK sets sales record with 40,857 registrations. The California celebrates its 25th birthday.



1985 First UK mobile call.

1986 M25 fully-opened.

1989 Berlin Wall opens to the West.



1990 The World Wide Web starts operating.

1991 The Warsaw Pact is disbanded.



1992 Prince and Princess of Wales separate.

1993 European single market opens for business.



1997 Astronauts begin commissioning the Hubble Telescope.

1998 Google is founded in California.



1999 The EURO is set up.

2000 The year of 'Y2K' concerns that computers would not move smoothly from 1999 to 2000.



2003 The London Congestion Charge comes into force.

2008 Global financial crisis precipitated by collapse of Lehman Brothers bank.



2011 The final Space Shuttle lands, ending the NASA programme.

2012 The print edition of the Encyclopaedia Britannica is discontinued after 244 years in print.



2014 Britain enjoys its best Winter Olympics performance since 1924.



Facts

Facts

BHP of the very first Transporter in 1954.
30

3.9m
Total production run of all the T2 Transporters.

£36
Cost of the canvas soft-top optional on the T1 pick-up in 1954.

Record global annual production of the T2 in 1972.

259,101

0.37
Drag coefficient of the front-drive T4.

4,707
Length in mm of the T4 Transporter.

2,400
Wheelbase (mm) of the first two generations of Transporter.

1,192
CC capacity of the first Transporter engine.

2,300,000
Total production of the T1.

2,465,000
Total German production of the 'Bay Window' T2 Transporter.

11,500,000
Total Transporters produced from 1950 – 2013, making it the world's best-selling commercial vehicle.

BHP of the diesel engine fitted to the T4.
59

9.3m³
Volume of today's high-roof LWB T5.

12
Months it took Volkswagen to get the Hanover plant operational in 1955/6.

1,000kg
Payload of T1 when the 1,500cc engine was launched in 1964.

18,350
Record sales for Transporter in UK: 2013.

6.6
Compression ratio of the T1 engine at UK launch in 1954.

1980
Launch year of the first diesel-powered Transporter.

PS of the most powerful diesel in today's twin-turbo 2.0 BiTDi T5.
180

£1,200
Optional cost of anti-lock brakes on T4 when first offered in 1990.

Payload of T1 when the 1,500cc engine was launched in 1964.

£668
UK price of Transporter in 1954.

17
The number of years the T1 'Splittie' was in production.

Sales:

How the Transporter has sold over the years – T1 to T5



1950
T1 – 2.3 million



1979
T3 – 1.7 million



Since 2003
T5 – 1.7 million



1968
T2 – 3.9 million



1990
T4 – 1.9 million

Global sales:
1950-2013

A model new to market has to start somewhere but it is still hard to believe that the Volkswagen Transporter started out with just 786 sales in 1954, its first full year on sale. Fast forward nearly 60 years and the figure rises to 18,350 — cementing the Transporter as Volkswagen Commercial Vehicles' best-seller.

While other models like the Caddy pick-up and the LT have come and gone, the Transporter has always been Volkswagen's best-selling van model in the UK. Initially sales built slowly, but steadily and in the early years passed through the 1,000 a year sales barrier in 1955 and the 2,000 a year figure in 1960. This new decade was, in fact a bumper year for the Transporter, coinciding with a sales push and the introduction of a revised model with more power, an automatic choke and improved gearing. These changes more than doubled sales in 1960 with just over 3,000 vehicles sold, proof that carefully-judged improvements to the product are recognised by customers and translate into increased sales.

Fast forward nearly 60 years and the figure rises to 18,350 — cementing the Transporter as Volkswagen Commercial Vehicles' best-seller.

During the 1960s and 1970s — the boom years for factory production of the T2 — sales remained between 3,000 to 4,000 — until the 1980s when the next economic boom arrived. De-regulation and privatisation of state run enterprises under the Thatcher government stimulated demand in all corners of the British economy and sales of the T3 Transporter benefited greatly. Coinciding with the change from air-cooled to water-cooled engines, Volkswagen was consistently selling between 3,500 to 4,500 Transporters a year, which represented circa. 50 per cent of its total sales of approximately 10,000 vehicles.

After the launch of the front-wheel drive T4 Transporter in 1990, there was a noticeable increase in sales. Britain also developed a taste for the T4's new 1.9 and 2.5-litre diesel and turbodiesel engines, which were frugal and quieter than those in the T3, while the choice of short or long wheelbase and high-roof models extended the Transporter's appeal to a new group of operators. Market conditions were, however, tough. After record sales in 1989 of 4,446 Transporters, the economic trough of the early 1990s pulled sales down, as it did for all van and truck manufacturers.

Market conditions were, however, tough. After record sales in 1989 of 4,446 Transporters, the economic trough of the early 1990s pulled sales down, as it did for all van and truck manufacturers.



Up until 1992, the Volkswagen van business had been run in conjunction with MAN truck activities in the UK, based in Swindon.

Sensing the business needed to be streamlined, in January 1992, Volkswagen Commercial Vehicles separated its activities and moved to the Volkswagen Audi Group's head office in Milton Keynes, where it is still based today.

By then declining sales of the larger LT model, and the end of production of the Caddy pick-up, meant Volkswagen's total sales of commercial vehicles declined to around 6,500 vehicles.

However, the steady increase in sales of the new T4 Transporter, boosted by cleverly negotiated

fleet deals with high profile customers like the AA, raised the proportion of Transporter sales overall to around 70 per cent.

And with the economy recovering, demand for the Transporter reached just under 6,000 units per annum (75 per cent of total sales) by 1995, and entered a period of greater success that took sales to new levels – a growth that has continued to this day.

Sceptics may have predicted the launch of the smaller Caddy van in 1996 would harm Transporter sales but the reality was very different. Transporter sales actually increased dramatically that year, jumping to a new peak of more than 7,100, twice

what they'd been in 1987.

The eight millionth Transporter was produced in 1997, the same year that UK sales set a new record of 8,140 – well over twice what the T2 and T3 achieved in their glory days of the 1960s, '70s and '80s.

Steady growth through the early years of the 'Noughties' and the dot.com boom — remember that? — would lead in to the launch of the fifth-generation T5 Transporter in 2003.

No-one could have predicted the huge growth in Transporter sales that followed, but neither could anyone have predicted the revolutionary effect that the internet and rise of home delivery companies would have on panel van sales.



Sales:

How the Transporter has sold over the years

UK Van sales by year*

Year	VW Van UK sales	Transporter UK sales
1985	9,475	4,462
1986	10,373	4,617
1987	8,528	3,524
1988	9,326	4,001
1989	10,270	4,446
1990	8,746	3,586
1991	6,195	3,300
1992	6,005	4,012
1993	6,530	4,838
1994	7,986	5,995
1995	7,392	5,749
1996	10,628	7,154
1997	15,067	8,140
1998	15,882	7,825
1999	15,134	7,544
2000	15,201	7,960
2001	16,440	9,792
2002	16,410	9,081
2003	16,412	9,332
2004	21,483	12,028
2005	23,893	13,524
2006	26,553	14,842
2007	30,255	17,035
2008	28,990	15,631
2009	23,323	10,818
2010	28,923	13,329
2011	35,142	15,114
2012	34,863	16,091
2013	40,857	18,350

*Internal figures. Applies to all variants of Transporter.

In its launch year of 2003, the T5 Transporter achieved sales of 9,332 but the boom years followed in quick succession through 2004, 2005, 2006 and 2007.

Each year Transporter sales ratcheted up, from 12,028 (2004), through 13,524 (2005) and 14,842 (2006) up to 17,035 (2007). The T5 Transporter was now selling nearly four times as many as its illustrious predecessors.

Of course the boom years couldn't keep going and as soon as the Lehman Brothers collapse precipitated the global banking crisis, operators cut their forward ordering to all van and truck makers and 2008 and 2009 were much leaner years.

In the decade between 2003 and 2013, Transporter sales increased from 9,332 to 18,350, while total sales for Volkswagen Commercial Vehicles have more than doubled – from 16,412 in 2003 to a peak of over 40,857 vehicles in 2013 – despite new model launches from key rivals.

The Van Centre Story

Today one of the key strengths of Volkswagen Commercial Vehicles is its dedicated Van Centre network of 71 sales and service outlets, backed up by a further 24 authorised repairers.

One of the secrets of its success is the dedicated expert sales and service staff who understand (and love) the Transporter and the rest of the Volkswagen Commercial Vehicles range and who are able to help customers with queries specific to van operations.

The success of this network can be traced back to several strategic moves made in the past, most notably in 1993 when Volkswagen AG took full control of the UK importer from Lonrho, a conglomerate with wide-ranging interests which had distributed

Volkswagens in the UK since 1975.

The move to take factory control in particular put the dealer network on a strong footing ready for the launch of the T4 in 1990.

Previously Volkswagen had been distributed in the UK by a variety of importers, including in the very early years, Volkswagen Motors, which was set up in 1953 to sell the Beetle and prepare for the launch of the Transporter.

By 1957, Volkswagen Motors was sold to the Thomas Tilling Group, a company that specialised in bus operations, and which oversaw the launch of various revised T1s, and the major expansion that came with the T2 Transporter in 1968.

With Volkswagen taking over distribution in 1988, there followed several significant reorganisations.

Lonrho had built a facility in Swindon in 1981 for its MAN truck operation and Volkswagen Vans were based there, while cars had been managed from Milton Keynes since 1979.

Culturally, however, cars and vans were separated, so the decision was taken in preparation of the T4 launch to streamline the dealer network, which resulted in the unevenly spread 130-plus network being refined to around 80 more strategically-sited dealers.

This brought a much more focussed approach to van selling, a process that has helped the Transporter consistently increase sales to a UK record of 18,350 sold last year. That's almost double the number of T3s sold in 1993 and a testament to the strong dealer network nurtured ever since.



The Camper

The rise of the leisure van



The Camper:

The rise of the leisure van



Say 'campervan' and everyone automatically thinks of Volkswagen. Today, Volkswagen is the only automotive manufacturer to produce its own campervan – the California.

Go anywhere near a beach or campsite on the north coast of Devon or Cornwall and you will soon spot Volkswagen Transporters of all generations and configurations, including Kombi and Caravelle

stablemates, parked up close to the surf.

It all started in the 1950s. In fact, even at the Transporter's press launch in November 1949 there were Kombi and Mini Bus versions to show it wasn't just designed as a van to carry goods. However in 1953 the first 'campingbox' was launched by Westfalia, a converter that became one of the most successful Volkswagen campervan partners.

The 'campingbox' was designed to be slotted in through the side doors of the Transporter so it

could be used as a commercial vehicle during the week and quickly be converted for leisure trips at the weekend. This was exported across Europe and America.

As Europe picked itself up in the post-war years, people wanted to explore again, but still needed cheap holidays, so the versatility of a van or Kombi that could be converted for camping made it a brilliant dual-purpose vehicle, and the Transporter was actively marketed as the perfect leisure vehicle.



Pop-up roofs weren't really seen until the giddy days of the 1960s and 1970s, when increasing prosperity meant many got the travel bug.

The Camper:
The rise of the leisure van



Pop-up roofs weren't really seen until the giddy days of the 1960s and especially the 1970s, when increasing prosperity meant many got the travel bug and the Transporter quickly became the most popular van for campervan conversions. Although Volkswagen had already been working closely with Westfalia in Germany for many years (and right up to the late 1990s), a number of UK converters quickly recognised this demand and developed models for the UK market.

One of the first UK converters, dating from 1957, was Devon which enjoyed exclusive rights

with Volkswagen in the 1970s to have T2 Campers marketed and warranted through its dealerships. Other UK converters followed with names such as Canterbury Pitt, Dormobile, Danbury and Moortown in the 1960s. The 1970s and 1980s saw names like Auto-Sleeper and Bilbo. Amazingly, many of these companies are still converting Transporters today.

Pop-up roofs with simple bunk beds for children and a rear seat that made into a double bed downstairs with a kitchen unit along one side was, and still is, one of the most popular layouts,

although those simple bunk beds have made way for more substantial double beds.

Over the years, high-roofs have also enjoyed a niche of their own, offering converters a wider scope for their interior conversions, including washrooms and greater storage, while they have the added benefit of being more weatherproof with better insulation for all-year round use. The T3 seemed a popular model for the high-roof, with the Westfalia Joker from the 1980s and the Auto-Sleeper Hi-Top some of the best known. All-wheel drive syncro models of the T3 have a cult following of their own.

High-roofs are still available for today's T5 from the likes of Auto-Sleeper, Danbury and Bilbo, amongst others, but for most people, the 'pop-up' elevating roof is what really defines a campervan as it is easier to use as an everyday vehicle and park anywhere.

The Volkswagen California deserves a special mention in the history of Transporter-based campers. This model was introduced by Westfalia for the T3 (third-generation Transporter) and was produced until German rivals acquired ownership in 2002, just before the launch of the T5.

The California returned in 2003, but this time produced in Volkswagen's own factory in Hanover. Right-hand drive versions were introduced in 2005. It is unique as the only campervan produced to automotive standards, has acquired a devoted following of its own and is the UK's best-selling campervan model. Distinguishing features include an electric elevating roof, fully integrated lighting and window blinds, plus a rear seat that moves on rails in the floor to offer the flexibility of more luggage space when travelling, and more living space when camping. Today's range in the UK

includes two models – the SE and the Beach.

There has not been another van to rival the Transporter's longstanding popularity as a camper. Why? Well, there have certainly been other vans that would be perfectly comfortable as a camper, but none create quite the same image as a Volkswagen or have such an enviable heritage. For customers, the durability and car-like driving qualities of the Transporter make it the perfect leisure vehicle.





This T1 high-roof factory prototype was produced for the Bundespost and features a sliding door.



A mobile post office to bring mail services to rural areas of Germany.



A novel use for a pick-up bed. Equipped with a swivelling attachment, long loads could be towed in combination with a lightweight trailer.



An ice cream van built in a high-roof, mobile shop body.



A tipper body conversion with hydraulic arm was aimed at construction companies.



The high-roof Transporter T2 featured a composite roof and sliding side door.

The Variants: Story of specials

From the early days Volkswagen recognised that the Transporter could serve as the basis for special versions with coach-built bodywork. In fact, think of any industrial activity and there's probably a van variant to serve that purpose.

There was a mix of designs with some built by the factory as official models, while others were converted by special coach-building companies. UK specialists like Tipmaster, which pioneered hydraulic mechanisms for tilting a body, served the local market, for example.

The first of the official factory variants was the mobile shop, and the second a high-roof mobile shop, which were officially classified in 1955/6 respectively. By the mid-1960s, the number of official variations was well over 100, each one designated by an 'SO' number.



Outfitted as a mobile office by Westfalia for German Polizei, this Transporter was converted to an interview room, including desk space to type up reports.



Ladder trucks were used to repair overhead cables or by tree surgeons to access tall trees. When moving, the folded ladder was supported on top of the cab.



A Westfalia mobile shop with serving counter (SO 1).



Service mobile shop, converted from a Kombi chassis.



Transporter converted for the Red Cross. Used as a maternity vehicle.



UK fire truck conversion built on a Pick-up chassis by Brainbridge Fire and Security.



SO 10 was a hydraulic lifting platform model, commonly known as a 'Cherry Picker'.



A German T2 police radar speed trap.



An ambulance body was among the original Transporter variants. Here's a T4 ambulance on the Caravelle.



A far cry from the simple early campers, this coachbuilt motor home sits on a long wheelbase chassis cab.

By the mid-1960s, the number of official variations was well over 100, each one designated by an 'SO' number.

A T4 chassis cab equipped with a low-roof box body. A similar body could be refrigerated.



SO is an abbreviation of Sonderausführungen (Special Model), used by Volkswagen from 1957 to designate its special body variants. The mobile shop and pole carrier (pictured on page 40) were SO1 and SO4 respectively, for example. In addition to the SO listings, dealers' catalogues also carried a range of Angregungen (possibilities) often using artistic impressions (to show further ideas and possibilities) from drinks delivery to livestock transport.

Nowadays, Volkswagen-based special body vehicles are converted by approved bodybuilder partners, fully equipped to do small scale production runs and offering everything from disabled transport conversions to tippers. The versatility of the Transporter as seen in the myriad special body variants produced over time, has been one of the hallmarks of the model range.



Decked out with an exterior rollcage, the Tristar double-cab pick-up with syncro 4WD launched in 1988 and was pitched at the newly-fashionable 4x4 market.



This cherry-picker is perfect for changing bulbs in overhead traffic lights.



Demand for compact refuse trucks remains buoyant for city centre operations in Europe. Here's a T5 equipped for municipal collections.



This mobile shop is built on a T5 chassis cab and features a high roof and hinged side panels that double up as shelter for waiting customers.



A wheelchair-accessible T5 Business with pavement access via an under-floor mounted electric lift.

Hanover:

The economic manufacturing miracle

Hanover:

The economic
manufacturing
miracle

T

he building of Volkswagen's new Hanover plant in the mid-1950s is a prime example of Germany's post-war 'Wirtschaftswunder' — economic miracle.

In less than 12 months Volkswagen found a site for a new plant, put up the buildings, equipped the plant, found a new workforce and put a model into production.

Today the speed of that achievement would be impossible to replicate, but the inspiring Heinrich Nordhoff, whose drive put the Transporter into production in 1950, energised the new plant project.

By 1954 output was about 80 vehicles a day and a new plant was needed to take the pressure off Wolfsburg and also because production had already become complex — even in these early years 30 different variants were being built.

Hanover was chosen because it was close to Wolfsburg and had a pool of skilled labour. Many workers from that region had moved to Wolfsburg to build the Transporter.

The green light was given in January 1955 and by March — almost 12 months after the Transporter was launched in the UK — the first foundations were laid. The first vans rolled down the production line in March 1956.

As production grew, another new plant was needed. With this in mind Volkswagen bought another plot of land in Kassel in October and the plant started working in 1958 as an engine reconditioning plant with 25 workers.

Demand for reconditioned engines was high, because about ten per cent of 'new' vehicle output was sold with an attractively-discounted price, possible because of the cheaper, reconditioned engine.

Again as demand increased, Hanover added an engine line for the air-cooled flat-four and later the water-cooled flat-four was built there.

With economies across Europe booming in the late-1950s and early 1960s, Transporter production at Hanover crossed the one million mark by 1962.

By that time the workforce had grown to about 20,000 and daily production was around a healthy 700 to 800 units per day.



Hanover continued to notch up production records and in its 25th year, 1981, built its five millionth commercial vehicle.



Hanover:

The economic manufacturing miracle

But with exports growing, Volkswagen now needed a plant with docking facilities to ease exports, and a new plant opened in 1964 at .

In the year that Hanover was being re-tooled for the T2 Transporter, 1968, production broke through the two million barrier. This was a sign of the growing popularity of the Transporter. Making the first million took 12 years, the second million half that time.

Big changes, however, were on the horizon for Hanover when in 1975, it also became a light-truck plant with a line added to make the LT (acronym for 'load transporter'). Despite the poor state of the economy after the first oil crisis in 1974, the LT quickly gained a market share of around 40 per cent.

Hanover continued to notch up production records and in its 25th year, 1981, built its five millionth commercial vehicle, output now being split between the Transporter, in all its variants, and the LT light truck.

Production of the T3 version of the Transporter was now in full swing and five years later, the

Transporter notched up the six million mark, with sales in 180 countries, making it the most produced van ever.

Adding up the numbers had become more complicated, of course, the T2 being built in Brazil, Mexico, Australia and South Africa, while the T3 was selling in Europe and the US.

More expansion at Hanover came in the late 1980s when another new line was added to make the Taro one-tonne pick-up, a joint-venture with Toyota.

At the same time as the Taro was going into production, Hanover also faced upheaval on the Transporter line, as production changed over in January 1990 to a completely new van with front-wheel drive, the T4 Transporter.

All-new production equipment required to build the new layout van and demanding market requirements meant that chassis cab, long and short-wheelbase variants all had to be ready to build.

By the mid-1990s Hanover was approaching its 40th birthday, and had been joined a couple of years

earlier by a new Transporter production facility at Poznań in Poland.

Initially Hanover supplied knockdown kits for Poznań to assemble, but now the plant has its own bodyshop, paintshop and assembly line and production has risen from 5,000 in 1993 to 170,000 units today.

The advent of the Poznań plant helped ratchet output of the Transporter past eight million units in 1997, followed the next year by the landmark one million total of the T4 generation. Poznań was cranking up output and in November 1999, notched up 250,000 units.

The growing importance of customer relationships in van sales and operations prompted more improvements at Hanover, when Volkswagen opened a new Customer Centre in June 2000, where Volkswagen staff could meet customers and manage large fleet orders.

In fact the growing success of the Volkswagen commercial vehicle business also meant that investments could be self-funded and a new

board of management, headed up by Chairman, Bernd Wiedemann, was assembled to manage the business in summer 2000.

Part of the investment package included a large-capacity suction mould, one of the largest press lines in the world.

That year Hanover built 178,000 vehicles, of which 139,000 were Transporters, Caravelles or Multivans and T4 production hit a new record.

Now a new Transporter, the T5, was already in the new product development phase.

In January 2002, Volkswagen Commercial Vehicles became a distinct, third pillar of Volkswagen AG, headquartered from Hanover, a move that cleared the way for a substantial financial investment in the T5 Transporter at Hanover and Poznań. Under the project '5000 x 5000', at least 1,500 new jobs were created at Hanover.

Production of the Transporter had now become highly flexible with a potential 375 different combinations of body style, roof height, wheelbase and petrol/diesel engines.

The new California camper was also developed with features like an electrohydraulic pop-up roof — also made of aluminium — prompting a move to a new, coach-building plant in the Limmer district of Hanover.

More developments followed as Volkswagen filled out its range with the Caddy urban delivery van, which despite its car-like dimensions offered twin sliding-doors.

Production of the Caddy is now solely concentrated at Poznań, the new model helping Volkswagen Commercial Vehicles celebrate production of the 10 millionth commercial vehicle in September 2004.

When production started at Hanover all those years back, the hard-pressed workforce could hardly have imagined it as a venue for a rock concert, but the 60th anniversary of the Transporter was celebrated in 2007 by a Bus Festival, a convoy of 150 historical models and an appearance by The Who, whose song 'The Magic Bus' inspired a special edition Transporter built to raise funds for a teenage cancer charity.

The following year, Hanover and Poznań celebrated bumper production years again, and Volkswagen Commercial Vehicles recorded deliveries of 503,025 vehicles in 2008 with the best-seller being the T5 Transporter/Multivan with 178,000 made.

Approaching the production levels of its predecessors, the T5 reached one million units made in 2009, a year before the facelift model was launched.

Another significant new model arrived in 2010, the Amarok pick-up, which was initially built in Argentina, with European production added at Hanover in 2012.

Today Hanover employs more than 13,000 employees and is part of a global manufacturing network of 106 plants — 19 of those in Europe — that employs 572,000 people in total who make an astonishing 39,000 vehicles per day.

Vintage Ads

Volkswagen has built-up a strong reputation for innovative advertising, which has helped boost the company's image and generated increased customer sales.

In the early years of the Transporter the van was promoted with illustrations by Bernd Reuters, whose stylistic 1950s imagery typified a style also familiar on comic strips of the time. Reuters artwork cleverly made the Transporter look fast and sleek, boosting desirability. In the early days these images were used all over the world, including the

UK, for brochures and price lists, which were also rich with artwork inside.

The real breakthrough for Volkswagen press ads came in the 1960s when Doyle Dane Bernbach (DDB) was handed the creative account in the US.

DDB produced ground-breaking and memorable brochures and press ads, and continues today as Volkswagen's key creative agency.

Based around large and clear images of the Transporter on very clean, white backgrounds, the DDB copywriters crafted memorable catch lines and realistic ad copy centred on real

features rather than trying to sell a dream.

The ad that shows a Beetle next to a Transporter carries the simple line: 'Regular size. Large economy size.' 'Volkswagens come in two handy sizes: Sedan and Station Wagon. The packages are very different, but the works are about the same.'

Later the clean look was mated to a more humorous message, hence the Transporter fitted out with a sail and the catchline: 'It carries a boatload.'

'When it isn't carrying boats, the wagon

takes on 8 people, luggage and all.'

Although Volkswagen had a relatively small budget compared to the Big Three US car-makers, the DDB ads worked magic and as sales of European cars in the US slumped in the 1960s, Volkswagen increased its share.

Very similar imagery was used in the UK, particularly in brochures to support the UK launch of the T2 Transporter in 1968, although the photography majored on German registered Transporters in working situations.

Today the basic building blocks of Transporter ads in the UK still trace their ancestry back to the original DDB creative.

As a bit of fun to celebrate the 60 years of Transporter, in 2010 Volkswagen introduced a range of retro ads aimed at 'Generation X' — car buyers now aged in their 30s to 40s had been produced. Most notable is the green T2 Transporter: 'It's unusual to drive the vehicle you were conceived in. Come to think of it, apart from you and the Volkswagen Van, there isn't much left of those years.'



Specifications



		T1	T1	T2	T3	T4	T5
Better known as		'Barndoor'	'Splittie'	'Bay window'	'Wedge'	'T4'	'T5'
Total production		2.3 million (all T1 variants)	2.3 million (all T1 variants)	3.9 million	1.7 million	1.9 million	1.7 million (up to December 2013)
Model Year		1954	1964-1967	1967-1979	1979-1992	1990-2003	2003-present day
Dimensions	Length	4,100 mm	4,280 mm	4,420 mm	4,570 mm	4,707-5,107 mm	4,892-5,292 mm
	Wheelbase	2,400 mm	2,400 mm	2,400 mm	2,460 mm	2,920-3,320 mm	3,000-3,400 mm
	Width	1,720 mm	1,720 mm	1,765 mm	1,845 mm	1,840 mm	1,904 mm
	Height	1,900-2,040 mm	1,900-2,040 mm	1,956 mm	1,965-2,365 mm	1,940-2,430 mm	1,990-2,476 mm
	Front Track	1,375 mm	1,375 mm	1,384 mm	1,570 mm	1,575 mm	1,904 mm
	Rear Track	1,360 mm	1,360 mm	1,425 mm	1,570 mm	1,540 mm	1,904 mm
Weight	Kerb	1,000 kg	1,070 kg	1,175 kg	1,320 kg	1,635-1,779 kg	1,829-2,128 kg
	Gross Vehicle Weight	1,800 kg	2,070 kg	2,175 kg	2,115 kg	2,510-2,800 kg	2,600-3,200 kg
Payload	Payload (maximum)	750 kg	1,000 kg	1,000 kg	1,070 kg	1,165 kg	1,340 kg
	Max Cube	4.6 m ³	4.8 m ³	5.0 m ³	5.7-7.6 m ³	5.4-7.8 m ³	5.8-9.3 m ³
	Load bay length	2,000 / 2,700 mm	2,000 mm / 2,700 mm	2,810 mm	2,780 mm	2,470 mm	2,570-2,970 mm
	Load bay width	1,500 mm	1,500 mm	1,570 mm	1,590 mm	1,220 mm	1,692 mm
	Load bay height	1,350 mm	1,350 mm	1,450 mm	1,465-1,880 mm	1,395 mm	1,394-1,940 mm
	Loading height	500 mm	500 mm	510 mm	455 mm	520 mm	566-572 mm
	Side Doors	Double Pull-Out	Double Pull-Out	Sliding	Sliding	Sliding	Sliding
	Door opening	1,170 mm	1,700 mm	1,196 mm	1,060 mm	1,092 mm	1,020 mm
Suspension	Front: Type	Independent trailing arms	Independent trailing arms	Independent trailing arms	Independent wishbones	Independent wishbones	MacPherson strut
	Springs	Transverse laminated torsion bars	Transverse laminated torsion bars	Transverse torsion bars	Coil	Torsion bars	Coil
	Dampers	Telescopic	Telescopic	Telescopic	Telescopic	Telescopic	Telescopic
	Rear: Type	Independent swing axles	Independent swing axles	Independent trailing arms	Independent semi-trailing arms	Independent semi-trailing arms	Independent trailing arms
	Springs	Upper and lower solid torsion bars	Upper and lower solid torsion bars	Torsion bars	Coil	Coil	Coil
	Dampers	Telescopic	Telescopic	Telescopic	Telescopic	Telescopic	Telescopic

Specifications

(cont.)



		T1 (cont.)	T1 (cont.)	T2 (cont.)	T3 (cont.)	T4 (cont.)	T5 (cont.)
Steering		ZF worm and roller	ZF worm and roller	Cam and peg	Rack and pinion	Rack and pinion, power assisted	Rack and pinion, power assisted
Wheels		16"	15"	14"	14"	15"	16"
Tyres		5.5" crossply	7.00" tubeless	n/a	185 SR-rated Radial	195/70 R Radial	205/65 R 16-225/45 R 18
Turning Circle		12 m	12 m	12 m	10.7 m	11.7-12.9 m	11.9-13.2 m
Engine	Type	4-cylinders, air cooled	4-cylinders, air cooled	4-cylinders, air cooled	4-cylinders, air cooled & water cooled	4/5-cylinders	4-cylinders
	Capacity / power	1.1 L / 24 bhp (petrol)	1.2 L / 42 bhp (petrol)	1.6 L / 48 bhp (petrol)	1.6 L / 50 bhp (petrol & air cooled)	1.8 L / 66 bhp (petrol)	2.0 TDI / 84 PS (diesel)
		1.2 L / 30 bhp (petrol)	1.5 L / 54 bhp (petrol)	1.7 L / 66 bhp (petrol)	2.0 L / 70 bhp (petrol & air cooled)	2.0 L / 83 bhp (petrol)	2.0 TDI / 102 PS (diesel)
			1.8 L / 67 bhp (petrol)	1.9 L / 55 - 89 bhp (petrol & water cooled)	2.5 L / 108 - 113 bhp (petrol)	2.0 TDI / 114 PS (diesel)	
			2.0 L / 70 bhp (petrol)	2.1 L / 90 - 112 bhp (petrol & water cooled)	1.9 L / 60 - 67 bhp (diesel)	2.0 TDI / 140 PS (diesel)	
			1.6 L / 70 bhp (diesel & water cooled)	2.4 L / 74 - 77 bhp (diesel)	2.0 TDI / 180 PS (diesel)		
Economy	Combined (maximum)	30 mpg	28 mpg	27 mpg	27 mpg	35.8 mpg	48.7 mpg
Fuel Tank		40 litres	40 litres	60 litres	60 litres	80 litres	80 litres
Gearbox	Type	4-speed manual, non-synchromesh	4-speed manual	4-speed manual 3-speed automatic	4-speed manual 5-speed manual 3-speed automatic	5-speed manual 4-speed automatic	5-speed manual 6-speed DSG automatic 7-speed DSG automatic
Performance	Top speed (maximum)	56 mph	65 mph	65 mph	85 mph	98 mph	119 mph

Acknowledgements

Julian Rendell
David Eccles
Cee Eccles
The Commercial Motor
David Price
Jenny Mäckelmann

David Gray
Glen Trouse
Freestone Creative
Anthony Machin
Kate Thompson
Mike Askew

Cogent Elliott
Joanne Brooks
Nicki Finlayson
Lowri Cool
Nicola Burnside
Kirsi Stewart

Helen Johnson
Jason Hill
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