Morris Cars

Minor 1948-52

When considering the immediate post-war activities of Morris Motors Ltd, one man and an outstanding Morris car figure prominently in motoring history. The man was Alexander Amold Constantine Issigonis (later Sir Alec Issigonis, KBE) and the car the Morris Minor.

Alec Issigonis had joined Morris Motors Ltd at Cowley in 1936 as a development engineer, after gaining something of a reputation as a suspension expert at Humber. During the war he had, among other things, designed the independent suspension arrangement for the Mark I Morris light reconnaissance car; a design which came to fruition, unlike his early attempt to introduce this type of suspension on the Morris Series M Ten, which Lord Nuffield refused to sanction. It was during the hostilities that, with the encouragement of the late Lord Thomas of Remenham (then Miles Thomas), Issigonis began to jot down design ideas for a car of chassis less construction, capable of withstanding the reaction stresses that his suspension system would impose.

In 1943, with the end of the war in sight, he began to translate his ideas into a hand-built body shell, constructed in the experimental shop at Cowley. The styling of the 'Mosquito', as it was initially called, made it one of the first English car bodies to incorporate the front wing shape as part of the door (the of length) caused something of a problem. This was quickly solved when Dunlop co-operated and made available the then unusual 14in diameter wheels and tyres.

Another problem, and one which the motor industry as a whole had to contend with, was the system of taxation based on the RAC horsepower formula. Some experiments were made with an unconventional three-cylinder, double-piston, two-stroke engine that would attract low rates of taxation, but this proved unsuitable. Such an engine was built before a prototype Mosquito body was available, so a Series E saloon was used as a test-bed. Although developing about 16hp with a good low speed torque considering its intended use, it had the usual deficiencies of a two-stroke: smoking, four-stroking, and excessive fuel consumption. A horizontally-opposed flat-four engine (type YF) was substituted, driving through a three-speed gearbox which was basically the Morris Eight gearbox components in a compact casing with linkage to a steering column lever. The small pistons in this engine would have kept it down to a capacity of 800cc to qualify for a low tax rating in the United Kingdom yet could easily have been bored out to 1,100cc for a better performance and to attract sales in those markets abroad where taxation was not so penal as it was in Britain at that time. A considerable number of these flat-four engines were made at a factory in Canada Road, Byfleet, where, in more recent years, the vintage-style Panther car was constructed. It has been said that W.O. Bentley was involved as a consultant at this stage in the design. A similar engine had already been used in the unsuccessful Jeep-like four-wheel drive mono-construction military vehicle, to be called the Nuffield Gutty FV1800 that Issigonis had been working on. In the Mosquito body the flat-four engine, having a low height to width ratio, was to be mounted well to the front of the car with the radiator situated behind, and consequently a low centre of gravity. Unfortunately, the louvres on top of the bonnet provided insufficient cooling and the radiator had to be moved to a more conventional forward position.

The prototype Mosquito bodies underwent various styling changes from the initial concept, from a flattened oval grille in 1944 to a long, low, slatted grille with built-in headlamps. By 1946, with the war over, a prototype with a 56in track was being tested up and downsteep

Cotswold gradients around the Midlands factories. The ride and handling of the car was impressive, but the quest for power and performance continued to pose problems. Added to this was the high cost of tooling and the over-optimistic idea that a very robust crankshaft would compensate for two closely spaced main bearings. Lord Nuffield's reaction on seeing the prototype did not help matters, he likened it to a 'poached egg', and was against going into production. (Considering Issigonis' contribution to the success of the Nuffield organisation in the immediate post-war years, it is curious that Lord Nuffield only ever met Issigonis twice -- the second occasion was in 1960 when he finally thanked the designer of the Minor.) Nor was time on the side of the Cowley management, with other motor manufacturers having ambitions for the small car market.

The answer to some of the problems came from an unexpected quarter. In the 1947 Finance Act, the Chancellor of the Exchequer, Hugh Dalton, abolished the old RAC horsepower tax and instituted a £10pa flat rate duty for all new cars, operative from New Year's day 1948. A decision was reached to abandon the flat-four unit and utilise the 918cc side-valve engine with a four-speed gearbox, which was basically the same power unit used in the Morris Eights since their introduction in 1934. (History tends to repeat events. It is on record that when Austins were in the design stage of the original Austin Seven, it was planned to use a flat-twin engine, a copy of the Rover Eight German designed air-cooled unit, but the prototype was so rough that Herbert Austin decided on a tiny four-cylinder 696cc side-valve unit.) The use of the Morris Eight power unit necessitated few changes in the steering geometry, and no further consideration was given to the proposed independent suspension at the rear. Additional savings were also made by dropping the idea of a split rear axle. By late summer 1947 a pre-production Mosquito successfully completed a 10,000 mile test.

It was while the tooling of the body dies were underway, and some actually completed, that Alec Issigonis decided that for aesthetic reasons he would increase the width of the body by a few inches. To get the proportions right he had a pre-production model cut in half-length wise and the two halves-moved apart until he felt that the proportions were right. The increase decided upon was 4in, and as a result the track dimension increased from 56in to 60in. There remains a legacy of this change of mind on subsequent production cars, for the bumpers, designed for the original narrow body, had already been produced by Wilmot Breeden. Rather than scrap them they were cut in half and a steel spacing piece added. Another feature to be found on the eventual production bodies, bearing witness to this last minute change of mind, is the raised 4in wide centre section on the bonnet.

The name 'Mosquito' had been dropped by the time the first production Morris Minor saloon rolled off the line at Cowley on 8 October 1948; followed a week later by the first of the tourers. That such a car was on the way was generally known in the trade and indeed Sir Miles Thomas had himself voiced some very broad hints the previous year in his after dinner speech on the eve of the Geneva Motor Show, with his prophecy of a small-engined family saloon 'capable of cruising at 60mph' with bodywork 'constructed on the stressed skin principle ... producing a car of extremely low weight and high power / weight ratio.' The first the general public knew of the Morris Minor was through the pages of a national Sunday newspaper which had broken the press embargo by ten days and published details which were intended for release on 26 October.

At the first post-war International Motor Exhibition held at Earls Court, London, late in October 1948, the public were able to see for the first time the results of the previous years of concentrated development work at Cowley. There was not only the Series MM Minor in two-d saloon and tourer form, but a new Morris Oxford saloon with a four-cylinder l,476cc side-valve engine and a six-cylinder overhead-valve Morris Six saloon. Nearby, on the Wolseley stand, it was not difficult to see the economical use of common pressings in the last-minute appearance of the four-cylinder Four-Fifty and the Wolseley Six-Eighty saloon.

The success of the Morris Minor exceeded the expectations of even the optimists at Cowley,

who anticipated that production might run until 1952. When the Minor passed into motoring history twenty-three years later, over 1½, million, in various forms, had been produced. However, before that landmark was reached there were to be many changes in specification, starting in June 1949 when twin tail lamps anticipated forthcoming regulations. The first new option came in October 1950 with the four-door saloon, introducing to the home market the new front end, with headlamps mounted in the wings. Starting the previous year, export models bound for America had been made with these raised wings to confirm with State Laws, for example, California implemented regulations in 1949 requiring headlamps to be not less than 24in above the road surface. By early 1951 all models had this new headlamp location and what has become known -- especially in the Antipodes -- as the 'low-lite' ceased. As a consequence of the mere 15 per cent of Minors released for the home market in the early years, the low lamp model is comparatively rare in the United Kingdom. It was estimated in 1952 that only five out of every hundred people who had ordered new cars had any hope of taking delivery during the year.

Raw materials for Britain's manufacturing industry were severely restricted following the war, allocation being dependent on a high export total of the finished product. In 1946 the supply was conditional to 50 per cent of production going to overseas markets, by 1947 the figure was raised to 60 per cent, then 70 per cent, and by 1949 75 per cent. These shortages continued well into the 'fifties and resulted in the occasional use of aluminium where sheet steel had been normally used. The outbreak of the Korean war in 1950 put a further strain on supplies, so it is not surprising to find that some manufacturers replaced chromium plate with paint on traditional bright parts. This occurred on the Minor in March 1951 when such a finish was specified for the radiator grille, although chromium plating returned to the nave plates by September that same year. Earlier, in December 1949, painted door window frames were fitted instead of plated ones.

Up to June 1951 the Series MM Minor tourer had been equipped, at the rear, with detachable fabric-covered celluloid side-screens similar to its open model predecessor. Now referred to as the Minor convertible, the open version was constructed with fixed rear quarter-windows of framed glass. Interestingly, J.H. Keller, the Zurich agents for Nuffield products in Switzerland, had produced their own conversion with fold-down glass quarter lights as early as 1949. Further changes in specification were to follow, such as the substitution by 1957 of the canvas hood for one of the plastic material, in addition to changes common to the other body types. In June 1969 the very last Minor convertible (registered YPK-345H) was delivered by Stewart and Ardern.

An example of demand turning full circle is illustrated when back in the 'fifties the Northampton coach building firm of Airflow Streamline were busy converting soft-top models into saloons. This enterprise is contrasted, in recent years, by a number of small motor engineers, finding a market for open Minors, stripping and rebuilding two-door saloons as convertibles.

Specifications

Morris Minor 1948-52	
Tourer.	Production period, October 1948 - February 1953
Saloon, 2-door.	Production period, September 1948 - February 1953
Saloon, 4-door.	Production period, September 1950 - July 1952

Morris Minor 1948-52
Engine, side valve, 918.6cc, USH M2. Four-speed gearbox with synchromesh on all forward gears, floor gear change lever. Clutch, single dry-plate Borg & Beck. 61/4in diameter. Brakes, Lockheed hydraulic, 7in diameter brake drums. two leading shoes at front. Handbrake by cable to rear wheels. 5-gallon petrol tank. SU electric fuel pump. 12-volt electrical system, positive earth. Steering, rack and pinion. Cooling system, fan and thermo siphon (impeller when heater fitted). Hypoid bevel real axle, 4.55:1. Independent front suspension front suspension by torsion bar and wishbones. Armstrong hydraulic double-acting shock absorbers. Rear springs, semi-elliptic leaf springs with rubber bushes, 7 leaves. 500-14 Dunlop tyres on pressed steel disc wheels, four stud. Wheelbase 7ft 2in. Track 4ft 25/8in front, 4ft 23/16in rear. Twin stop/tail lamps. in place of single lamps, added in January 1949. In January 1951 headlamps of two-door saloon raised above grille and separate side lamps fitted. March 1951, painted radiator grille in place of chromium plate. June 1951 tourer known as convertible and with fixed rear-side windows. December 1951 ash tray fitted centre of top facia. March 1952 headlamp warning lights on facia added to four-door saloon models and added to other models in April 1952. This same period saw the glove box emblem changed from chrome/enamel to plastic.

For further details please refer to *The Morris Motor Car 1913-1983 by Harry Edwards*
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