

MGA/EX182



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MGA/EX182 1955

By Geoffrey Howard and Lionel Burrell

From a 1951 prototype the MGA was launched in October 1955. Three pre-production cars in modified form were entered for Le Mans before the car was announced; they were known as the EX182. By the time production ceased in 1962 over 100,000 MGAs had been built, about 95 per cent going for export

It is true to say that the MGA, when it was announced at the Motor Show in 1955, was not greeted with overwhelming enthusiasm by sporting motorists. It represented a complete break from the traditional MG two-seater image and as such became a controversial car in the eyes of the flourishing motor club fraternity of that era. Seven years and 101,000 cars later when it was replaced by the MGB, it began to be regarded as a classic of its time.

The real root of the MGA body shape can be traced back to a works racing car built for George Phillips to drive at Le Mans in 1951. It was based on the current production MG, the TD, but had many of the MGA styling features. It was the beginning of an attempt to streamline the sit-up-and-beg kind of square barn styling that had been with MGs since Cecil Kimber's day.

From this a prototype known as the EX175 was built on a widened chassis, powered still by the famous XPAG cross-flow engine. It was still only 1952, yet apart from a bulge in the bonnet to accommodate the tall, 1,250 c.c. engine, this looked for all the world like a production MGA. But the merger of Nuffield with Austin caused a policy change for MG and, to avoid a conflict with the soon to be announced Austin Healey 100, the EX175 was shelved and the TD was revamped into the TF.

Then in June 1955 details were announced of an MG team entry for Le Mans. Three cars, known as EX182, were prepared. At the time it was put out that their purpose was to provide information for a future production version, but a close look at the detail of the car (shown here in Lionel Burrell's paintings) reveals that much of the production tooling was already in existence.

The main difference between the EX182 and the 1952 EX179 designs was in the power unit. Although the venerable XPAG engine was stretched to 1,500 c.c. for the later MG TF models, that was as far as it would go and its methods of construction did not seem suitable for the volume of production envisaged for the MGA. Instead of this unit therefore the BMC B-series unit as used in the MG Magnette of the same era was substituted. It was capable of a lot of further development and had the advantage of being shorter from sump to rocker cover.

As tuned for the Le Mans race, the engine developed 82.5 bhp at 6,000 rpm with a peak torque of 86 lbft at 4,500

rpm. The production unit introduced later had a power output of 72 bhp at 5,500 rpm with 77 lbft of torque at 3,500 rpm. A lapped head with no gasket was used for the race, giving a compression ratio of 9.4 to 1. In production a normal gasket reduced this to 8.3 to 1.

Other differences between the MGA you could buy and the one raced at Le Mans were a close ratio gearbox with 3.7 to 1 rear axle, a 20-gal fuel tank taking up most of the boot space (with large neck filler poking through the lid), and an all-aluminium body riveted to a framework. There was also a complete undershield.

It was only a year after the open two-seater MGA went into production that an alternative closed coupé was introduced. This extended the comfort and luxury of the fittings even further, being a snug little fixed head with wind-up windows and a three-piece wrap-round backlight.

In terms of performance the MGA with 1,489 c.c. engine was capable of just on 100 mph and could accelerate to 60 mph from rest in 15 sec. Overall fuel consumption was around 28 mpg. With its higher axle ratio and oversize rear tyres, the Le Mans car was capable of about 120 mph, but the acceleration from rest suffered considerably from the first gear ratio of 2.44 to 1 used in the close-ratio racing box.

In 1959 the capacity of the engine was increased to 1,588 c.c. by boring out from 73 to 75.4 mm. This version was first seen as the MGA 1600 and it became my first new sports car as a 22-year-old de Havilland apprentice just a few weeks after it was announced. I shall never forget the thrill of taking delivery of that car, in Old English white with red trim and wire wheels. I ran it for over a year and nearly 20,000 miles before trading it in for a new 1600 coupé based on one of the ill-fated Twin-Cam chassis.

What Ford and Lotus managed to do so successfully later, MG failed with in 1958. They attempted to make a twin-cam conversion on the B-series engine, which gave the MGA a top speed of 114 mph and a 0 to 90 mph acceleration time some 15 sec quicker than with the push-rod unit. Peak power was 108 instead of 72 bhp, at 6,700 rpm. There were problems with over-revving and lubrication breakdowns, and the model quickly developed a very bad name for engine reliability. Two years later it was dropped, just at the time when its problems had been solved.

In its final form the MGA had a 1,622 c.c. engine, like that used in the BMC Farina saloons until last year. Keeping the

same crank throw as the 1500 and 1600 engines, the bore was further increased to 76.2 mm by designing a new block. Head, pistons, con-rods, crankshaft and flywheel were all new and it was this unit which was enlarged to 1,798 c.c. (still with the same 88.9 mm crank throw, but a bore size of 80.3 mm) for the first three-main-bearing MGB engine.

The 1,622 c.c. MGA (called the 1600 Mk II) ran from April 1961 until June 1962 and in many ways it was the best MGA ever. It even won its class in the 1962 Monte Carlo and Tulip rallies. Prior to that, MGAs had won the ladies rally championship for Nancy Mitchell in 1956 and 1957, won their class at Sebring in 1957 and 1961, came second and third in their class in the 1957 Mille Miglia and a Twin Cam won the 2-litre class at Le Mans in 1960. EX179, a record breaker based on the EX175, reached 170 mph in 1956 powered by a supercharged Twin-Cam engine. This engine later powered EX181, a rear-engined record breaker in which Stirling Moss did 245.64 mph in 1957 and Phil Hill managed 254.91 mph with an enlarged engine in 1959.

Of the total of 101,000 MGAs built, only 6,000 were for home delivery. Almost 95 per cent went for export, very many of them to the USA. Surviving examples in good condition are becoming a rarity, which makes this latter-day classic all the more worth preserving.

LE MANS MG SPECIFICATION

Engine.—4 cyl, bore 73.025 mm, stroke 89 mm (1,489 c.c.). Compression ratio 9.4 to 1. Three-bearing crankshaft, lead indium bearings. 82.5 bhp at 6,000 rpm. Maximum bmep, 142 lb per sq in. at 4,500 rpm. Heart-shaped combustion chamber with vertical valves operated by rockers and push rods from single side camshaft.

Transmission.—Dry single plate 8 in. dia. Ball type clutch withdrawal race. Gear box, four forward speeds and reverse, with synchromesh on second, third and top. Remote control gear change. Hypoid rear axle with bevel gear-type differential. Overall gear ratios (with 3.7 axle ratio), top, 3.7; third 4.712; second 5.994; first 9.065 to 1. 21 mph per 1,000 rpm of engine, with 6.00-15 in. rear tyres, in top gear.

Suspension.—Front, independent, wish-bones and coil spring, piston-type dampers. Rear, half-elliptic leaf springs, piston-type dampers.

Brakes.—Lockheed hydraulic, two-leading shoe front, leading and trailing shoe rear. Drums 10 in. diameter by 1½ in. wide.

Steering.—Rack and pinion.

Wheels and Tyres.—Dunlop wire wheels with light alloy rims. Rudge type hubs Tyre sizes, front 5.50-15 in., rear, 6.00-15 in.

Electrical Equipment.—12-volt positive earth; 37 ampere-hour battery.

Fuel System.—20 gallon tank. Twin high pressure S.U. electric feed pump.

Main Dimensions.—Wheelbase, 7 ft 10 in. Track, front 3 ft 11½ in., rear 4 ft 0½ in. Overall length, 12 ft 6 in. Height, 3 ft 5 in. (excluding screen). Ground clearance, 6 in. Dry weight, 14½ cwt (1,596 lb).