



Bringing the MGB into the Modern Era

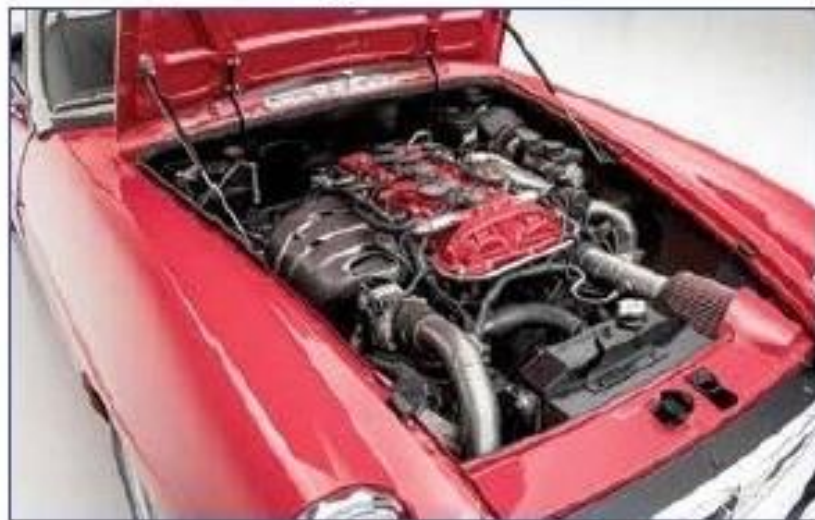
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The MGB was introduced in the early 1960s and sold through 1980. The car featured good performance and introduced many to the joys of driving sports cars. Significant progress with automotive technology has taken place since the MGB era. Today, engines with similar displacement to the MGB produce much more power, are reliable, fuel efficient, and have reduced emissions. Suspension design has progressed as well, with designs that transcend the suspensions of the sports cars of the 1960s. A classic sports car with modern performance and reliability has great appeal because it combines the best of the past with today's technology.



THE SNAKE RIVER CLASSICS JOURNEY

Snake River Classics was established to transform the MGB into a modern classic. The primary design goal was to retain the basic look and character of the MGB. It would remain a 4-cylinder, solid rear axle sports car with balanced performance. Upgrades would be across the engine, transmission, suspension, brakes, wheels, and tires. The focus would be to retain the early classic (first generation) appearance of the MGB for both the exterior and interior. Any changes to the body design would require consistency with the original





torque in stock form, with 90% of the torque available at 2000 RPM. The engine control unit (ECU) is tunable to produce different power levels, so a single engine can meet different performance objectives. The engine can easily produce over 300 HP with significant torque available at low RPM. There is minimal impact on weight and balance of the MGB as

design concept. The interior would include updated and optional modern comforts such as power steering, heated seats, and air conditioning. The transformation process would apply to all years of MGB, from 1963 through 1980, with later "rubber bumper" cars receiving the earlier chrome bumper and grille conversion.

DESIGN AND DEVELOPMENT

Every aspect of the MGB was addressed over a rigorous three-year development and test process. Design verification and performance testing was accomplished through two development cars, a late model MGB and early model MGB/GT. Extensive dynamometer testing, together with road and track testing, validated the performance goals set by Snake River Classics.

The engine selection was based on availability, weight, power density, and ability to fit within the stock MGB engine bay. Snake River Classics selected the aluminum 4-cylinder GM LTG DOHC 2-liter Turbo LTG engine – an engine used in multiple GM cars. This state-of-the-art engine produces 275HP and 295lb ft of

the weight of the engine is similar to the original 1.8L MGB engine.

Transmission choices include the Aisin all synchromesh 5-speed and a 6-speed automatic. These drive the heavy-duty solid rear axle through a limited slip differential.

The suspension design is completely new and does not rely on any of the original geometries of the MGB. It was developed using extensive computer modeling and covers both front and rear suspension as a complete solution. The differences from the original MGB are readily apparent. In the front, cast aluminum lower A-arms with fabricated upper A-arms and coil over shocks are mounted on a high strength subframe. An integral sway





bar with a steering rack completes the design. In the rear, a 3-link suspension was designed with tubular trailing arms, torque arm, coil over shocks, and a Panhard bar. The rear suspension is attached at the forward leaf spring mounts and by a torque arm that links the differential to a structural brace that adds torsional rigidity to the body. The suspension design was developed specifically to handle the high level of torque from the engine and supports wide tire widths for traction. It meets performance objectives for both street and track use.

The Snake River Classics transformations use 15-inch wheels in varying widths. Stopping power is provided by 11-inch vented rotors on all four wheels with cast aluminum front calipers and steel rear brake calipers with integrated parking brakes.

Body modifications were generally limited to detail features such as integrated function headlights, enhanced body seams, precision fit

bumpers, and a hide away fuel fill. For many customers the stock MGB body with 195 width tires is adequate. However, wider tires and fender flares are required if increased traction is desired. Two different fender flare approaches were developed – a subtle rear-only fender flare for tire widths up through 225, and a more aggressive front and rear fender flare that accommodates tire widths through 245. The fender flare designs retain the fender crease of the original body design.

The interior has a first-generation style metal dashboard with new Smiths instrumentation featuring a reverse winding 160mph speedometer. Supplemental gauges are available as well as a center vent stack for fresh air or air conditioning. A variety of leather seats, steering wheels, and leather accents with contrasting stitching are available options.

The development effort also included establishing a fully documented production process for future



customer MGB transformations. Fabrication jigs and tooling were developed for producing various components and CAD driven laser fabrication was used to produce key metal parts.

MILD-TO-WILD CONFIGURABILITY

Snake River Classics provides significant configuration flexibility with three different engine options, two different transmissions, and three different body configurations for both the Roadster and GT. A transformation can be specified that appears to be a classic restoration, a truly high-performance vehicle for street or track use at the other extreme, or anything in between for a customer's ultimate MGB.

THE DRIVING EXPERIENCE

An MGB with three times the power of the original is exhilarating to drive. The impressive handling inspires driver confidence. The modern engine, transmission, and suspension with state-of-the-art electronics makes driving a classic fun again. High performance from Snake River Classics means more than acceleration, braking, handling, and speed. It includes dependability, serviceability, and some basic creature comforts. All with a classic look. Contact Snake River Classics for more information.

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