

If you love big Detroit engines and want to be First Overall — the Genie Mk. 8 will take a Buick, Oldsmobile, Pontiac, Chevrolet or a Ford Fairlane V-8!

SUPER GENIE Mk. 8

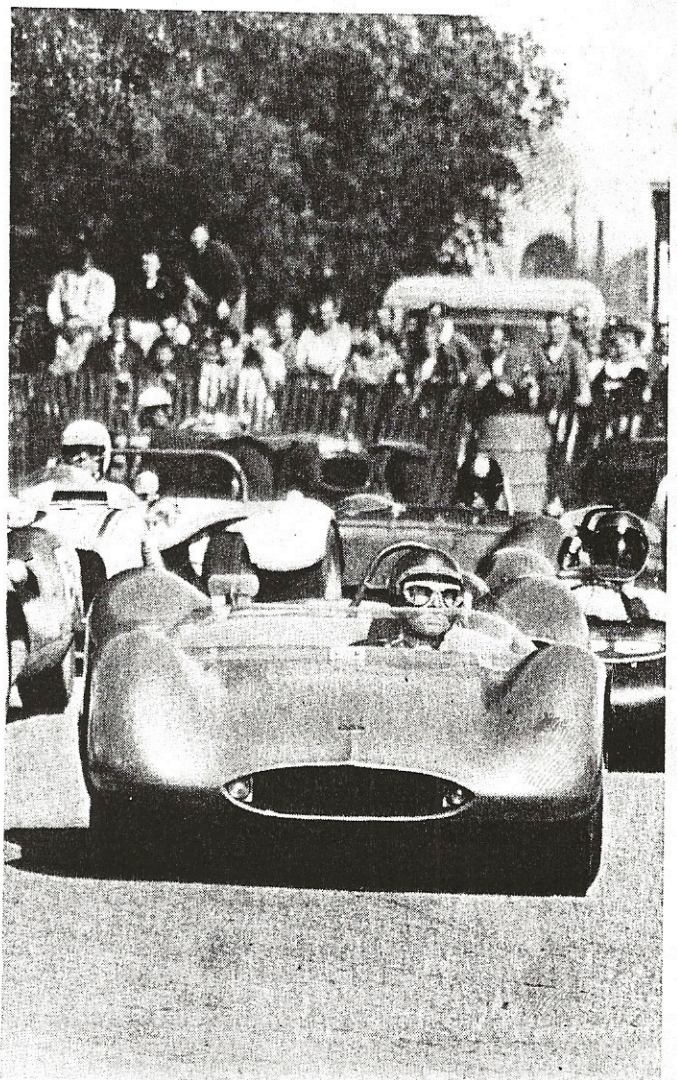
ARTICLE/PHOTOS: PETE BIRO

WITH ALL THE CONFUSION AND FUSS over GT and Prototype designations — as well as the mixed up status of Formula Junior — Kjell Qvale and Joe Huffaker, of British Motor Car Distributors, San Francisco, have decided to evade these problems by designing and constructing a new BMC "Super Genie" modified sports car. This car is designed to be competitive for the overall laurels (ca\$h) of what have turned out to be the major forms of road racing in the United States — the professional sports car events and the SCCA Road Racing Championship.

The basic model of BMC's Super Genie Mk. 8 is designed around the lightweight cast alloy BOP (Buick-Olds-Pontiac) V-8, the Chevrolet 283 and 327-inch V-8 and the 289-inch Ford Fairlane-Cobra engines. Along with the stock block versions, Huffaker is assembling a lighter model with a two-liter Coventry Climax to run in the under two-liter class.

Heli-arc welded, the frame is a very rigid, well designed unit of the space-type, with full triangulation in all bays but the cockpit entry section. Chrome moly (4130) tubing with .045 wall thickness is used throughout. Main chassis members are fabricated from one-inch diameter tubing, while sub-frames and minor chassis members feature $\frac{3}{4}$ and $\frac{5}{8}$ -inch diameter tubing. Increasing the overall chassis stiffness, a full belly pan of stressed aluminum sheeting is employed. The forward bay is triangulated with an aluminum plate, which doubles as a mounting for the dual brake cylinders, the clutch cylinder and the Morris rack-and-pinion steering. The engine bay is triangulated with a removable Y-shaped structure. The brake cylinders are balanced to allow adjustment of front-to-rear braking ratios.

Front and rear sub-frames, designed to absorb the loads of minor collisions, are bolted in place to keep from transferring these loads into the frame proper. Thus if the front or rear-end gets damaged, a new assembly can be ordered and bolted in place.



Leading on its maiden voyage at Stockton, the Super Genie was soon to retire with broken distributor drive on Olds V-8.

Suspension loads are widely fed into the chassis, with unequal length wishbones at the front. Trailing arms are combined with a reversed lower wishbone and a single upper link at the rear. The front wishbones (actually leading arms and links) are derived from the smaller displacement 1100 cc Genie and are effective in the reduction of wheel hop. Shocks are fully adjustable Armstrong units. Unsprung weight is kept low with special magnesium Dunlop brake calipers and BMC magnesium hubs and wheels. With low unsprung weight, soft springing can be employed to increase traction and thereby improve road-holding. Spring rates are 105 pounds at the front and 125 pounds at the rear. High roll center, combined with anti-roll bars, are used to keep body lean to a minimum.

With the F-85 engine weight distribution, dry, is 40-60. With fuel and driver aboard, however, 57 percent of the overall weight is on the rear. A twenty-gallon fuel tank, fitted amidships on the right side, is fabricated with aluminum sheet and is glassed for added safety. For longer duration races an additional tank can be fitted, bringing total capacity to 40-gallons.

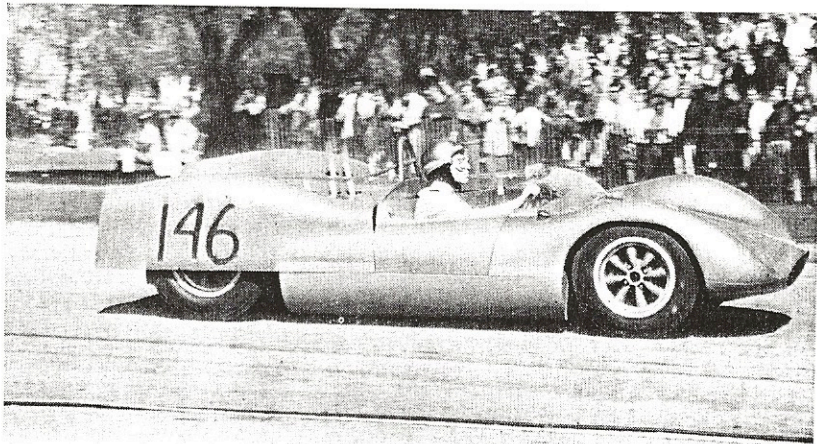
One of the major problems with modified aluminum V-8's has been overheating. Rodger Ward's Cooper-Buick was plagued with this trouble in its first appearances, and Lance Reventlow's Scarab-Olds had to employ two of the biggest, costliest radiators ever seen. Huffaker has had no trouble in this department. In warm temperatures, with a relatively small radiator, the engine temperature has been no higher than 150 degrees. A Gilmer-belt driven, non-cavitating, water pump, fabricated in the BMC shops, is fitted at the lower left front corner of the engine bay. A low mounting point for the water pump is a must to prevent one of the major causes of overheating, cavitation. A high mounting point tends to suck air bubbles into the system.

The driver's area is all business, well laid-out and has full-size bucket seats of equal dimensions to comply with FIA regulations. Seating is of the semi-reclining type. Shift changes are easily made with a Corvette shift gate mechanism at the driver's left. The remote linkage works smoothly with all joints utilizing Heim bearings.

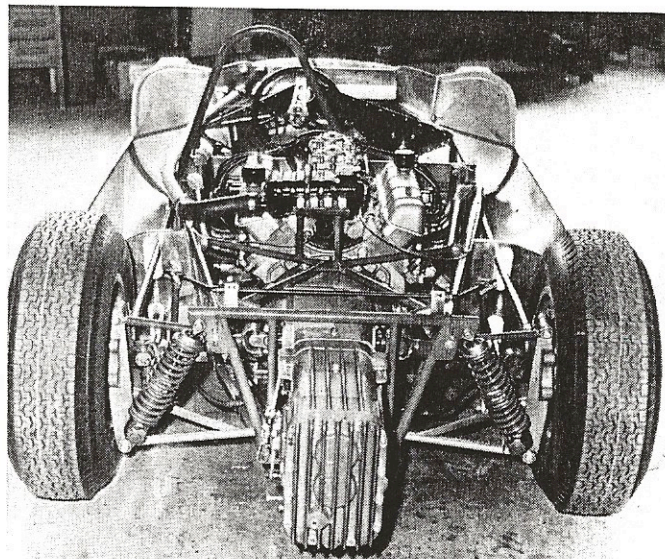
Hinged to the front and rear sub-frames, the body is made of color-impregnated glass fiber, and is attached with Dzus fasteners. The windshield, designed by John O'Donnell, is made of curved Plexiglass, with side sections flowing back to the engine compartment air scoops.

First to take delivery of a Mk. 8 Genie was San Franciscan Dave Ridenour, who has been campaigning an outdated Costin-Lister and hopes with this new mount to be competitive with the best on a national level. Ridenour's choice of powerplant was the Olds F-85. A well breathed-on version has been assembled by Huffaker, with bits and pieces more familiar to the hot rod oriented builder than the purist imported type. The Olds F-85 was chosen over the Buick because its head stud pattern permits more efficient port shapes and it is generally better constructed throughout.

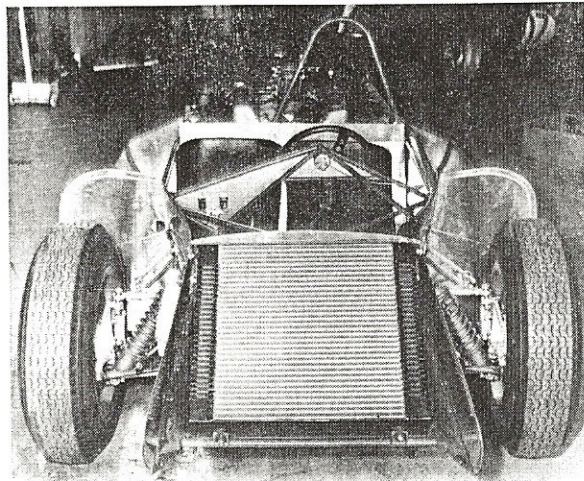
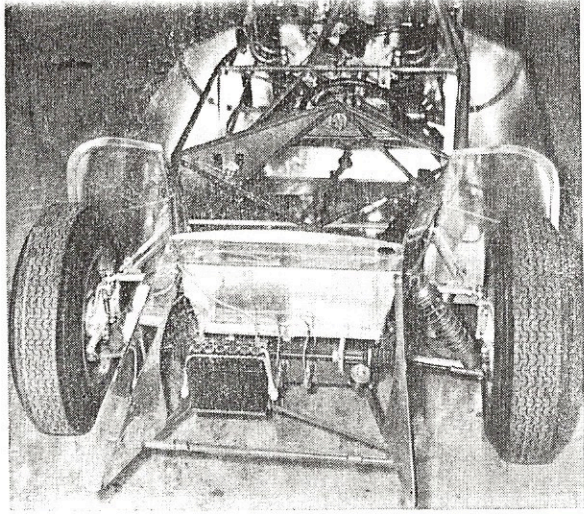
By boring .060, displacement has been brought to 239 cubic inches. Valves have been enlarged, with intakes at 1.6 inches and exhausts at 1.4 inches. An Engle roller-cam, re-ground by Ed Winfield to Huffaker's specifications, with .420 lift, is used. Intake opens at 37 degrees BTDC and closes at 72 degrees ABDC, while exhaust opens at 72 degrees BBDC and closes at 37 degrees ATDC. Stock rocker arms are used with Harmon and Collins roller tappets, Smith push rods and guides specially machined by Ridenour. Special forged rods, with .003 bearing clearance, are used as well as J & E pistons with three Perfect Circle rings. Skirt to wall clearance is .0055, with 1/16-inch piston pin offset.



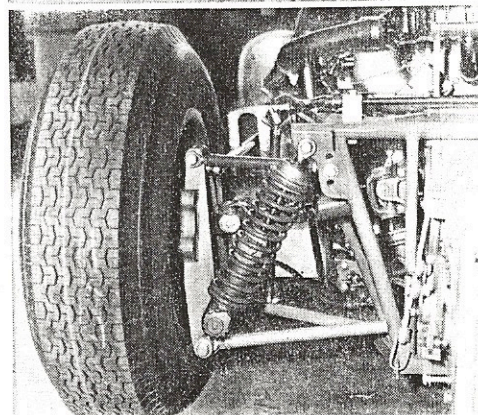
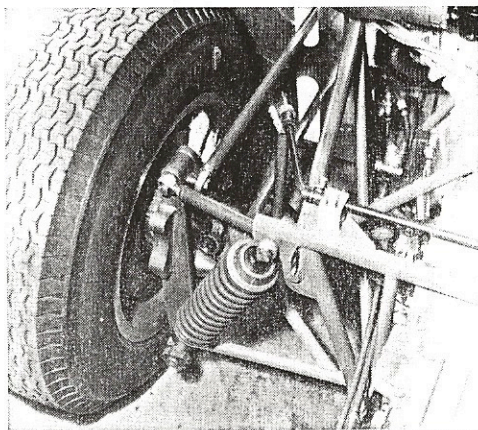
Body-lean due to soft suspension is evident here as Ridenour takes a corner. Spring and roll rates have been firmed since.



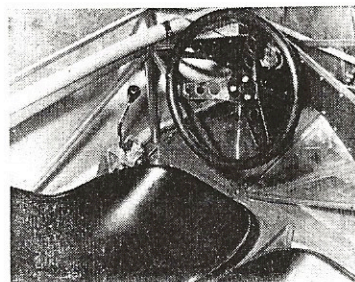
Rear view of the potent car shows ample room for the engine and transaxle in the light spaceframe. Note bolt-in X-frame.



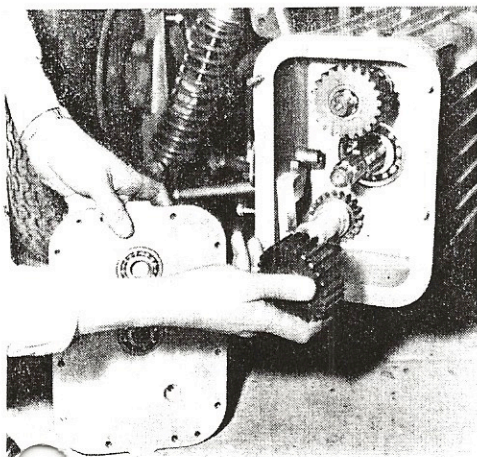
At top, area beneath radiator contains battery, master cylinders and rack-and-pinion. Mounted at roughly a 45-degree incline, the radiator is of special alloy and probably is E-Jaguar derived.



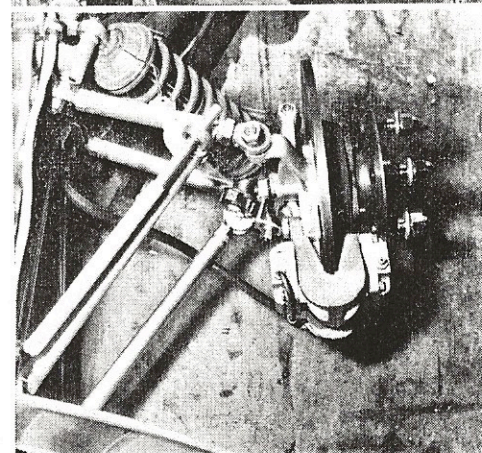
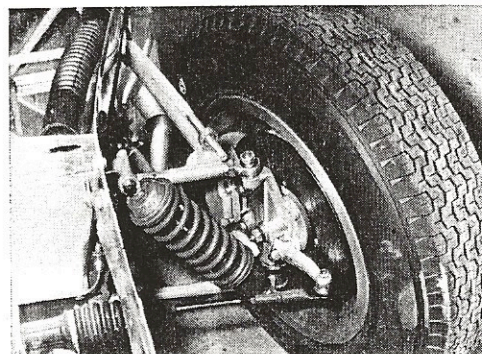
Two views above detail the rear suspension and drive axles. Armstrong coil/shocks are at relatively vertical angle. Swaybar is linked to lower reversed A-arm. Note that all links and shocks use Heim joints at both ends.



Using a left-hand gearshift, the tight cockpit bends the FIA rules concerning footroom a bit, but complies with the two seats equidistant from center.



The BMCD transaxle, at left, is a quick-change unit built to handle 400 hp, uses Chevy gears in alloy cast casings.



The front suspension has "sea-legged" coil/shocks, uses Triumph spindles. The brakes are outboard at all four wheels, have a special light Dunlop cast-magnesium caliper.

SUPER GENIE Mk 8 *(continued)*

Heads, ported and polished by Traco, have a fairly high compression ratio of 11.4:1. The fuel/air mixture is fed by two Rochester carburetors, mated to the Olds block with an Edelbrock manifold, and fired by AC plugs. Once combusted, burned gasses are exhausted through individual header pipes.

A 17-pound fabricated flywheel and a seven-inch triple-disc Borg and Beck clutch transmit power to the new Huffaker-BMC Transaxle. This new 4-speed, all synchro, magnesium transaxle features a quick change center section, close ratio gears and Power-Loc. It is designed to take loads in excess of 400 horsepower.

Engine power is transmitted from the transaxle to the ground via Hardy-Spicer splined halfshafts with double universals. Special eight-spoke cast magnesium 15-inch wheels carry Dunlop D9 or D12 tires, 5.50's at

the front and 6.50's at the rear.

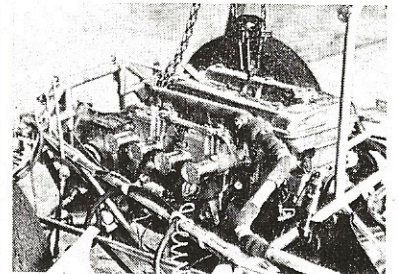
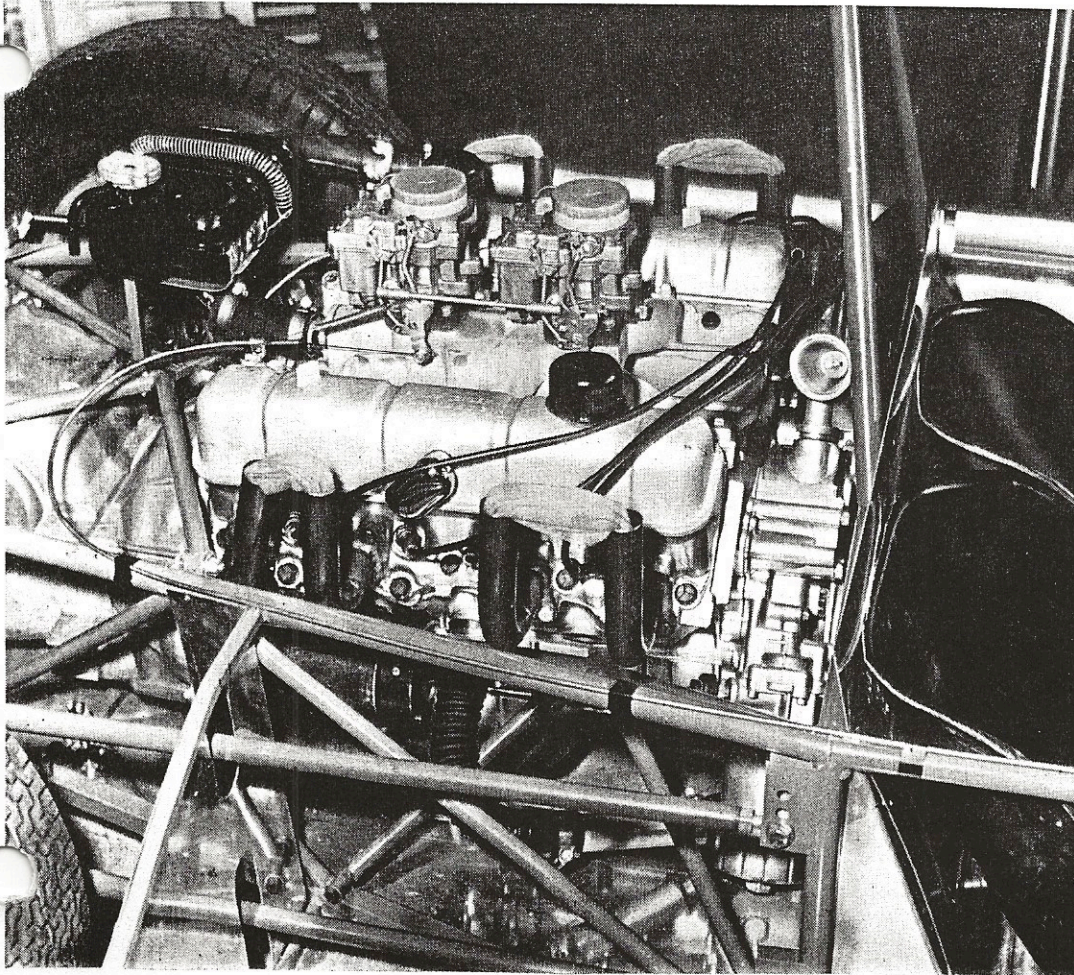
Under fierce acceleration tests it was practically impossible to induce wheelspin. Special 11.5-inch disc brakes fitted outboard bring the 1150-pound car to a stop with ease, enabling the driver to dive deeply into corners without locking up.

With a "stock" Buick engine Huffaker knocked a full three seconds off the existing track record during tests at Cotati. The car was "right off the trailer" and no chassis changes or adjustments were found necessary. Steering and handling were practically neutral. Wheelbase is an even 90-inches with a front tread of 51-inches and a rear tread of 49.5 inches. Huffaker's design provides for complete chassis tuning, including adjustment of camber, caster and toe-in, as well as raising or lowering of roll centers.

The old record at Cotati, held jointly by Dave MacDonald and Don Hulette, was one minute and 25 seconds, yet Huffaker recorded many laps at 1:22. He believes an experienced driver should have little difficulty circulating at 1:18 with the added go of a modified engine. An interesting comparison of power-to-weight ratio finds the Genie carrying 3.3 to 4 lbs hp (depending, of course, on the engine fitted), while the Cooper Monaco with 2.7 Climax carries close to 5 lbs hp.

A 327-inch Corvette-engined version of the Mk. 8 is being assembled by BMC's Competition Department to be used as a team car. Six Mk. 8's are currently under construction and at this time they are all sold. These cars are priced at \$9,400, ready to win, or \$7,850 minus engine, while comparable equipment purchased overseas costs at least \$14,000.

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The Genie comes in all sizes as shown above, with an Alfa being installed, and at left, with a BOP. The latest is a Chevy V-8!

