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1966 SEBRING SPRITE PROTOTYPE: ALIVE AND WELL IN PENNSYLVANIA

Two special treats greeted guests at the Austin-Healey Sports & Touring Club's annual Encounter 2008 in Carlisle, Pennsylvania, last August: racing driver Janet Guthrie, who in 1977 became the first female competitor to drive in the Daytona and Indy 500 mile races (see *HEALEY MARQUE*, August 2008), and the Donald Healey Motor Company's works Sebring Sprite #67 of 1966, now owned by Jeff Brenner of Octagon Auto in Felton, Pennsylvania (www.octagonauto.com). The presence of both Guthrie and the Sprite helped to highlight the 50th anniversary of the Sprite.

Car #67 is similar to the former works and privateer-owned Sprite driven to first in class by Janet Guthrie and her all-female driver team at the Sebring 12-hour race in 1970. This 1966 Sebring Sprite is a very historic race car, as it represents one of the very few Sprites constructed at the Healey works in Warwick. These cars, referred to as "prototypes," were purpose-built for competition at Le Mans, the Targa Floria, and Sebring in the mid-to-late 1960s.

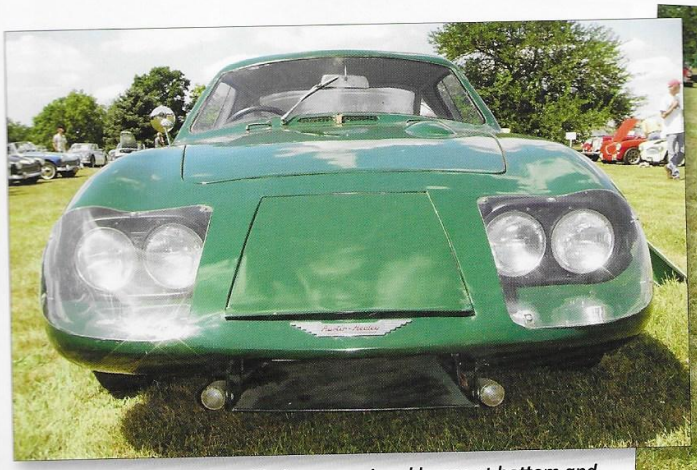
This car* and a sister car were entered by the Donald Healey Motor Company (DHMC) in the 12-hour endurance race at Sebring, Florida, on March 26, 1966. Both streamlined cars were painted a bright, Day-Glo orange, probably for easy identification by the crews and to be visible on the track among much faster cars. Car #67 was driven by Timo Makinen and Paul Hawkins to 18th place overall and first in the SP7 class (1000-1300 cc Sports Prototype class), completing 175 laps.

The sister car, #66, finished 29th overall and second in the SP7 class, completing 121 laps. Only 30 of the original 60+ starters finished, and #67 was the highest place finisher with the smallest displacement engine of 1293 cc – a tribute to the durability of Donald Healey's cars and the XSP engine builders.

After Sebring 1966

Following the success at the 1966 Sebring race, Fred Royston purchased #67 from the DHMC. He owned Royston Motors, a major distributorship for Austin-Healeys in Philadelphia. Royston bought the car with the thought of converting it to a

* Please note this car was NOT one of the 2 that raced at Sebring in 1966 but is merely thought to have been a back-up car.



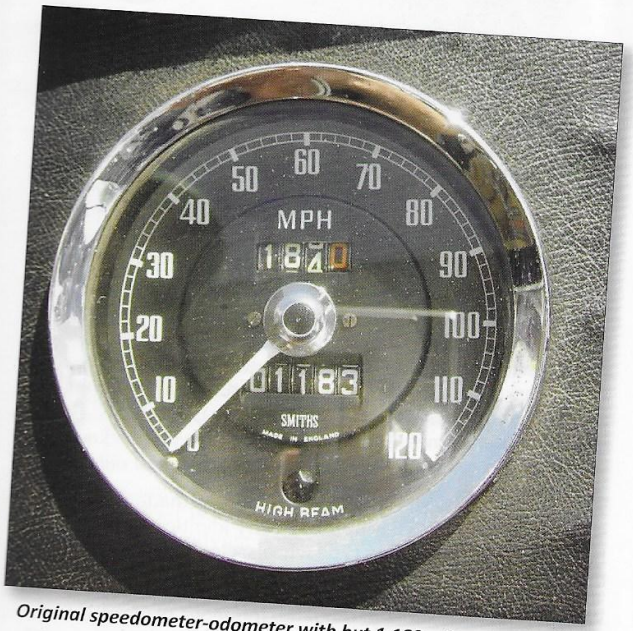
Front end features the added-on turn signal lamps at bottom and the large air scoop between the headlamps. This scoop was not adjusted by the driver but by a mechanic reaching inside the scoop during pit stops.



The headlamps are not original to the race car. They were replaced by these Chevrolet Corvair units in an attempt to make the car street-legal.

street-legal touring car, resprayed it British Racing Green, and installed sealed beam headlights from a Corvair (replacing the Lucas driving lights). Small turn signals were added as well as a small silencer (muffler) at the rear. The rest of the race car remained basically unchanged, including the odometer. The car was driven very few miles after the race, and it can be assumed that it was not accepted as a touring car by potential buyers. Instead, it served as a showroom attraction for a time. It now shows 1,183 miles on the odometer, about 910 of which were turned on the Sebring track during the race.

Close examination of the car on the show field at Encounter revealed some interesting details. Brenner pointed out that while no orange paint exists under the coat of BRG, there was evidence of orange overspray on the coil springs and lower control arms. (Royston probably couldn't properly paint over the bright orange paint, so the body was stripped down and resprayed.) The engine, XSP 260/1, is the normally aspirated race engine, and the transmission is the race-installed four-speed with the engine number stamped on it, dated '66. The gear box resembles an early MGB box, but it isn't one. The back plate on the motor is different in order to mate to the gearbox. Note that the fuel-injected engines didn't appear until 1969 and 1970; the car that Janet Guthrie drove at Sebring in 1970 was fuel-injected.



Original speedometer-odometer with but 1,183 miles showing.



Janet Guthrie reads about this car which was similar to the Sprite she and her all-female team drove to a class victory at the 1970 Sebring 12-hour race. Charlie Baldwin of York, Pennsylvania, explains some details.

While this car was built by DHMC alongside the similar cars which raced at Sebring and Le Mans it is believed this example never raced and was merely used for display/advertising purposes.



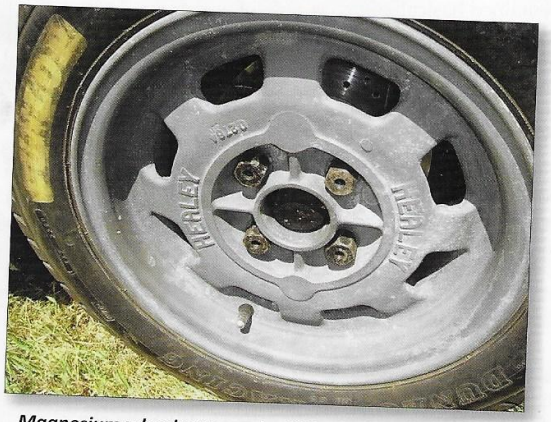
Rear quarter view shows the Kamm tail design feature.



Driver's foot well exhibits the large center brake pedal which is positioned forward toward driver to facilitate heel and toe gear shifting.



The Sebring race engine. The displacement was 1293cc with carburetion from a single Weber 45 DCOE. Power was rated at 110 BHP at 7200 RPM.



Magnesium wheels are marked "Healey," but the manufacturer's name is not stamped on the wheel.

Built for Durability

Generally, this car was purpose-built for reliability and not necessarily for high speed. Jeff noted improved methods for oil distribution when he disassembled the engine and also discovered modifications to the flywheel. The radiator is stock, but the guard on top had been trimmed away for easier access to the fan belt. The front brakes were also stock, but with twin master cylinders with adjustment for front and rear brake bias. Every circuit is fused separately, and there are twin coils. The tachometer has a neatly hand-painted red line at 7000 RPM. Perhaps this was Geoff Healey's handiwork.

According to Jeff, much thought was given to proper weight distribution. The oil sump is near the left foot well to help balance out the driver on the right. The spare wheel had two posts in the rear of the car about one foot apart. This probably enabled the crew to compensate for changing fuel loads; the fuel tank was located in the very rear of the race car.

Still existing in the driver's foot well is a rather crude indentation for the driver's heel. This may have been hammered into the steel floor in the foot well just before the race; interestingly, the balance of the floor is aluminum. The monocoque body shell is all hand-beaten aluminum and is fitted over a framework of small, one-inch diameter tubing. It resembles a roll cage but doesn't appear to be very crash-worthy. There is no shoulder harness for the driver. All this helped keep the weight down to about 1425 lbs., including fuel and oil!

The 13-inch magnesium wheels are purpose-made and stamped "Healey." They appear nearly identical to those on Kjell Qvale's CMCD alloy type wheels; Geoff Healey wrote that these were "cribbed" from Qvale.

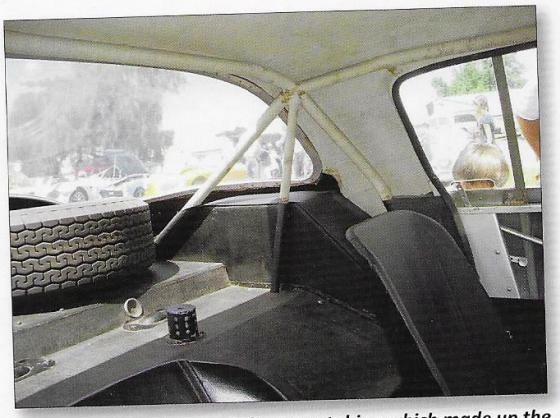
When he was at a show in England, Jeff met a mechanic who had worked on the car at DHMC. According to him, the wind-



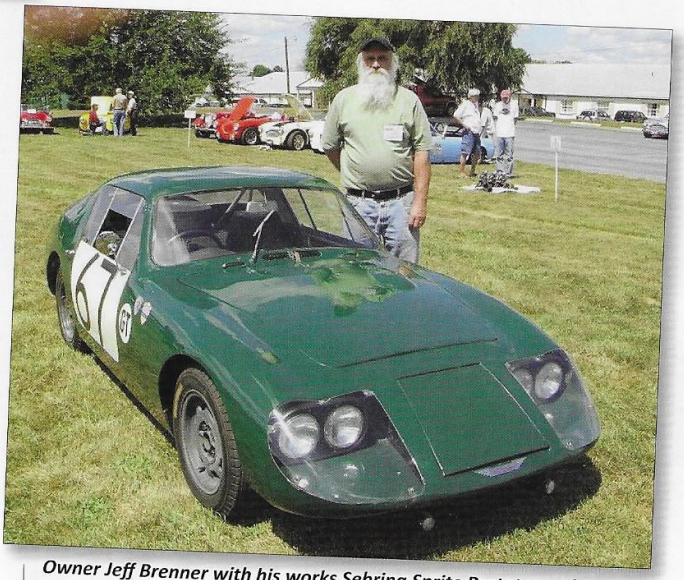
Interior of cockpit with the two large demister vents intended to improve windscreen demisting at the very wet 1965 Sebring race.



Type 1293 refers to the engine displacement.



Interior exhibits the small-diameter tubing which made up the frame of the race car - no large roll cage here!



Owner Jeff Brenner with his works Sebring Sprite Prototype of 1966.

screen is from a Mini and cut down to fit; it took several tries to get it sorted and fitted properly.

1964 Wind Tunnel Tests and the Kamm Tail

Geoff Healey's wind tunnel testing of the Sprite prototypes in late 1964 resulted in much-improved aerodynamics in the Sebring and Le Mans Sprites being built at the works. One feature of this 1966 Sebring Sprite is the unusual, chopped-off tail section. This truncated shape is often referred to as a "Kamm tail," which was named after the German professor/engineer Wunibald Kamm, who was head of a research institute in Germany from about 1930 until following WWII. The real discoverer of this aerodynamic shape was a man called Reinhard Koenig-Fachsenfeld. It was Kamm who developed his theory about not permitting the layer of air flowing over the top of the vehicle's body to separate into turbulence until the very end of the roof. This feature differentiates later works Sprites from the predecessors.

What the folks at Encounter '08 saw was a nearly pure example of a works Healey Sprite race car that was a class winner at the famous Sebring 12-hour race in 1966. Owner Jeff Brenner has no plans to vintage race his Sprite. "Most vintage racing organizations require a proper roll cage, etc., and I do not want to cut up this piece of history just to go racing." This is as it should be: an example of the Donald Healey Motor Company's race team in unmolested condition for the education and enjoyment of enthusiasts. HM

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