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Adding a supercharger to its 1,275-cc four transforms a 1960 Austin-Healey Sprite Mk 1



WORDS AND PHOTOGRAPHY BY DAVID LACHANCE

Even in its most basic, 948-cc form, the Austin-Healey Sprite can give its driver a smile to rival its own. The bare-bones sports car's combination of a close-to-the-pavement seating position, raspy exhaust note and light weight certainly help to create the impression of speed—never mind what the stopwatch says.

But, surely, there's no shame in wishing for a bit more urge under the hood, is there? The factory itself did, after all. The original A-Series four, derived from Austin's A35 small car, made just 46.5 horsepower, and that was with a pair of dual SU H1 carburetors in place of the Austin's single Zenith. From that point came continual improvements: bigger HS2 carburetors in May 1961 for the Mk II Sprite; an increase of capacity to 1,098 cc in October 1962; and a final increase to 1,275 cc in the Mk IV Sprite of October 1966. (Sprites were out of production by the time the Triumph 1500 engine was installed under the hood of the last generation of the Sprite's corporate twin, the MG Midget.)

It's not a complicated job to do as the factory did, and substitute a 1,098 cc for the original 948—or to cut to the chase and go straight to a 1,275 cc, which is rated at a useful 65 hp at 6,000 RPM. And what if that still doesn't satisfy? Well, there are any number of modifications that can be made to the 1,275 that will increase output, though at a cost: a lumpy idle or driveability issues at lower revs are the sorts of tradeoffs that might give an owner second thoughts. Of course, if an authentic appearance isn't important, a more modern four-cylinder like a Ford Zetec can be squeezed behind that happy grille—loads of fun, yes, and also less Healey than it was before.

There's another route: adding forced induction to the A-Series. Superchargers were offered for the Sprite, and other small cars, by third-party manufacturers back when they were new—it's not uncommon to see a vintage Judson on a 948-cc engine—and Donald Healey himself even offered a Shorrock blower conversion for the original cars. Today, efficient, modern supercharger kits offer the promise of added horsepower at no cost in driveability, in exchange for several hours of installation and a four-figure check. This is the route that Karlo Flores chose for the 1960 Sprite Mk I shown on these pages.

Karlo, a wholesaler of candies and chocolate from Vancouver, British Columbia, is abundantly familiar with the Bugeye's charms. He still owns the 1,098-cc-powered Mk I that he used as his daily driver decades ago, enjoying it through 10 sunny Pacific Northwest summers, and 10 rainy winters. "I loved the size of it, and the feel of the road," he says. It was his third car, following an Austin Mini and a 1,275-cc MG Midget, and it's one he hasn't been able to part with.

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He has other British cars that compete for his attention—an Austin-Healey 3000 Mk III, a Series 1 E-type OTS, a Lotus 7, an MGA and an MG TD are currently in his stable—but he found himself thinking about the Bugeye after talking with a fellow collector at a recent car meet. This collector had 27 cars and—in answer to Karlo's question—yes, he did in fact own a Mk I Sprite. In fact, he had just bought it from a specialist shop in Connecticut.

Karlo began thinking about restoring his Bugeye, which has been in storage for 20 years, but was counseled by friends that he might be opening up a Pandora's box, running into unforeseen expenses that could far exceed the value of the car. He became convinced that the best thing to do would be to buy a Bugeye that had already been sorted, and turned to the Branford, Connecticut, specialist his collector friend had recommended, David Silberkleit of Bugeyeguy.com.

One car in David's inventory, a blue Bugeye with a 1,300-cc engine and five-speed gearbox transplanted from a Datsun 210, caught Karlo's eye, and he flew east to check it out. But, "when I drove it, it didn't really click with me," he says. Instead, it was a dark green Bugeye that called his name. "It felt right. That's what I remember these Bugeyes feeling like," he says. The

car was awaiting a couple of final touches, and David showed Karlo the Moss Motors parts catalog, offering him the opportunity to equip it to his liking. That's when he saw the listing for the supercharger kit. Why not? "One of the reasons I decided to put it in was because they did offer an aftermarket supercharger at that time," Karlo said. "I always want to keep the car as authentic as possible, not only mechanically, but aesthetically. I'm not going to put something that works well on a Miata, for instance, on the Bugeye. In my opinion, that's just not right." The blower passed the test.

David, who we introduced back in *HS&EC* #97 ("The Sprite Stuff"), had never taken on the installation of a supercharger on a Bugeye, but was eager to try it out. It helped that Karlo's car, nicknamed Roxy, had already had a transplanted 1,275 that was in good condition, and had been upgraded with an aftermarket aluminum radiator and the front disc brakes from the Mk IV, a common and popular swap. The Moss supercharger kit is engineered for the 1,275, and requires no internal engine work. (Some superchargers provide more boost, and somewhat paradoxically require a drop-in engine compression to avoid detonation at the high end of the range.)

The \$3,795 kit incorporates a Roots-type Eaton positive-displacement supercharger, set to produce five to six PSI of boost. Also included are an intake manifold engineered to equalize airflow, pressure and fuel to each cylinder, a four-rib serpentine belt system with tensioner, a new SU HS6 carburetor and a K&N air filter.

David cautions that installing the kit on a Bugeye might prove to be a challenge to the amateur mechanic. "While the kit is quite complete, it's not a plug-and-play

product," he says. "It required a fair amount of innovation to make it fit on the Bugeye." Installation took 18 hours of a master fabricator's time; that included solving a serpentine belt alignment issue, relocating the fuel pump and making clearance between the air filter and wiper motor.

In the end, David was so impressed that he decided to stock the kits, anticipating that he'd be doing more installations. "We expect that we can reduce that build time as we do more," he says. Of course, he'd be happy to talk with any Bugeye owner, current or potential, about the installation.

While the car was still at David's, we got a chance to try it out. Behind the substantial Tourist Trophy steering wheel, there's the standard set of Bugeye gauges, with no boost dials or warning lamps to give the game away. Switch on the ignition, pull the starter knob, and the engine starts promptly and idles smoothly, just like a stock 1,275. Blip the throttle, and it responds with the raspy blatt you might expect.

It's when we're rolling, of course, that the supercharger shows its worth. Though a Bugeye's redline is 5,500 RPM, it's usually a case of diminishing returns above 4,000 RPM, where there's more noise, but not a whole lot more acceleration. That's not the case with the supercharger. You could get whiplash watching the tach needle spin 'round, and it's a shock how hard it is to keep it below the redline—it's constantly straining at the leash. The engine pulls smoothly in all gears and all speeds, and there's no question that acceleration is quicker than usual, though we don't carry out any empirical tests.

Moss claims a 40 percent increase in horsepower, which would bring this 65-hp example up to a more Charles Atlas-like 90



The supercharger increased the engine's output by an estimated 40 percent, from 65 hp to 90 hp.

hp. It doesn't so much kick you in the back as take you on a ride down a roller coaster, a smooth and steady buildup of speed with no end in sight. "You almost want an 8,000 RPM redline, because you get the sense that it will keep going and going and going," David says.

"It really does make a difference," Karlo agrees. "It revs past 6,500 RPM. I know it's redlining, and it still wants to go more, but I don't want to push it. She works hard, and she doesn't want to give up."

He's not at all concerned about the supercharger overstressing the engine, or the rest of the car, though he has installed a competition clutch. "My other Bugeyes, I drove so hard, and it never quit," he says. In its decade of steady use, it suffered one broken wheel hub, and one fuel pump failure. "I drove it in snow, rain, everything,"

he says. "I even strapped skis onto it and went skiing at Whistler."

"I don't drive this one so hard all the time, but when I do want to have some fun, I can push it without breaking it," he adds.

Karlo says his 14-year-old daughter likes the endearing Bugeye best of all the cars in his collection. "She's very concerned about the environment, and it's a small car with good fuel economy," he says.

He plans to give the car regular use, which means the others are just going to have to wait their turn. "The power that I get in the E-type or the Healey, you come back down to the Bugeye—you've got to work with the car more," he says. "It's not going to have the power that the bigger engines have. It's got its own challenge."

For Karlo, it's a challenge to be enjoyed, again, and again, and again. 🍷

Specifications

Engine

Type	Inline-four, cast-iron block and head
Displacement	1,275 cc (77.8-cu.in.)
Bore x stroke	70.6 x 81.3 mm
Compression ratio	8.8:1
Horsepower @ RPM	90 @ 6,000 (est.)
Torque @ RPM	100-lb.-ft. @ 3,000 (est.)
Fuel system	Single SU HS6 carburetor, Eaton Roots-type supercharger

Transmission

Type	Four-speed, synchromesh on 2nd, 3rd and 4th
Ratios	
1st	3.20:1
2nd	1.92:1
3rd	1.36:1
4th	1.00:1
Reverse	4.11:1

Suspension

Front	Independent; coil springs, lower A-arms, kingpins, lever-arm shock absorbers
Rear	14-leaf quarter-elliptic springs, radius arms, live axle, lever-arm shock absorbers

Brakes

Type	Four-wheel hydraulic
Front	8 $\frac{1}{2}$ -inch disc

Weights and measures

Wheelbase	85 inches
Overall length	142 inches
Overall width	54 inches
Overall height	48 inches
Curb weight	1,560 pounds



The cockpit, though still Spartan, has such luxury touches as carpeting and a wood-rimmed aftermarket steering wheel.

