# Frontline Austin-Healey Frogeye Sprite

By Simon Charlesworth August 9, 2012 ~ Published in Dep-O Magazine



Cute, endearing and perfectly proportioned the Austin-Healey 'Frogeye' Sprite may be, but drive a standard one and you'll be disappointed. I know because it's happened to me – twice.

Both uncomplicated yet fun chassis and 43bhp 948cc engine are sweet, but it is the gear ratios which really do scupper the car's cross-country ability. It may have recorded a max speed of 82mph when new, but in reality it's a struggle to find a piece of road long enough where 60mph can be visited. The problem is the massive chasm between second and third

gears. It's so vast that for a few seconds, it feels as if the engine has legged it home early.

If you really really want a Frogeye – I think there are two options. First, you could buy a standard car, park it in your house and drink in its cuteness. Alternatively, if you want to enjoy driving it, then modify it – and Andres Martinez, who lives in the US's Florida Quays, has wisely chosen the second option.



"I decided to have a Frogeye when I first saw an article in 'British Sports Car Legends' magazine about the Frontline Frogeye. The characteristic I like the most is that even though the car preserves its look and originality, the mechanics are modern high performance. It's what we call in the USA, a 'little sleeper', a street-rod high-performance weapon."

The Frogeye may sound like a strange choice of car for an American to buy, but not if you're one with a formidable collection of English cars.

"I am a little crazy about English cars, for me they represent style and elegance – pure vintage expressions. The only English car I do not like is the Rolls Royce, I think it is extravagant and opulent, the opposite to elegance," says Andres who currently owns a 1954 MG TF, 1960 MGA, 1970 MGB, 1966 Ford Anglia, 1966 Morris Minor, 1961 Jaguar MkII, 1991 Jaguar XKF, 1966 Austin Healey 3000 MkIII, 1968 Morris Mini Cooper, 1998 Mini Miglia Racer, 1991 Rover Mini Cooper, 1991 Lotus Elan M100, 1971 Austin Mini Moke and now this very special custom-built 1958 MkI Sprite.

Ed adds: "This car has had the best of everything. There isn't one thing where you could say 'it's a real shame we didn't do that'. An example is the fuel lines – you can use copper pipe, flexible black rubber pipe or stainless steel braided hosing, but I think that looks out of place on a road car. The alternative is, go to Goodridge and ask for some black anodised nylon hosing which looks like black cloth, and it's all fitted with aluminium connectors."



No matter where you look, the engineering details impress – from unequal length trumpets to produce the best possible torque and power figures to alloy hubs for better unsprung mass figures and superior heat dispersion. Actually, it's not just the engineering, but the cosmetics too, such as hidden remote-controlled stereo and the custom-trimmed seats which have more padding and support than the original tilt-forward chairs and are trimmed in tasteful grey alcantara.

The subtle theme of the colour co-ordination, as you can see, has been given quite a lot of time, thought and effort. Instead of opting for a steering wheel with polished spokes, one has been fitted with black spokes – because what aluminium there is, is wearing a matt finish (eg windscreen frame and cabin surround). Actually, when we visited, Ed was still deciding whether to paint the alloys so that they would perfectly match the twin roll-over hoops.

Where do you start with such a comprehensively modified car? How about the bits which haven't been replaced on this 1958 Sprite...? It's a short list, with only the bodyshell, bonnet, rear lamps, windscreen and steering column remaining.

"Originally, it was a very nicely restored 1958 US-market Sprite," says Frontline's Ed Braclik. "It had chrome wires, whitewall tyres, a big bull-bar on the back of it and the Speedwell exterior door releases. It was just a pretty car with the original 948cc engine and four-speed gearbox. Everything – apart from the wires, tyres and bull-bar – was as it would have been originally and it had come back into the UK in the early Nineties where it was restored. In 15 years, it had only done 1100 miles."

So given it's originality, all Frontline has done to the exterior is remove the rear bull-bar bumper and replace them with the over-riders, put on some spotlamps, changed the filler cap and fitted the roll-hoops. Given that the MkI Sprite doesn't have an opening boot, access is gained by tipping the seats forward, the roll-hoops are attached to a spaceframe structure built on top of the inner arches – otherwise the boot space would have been rendered useless.



The chassis has been strengthened, a thoroughly rabid 191bhp 1796cc throttle-bodied K-series has been fitted along with a five-speed gearbox and LSD. The drum brakes have been replaced by discs and alloy billet calipers, the suspension lowered and converted to telescopic dampers, double front wishbones and the rear benefits from Frontline's clever Rear Traction Link.

It's somehow ironic then that its fantastically subtle period grey attire is one of the things which makes this Sprite such an attention-grabber.

"This is a car that I'll really miss when it's gone," says Ed. "Imagine taking a year off work and saying that you're going to do a project with the best parts, materials and people to make the best car – and do it to my taste. Well, here it is.

"Every modification designed on it was intended to be in keeping with the period. We've even painted the engine the same green as the original BMC A-series to get it all to tie in and make it look really pretty."

Arguably, the most eye-catching elements of this Sprite is its stance and ride-height, because it has been lowered by three whole inches. Getting the Frogeye's posture just right and making sure that it handled properly was one huge undertaking. Starting with the ride height, the entire boot-floor had to be unstitched, fillets were then cut out, the boot floor was then moved back and it was all stitched back together again.



"It looked okay when lowered, but your eye was always drawn to the wheelarches, so we've even painted all the insides of the wheelarches matt black to make it look lower. Suddenly it looked even meaner," say Ed grinning.

The only way to sort out the rear ride on these cars is to disassemble the quarter elliptic springs – lowering springs are not available – and re-assemble the leaves in a different order with angled billet aluminium wedges until the ride and ride height are properly sorted. Milling the wedge and sorting out the springs, is all a matter of trial and error, and it could take up to three or four days.

What does all this add up to? Ed reckons the Frogeye is probably capable of 0-60mph in about 4.2 or 4.3 seconds.

"It's not so fast that it becomes scary to drive. It can drive in traffic, you can do anything in it. The more you press the pedal, the more power it gives you, so if you don't want to go quickly, then you don't press the pedal.

"The power curve looks like a ruler, there's no 'it's come on cam, hold on!' It's constant gradual power. At 5000rpm, you've got about 130bhp – at 7000rpm you've got 190bhp. So you've still got 50% of your power, if you're changing gear at 5000rpm. It's maximum revs is at 7500rpm because it's safe, but it will rev cleanly all the way to 81-8200rpm," says Ed, before adding, "This one is night and day ahead of our demonstrator – it's absolutely

phenomenal because it's lower, flatter, got wide tyres and everything has had so much time to set it up."



So what does Andres make of his phenomenal Frogeye? "The car runs great, I mean, it is one of the best sensations I have experienced with a car. Everything is perfect: power, transmission, suspension, brakes, steering – the handling feels like a go-kart.

"Everybody on the street is crazy about the car, it just gets so much attention that sometimes I feel embarrassed! I have been driving the car daily for three days and it is just so much fun, you feel like driving a Formula 3 racer on the road."

## In Frontline Austin-Healey Frogeye Sprite - Technical Specification

# **Body**

1958 Austin-Healey Sprite MkI, former US market car, fully strengthened and sound-proofed all-steel semi-monocoque, Speedwell exterior door releases, headlamp grilles, front spot and

fog lamps, reversing lamp, twin roll-over hoops mounted on internal spaceframe support.

#### **Engine**

MGF 1796cc K-series block, VVC cylinder head with VVC valve-gear removed, Piper PP285H cam, uprated springs, caps and buckets, Jenvey 42mm direct-to-head throttle bodies and performance air-filter, unequal length trumpets, uprated bearings and pistons.



Power: 191bhp; torque: 142lb.ft.

## **Transmission**

Front-engine, rear-wheel drive, Ford Type-9 five-speed gearbox with helical gears, quickshift gearlever, fine-spline EN40T driveshafts, fine-spline action sun-gears, plate-type limited-slip differential.

### **Suspension**

Front: independent via coils, double reinforced wishbones, telescopic dampers, front anti-roll bar; rear: live-axle with quarter-elliptic cart-springs, telescopic dampers, rear traction link.

# **Brakes**

Disc brakes all around with billet alloy calipers. Alloy hubs, rear double hub bearings, uprated master-cylinder, stainless steel braided brake hoses.

Wheels and tyres

Minilight 14inch alloys with Yokohama A048 185/60R14 tyres.

#### Interior

Moto-Lita black three-spoke steering wheel, Smith's electronic gauges, concealed remote control stereo, electric windscreen washers, custom padded forward tilt seats and centre console trimmed alcantara.

