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# ROOKIE RILEY

**Andrew Steele had never owned or driven a Mini before he decided to buy a Riley Elf and rebuild it to compete in historic road rallies.**

**Words and photos:** Rob Hawkins.

“**I**ts first event was supposed to be the Tour of Cheshire, at the start of March this year, but it was cancelled due to snow,” remarks Andrew Steele on the first major outing for his beautifully rebuilt Riley Elf. It got all the way to the start of the event but got caught out by the Beast from the East. Having spent about two-and-a-half years stripping and rebuilding the 1967 Mk3 Elf, to compete in historic road rallies, he not only didn't get off to a good start on his first event, but then had to spend a long weekend cleaning the car in preparation for *MiniWorld* to photograph it. Fortunately, all the hard work has been well worth the effort, and the reborn Elf oozes period rally features.

Using such a Mini to create a historic road rally weapon has

saved him thousands of pounds over the cost of a Mini saloon. Back in December 2014, he paid a mere £800 for this 998cc Elf, which hadn't moved in 20 years and whose last MOT certificate was dated 1997.

“The engine was seized,” he remembers, recalling the fact that the brakes were also seized, so it had to be dragged out of its garage and onto a flatbed truck. Try finding a Mk1 Mini saloon in similar condition for the same sort of money and you'll really need to be lucky. “Mechanically it was going to be uprated, so I just wanted a good, sound body to start with, which had to be pre-1968 for the class I wanted to run the car in.”

The events that Andrew was aiming to enter are organised by the Historic

Rally Car Register ([www.hrcr.co.uk](http://www.hrcr.co.uk)), in particular, their Clubmans Road Rally Championship. Each event consists of a series of autotests and regularity events.

“This is where you have to average a set speed on a fixed route,” Andrew explains concerning the regularities. “The speed is low, at 30 or so mph, but the navigation of the route is the key. If you get the navigation right, then the speed is comfortable but, if you mess the navigation up, then it gets hard to get back on time.” Breakdowns, traffic and weather all help to make the easy-looking set speed rather more tricky to maintain.

For the HCRC CRRC, any modifications to a pre-1968 car must be period to the year of the car. “So you can't fit things like roller rockers or vented discs as





they weren't available in 1967," Andrew comments. "The only thing you can do are modifications that improve safety, so converting to dual-circuit brakes is fine." Anyone wanting further information on what is allowed, should visit [www.hrct.co.uk/category-1-mini](http://www.hrct.co.uk/category-1-mini).

Working as a qualified electronics engineer, Andrew is happy to turn his hand to stripping a car, building an engine and assembling subframes but knows his limits when it comes to bodywork, such as welding and painting. He spent a couple of months of spare time stripping the Elf down to a bare shell. It was then transported to Paul Preston Classic Mini Restoration ([www.paulprestonminis.co.uk](http://www.paulprestonminis.co.uk)) in Leicestershire to cut out the rust and fit replacement panels. The front panel, front wings, sills (inner and outer) and the front sections of both floors were full of corrosion, so they were all replaced. Any bodywork that had survived was stripped to bare metal before the repaired bodyshell was resprayed by Paul in Smoke Grey (BU 15) with an Old English White (WT3) roof. Even the Safety Devices six-point rollcage that had been fitted was painted in Smoke Grey.

While the bodyshell was being repaired and painted, Andrew was concentrating on his choice of engine and gearbox. The Elf had a 998cc A-series engine but he wanted to fit a larger 1275 and bore it out to 1293cc. John Guess, of Guessworks in Rugby ([www.guess-works.com](http://www.guess-works.com)), sourced a suitable A-series engine and an Austin 1300 gearbox with a remote change. The engine was bored out to 1293cc by Rob Walker Engineering, who also balanced its rotating components and assembled the bottom end (crankshaft, flywheel, pistons). Knight Engine Services gas-flowed the cylinder head and this was equipped with 35.6/29mm inlet/exhaust valves.

Andrew assembled the rest of the engine, fitting a Kent 276 camshaft with duplex timing gear. Engine ancillaries include popular period upgrades, such as twin HS4 carburettors, a Manifold long centre branch (LCB) exhaust manifold and an aluminium radiator.

As for the gearbox, John Guess built this with straight-cut, close-ratio gears and a 3.7:1 final drive ratio. "Down dual carriageways and motorways the high engine revs get a bit tiring, but find a twisty B-road and they are great, which is what the gearbox was built for," Andrew remarks. »



Period Lucas lighting includes reverse lamp plus fog and spot lamps up front.



After a dusty photoshoot, Andrew calls on Henry to remove the dirt from the Newton Commercial carpets.

#### OWNER PROFILE

### Andrew Steele

**Age:** 42

**Occupation:** Electronics engineer

**First car:** MG Midget

**Current cars:** This Riley Elf and an MGA. I recently scrapped my daily Volvo.

**What's the best thing about your Elf?** Great fun to drive, even at 50mph

**Worst job on a Mini:** Fitting the split pin for the clutch master cylinder.

**Lottery winning plans:** Build an eight-car garage and fill it with classics.

**Favourite Mini supplier:** Mini Spares

**When is the Elf's first rally?**

The Ross Traders Historic Tour in Ross on Wye on 21 July



The Elf was originally fitted with Hydrolastic suspension but Andrew decided to change to dry rubber cones, as he explains, "The Hydrolastic looked like it could become a reliability issue. Why have more stuff to go wrong? The most important aspect is reliability, so in my opinion, rubber cones are bomb-proof." The rear subframe was replaced for a dry unit but the front was converted. "There are some little tabs which the Hydrolastic units locked into," he explains. "You

just bend them out of the way, then the rubber cones can be fitted."

Having sold the old Hydrolastic units, he managed to almost cover the cost of a new set of Moulton rubber cones, Mini Sport Adjusta-Ride trumpets and Gaz adjustable dampers to replace them. At the front, 1.5-degree negative camber bottom arms and adjustable tie-rods were fitted, along with standard upper arms. At the rear, standard radius arms were retained. "I love the handling," says Andrew. "It's so flat through corners.

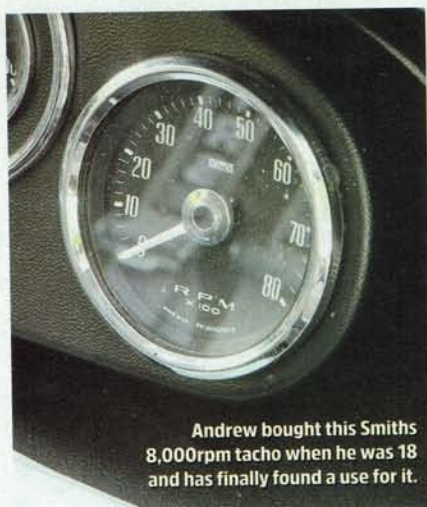
You forget how much feedback you get through the steering when there is no power assistance. For a car designed in the 1950s the road holding is amazing."

The brakes were altered, with a later dual-circuit master cylinder, copper brake pipes routed inside the car, stainless-steel-braided flexi-hoses, Cooper S two-pot front calipers and 7.5-inch discs with Mini Spares carbon metallic pads at the front and alloy Superfins at the rear.

By the end of 2015, less than a year since the rebuild had started, »



"The most important aspect is reliability so, in my opinion, rubber cones are bomb-proof."



Andrew bought this Smiths 8,000rpm tacho when he was 18 and has finally found a use for it.

### The build



Dragged onto a flatbed truck, in December 2014, the £800 Elf had a seized engine and brakes.



The front sections of the floors were replaced on both sides, along with the inner and outer sills.

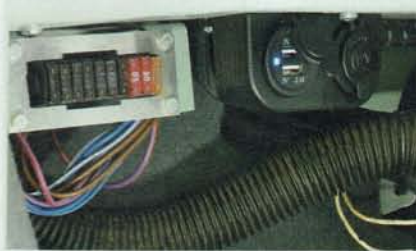




Rally-style interior includes Cobra Classic RSR high-back front buckets, FIA-approved harnesses and a Safety Devices six-point cage. Narrow Cobra Classic RSR seats provide enough room to fit runners and to actually use them. eBay Riley centre badge was the right size for the centre of the wood-rim steering wheel.



Period-looking Brantz tripmeter and stopwatch are located in front of the navigator's seat.



An Autospark fuse box is located underneath the dash rail. A USB charger socket and cig-lighter have been fitted as they are a useful addition.



Lucas switch panel contains lettering usually found on many classic Land Rovers.



The entire front end was wisely replaced because corrosion had got the better of most of the metal.



Andrew chose Smoke Grey for the Elf's respray (including the rollcage) with OEW for the roof.



Meticulous rebuild took up all of 2016 and half of 2017 to achieve a stunning standard of finish.





Detachable hinges, from Minivation, allow the bonnet to be raised much higher than standard.



"The engine has a lot of torque from low down, and just keeps going..."



the resprayed Elf was back on its wheels with a modified engine and gearbox under the bonnet (the old 998cc A-series engine and gearbox were sold). The major jobs were completed but there was still a long way to go. The interior needed fitting, along with the wiring, exterior details and all the modifications that make this Elf look more like a rally car.

The interior retained plenty of creature comforts. Newton Commercial supplied the carpets, headlining and door cards. A pair of Cobra Classic RSR high-back bucket front seats was secured to runners and bolted in position along with FIA-approved quick-release harnesses from TRS. The 90mph centrally-mounted Smiths speedo that was fitted in the Elf was kept, along with its accompanying coolant temperature and oil pressure gauges. Andrew added a Smiths 8,000rpm tacho, which he'd bought when he was 18 years old, but never fitted to any car he'd owned. He also added a voltmeter, a Brantz tripmeter and stopwatch. There are several subtle additions to the interior, such as the Lucas switch panel, with labelled toggle switches, commonly found on classic Land Rovers. The wood-rimmed steering wheel includes a Riley centre badge, found on eBay, and which is, luckily, a perfect fit.

Andrew decided to rewire the entire car and bought a negative earth loom from Autospark of Nottingham ([www.autosparks.co.uk](http://www.autosparks.co.uk)). This includes a fuse box, which is mounted underneath the passenger side dash rail, and several relay switches, which can be found along the offside inner wing inside the engine bay. "They did a brilliant job and I found it was easy to fit, but I am an electronics engineer, so I'm used to that sort of stuff," he explains.

The exterior was modified with




4.5x10-inch pressed steel wheels (Cooper S option type) have been wrapped in Falken 165/70 tyres.



some rally accessories, including Lucas spot, fog and reversing lamps. The bumpers were reused, but Andrew chose to remove the overriders. Any Elf or Hornet owner will tell you that they have caught the back of their head on the bottom of the front grille when the bonnet is raised. Andrew realised he'd soon be bearing scars on his head, so he bought a set of bonnet hinges from Minivation ([www.minivation.co.uk](http://www.minivation.co.uk)). These allow the bonnet to be raised to a vertical position and secured with gas rams. It's a little more fiddly to do than raising a standard bonnet, but well worth the reduced risk of head trauma.

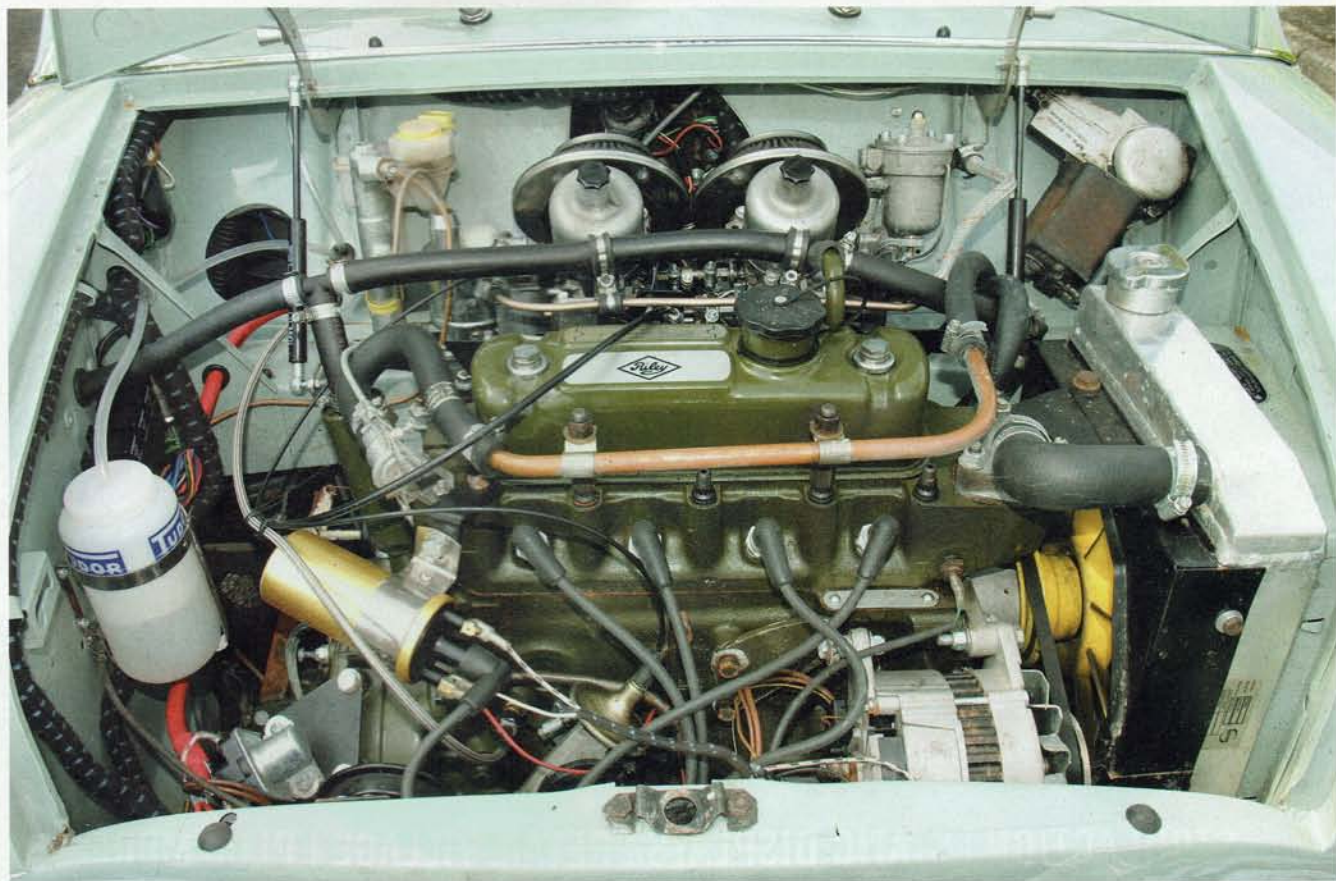
During June 2017, the Elf was back on the road and was being carefully shaken down for the rest of that summer. The first teething problem arose on one of the first test-runs when Andrew discovered that, when the fuel gauge read empty, it really did mean there was nothing inside the tank! Having learnt to trust the fuel gauge, he's quickly grown to appreciate the modifications that have been incorporated into this build. Perhaps the best, in his opinion, is the Kent 276 profile camshaft. "The engine has a lot of torque from low down, and just keeps going. It's still going at 6,000rpm but I'm not brave enough to

hold the gear any longer. When you drive it hard, it's never off cam, so the cam and the gearbox work really well. It can't help but put a smile on my face and I think it surprises a few people too." 

**Andrew Steele would like to thank:**

"Paul Preston, for the bodywork; John Guess, for sourcing the engine and gearbox; Rob Walker, for part of the engine build and everyone at Mini Spares Potters Bar, for help and advice."

**Below: Tidy 1293cc engine is fuelled by twin SU 1½-inch carburettors fed by a Facet electronic fuel pump via a Filter King fuel pressure regulator.**



TECHNICAL SPECIFICATION

Modified 1967 Riley Elf Mk3

**Engine:** 1275cc A-series bored +0.020-inch to 1293cc . Kent 276 camshaft . balanced rotating assembly . gas-flowed cylinder head, 1.3:1 rockers . Manifold alloy inlet manifold, twin SU HS4 1½-inch carburettors, K&N cone air filters . Facet electronic fuel pump, Filter King fuel pressure regulator . Manifold Stage 2 LCB exhaust manifold, Manifold mild-steel twin-silencer system, side-exit . Lucas 25D4 distributor . Lucas Sports coil . Mini Spares HT leads . NGK BPR6ES spark plugs . aluminium radiator . 11-blade mechanical cooling fan . alternator (negative earth) . **Gearbox:** Austin 1300 four-speed, four-synchro, manual, remote-shift gearbox . straight-cut close-ratio gears . 3.7:1 final drive ratio .

MED Ultralight steel flywheel . MG Metro Turbo clutch . **Suspension:** Solid-mounted front subframe, rubber-mounted rear . dry suspension conversion . Moulton rubber cones, Gaz adjustable dampers, Mini Sport Adjusta Rides . Front: 1.5-degree negative camber bottom arms . adjustable tie-rods . OE upper arms . Rear: OE radius arms . **Brakes:** Dual-circuit, non-servo assisted . internally routed copper pipes . stainless-steel-braided hoses . Front: Cooper S two-pot callipers, 7.5-inch solid discs, Mini Spares carbon metallic brake pads . Rear: Superfin alloy drums, OE shoes . **Wheels/Tyres:** 4.5x10-inch pressed steel S-option type wheels . Falken 165/70R10 radial tyres . **Interior:** Cobra Classic

RSR high-back front bucket seats, OE rear seat . Newton Commercial grey carpets . Newton Commercial Cumulus Grey door cards . Smiths 90mph speedo, 8,000rpm tachometer, oil pressure, coolant temp gauges . Lucas switch panel, Land Rover lettering . Brantz tripmeter, stopwatch . fly-off handbrake . Safety Devices six-point rollcage . TRS four-point FIA front harnesses, rear ISOFIX mount . wood-rim steering wheel, Riley centre badge . new wiring loom . **Exterior:** Mk3 Riley Elf bodyshell painted Smoke Grey (BU-15), Old English White (WT3) roof . new front wings, sills, floor repairs . OE bumpers, overriders removed . OE lighting, Lucas reversing light, Lucas front-mounted fog, spotlight