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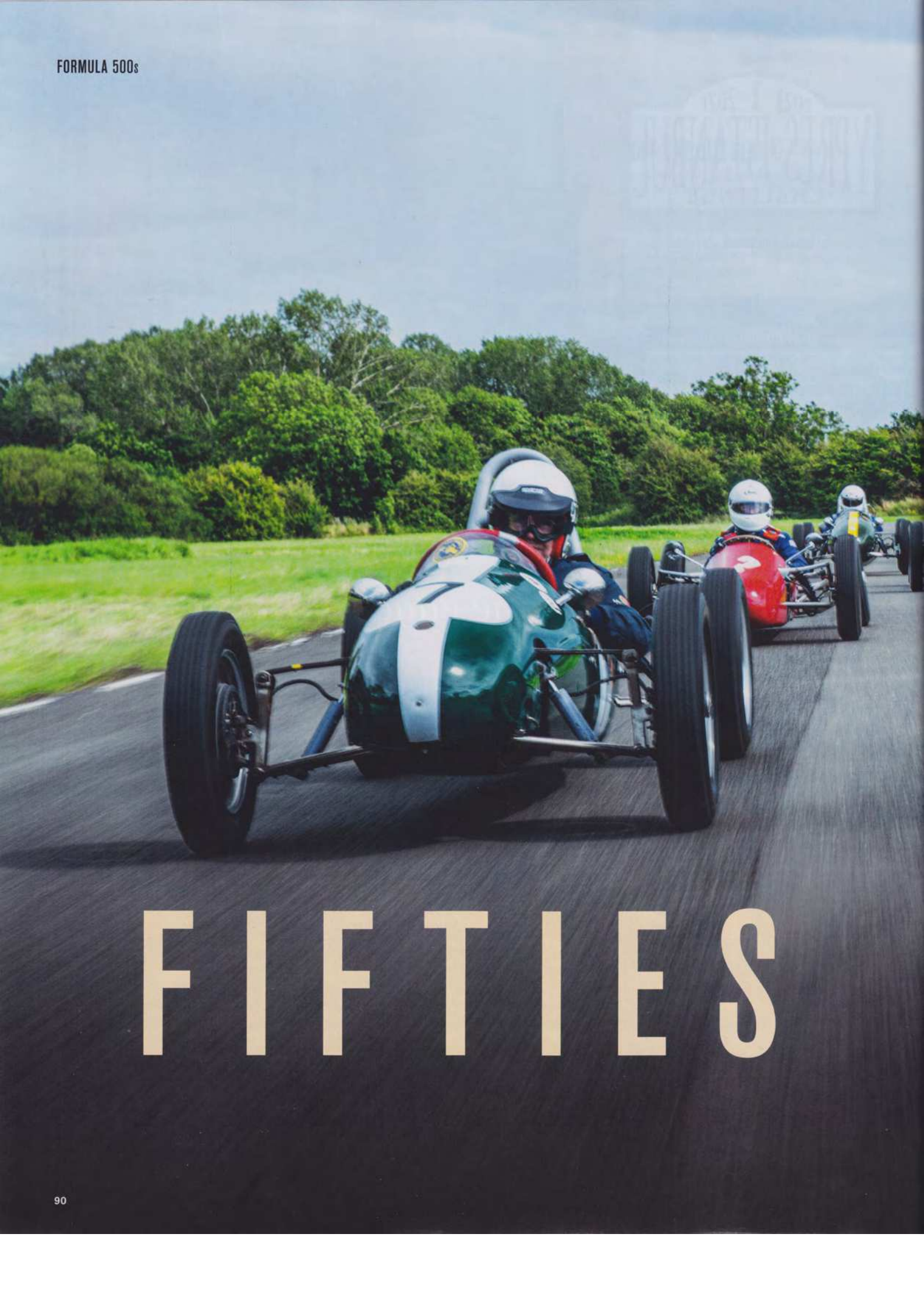


FIFTIES

500s

These buzzbombs are still the cheapest way into Historic racing at the world's most celebrated meetings

Words John Simister
Photography Drew Deas

It sounds like a motorbike. It looks like a single-seater racing car. It feels like a big kart. It smells of burnt methanol and castor oil and I'm tasting what it's like to drive a machine whose configuration set the template for Grand Prix cars to this day. Meet the Cooper '500'.

When, back in the late 1940s, John Cooper chopped up two Fiat 500 Topolinos lying in father Charles' garage yard, attached their transverse-leaf front suspensions to each end of a garage-made chassis and installed a JAP motorcycle engine behind the driver, he set out on the road to domination of the 500cc single-seater formula. This had been inaugurated after the war as a low-cost category to get motorsport moving again, and Cooper's mid-engined racer – and the many improved examples he soon found himself building – quickly became the machine to beat.

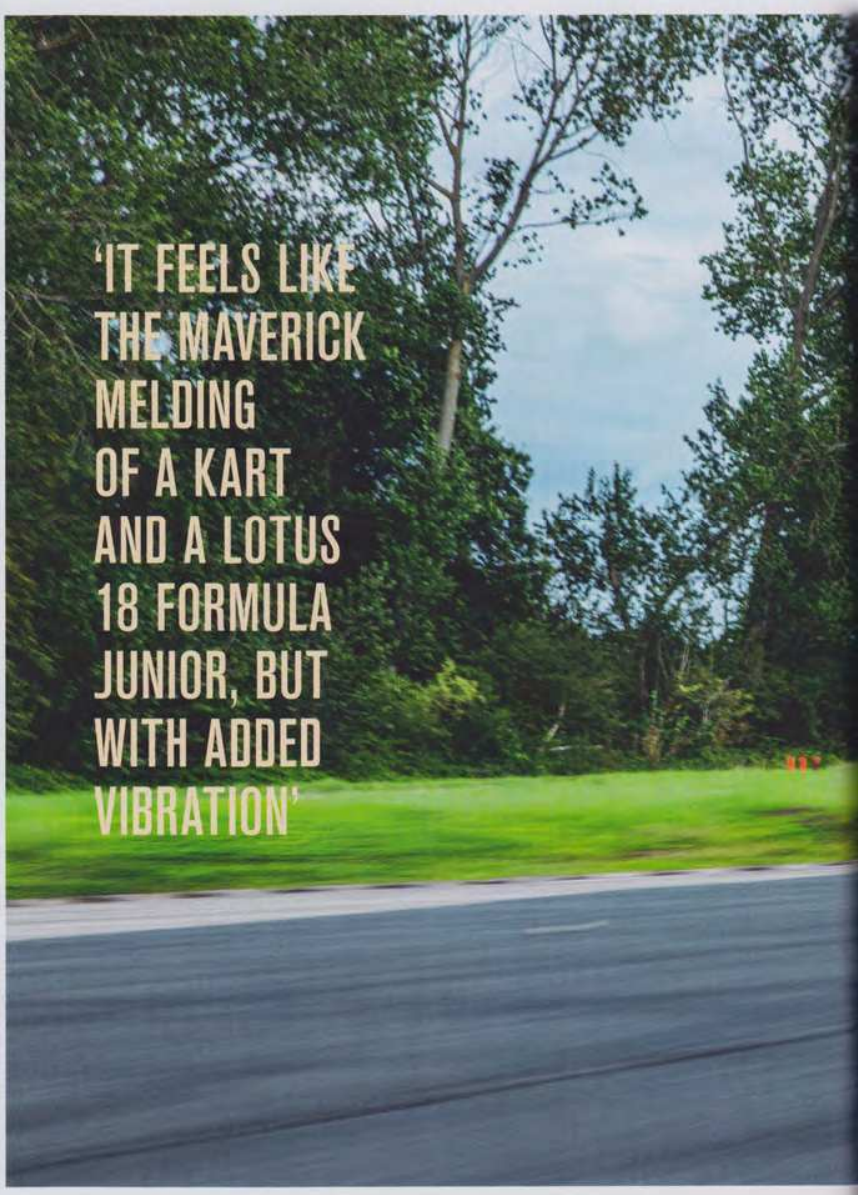
Cooper wasn't the first to use the mid-engine layout, of course, as the pre-war Auto Union Grand Prix cars demonstrated, but his were the cars that popularised it. Stirling Moss was one notable early customer, and other famous names from the 1950s also gained their fame via the 500 route such as Ivor Bueb and Stuart Lewis-Evans. The champion 500 racer Jim Russell even went on to set up what became a world-famous racing school, using these cars as the starting point.

There have been myriad makes beyond the Coopers, though. And plenty of them are still racing today, following a resurgence of interest in 500 – later promoted as Formula 3 – racing. Nowadays, as 500 Owners' Association treasurer Robin Shackleton is telling me with messianic zeal, it's the most affordable form of Historic racing, not least because the association certifies the car, so no FIA papers are needed. Membership costs £35 a year, races are £250 each, and a competitive car costs as little as £15,000, rising to £40k.

It all sounds a tempting prospect, which is why I have arrived at the Curborough sprint course, near Lichfield in Staffordshire, in my own '500' (a Fiat Twinair) for the 500 Owners' Association test day. It's a day for club members to check their machines are working as they should, perhaps ready for entry in the 500cc race held every four years at the Goodwood Revival and less than a month away. Or rather, it was when we did the photo shoot in 2019: this year's Revival has of course been cancelled, so treat this feature as a reminder of happier times.

The 500 race is a significant one for Goodwood because the first race ever run there, in 1946, was for 500cc single-seaters. There are several other races in the UK and Europe plus a dozen or so sprints and hillclimbs to keep the tiny cars active; not all the cars here at Curborough will tackle Goodwood, and some at Goodwood won't have benefited from being at the test day, but after I've had a good look at the cars and met the owners I've been invited to try a Goodwood entrant for myself.

THE FIRST 500 I encounter is Xavier Kingsland's 1953 Erskine Staride with a long history of hillclimbing. It is mid-engined, of course – nearly all 500s are, although we'll meet an exception later in the story – and it features swing-axle rear suspension with a floating spring and, consequently, no



'IT FEELS LIKE THE MAVERICK MELDING OF A KART AND A LOTUS 18 FORMULA JUNIOR, BUT WITH ADDED VIBRATION'

Clockwise, from this image
Author Simister wrestles with 500cc of single-cylinder power in Nigel Challis's Cooper Mk8; hotshoe George Shackleton looks relaxed; camber change in action; guru Jan Nycz checks oil pressure on Xavier Kingsland's Erskine Stanide.

'THESE TINY CARS DART THROUGH CURBOROUGH'S CURVES, WHEELS AT UNLIKELY CAMBER ANGLES'

rear roll stiffness. There's a good reason for this: it makes the outer rear wheel much less likely to 'jack up' the suspension under hard cornering, and when the jacking-up does come it counteracts roll. Engineering was so logical back then.

Across the impromptu paddock I find Andy Raynor and his 1954 Kieft CK54. 'Only two were made,' Andy tells me, 'and the other was raced in period by Don Parker [a legend in the world of 500s]. They ran with a variety of engines, including a Vincent. It has a Manx Norton engine now, just back from a rebuild after a main-bearing problem.' I notice the truck-like angle of the steering wheel, and the way the driver sits far forward with a steering rack above the knees.

And now father and son Robin and George Shackleton have arrived with their 1957 Cooper Mk11, which is to be given the honour of being a 'works' Cooper entry at Goodwood. It's being unloaded from their purpose-built Cooper T1 trailer, the only known survivor of this ideal accessory. 'It went to the US when new,' says Robin. 'It came back in 2010 and we bought it two years later.'

He gives me a guided tour. There's no differential, and the back axle has just the one disc brake. The axle drives the fuel pump, so you have to pump the priming lever by hand when the car is stationary, such as when waiting on the starting grid for the flag to fall. 'All the cars have marks on the back wheels to show when the pump is off the cam, so you can hand-pump,' Robin explains. 'It means you might have to roll back a bit at the start of a race.'

All the 500s run on methanol, which both adds power and keeps the combustion chambers cool. The downside is that methanol consumption is about double what petrol consumption would be, and methanol burns with an invisible flame. So all the cars bear a small orange roundel, to warn marshalls of what they might be up against.

This particular Manx Norton engine is a rare short-stroke version, able to rev to 8000rpm and consequently to pull shorter, and therefore more accelerative, gear ratios at the expense of a very peaky power delivery. It's an original engine, built in 1958 by Ray Petty, but some of the Norton motors seen today are remanufactured replicas. One subtle difference from a motorcycle installation is that the Amal carburettor has two float chambers to keep fuel flowing under cornering forces, given that a four-wheeled racing car can't lean into a corner in the manner of a motorcycle.

Starting these cars involves pushing them or, more kindly for the first start of the day, placing a back wheel on an electric roller to turn the engine. The aroma of partially burnt ethanol and Castrol R as the engine catches is bordering on motornarcotic, and there's a lot of it about as a half-a-dozen or so 500s erupt into blattering, staccato life.

Soon they're buzzing around the track and sounding like a film of angry hornets with the soundtrack slowed down. Cooper is the dominant marque, though there's the Erskine Staride and a second Kieft – a CK52 in light metallic green, beautifully restored by Jan Nycz, whose knowledge and engineering skill run deep in 500 Owners' Association lore.

These, a Martin-Norton (tiniest of all) and more are darting through Curborough's curves, wheels at unlikely camber angles, the narrow circuit plenty wide enough for such neatly compact machines. A particular 1954 Mk8, wearing racing number 7 as Stirling Moss's Coopers often did in later years, seems to be running well. That's good, because I'm about to drive it.

THIS MK8, WHICH belongs to club chairman Nigel Challis and is destined for the Goodwood Revival, is an example of the first Cooper 500 to be built on a tubular, rather than channel-section, chassis. It had been devoted to hillclimbing before Nigel bought it in 1999, from Add-a-Nought Motors at the Goodwood Revival. It came with a short-stroke Norton but Nigel replaced it with a long-stroke, the better to suit a career that was to involve both hills and racetracks all over Europe and even as far away as Macau.

Nigel has been testing his newly rebuilt engine. 'It was in pieces last week and I finished putting it together yesterday,' he says. 'I do all the work myself.' Happy with the way the Cooper is performing, he entrusts it to me. It's snug in here behind the flat steering wheel with its red leather rim. The only dial is a revcounter above my left knee, redlined at 7000rpm, and a short gearlever to my right controls the sequential motorcycle shift – pull back to upshift, after which it returns to its 'rest' position. There are four forward gears but no reverse. Above my knees is a tank of methanol.

A hearty push from outside, a second-gear bump-start and I'm away, with around 50bhp to propel around 230kg of car and 75kg of me. I've driven go-karts and I've driven a Formula Junior Lotus 18, and this feels like a maverick melding of both, with added vibration from that thumping piston in its 500cc cylinder right behind my shoulders. Apparently the engine doesn't really come alive until it's past 4000rpm, but it's quite frisky enough around 3000 while I'm learning the Mk8's ways.

Cornering is simple: brake, point, squirt, while sensing the grip of the rear wheels whose benign, Fiat-derived rear suspension uses a lower wishbone and double-jointed driveshafts, with the transverse leaf acting as the upper link. I must also remember to allow for the long travel of the drum brakes' pedal, on the pre-Goodwood to-do list. Gearshifts are blip-click in the motorcycle manner, requiring you not to lose count of the shifts while you're still learning how to calibrate noise versus speed. The Cooper feels light but taut and tough, and more forgiving than I expected.

Later research reveals that this is a good car for a 500 virgin, thanks to masses moved nearer the extremities compared with earlier Coopers (so a higher polar moment and greater predictability of intention), and small auxiliary leaf springs to add some roll stiffness as the main springs meet them. These developments doubtless help encourage my rising boldness level as I venture past 4000rpm in a breathtaking blast of angry energy and begin to taste what racing one of these machines might be like. They're good for 110mph, given the opportunity.

And then, just as I'm really enjoying the revcounter scale's further reaches, it splutters to a halt as I fail to power out of a bend. It's out of fuel. Never mind; it's been fun, the paddock isn't far away and few racing cars are easier to push.

LESS THAN A MONTH later, I'm at Goodwood to watch the 500s in their showpiece race. In the paddock are machines I've not knowingly seen before, such as Richard Bishop-Miller's Revis-JAP streamliner that once belonged to NASA's official artist, and an Iota Wasp-JAP in suitable

Clockwise, from below
Stark cockpit of Shackleton Cooper Mk11; Amal carb has two float chambers and note Erskine Staride's single, floating rear spring; Jan Nycz restored this beautiful, cockpit-forward Kieft CK52; with panels off, test day tweaks are easier.

JAYSON FONG

JAYSON FONG

Top and above
The start at Goodwood, with several Curborough test day cars poised for their day of reckoning; John Chisholm's Arnott-JAP blows smoke as Richard de la Roche's Smith-Buckler-JAP passes. Another de La Roche, Peter, will win.

stripes. I've heard that Aston Martin's design supremo, Marek Reichman, is another 500 combatant in a highly unusual machine, a 1951 Emeryson-Norton – and here he is.

'It's notoriously difficult to drive,' he explains. 'It has the exhaust megaphone right in front of you, so you get methanol all over you and the rear tyres on the overrun.' In front? Yes, the Emeryson has a front-mounted engine and, yet more unconventionally, front-wheel drive.

'Paul Emery said "I'm not going to compete with the other guys, I'll do it my way." The other drivers hate me, they're all in a chain going into a corner and I take a completely different line. It has no differential and lots of torque steer, so you never know which way it's going to go. And the brakes are terrible. I need to get the tail to drift, otherwise it just understeers. But if it rains I'm way ahead.'

The Emeryson is perhaps the best-looking 500 of all in its curvaceous skin of polished aluminium, and designer Marek hasn't been able to resist adding his mark in the form of a rather lovely air-scoop to keep the engine cooler. But it's not raining, so a win is unlikely.

Come the race, 20 minutes long, George Shackleton is to start from the middle of the front row, Nigel Challis in 'my' car from row six. Xavier Kingsland's Erskine Staride is looking good on row three. Andy Raynor's Kieft is back in row eight, one row ahead of the Emeryson. And on pole? Peter de la Roche in a 1952 Cooper-Norton Mk5, two seconds quicker than George.

I'm watching from the beginning of the Lavant Straight, and the front-runners look genuinely speedy. Some sound deep, some have a higher buzz – and some are dropping out as de la Roche builds his lead. On lap four that includes a disappointed George, with five laps still to go. Peter de la Roche wins by 15 seconds, Nigel Challis (whose experience I can most closely imagine) finishes seventh, Marek Reichman retires on lap six.

Back at the paddock, I track down the winner who I've already heard is the youngest person to have won a 500 race at Goodwood (he was 17), beating the record formerly held by one S Moss, esq. So, what's the secret? 'I don't know, really,' says Peter, 'but it's good.'

The young man is clearly an intuitive sort of driver, doesn't know why he's quick, just is. 'Well, I carry speed through the corners,' he adds, modestly. Skill and bravery, then. Just like Moss, in fact. Ends

THANKS TO Robin Shackleton for making the feature happen, and Nigel Challis for entrusting Octane with his Cooper Mk8. More at www.500race.org.