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2018 seems to be the year for motoring milestones. In the July issue we celebrated 70 years of Porsche, and with Land Rover hitting the same number this year, we are well into planning a feature on 'The Best 4x4Far'. Others on the list of big birthdays include the likes of the Opel GT (50) and BMW M1 (40), but this issue Graeme Hurst raises a glass to 70 years of what we think might be the most influential British motoring symbols of all time: the Jaguar XK engine and the Morris Minor.

While calling this pair the best of Britain might seem a bit bold, just think how many Jaguar models made use of the XK engine over its 43-year production, and the fact that with 1.6 million Morris Minor units sold, it was the post-war machine that really did for Britain what the Fiat 500, Citroën 2CV or VW Beetle did for their respective home countries. Not wanting to miss out on any birthday cake, I track down a Volvo 144 to celebrate 50 years of the boxy Swede in South Africa and Braam Nel tells the story of VW's 411 of the same age.

Without any prompting, our two-wheeled expert Gavin Foster also went down the influential route, with a story on the DKW RT125 motorcycle. Never heard of it? How about the BSA Bantam? Or the Harley Davidson Model 125, ST-125 and Hummer? Or Yamaha's first bike, the YA-1? You guessed

it... these were all copies of the DKW. Gavin also tests the latest parallel-twin from KTM and gives us a delightful look into the past and present of the Durban beachfront's rickshaw operations.

Mike Monk keeps up the British angle with a dash in a glorious Aston Martin DB4 GT, before swapping across to the German team with a stint in a Mercedes-Benz W136 – the model that helped the brand recover after the war.

If this month's unofficial theme is influencers (today a term referring to celebrity product endorsers on social media) then Sivan Goren's article on the Chevrolet Corvair must take the lead role. This, of course, thanks to a critical chapter by Ralph Nader in his book *Unsafe at any Speed* that dealt the 'compact' car a hefty blow in the sales department by convincing consumers that the revolutionary machine was deadly.

In the mini-series department, Jake Venter continues his fictitious interviews with a 'chat' to front-wheel drive revolutionary Jean-Albert Grégoire, while John Rabe gives us part two of his bubble car and microcar instalment – this time featuring the Goggomobil, Vespa, Lloyd and the locally assembled Fuldomobil.

We hope you enjoy and please keep sending your letters, classified adverts, classic news and upcoming events to info@classiccarafrika.com.

Stuart

PORSCHE 70 DISPLAY

In celebration of Porsche's 70th anniversary this year, currently on display in FMM's Hall D are five of the famous models that collectively represent the company's proud history. Heading the line-up is the 1984 956 Le Mans car in its famous Rothmans livery. This is the last of the 120 factory team cars that won races at Silverstone and Mosport. Alongside is a 2005 limited-edition Carrera GT that was reported on in depth in the July CCA. Next is a 1984

928S, and one of the front-engine rear-wheel-drive models intended to be a replacement for the 911. It was Porsche's first V8-engined production car. Then we have the iconic 1979 930 Turbo, the first turbocharged 911 and bearer of the infamous 'whale tail' rear spoiler. It was featured in the April 2017 CCA. Finally there is a 1965 912, the four-cylinder model aimed at bridging the gap between the 356 and 911.



17TH-CENTURY SEDAN RESTORATION



Something different, without wheels... One of the more unusual and lesser-known historical items in FMM's collection is a sedan chair believed to be from the 17th century. It was acquired by the Heidelberg Motor Museum from the Van Rijn collection and following the museum's move to Franschhoek to create FMM, it has been kept on display in the boardroom. But it is now undergoing careful restoration by experienced painting conservator Angela Zehnder, who is amazed at the chair's condition. "The exterior paintings have been retouched

in small places in the past," says Angela, "but it is in incredibly original condition."

Its origins are not known, but the crest on the rear panel and the painted scenes may give a clue – any ideas, anyone? The glasswork is unmarked and the leather-covered roof and the interior fabric are still in excellent condition. Traces of cigarette smoke are still noticeable on the woodwork but the frame is generally sound, with only the door's upper hinges slightly skew. The restoration has sparked fresh interest in this valuable artefact, and its history will be looked into.

FMM SLOT CAR CHAMPIONSHIP

FMM's Slot Car Championship is steadily growing in both interest and participation. The August meeting saw the biggest entry yet for the two championship categories: despite the absence of a couple of regular competitors, no less than 27 drivers and 40 different cars took part in the evening's proceedings.

The night's action started with the second 24-minute Enduro Challenge and it was Team Bratwurst up against Team Mustang. The former consisted of Karin Ras (Audi R8 DTM), Günther Ras (Ford Zakspeed Capri), Mark Venske (BMW M4 DTM) and Michael West (Mercedes CLK DTM), and the mix of sports and classic touring cars ran out the winners by 7 laps from the quartet of 1960s Mustangs piloted by Malcolm Uytendogaardt, Mike Monk, and Franklin and Boeli Smit. But it was a close-run affair until the final stint, when Mark's Beemer pulled away from Malcolm's Muzzie.

Then it was down to business with the championship rounds. Twenty cars were race-ready for the Touring Car Championship and after some

intense duels, Marius Brink caused a surprise by taking victory with a first outing with his Holden Torana. Marius finished a mere 0.13 seconds ahead of regular leader of the pack Pieter Venter's Jaguar XKR-S. Youngster Albie Venter finished third with his Porsche (934) 911, his fastest lap being only 0.01 seconds slower than Marius's quickest time. After two rounds, Pieter leads the championship with 36 points from Franklin Smit (Ford Mustang) on 32.

The Sports Car Championship field also had 20 cars in the line-up and another surprise was in store when Jackie van Wyk emerged as the winner with his Porsche 917, two laps ahead of Jon Lederle's Audi RS5 DTM. Mark Venske filled the podium places with his BMW M4 DTM, a further lap behind. Jackie set up the fastest lap of the evening to earn a bonus point. Jon leads the championship log with 34 points, with Mark second on 30.

For the September round a new, longer four-lane circuit has been constructed and the challenging layout will provide more race time for competitors.

Competitors will continue to race against each other over time-controlled heats and it will be interesting to see what a difference the busier track will have on the racing. For the rest of the year the two championship categories will remain, with classes for modern, historic and non-magnetised cars in each. Points are awarded to every competitor based on their finishing position, and a bonus point is awarded for the fastest lap in each category. Meetings are held in the evening of the first Wednesday of each month and the museum's deli offers some welcome nourishment throughout the night.



WHERE, WHAT TIMES AND HOW MUCH

The Franschhoek Motor Museum is situated on the L'Ormarins Estate along the R45 in the Franschhoek Valley in the Western Cape. Visiting is currently by appointment only – phone (021) 874 9002 to make a reservation. Opening hours are Monday to Friday 10h00 to 17h00 (last admittance 16h00), Saturday and Sunday 10h00 to 16h00 (last admittance 15h00). The museum is open on most public holidays except Christmas Day and Good Friday. Admission prices are R80 adults, R60 pensioners and motor club members (with membership ID), R40 children (ages 3-12). Guided tours are available upon request at no charge. An on-site deli offers refreshments and a selection of wines produced by Anthonij Rupert Wyne. (NB: Motorcycles and buses larger than 23-seaters should park at Anthonij Rupert Wyne from where visitors will be transported to and from the museum by charabanc.)



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MAKE A DATE

We will continually update the 2018 events calendar. To submit your club event for publication in the magazine as well as on our website (www.classiccarafrika.com) please submit details along with an image or two to stuart@classiccarafrika.com.

SEPTEMBER

1	Madiba Bay Car Show	Port Elizabeth
1-2	Kyalami Festival of Motoring	Kyalami Racetrack
2	Wheels at the Vaal	Vanderbijlpark
9	VVC Parkhurst Vintage & Veteran Day	Parkhurst
16	Piston Ring Auto Jumble	Modderfontein
22-23	Platinum Regularity Rally	Rustenburg
28-29	National Rally Classic Championship	Secunda
29	Historic Tour Racing	Zwartkops Raceway
29	Whales & Wheels Show	Hermanus
30	Blairgowrie Toy Fair	Blairgowrie
30	Distinguished Gentleman's Ride	VMC, Oaklands

OCTOBER

5-7	Rendezvous Tour Regularity Rally	Free State
6	Welkom Cars in the Park	Welkom
13	Alberton Old Car Show	Alberton
14	Peter Arnot Memorial Regularity Rally	Zwartkops Raceway
20	Worcester Wheels Show	Worcester
26-27	National Rally Classic Championship	Tzaneen
28	Studebaker Show	Irene

NOVEMBER

3	Historic Tour Racing	Red Star Raceway
11	Cape Classic Car Show	Cape Town
11	Portuguese Trial Regularity Rally	Johannesburg
25	Blairgowrie Toy Fair	Blairgowrie

DECEMBER

2	NASREC Classic Car Show	NASREC
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MONTHLY MUST-DO EVENTS

1 st Saturday of the month	Classic Motorcycle Club of Natal – Bluff, Durban
1 st Sunday of the month	Classic Motorcycle Club Johannesburg – Germiston, Johannesburg
2 nd Saturday of the month	Vintage Sports Car Club of Natal – Oribi Rd, Pietermaritzburg
2 nd Sunday of the month	Pretoria Old Motor Club – Silverton, Pretoria
3 rd Saturday of the month	Cape Vintage Motorcycle Club – Parow North, Cape Town
3 rd Sunday of the month	Piston Ring – Modderfontein, Johannesburg
Last Sunday of the month	Vintage and Veteran Club – Athol Oaklands, Johannesburg
Last Sunday of the month	Southern Cape Old Car Club – Glenwood, George
Last Sunday of the month	The Crankhandle Club – Wynberg, Cape Town
Last Sunday of the month	The Veteran Car Club of South Africa – Kloof, Durban

ON-TRACK RECORD

This year's Pretoria Cars in the Park held at Zwartkops Raceway saw the biggest turnout of spectators and vehicles on show in the event's 39-year history, with more than 15 000 people either showing off vehicles or taking in the scene as spectators. Close on 3 000 vehicles stood proud while 130 other exhibitors, food stalls and the like made for a fantastic day, underlining the growing number of people involved in securing our motoring heritage – more than 120 clubs were represented this year. Vehicles on display varied from one of the oldest motor vehicles in South Africa, a 1902 Oldsmobile, to some of the latest models, such as the 2018 Ford Mustang. To accommodate this growth, substantial changes have been made to the parking facilities and an additional access road was in operation this year.





1964 Jaguar MKII 3.4 Sedan
Olde English White with Ox Blood interior, 4 speed manual with Over Drive, 1 owner, 4 year nut and bolt documented restoration. Immaculate Condition. **R450,000**



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1937 Rolls Royce Phantom II
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1992 Mazda RX7 Roadster
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1957 Ford Thunderbird Roadster
Excellent original car with matching numbers V8 and Auto box, new soft top and 'Port Hole Window' hard top. The best of all the T Birds. **POA**



2007 Triumph Bonneville
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1960 Mercedes Benz 190SL
Maroon with Tan leather interior, ground up restoration with all new part from Germany. **POA**



1970 Mercedes Benz 280SE W108
White with Tan interior, 4 speed manual, immaculate condition. **R225,000**



1997 Ferrari F355 Spider
Rosso Corsa with Crema interior, 6 speed manual, 33,000miles, FSH, books and tools. **R2,550,000**



1990 TVR S3 Cabriolet
Dark Metallic Blue with Tan interior, 3L V6 with 5 speed manual, roadster with targa roof system. excellent overall condition. **R195,000**



1953 Willy's Jeep CJ3b
Military Green with Khaki Canvas seats, Canvas soft top, nut and bolt restoration, rare RHD. **R195,000**

**NEW STOCK
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(in restoration)

1969 VW Beetle Karmann
Convertible (in restoration)

1972 Mercedes Benz 350SL

1985 Morgan +8 Roadster

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Roadster
R 1 000 000



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R 290 000



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R 425 000



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R 600 000



1964
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Stingray
R 1 350 000



1972
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ES1800
R 720 000



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911SC
R 950 000



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SHOW & SHINING

Regular readers will know that over the last year or so we have completed a number of air-cooled Volkswagen bodywork jobs where the description often ended with “the client will assemble”. These have actually been for a single client – Generation Old School in Benoni. Scanning the results of the recent Concours South Africa we were pleased to see the Beetle we completed bodywork and paint on was entered for the outfit. And we are proud to announce that it went on to scoop a category win and highly coveted Gold award. Of course bodywork is not the only criteria and we

praise the masterful assembly and detailing that the family-run Generation Old School team put into the humble people’s car to see it finish at the sharp end of the field. It’s a pleasure to work with like-minded perfectionists and reap the rewards of hours of hard work. Though we are bursting with pride the work must continue and we’ve got a shop full of classics – yes, there are a few more VWs on the go for Generation Old School, as well as a monstrous Caddy. We’ll keep you posted on these and projects for other clients – the ups the downs and all.



Bigger is better, right? In the case of this Cadillac, it seems true. It’s another Generation Old School project and is in surprisingly sound condition. We are stripping off what appears to be the original paint layer and finding very little in the way of rust. Once any imperfections are remedied and the monster is painted, it will leave us to be put back together again.



Another Beetle nearing completion and delivery to the client for assembly. The regular amount of corrosion was removed and replaced with hand-shaped new parts. With the underside painted in the correct red, it’s time to shoot the upper body.



Remember the red splittie that looked reasonable on entry to the shop? Well, it wasn’t. Under the paint we found heaps of filler and even more fibreglass patchwork. We stripped it to bare metal, removed the botched work and made up new metal parts and panels to suit. It’s now finally ready for paint and will be done in a two-tone white/blue hue before Generation Old School assemble.



The Maserati Indy is finally in the paint preparation booth. With rust on almost every panel and holes in each crevice it has been a massive job of rotten metal removal, panel making and fitment, and even in primer it’s starting to look like the grand sports car it once was. It will be off to paint next and delivery to the client for assembly is scheduled in the next eight weeks.



This dapper-looking Volkswagen Kombi was the ratty-looking green machine Generation Old School brought us a few months back. Thankfully there wasn’t as much rust as we anticipated. Of course a vehicle of this age will have a few metal issues but we ironed them out before paint. It’s in the polishing stage and then will be fetched for assembly.



This BMW wasn’t half bad when it arrived but a new owner wants it to be the best of the best. We’ve stripped the car and are in the process of removing the paint to assess the magnitude of the job ahead. We’ll be handling the full job so once dents are removed, we’ll paint and assemble. With the outside looking fresh we are glad that the owner has decided to let us project-manage the full restoration of the cabin too.



With what seems like acres of refurbished chromework going back onto the Dodge Polara, the time is coming where the owner will be able to drive out in a real show-stopper. One lucky find was a new windscreen, a part so often overlooked in classic refurbishments and one that can make or break a build.



Our very own BMW 3.0CSi has gone into a short hibernation as getting the customer cars out takes preference. Underneath the wrapping the majority of external trim has been fitted and the locally restored seats, dash, carpet and wood veneer are ready for final fitment.



The Jaguar E-Type is starting to look like a car again as we mock up the replacement nose for fitment. It is not a case of simply bolting it onto the hinges and takes a serious number of hours to get just right. We’ve completed the cutting out of rust and replaced what were almost non-existent floors, sills and boot with new metal.

CONCOURS SA DELIVERS DIVERSITY

With cars ranging from a 1902 Curved Dash Oldsmobile, to humble Volkswagen Beetles and Ford Escorts, to the latest Ferrari supercars, Concours South Africa delivered something for everyone in August.

The intimacy provided by the unique Steyn City venue enabled visitors and exhibitors alike to mingle amongst the cars lined up alongside a scenic flowing creek. With an extremely high standard of preparation across the board, the judges had an exacting job picking a winner –

it was so close that in the final analysis a few hundredths of a percentage point separated the top three cars.

With the maths done, Ferrari enthusiast Zia Wort saw her 1989 Ferrari 328 GTS in Rosso Corsa scoop the overall win from the extremely authentic-looking 1969 light metallic blue Daytona 365 GTB/4 owned by Cape Town's enthusiast Stuart Mackay-Davidson. In third place, an equally lauded choice, was the Irish Green Porsche 911 S – a 1970 model – jointly owned by Tim Abbot and Michelle Hambly.

The list of class winners was drool-worthy – like the Dr Frank Snyckers 1934 Rolls-Royce Phantom II, Chad Wentzel's 1958 Chevrolet Corvette restomod, the Porsche 356A of Kirsten Venter, Marek Letowt's BMW M5, Anton Roux's '63 Chevy Impala convertible and a 1960 VW Beetle entered by Wynand Strydom. Other standouts included a freshly built 1965 Alfa Romeo Giulia Sprint GT, a 1990s Opel Kadett GSi Superboss and of course a mind-blowing line-up of six Ferrari Daytonas organised by Ferrari specialists Pablo Clark.

Winner of Concours South Africa 2018 was this 1989 Ferrari 328 GTS owned by Zia Wort (right). With Zia is Mrs Carolyn Steyn of Steyn City and Greg Marucchi of Concours South Africa.



The immaculate 1969 Ferrari 365 GTB4 Daytona owned by Stuart Mackay-Davidson and second overall at Concours South Africa 2018.



Classics from the '60s – Alfa Romeo Sprint GT and Ford Escort Mk1.



Oldest car at Concours South Africa 2018 was this Curved Dash Oldsmobile, a 1902 model.



This Irish Green Porsche 911S from 1970, owned by Tim Abbot and Michelle Hambly, was third overall at Concours South Africa 2018.



This 1959 Corvette restored by Wynand Strydom was a class winner at Concours South Africa 2018.



SCOTTBURGH SHINES

Glorious blue skies and sunshine formed the backdrop to the ninth charity Scottburgh Classic Car Show at Scottburgh High School in July. Morris was the featured marque and 27 examples of the brand put on a colourful display – dominated of course by the popular Morris Minor. Twenty-four car clubs were represented, bulked up by many other individual exhibitors and a strong contingent of Gauteng-based MGs. Two hours of moving parades kept the masses occupied with a highlight being the 'Fun & Fashion Parade', with a dose of song and dance and glamour – 10 models, including Jewel of the World pageant titleholder Neena Bezedenhout, arrived in some great cars. For good measure the organisers added music from the 1950s and '60s as well as a beer and tea garden and a number of formation fly-pasts by a Tiger Moth and Chipmunk to keep the 4 000 show-goers entertained. The 2019 show takes place on 7 July – make a note now.





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SA GP ALFA ROMEO COMING HOME

When the hammer fell on the ex-Richard Shuttleworth Alfa Romeo P3 Tipo B Monoposto during the Bonhams auction at the Goodwood Festival of Speed in July, it sold to an American collector with an invitation to return the car to South Africa where it raced 82 years ago. The Grand Prix Alfa Romeo raced in the 1936 South African Grand Prix and is confirmed to return to East London to participate in the South African Historic Grand Prix Festival on 25 November 2018.

Alfa Romeo built just 12 of these fabled grand prix machines in 1934. This particular car was a thirteenth car built by Scuderia Ferrari and supplied to Richard Shuttleworth for the 1935 racing season.

When the Alfa arrived in East London in 1936, it was about as exotic as they came: a straight-eight-cylinder twin overhead cam, twin supercharged engine, split differentials at the back, and single-seat configuration. And weighing just 750kg, it was fast. The state-of-the-art car became the grand prix standard and they consequently remain in huge demand by collectors and enthusiasts as fast, reliable and imminently usable pre-war machines in the world's best historic events.

While the Alfa somersaulted spectacularly out of the 1936 race, seriously injuring Shuttleworth, the distinctive roar of its straight-eight will be a mystical experience alongside the East London

coast on parts of the very tarmac it occupied 82 years ago. And while there won't be time for its new owner to fit its optional two-seater body for the tour down to Val de Vie the following week, the Alfa should be a thrilling driving experience in single-seater form on some of South Africa's most spectacular roads and scenery.

The South African Historic Grand Prix Festival has assembled over 20 pre-war cars from 25 November to 2 December, including the 1934-winning Maserati 8CM, Bugattis, Rileys, Talbots, MGs and two ERAs. Get your tickets early for this momentous event at www.sahistoricgp.com. You can follow updates on Facebook – SA Historic Grand Prix Festival.

TAKE CHARGE

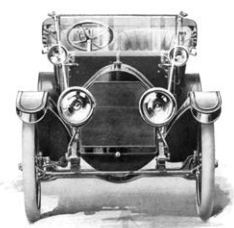
Winter makes us appreciate the role electricity and energy plays in our lives. Without it, we would have a tough time staying warm and that hot cup of coffee would be hard to make. With the sun rising late and setting early, days would be darker. And, of course, driving most of our classics wouldn't be possible either.

1. In 1799, the Italian physicist Alessandro Volta created a battery by stacking layers of zinc, silver and soaked board or cloth on top of one another. Debate abounds as to whether it was the first man-made device to generate electricity, but what is regarded as gospel is that it was the first to emit a steady current. The honours of first could go the way of a clay jar discovered in Iraq in 1938. Believed to be 2 000 years old, the jar contained an iron rod surrounded by a copper cylinder. When the container was filled with vinegar, it produced up to two volts. Theories still exist about the artefact, so until the true purpose of this prehistoric find is established, the exact origin of the battery remains a mystery.
2. Volta's battery was called a Voltaic Pile, with its bottom and top plates acting as positive and negative terminals. In honour of his constant current, the unit of electromotive measurement is today known as the volt.
3. In 1859, the first rechargeable battery was created by French inventor Gaston Plante. His lead acid technology is still used today to start most internal combustion engine cars.
4. The invention of batteries enabled manufacturers to produce cars with electric

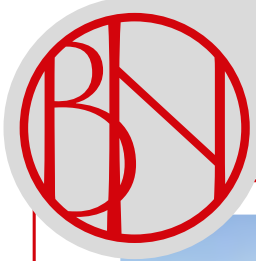
starters. The 1912 Cadillac was the first vehicle in the US to sport such a starter. It was developed by Henry M. Leland and Charles Kettering at Cadillac after an engineer at the company was killed when a car's mechanical starting crank hit him on the head.

5. The first South African automotive batteries were made by First National Battery in 1931 and the company launched the nationwide Battery Centre network, with its first branch opened in Bloemfontein during 1969.
6. Raylite batteries have been leading the local way and today 100% of South African car manufacturers use them.

What will the future of car batteries look like? With more hybrid vehicles on the road, Raylite batteries are paving the way for enhanced battery performance for these cars. Designed for stop-start cars, the batteries use new processing techniques that improve charge acceptance. They deliver more than 10% cranking current, three times longer cycle life and a nationwide guarantee – and are of course available from Battery Centre nationwide.



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LAP OF NAMIBIA

The 2019 Lap of Namibia organised by Classic Car Events is a go and will take place between Sunday 5 May and Friday 17 May 2019. The trip departs from the Lanseria area of Johannesburg and follows a set route to Upington, with points of interest and accommodation along the way. Entries are limited and filling up fast so the time is now to put your name on the list.

Contact Roger Pearce on roger@afriod.co.za for more information and to enter.



DURBAN DELIGHTS



Durban Country Club was host to the inaugural Concours d'Elegance Durban on Sunday, 12 August 2018 with an impressive array of immaculate vintage and classic vehicles. Added to the festivities were fashion shows, live music, food trucks and VIP champagne lounges. Envisioned by John Aritho and Avish Maharaj, who share a love for elegant vehicles and timeless machines, this event was created from pure passion and a love for quintessential style. Cars were meticulously judged in line with international standards and competed for both class and the prestigious 'Best in Show' award. And it was all for a good cause with funds raised going to TAFTA, an NPO that serves the needs of Durban's elderly residents. A truly great family day out hosted in the heart of Durban.

BEST IN SHOW

- | | |
|------------------------------------|-------------------|
| 1. 1957 Rolls-Royce Silver Cloud 1 | Paul Jorgensen |
| 2. 1959 Mercedes-Benz 300SL | Connie Oosthuizen |
| 3. 1990 Toyota TwinCam | Fonnie Nortje |



CHARITY-DRIVEN

The Knysna Motor Show, sponsored by Sanlam Private Wealth and held on 29 April 2018, was a phenomenal success. Not only was a high standard of awesome cars and motorcycles on display, but a record crowd of more than 8 000 people attended and ensured organisers could donate R116 000 to charity. Those who benefited from donations included Knysna and Sedgefield Hospice, Knysna Animal Welfare, E-PAP, FAMSA, and more. Over the past eight years the Knysna Motor Show has donated in excess of R500 000 to these charities. The 2019 Knysna Motor Show will be held on Sunday, 28 April.





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LABOUR PAINS

Having the keys to an Alfa as you begin your motoring life has been a rite of passage for most petrolheads in SA. And last month's feature on the GTA replica was a reminder of the trials and tribulations that go with one bought and run on a shoestring, says **Graeme Hurst**.



“**A**lfa owners are like women with childbirth,” my brother Andrew often likes to gleefully remark whenever my youngest brother Kevin and I rekindle our youth with the purchase of one these famous Milanese products. “They forget the pain they went through last time round!” His view comes from observing the fun and games Kevin and I had as students with our respective Alfa Juniors on the family driveway. (Where they were usually sitting on axle stands, of course.)

I like to think that Andrew's perception is largely because he never went the Alfa route, so missed out on the unrivalled thrills an example of the marque can deliver on a good day. However, I should perhaps add that he's a commercial airline pilot, so quite a precise sort of guy: when he pushes a throttle, he expects plenty of thrust on demand and no ominous indications from the lights and gauges on the cockpit panel.

A non-functioning engine seemed to be a popular entry point to Alfa ownership on a tight budget, as it turned out, after I spotted a rather scruffy 1750 GTV on offer at a dealer in Bellville for three and a half grand

Or for critical components to suddenly call time mid-journey, for that matter!

Naturally, those are entirely reasonable expectations when behind the wheel of a car, too. Except, of course, when that wheel is attached to an Alfa Romeo. Especially a tired example run on a student budget nearly 30 years back. It was around then that I first got the itch to own one of these Italian beauties, following the tuning antics with my Cortina bakkie which had started sounding distinctly Alfa-like after I installed a set of side-drafts.

The Alfa Romeo seed had actually been sown much earlier – almost from birth as it happens – after friends of my parents bought a GT Junior out of the box when I was a few months old. And as the family photo album attests, even at that age I fancied myself as an Alfa driver. Evidently I also regarded myself as a bit of a mechanic of the marque after attempting to emulate my late dad Peter's efforts at panel beating the Giulia Super, which he bought when only a year or two old, shortly afterwards. Family legend has it that after watching him repair a dent on a rear door, I proceeded to do the same to the other door!

The 1600 Giulia was a fixture of my early years and various holidays, when it was often hitched to a glider trailer (yes really!) and had the boot filled with camping gear. It was our primary transport for the best

part of a decade, going round the clock at least once and – despite my own later experiences – proved to be utterly reliable. After it went to a new owner in the early '80s, my Alfa exposure was limited to lifts in a family friend's Aflasud Sprint. Until, that is, a school mate bought a Giulietta with a seized engine. Despite the alleged complexity, the unit was straightforward to rebuild and he was soon the envy of our petrolhead mates.

A non-functioning engine seemed to be a popular entry point to Alfa ownership on a tight budget, as it turned out, after I spotted a rather scruffy 1750 GTV on offer at a dealer in Bellville for three and a half grand. When I turned up just as they were shutting up shop on a Saturday, the Alfa was parked round the back with a tow rope attached to its front. Story went that it had been loaned to a customer that morning, but less than half an hour later the bloke had called from a ticky box to say that the engine had 'gone'. The dealer had other fish to fry on his forecourt and just wanted shot of the car as is for what it owed him.

From memory that was two grand, which I happily shelled out on the spot. That Monday my mate Alan Dike and I skipped lectures to haul it back home. Only the engine seemed to spin over fine and Alan quickly noticed that those 40DCOE carbs I craved to hear gurgle were bone dry... hmm. A quick trip with a Coke bottle to the Caltex across the road and the 1750 fired up instantly!

Half in shock at the ease with which I'd outwitted one of Bellville's finest and half



fearful that he would renege on the deal, I hit the loud pedal and got out of there. Only the dealer had the last laugh that day: one block later Alan pulled over and suggested stopping in at a neighbouring jet wash place to degrease the engine in preparation for an attempt at roadworthy.

All very well on a modern, but not such a clever idea on something with Italian electrics and a non-standard (as it would turn out) distributor cap, which the jet wash operator accidentally put on 180 degrees out after removing it to dry it. Try as we might, the 1750 GTV would not start and so it ended up leaving Bellville on a tow rope after all.

With the cap switched around we soon had the twin-cam running and it went like the clappers. Turned out it was a 2-litre motor, with the loss of the pukka 1750 item possibly related to damage on the chassis rails, and the sump likely being the first victim of whatever the car went over at some point.

That damage was just one of many scars, as I discovered when a crack developed in the boot lid. Various others followed as copious quantities of filler started falling off the right rear wing during the first few months of ownership and the Alfa soon became known as the 'Armadillo car'. A digs mate talked me into cutting off the rear wing and welding on a better version from a scrapyard. Trouble was our welding skills meant the replacement item required only marginally less filler to get it looking like Bertone intended!

Bodywork issues aside, I was quickly addicted to the way it drove (and sounded) and my passion soon wore off on Kevin, who bought a Junior as his first car. He opted for one of the unique-to-SA late model 1600s – a 2000 GTV body with the smaller engine. His Alfa didn't sport the same quantity of filler but had endured a hard life mechanically. While I learnt Alfa Bodywork 101 on mine, Kevin studied Engine Rebuild 101 on his after the motor ran a main bearing. Of course it didn't do that on the driveway but rather as he approached Colesberg en route to Joburg during one varsity holiday.

The expedition to retrieve the car with my bakkie turned out to be the first of two Karoo recoveries for Kevin. On the next trip up (each holiday he had to work in Joburg for his bursar), with a freshly rebuilt engine, the Alfa's propshaft vibrated like hell and damaged the gearbox by the time he hit the Reef, necessitating a rebuild on that front while there.

Some weeks later he set off back to Cape Town, complete with his girlfriend and her cat in tow. All went well until some distance this side of (the now familiar) Colesberg, when the oil pressure suddenly plummeted and a loud knocking developed under the bonnet. The added aural entertainment was thanks to a big-end bearing (a victim of the propshaft episode) disintegrating, allowing the associated piston to

meet the cylinder head for the first time.

On this occasion, no family needed to get involved as a couple in a passing 3-litre Ford Courier offered to haul him to Beaufort West. With no tow rope (yes, he was driving an Alfa across the country, I know...) Kevin used the Alfa's seat belts to hitch the car up and off they went. Evidently that lash-up did the trick – the couple were so impressed with his car control that they held up a note in the back window (which thanks to the seat belt arrangement was close enough to read) that said: "Carry on to Cape Town?" as they passed through Beaufort West.

And that's precisely what they did for the remaining 450km, arriving home sooner than the Alfa could've managed under its own power – and with fuel left in the tank. And the cat fast asleep on the back seat. It was such a comfortable journey that it's no wonder Alfa die-hards forget the pain of ownership. 📺

The couple were so impressed with his car control that they held up a note in the back window (which thanks to the seat belt arrangement was close enough to read) that said: "Carry on to Cape Town?" as they passed through Beaufort West

BIG CAT COUNTRY

By Robert Peché



“I really don't like the fried-egg headlights. I also have *no* idea what he was thinking, buying a so-called family car with cream leather that doesn't fit in normal parking spaces and can't take a pram in the boot.” – Mrs Smit

Quintin Smit isn't the first man in history to see his pride and joy receive a less than enthusiastic reaction from his better half. It seems unlikely that a more original XJR exists in South Africa. The tools are still in their factory packaging. The door sills, astonishingly, still have their blue protective plastic films. There is genuinely not a single mark on the magnificent cream interior. The preserved state of this car is more due to exceptional care by each of her owners than lack of use, which makes it even more special.

To be fair, the family car game has moved on since the days of executive saloons. The MPV started the trend of large family cars and the SUV perfected it. Super SUVs have replaced super saloons on our roads. These cars have loads of space for the pram and the entire family, unless you buy a look-at-me SUV with a sloping rear roof.

Even worse, the average consumer has gone against traditional petrolhead folklore by declaring that there is in fact a replacement for displacement – small, turbodiesel engines.

Yuck.

The preserved state of this car is more due to exceptional care by each of her owners than lack of use, which makes it even more special

No doubt about it, then: this five-metre-long 4.0 supercharged V8 Jaguar XJR is an endangered species. She's a throwback to a time when golf was what executives played on Saturdays, not what they aspired to drive. Just as well, perhaps, because a golf bag is probably the only thing that will fit in the exceptionally shallow boot. We can't dispute that criticism from Mrs Jaguar.

Love them or hate them, the four small headlights define the front of this car. The enormous grille could devour your Korean hatchback whole, while the growler emblem suggests a strong willingness to do so.

If you have ever had the pleasure of owning a kitten, you will instantly recognise the side profile of this car. Low and sleek, the Jaguar stalks its prey around every corner. The rear is even prettier, with sculpted taillights rounding off the boot. This is a design study in muscular athleticism.

But don't mistake this car for a muscle car, even with that V8 badge. This cat kills silently, perhaps slightly disappointingly. The current Jaguar model range includes some of the angriest-sounding cars that money can buy. The previous generation of Jaguar drivers preferred silencers on their guns. If you want a V8 that scares the neighbours, this isn't it.

The XJR does have a sport button, but the only noticeable effect is that the automatic gearbox shifts at higher revs. Bad behaviour is almost impossible; the box won't let you rev above 3000rpm in park or neutral.

Almost impossible.

Have you ever used a laser pointer to send a red dot dancing along the floor in front of a cat? All hell immediately breaks loose. The

same happens when this predator sniffs a sweeping bend.

With the whining supercharger the only clue to her prey that the end is near, she simply defies physics. It cannot be possible that this almost-20-year-old grand piano can dispatch corners with such poise and grace. But she does.

Although we didn't take the car on a track to truly test the limits, in real-world spirited driving conditions there is absolutely no body roll. The car genuinely feels no bigger than a 3 Series and the steering gives plenty of feedback. All but the hottest hatches are sent home for a cold shower, without a drop of your tea being spilt.

As we head back into urban conditions, Hyde hides and Jekyll reappears. We are now in a stately, highly respectable Sunday car – the same one that was ripping apart mountain passes just a few minutes ago. The magnificent cream and wood interior doesn't so much as hint at the fury that was unleashed in the mountains. Nobody looks twice as we swoosh along the streets of Somerset West. The wild cat has reverted back to a house cat, daintily licking her paws after her meal.

In the modern world the XJR is ironically unpretentious, despite her original market position as a car fit for royalty. Amongst shouty hatchbacks and vulgar SUVs, the Jag is quietly confident. Instead of accelerating, she simply teleports you from A to B. The experience is almost surreal.

In 1999, this car would have screamed status. In 2018, she merely whispers it. Like most truly successful people, she just wants to blend into the crowd, with nothing to prove to anyone.

After a fantastic morning, it was time for a catnap. She's earned it. 🐾



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CANON FIRE

Hi Stuart,

First of all, I must congratulate you on a fantastic magazine, full of reading pleasure from cover to cover.

The article a few months ago on the unpublished photos sent me delving into my archives as I remembered that my late brother, Gert, took these photos at Kyalami. He had just bought a new Canon with a motor drive and we were sitting at Jukskei Sweep when this crash happened. I think he got a great sequence of shots.

Please feel free to publish it. Keep up the good work!

Regards,
Ivan de la Rey

Thanks for the kind words, Ivan. It is not all me as I am extremely lucky to have a team of contributors and faithful readers that keep the stories and ideas rolling in – just like your submission of your brother's photos. This Sarel vs Ian Scheckter crash is arguably one of the most famous race incidents in local motorsport history and is even credited with having killed off the Manufacturers' Challenge. Whose fault it was will be an infinite debate amongst fans and I doubt either of the drivers will take any responsibility. I've seen the video of it, as well as some photos, but nothing anywhere near as clear as these shots. Thank you, these are a brilliant record of the action and testament to Gert's skills behind the lens.

Stuart



MASERATI COINCIDENCE

Hi Stuart,

On the same day that I read the article 'Pre-War Passion' on the 1939 South African Grand Prix in April's issue of *Classic Car Africa*, I visited the excellent Louwman Museum in The Hague. A photo on page 40 of the article shows Pierro Taruffi's Maserati (#8) partly obscured by Howe's ERA.

The museum has this Maserati 8CM Monoposto built in 1933 and with a South African connection on display. I initially thought it to be the car in the photo, but it appears not to be the case. The museum's Maserati was raced by the legendary Tazio Nuvolari, winning the 1933 Belgian Grand Prix. Nuvolari then sold it to Taruffi, who converted it to a two-seater and took it to South Africa, apparently in 1936, to participate in the South African Grand Prix. Here he sold it to a local racer, Bill Roderick, who raced it in the 1937 Rand Grand Prix and the 1938 South African Grand Prix.

After the museum acquired it, it was restored back to single-seater ('monoposto') configuration. Unfortunately, it appears that the museum has no plans to bring it back to its old hunting grounds for the 2018 Historic GP Festival!

Regards,
Andre Stemmet

Brilliant coincidence, Andre, and I am glad to hear the magazine is travelling with you – did you read it in hardcopy format or digitally on a tablet or the like? The Louwman Museum is apparently an exceptional place and must be added to any car fan's bucket list. Thanks for the interesting information on the Maserati and its South African connection. I have managed to find an R.H. Roderick (of Bloemfontein) in a copy of the 1937 Rand Grand Prix (Lord Howe Circuit, Johannesburg) programme. I presume this is that same person, however his entry for

this 30 January event was a 2600cc eight-cylinder supercharged Alfa Romeo and not the Maserati. Sun on the Grid also makes mention of Mr Roderick in an Alfa and not Maserati during this period. It does, however, mention a 2905cc Alfa that was converted from monoposto to two-seater following the death of its driver, R.O. Shuttleworth. Fascinating stuff! I will continue to look into the details surrounding the Maserati. Thanks for continuing to spark the ideas.

Stuart



KRUGER CAPTIONS

I really enjoyed your historic pics in the August CCA on the cars in the Kruger. Hopefully I can help with some of the vehicle identification, these could help to date the photos.



Page 28

Left pic: The car in the front is a '47/'48 Plymouth, behind it is a 'step-down' Hudson circa '48, on the left behind the lions is a '49/'50 Ford V8.



Right pic: '47/'48 Chrysler Windsor.



Page 29

Top left: This must be one of the lesser-known American makes, possibly a mid-1920s Overland. I'll do more research and get back to you.



Top right: Hudson Rambler circa '54.



Bottom right: The car right in front is a '49/'50 Ford V8, followed by a '47/'48 Chrysler Windsor, a '47/'48 Studebaker, with a '48 Buick back left and '48 Pontiac back right.



Page 30

Top: The station wagon in the background is, as you suggest, a Peugeot 403.



Middle left: Peugeot 403, behind it is a Studebaker Lark Daytona circa '64, in the centre is a Simca 1000 circa '62.



Middle right: The car behind the Austin Seven is a Buick circa 1925.



Bottom left: Chevrolet circa 1938.



Bottom right: The dark car behind the Beetle is a Ford V8 or Mercury circa '48.



Page 31

Top from left: Zephyr circa '53, '49/'50 Chevrolet, Morris Oxford circa '52 and Austin A40 circa '48. Great stuff!

Kind regards,
Derek-Stuart Findlay

Hi Derek, thank you for adding to Graeme's Kruger story. Our combined knowledge of some of the periods is a little lacking so we welcome information and memories from all corners. If we've still missed some of the vehicles' identities, I ask that the readers keep the emails flowing. The images shown are brilliant and all that has been on my mind since then is organising a tour to the Kruger Park with some classics to recreate the scenes. Who is up for it? I think I'd go with a Zephyr or brown Peugeot 404.
Stuart

CARBS & COFFEE – CARS OF THE KRUGER



As everyone knows, we Kapenaars have been enduring the worst drought in 100 years, but thankfully the typical wet Cape winter has now hit with a vengeance. And while that may mean showering over a bucket will soon be a thing of the past, it's made driving – and even working on – old cars a tad unpleasant lately. Far better to stay indoors and plan a trip or two says **Graeme Harst**, who did just that while sipping his coffee, and ended up stumbling on some amazing period car-related images that local tour operator, Bubesi Tours (www.bubestours.co.za), hunted down.

These were the times I was born (parented for as in a national treasure that, for most of us, featured in our childhood as scenic postcard. Possibly more than once. I've never been there as an adult and can never appreciate the effort (spiteful!) it takes to be revealed with the light of a sunset with his kill in a tree or – even rarer – a chameleon at full speed.

But as a kid, visits to the Kruger Park felt immensely boring to be honest... unless something unusual or different was rolling, but impala and the odd zebra in the distant

have while we three boys peered for an in the warmer heat in the back of our family Ford Transit. And of course whinned the usual "we're nearly there yet!" about the camp we'd only left two hours before.

The car's entertainment was getting a light with my two brothers over whose turn it was to sit between the front seats on "booked" (usually reserved by my dad arranging his arms behind him to "see" whoever he could). That and identifying the cars we were trying to yell out (and score) Ford Granada or Opel Commodore (debatable points for something obscure like a Citroën, triple for

a Landro from the shape of the lights in the distance was way more exciting than spotting a kudu enjoying its last meal as the wild in the distance started to get harassed. These trips certainly held their fair share of adrenaline trade, the memories of which were made richer after stumbling upon this treasure trove of pics that pretty much span the life of our magnificent national game reserve which was formalised in 1936. We've had a great old identifying some of the cars but welcome reader input into those we can't name or any from-related related memories and photos you may have!



One for 1940s & '50s car nuts... is that front car a Dodge? We reckon the rear hatch could be a Hudson, while the central chrome grille ornament on the TP (Pontiac) placed car to the left is a bit Studebaker but we're not entirely sure. And how about that canvas water cooler bag... remember those? Doubt it would be very effective at these sort of occasions.

Another 1940s & '50s car... want to say Cadillac but it's probably not big enough. The '50s registration was from Barbiston, so not all that far, and this could even have been a day trip to the Park. This may explain the '50s focus on the gear to the right. Cape and Ouma in their Sundae best perhaps?

THATCH MORRIS & THE KRUGER

Hey Stuart,

I too remember the Morris Minor with the thatch roof that Chris Jewitt mentioned in the August issue. It was a regular sight in the Kloof/Hillcrest/Botha's Hill area in the early 1950s. It was driven by a heavily bearded man by the name of Cox. Originally it was a low-light convertible – you can still see the roof bows in the picture. I seem to recall that Mr Cox was involved with an experimental hydroponics farm near the Rob Roy Hotel. Interestingly, it preceded the Ford Anglia with the reverse-slant rear window!

I think I recognise some of the cars in the Kruger Park article in the August issue.

Page 28

Bottom left: The front car is a Plymouth, followed by a Hudson. The car to the left is

a Ford V8 and the one at right angles behind it is a Buick.

Bottom right: The car is a Chrysler.

Page 29

Top right: The car is a Nash.

Bottom right: The car is a Chrysler, and correct, it is followed by a Studebaker. Further back is a Buick and a Pontiac.

Page 30

Middle left: Peugeot 403 is correct, ahead of it is a Studebaker Lark or Daytona and to the right a Simca 1000.

Bottom left: The car is a Chevrolet.

Page 31

Top: Middle car is a '49 or '50 Chevrolet. Morris Oxford is correct and the car with the boot open is an Austin A40 Devon.

It amazes me how you continue to publish so many interesting articles. Congratulations!

Regards,

Colin Downie

Hi Colin, outstanding memory, thank you. I will forward your mail on to Chris Jewitt and I am sure the mention of Mr Cox will stimulate even more memories. Chris got the 'eccentric' aspect right as I am sure the use of hydroponics wasn't

exactly mainstream back then. Also thank you for the captions to Graeme's Kruger Park article – I will add these to the other submissions we have and come up with a comprehensive list in the next issue.

Stuart

BOOKS AND BIG BANGERS

Dear Stuart,

It was most kind of you to drop off my copy of Greg's latest book personally. I do appreciate your effort. From a quick glance it looks like money well spent. It will be a great read and facilitate, as Greg's other books have done, a recollection of all those days in my childhood spent at Kyalami and other tracks. Great too that the book is signed by Greg. I wasn't expecting that.

On one page I spotted a picture of the shy John McNicol. His mechanic worked during the day for the construction company where my father worked, in Wynberg on the edge of Alexandra. I spent many afternoons at the track and watching the car being prepared and remember all too well that fateful day when McNicol was set to win the combined F1/F500 Championship (as it was then) after John Love, the other contender for Championship honours, had sportingly allowed the race to be delayed due to a chassis weld breaking on McNicol's car –

a Lola. All was going well until a different fault caused McNicol to cannon into and turn upside down against the bank at Jukskei Sweep. The car was wrecked and the Championship was lost, but McNicol survived and went on to race a McLaren F5000 car that has since been restored. I was stunned and delighted to see it in bright yellow, the colour McNicol favoured, in the pits and doing slow demo laps at the Passion for Speed last year. That would be a great story for the mag.

All good wishes.

Roger Wicks

Hi Roger, yes, Greg's latest book is a must-have for any collector of SA motorsport memorabilia and history. And hats must go off to the suppliers of imagery as it is mind-blowing stuff; the colour shots bring it to life for those of us too young to have been there live. The F5000 you saw is still in South Africa and was restored by another legend, Andrew Thompson. Good idea on the story, I will follow this up with the owner and builder. It must have been fantastic to see such brutal race cars being piloted at full-tilt. Hopefully the arrival of more restored historic single-seaters in the near future means my generation might well be able to see them being given 100% on track. Thanks for all the support.

Stuart

HEY DELAHAYE

Hi Stuart,

With reference to the picture sent in by Ken Stewart, I can advise that this car is now in Australia. It came into my workshop in about 2008 in a rather sorry state. It was then restored and eventually went to the new owner. I have his contact details if anyone is interested.

In Ken's image you can just make out the number plate, being NU 5342. I've attached an image of the car at a VCC gymkhana at Botha's Hill near Durban. This was in 1968. Whether the youngster fell out as the suicide door flew open I can't say! But you'll see the matching registration number. There is a rather long and convoluted history attached to this car. It is unfortunate that it had to go to Australia, where it is in an enthusiast's collection (which includes another Delahaye).

Included here are a couple of before-and-after pics. Not

visible in the before pic is a square hole in the fender where a pick had been driven clean through the metalwork!

Hope that this bit of history is of interest.

Regards,

Chris Jewitt

Hi Chris, fantastic addition to the image sent in by Ken Stewart and published in the July issue. I will pass on your details to Ken, should he wish to make contact with the current owner. I would love to hear the full 'long and convoluted history' as well as to chat about how to restore such a rarity and why a pick was used on the vehicle,

so will also be in touch. And perhaps a reader will know if the youngster (probably now 60 years old) managed to stay in the car. Thanks for keeping the interest alive.

Stuart



THEFT OF A CLASSIC CAR

Hi Stuart,

Firstly, thanks to you and your team for an excellent publication, something I look forward to every month.

In your 'Editor's Point of View – Expose Yourself' in the June issue you point out that regular use of old cars does them the world of good. Good advice, but be careful you don't expose your classic to theft. Regular use of your 'rusty old banger' may not be a problem but your classic attracts the attention of the traffic lemmings as well as the thieves.

Up until 1 August 2018 I was the proud owner of a mint-condition Leyland Mini Deluxe MkII DSK683GP, which I purchased new on 25 August 1975. (See attached photo.) Over my 43-year ownership of the Mini, it had only covered 38 000km. Apart from an imported set of Minilite mag wheels, it was totally original and was always kept garaged. After a spell of short-distance weekly use from 1976 to 1999 (during which time it covered 20 500km), it was only taken out for high days and holidays, club runs and show days. Everywhere I went I was greeted with waves, smiles and offers to purchase. On more than one occasion I was asked by young children if I was Mr Bean! I kept the Mini over the years with the express intention of driving it in my retirement. We recently moved into a retirement village and on the Mini's second outing, it was stolen in Northcliff, Johannesburg.

Statistics show that there is an extremely high risk of car theft in Johannesburg. Some 27 000 vehicles were stolen in Gauteng over the past 12 months, with Gauteng accounting for more than 50% of the national theft figures.

My Mini was locked and fitted with a crook lock secured between the clutch pedal and the steering wheel. Clutch and steering immobilised, the vehicle cannot be driven – or so I thought. It was stolen within 30 minutes of being parked outside the front door of a nursing home. Interestingly, it was in full view of workmen laying cables along the pavement, but like Manuel in *Fawlty Towers*, they 'saw nutting'. I have been trying to figure out how the Mini was stolen. Pulling it onto a trailer was a possibility but unlikely due to the location and short time period. I searched the Internet only to find that with vehicles manufactured prior to 1990, a flathead screwdriver and hammer work as efficiently as a key. Enter door, remove crook lock, turn ignition and drive away. Simple!

What are the chances of recovery? Pretty slim I would think. Vehicles without tracking systems are generally only recovered after they have been trashed and abandoned. The Mini engine number, VIN and manufacturer's details are hard-stamped onto removable metal plates. New registration documents are available from corrupt licensing officials. Being a classic, the vehicle is valuable and will probably receive a new identity and be sold to an unsuspecting new owner. It could even be shipped to Europe where original, unrestored, rust-free classics command top dollar, Euro or Pound.

The moral of the story: Run your classic to keep it healthy but do not park it in an unsecured area, particularly in Gauteng.

Regards,
Colin Alvey

Extremely sad and disturbing news, Colin, but thank you for sharing and reminding us to keep on our toes. Classic thefts seem to be on the rise. I lost a more modern classic (1984 Mercedes-Benz 190E) in December last year from Greenside, Johannesburg – despite being left-hand drive, sporting a roll cage and being fitted with race tyres. Not a word has been heard in eight months and we suspect it has either been chopped into a million bits and the engine used or it has crossed the border. It was parked on a very busy road in a dedicated parking space with numerous guards around but, as in your case, nobody saw a thing.

So do we keep using them? It's a difficult situation. I enjoy driving them too much to hide them away. So my only consolation is that the more I am seen in the old car, the more people will realise something is wrong when a new driver is behind the wheel.

We have posted the details of your car to our followers on various social media platforms and will keep our eyes peeled and ears open for anything that could help in the recovery of the beautiful and sentimental Mini. A sad day.

Stuart



POPPING THE ELECTRIC BUBBLE

Hi Stuart,

Further to the recent article on Messerschmitts and the derivative FMR Tigers, I enclose a couple of pics courtesy of Jeff Benstock of the 'Cars You Don't See Anymore' UK website. These three cars have been converted to battery power and were seen in the UK in early August. The three-wheeler is a Messerschmitt KR201 Roadster and the two Tigers are rare Sport Roadsters.

If one takes into account that a rare KR201 achieved US\$103 500 at RM's Bubble Car Auction and a Tiger Coupé (admittedly a rare colour) was knocked down for a paltry US\$322 000, these conversions are pure sacrilege.

Regards,
John Rabe

Hi John, it does sound a bit sacrilegious and one can only hope the 'donor' vehicles were too far gone to restore back to original specification. It also raises the question as to what the future holds for petrol cars and if electric conversions are the way to go in countries that are moving towards a ban on high-emission cars – a number of European cities look set to stop classics running around the CBD in the very near future.

While it is imperative to keep our planet as clean as possible, I just can't get my head around a silent classic. Call me biased but I still maintain an old car's carbon footprint is relatively low considering that lifespan and hands-on manufacturing processes must be incorporated into the maths...

Stuart





ACQUIRED TASTE

In May 1968, Volkswagen was forced to release photographs of its completely new 411 model to the media as the German magazine *Der Spiegel* was about to publish spy photos of the vehicle caught in testing. And so began the life of the Volkswagen Type 4, or project EA124 as it was known internally – one of Volkswagen's least successful model ranges to date, with production halting in 1974 after only 367 728 cars had been produced globally. But perhaps more significantly, it was the last ever rear-engine air-cooled vehicle produced globally with a brand new motor, gearbox, suspension and body design. On its 50th birthday, **Braam Nel** looks back at the story of the oddball Volkswagen 411.

Photography by Devin Paisley







When launched at the Paris Motor Show in October 1968, it was claimed that this was a Volkswagen like never before – and for the most part that was true. It was an important car for Volkswagen, who by this time had produced 11 million Beetles and needed to start meeting the need for a bigger, better car to take it into the '70s. This was a much bigger car than the Beetle it replaced. Its design was credited to Carrozzeria Pininfarina, who also penned the Lancia Flavia and Maserati Quattroporte amongst many others in the late '60s. If you look at the three cars now it's clear they were styled by the same hand – very flattering for the little Volkswagen. Three body styles were available: the two-door and four-door Fastback – a first for VW – and the two-door station wagon or Squareback model, all sporting the 400L front boot with ample additional storage space for longer trips. It is that boot that led to the 411 receiving the nickname 'Coati' – a small, long-nosed creature from the Americas. The boot also gave the car its rather unique nose-high stance as the front suspension had to be able to cope with 200kg of payload in the nose.

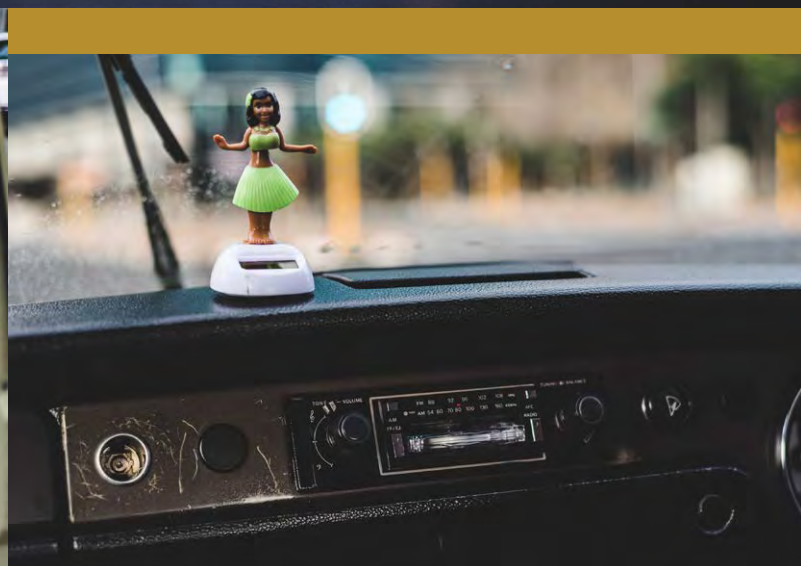
Volkswagen made the decision to retain the rear-engine air-cooled layout, which

it believed was VW's unique feature, and the company trusted that the Volkswagen faithful would appreciate the continuation of the air-cooled heritage. The motor was a brand-new design. At launch, the 411 featured a 1679cc engine (with a mere 76hp) mated to twin Solex carburetors. Unlike the Beetle, the Type 4 motor had its cooling fan mounted directly off the crankshaft, which ensured a lower deck above the engine for a lower luggage compartment floor. The motor would be used in Kombis until 1982 and eventually grew to 2000L, evolving into the Wasserboxer motor. After the launch, the Type 4 engine received Bosch electronic fuel injection, with these models identified as 'E' models, and power jumped to 80hp – very technologically advanced for a low-cost car of that time. Automatic transmission was offered as a factory option for the first time, but performance was negatively affected by the three-speed auto box.

Despite the press proclaiming that the 411 was just a bigger four-door Beetle, many innovations were brought to market, which paved the way for the company in the future. This was the first unibody construction vehicle produced by Volkswagen, where the body and chassis were not separate

elements. It also had front and rear crumple zones with a rigid monocoque passenger cell, which has become the standard on all vehicles since. Suspension was also groundbreaking: Porsche developed fully independent front suspension featuring MacPherson struts and a double-jointed arrangement at the rear with trailing arms front and back, just like that of the 911. The use of a hydraulic clutch meant that there was no tunnel in the passenger compartment and the completely flat floor added to the feeling of space inside the car. One of the most unique features fitted to European and American models was the thermostatically controlled auxiliary heating system. It comprised an Eberspächer heater fired by a glow plug which used fuel from the fuel tank to warm up the car without the need for the engine to be running. Amazingly, the heater could be activated by setting the timer (placed in the rev

Its design was credited to Carrozzeria Pininfarina, who also penned the Lancia Flavia and Maserati Quattroporte amongst many others in the late '60s



counter clock), which meant you could get into a beautifully warm car first thing in the morning. As could be expected, when not maintained properly, this system led to many 411s burning to the ground.

Disappointing sales globally led to the launch of the 412 in September 1972, the 411 having been restyled by designer Brooks Stevens. The headlight surround

was reshaped and the large front indicator lenses were redesigned. In 1974 the engine capacity was raised to 1795cc and fuel management reverted to a twin carburettor system after the Bosch system proved unreliable. But it was too little too late and with a multitude of cheaper competitors that consistently beat the Type 4 in road tests, the 412 was taken off the market in late 1974.

Having just read all this information about the 'ugly duckling' Volkswagen and its many problems, you must be wondering why on earth anyone would buy such a car. Availability of parts is virtually non-existent globally and one needs to

become a highly skilled eBay user to pick up any parts when they do pop up. Just replacing the shock absorbers took me two months and it took significant effort to finally track down an NOS set from a collector in Italy. Interchangeability of parts with other Volkswagens is also surprisingly uncommon due to the unique motor, suspension and body parts, and rubbers and bright work are obviously like hen's teeth.

I bought this 1971 Volkswagen 411L Variant about 18 months ago in Johannesburg – it's one of 34 456 Type 4s built in the Uitenhage plant, and one of only 9 960 Variant models. South Africa produced the third most Type 4s globally and was the only country to develop performance upgrades (called the GP range), developed with Basil van Rooyen. These

Availability of parts is virtually non-existent globally and one needs to become a highly skilled eBay user to pick up any parts when they do pop up



Photos are from the Type 4's 50th birthday event held in Germany. There were 30 cars from across the world at the event and Volkswagen supplied a host of factory prototypes from their museum, such as the convertible and sedan which never made it into production.

kits were approved by the factory and were available in three stages, with the stage three taking performance up to 140hp!

After an impossibly long wait, my Variant eventually arrived. Cars are never as clean as they look in the photos, but she presented really well and was complete. I loved her gawky looks and that lovely black Bauhaus-inspired interior and instrument cluster that would have made Dieter Rams nod with approval. Then there is the attention I was suddenly getting from friendly grey-haired ladies, reminiscing about how they used to take their kids on holiday in their 'Vari' with the back seat folded flat and all the kids sleeping in the back.

Sadly, the drive was less impressive: there was a huge flat spot and the fuel pump died

on my first trip into town with my wife and daughter – not a good start for the poor thing. Off she went to the Berg Motors workshop to help me sort out my long list of issues but eventually, after repeated visits and having the carbs rebuilt, clutch, fuel pump, battery, wheel bearings and shocks replaced and electronic ignition installed, I finally got to experience how she really drives and I'm seriously growing fond of her. She'll comfortably sit at just below highway speeds all day, tracking straight and true, the single-speaker Blaupunkt radio making more noise than the motor. The gearbox remains a mystery, finding second is a hit-and-miss affair and the unassisted brakes take a while to get used to but work well nonetheless.

Back to my earlier question, though: why would I buy a car that failed in so many areas, holds no real monetary value in the air-cooled market and is almost impossible to maintain?

Well, the thing is that when I saw the ad for the Variant, even at an eye-watering price, it sparked such a strong memory of carefree childhood days growing up in the Lowveld, cruising around in the back of my aunt's Variant, that after some negotiating she had to be mine. For me that's what classic cars are about – they remind us of simpler times when you would not get arrested for letting your kids sleep in the back of your station wagon. So yes, I confess that I have most definitely acquired the taste. Happy 50th birthday, Type 4. **C**

SET THE RECORD STRAIGHT

Volkswagen's Beetle might have enjoyed the occasional race and rally success (like on the East African Safari Rally) but it wasn't really until the arrival of the Golf GTi in the mid-1970s that the firm etched itself as a track star. That said, there was a successful track record attempt carried out in 1969 right here in South Africa. And as **Stuart Grant** recounts, it wasn't a Golf – or a Beetle for that matter – it was a trio of Volkswagen 411s. **Photos courtesy of John Lemon.**



On 2 August 1969 at Pietermaritzburg's Roy Hesketh race track, three 411s sporting number plates borrowed from famed Afrikaans cartoon characters Wolf, Jakkals and Adoons lined up to break the South African 24-hour endurance record, then held by Ford's Zephyr MkV. Ronnie Kruger, VWSA's PR man, teamed up with a host of carefully selected motoring journalists to pilot a pair of manuals and an automatic. Following a pit stop demonstration and a handful of exploratory laps by each driver, the action kicked off

Following a pit stop demonstration and a handful of exploratory laps by each driver, the action kicked off for real at 9am under the officialdom of the Automobile Association

for real at 9am under the officialdom of the Automobile Association.

Calculations that factored in time needed for pit stops and remedying potential mechanical gremlins indicated that in order to beat the Ford record, a lap time of 1 minute 55 seconds needed to be hit consistently. Kruger had carried out a few test laps earlier in the day and this number proved doable, even in the auto, which lapped a second or so slower than the manual cars.

From the get-go Jakkals (two-door manual) led the way, with Wolf (four-door manual) and Adoons (two-door automatic) following in formation. At 51 minutes 34.7 seconds all three broke the existing 50-mile record of 55:26.2. Jakkals then took the one-hour title, with 58.21 miles covered. The 12-hour mark came and the three men proceeded to notch off

another five records – at some point hitting a top speed of 98mph (158km/h) down the straight.

At this halfway mark Jakkals had covered a distance of 680.27 miles and added that to the list of records. From the outside it looked like plain sailing, but the reality was that the manual cars were being driven with some semblance of caution – if the clutch pedals weren't fully pushed to the floor, the synchro between second and third could be beaten and the imprecise gear selector meant wrong-slotting a cog was an ever-present possibility.

With only the 1000-mile and 24-hour distance titles left to scoop, the atmosphere was positively celebratory. But this was short-lived as the automatic Adoons suffered hub failure. Thankfully the wheel stayed on the car and the driver was able to limp back to the pit area, where a new unit was fitted. The 1000-mile record of 18 hours 49 minutes 9.7 seconds was smashed at 17:43.37.8 and without any issues, the three



"Wolf", the four-door, three-wheels around Quarry Curve with Ronnie Kruger, VW's then public relations manager, at the helm. Below: Jakkals, the two-door, rounds Angel's Angle.



"Adoons", the two-door automatic, and "Jakkals", the standard two-door, chase one another through Quarry Curve. Note the tortured tyres. Pictures courtesy of John Lemon.

To the man who said he'd eat his hat before he bought a Volkswagen...

Bon Appetit!

The BIG, irresistible VW411

As you thought that Volkswagen was for you, think again. Now you're on the road. The car you've always wanted. The car you've always needed. The car you've always dreamed of. The car you've always wanted. The car you've always needed. The car you've always dreamed of.

Available in a range of four: 2-door, 2-door de luxe, 4-door de luxe, 4-door de luxe automatic. Prices from R2,150 (From R93 Sales Tax).

Record-breaking BP Super Enerjet does it again

Volkswagen 411 sets new 24 hour South African Distance Record* on Alkylate-boosted BP Super Enerjet petrol.

At Roy Heeseth Circuit on 2nd August at 0900 a standard VW 411 took off with its tank filled with new BP Super Enerjet containing ALKYLATE. 24 Hours later it triumphantly crossed the line to set a new official South African Distance Record of 1342.72 miles.

Give your car a "Tankful of Take-off!" - Now available for all motoring enthusiasts at the BP Super Enerjet pump.

Record-breaking BP sets the pace

*Subject to official confirmation

Volkswagen choose Castrol Super 20W-50 to break the 24-hour South African National Record

Castrol Super 20W-50 with Liquid Tungsten cuts down oil consumption

At Roy Heeseth Circuit in Pietermaritzburg, August 2nd and 3rd, 1969, Volkswagen chose three Model 411's to drive an automatic against time and distance. On this, the toughest track in South Africa, with severe weather conditions that necessitated an extra manual gear change on four, these three cars prepared to shatter the existing 24-hour South African national record.

And to help assure the best possible performance, Volkswagen chose Castrol Super 20W-50 with Liquid Tungsten. 24.8 hrs @ 1,342,720 Miles. Result: All three cars smashed the record. And each car used less than one pint of oil. Proof, again, that Castrol Super 20W-50 with Liquid Tungsten cuts down oil consumption.

Driving on-site for 24 hours, over a rugged granite track, Car No. 8 covered a distance of 1,342.72 miles. Car No. 9 covered 1,337.48 miles; and Car No. 10, the automatic, completed 1,371.39 miles. (Subject to official confirmation.)

411s drove through the sunrise hours and on to the 24-hour mark. The lead car put in a fastest lap time of 1 minute 48.7 and averaged 1:50 to clock 1 342.72 miles, breaking the Ford record of 1 261.07 miles by 81.65 miles and scooping nine other records along the way.

Although the 411 is never going to make it onto the list of ultimate track-going Volkswagens, there is no denying that under harsh conditions the cars offered exceptional reliability and endurance (with a surprisingly decent pace). Despite the comical names adopted by VW for the endurance record attempt, the carefully planned and executed event was no laughing matter, and did wonders for the 411's South African popularity – by close of business in '69 some 3 675 VW 411s were cruising the local roads, and this number climbed up to 35 000 or so by the end of its new car lifespan five years later, making it one of the largest 411 markets in the world. **Q**

The 1000-mile record of 18 hours 49 minutes 9.7 seconds was smashed at 17:43.37.8 and without any issues, the three 411s drove through the sunrise hours and on to the 24-hour mark

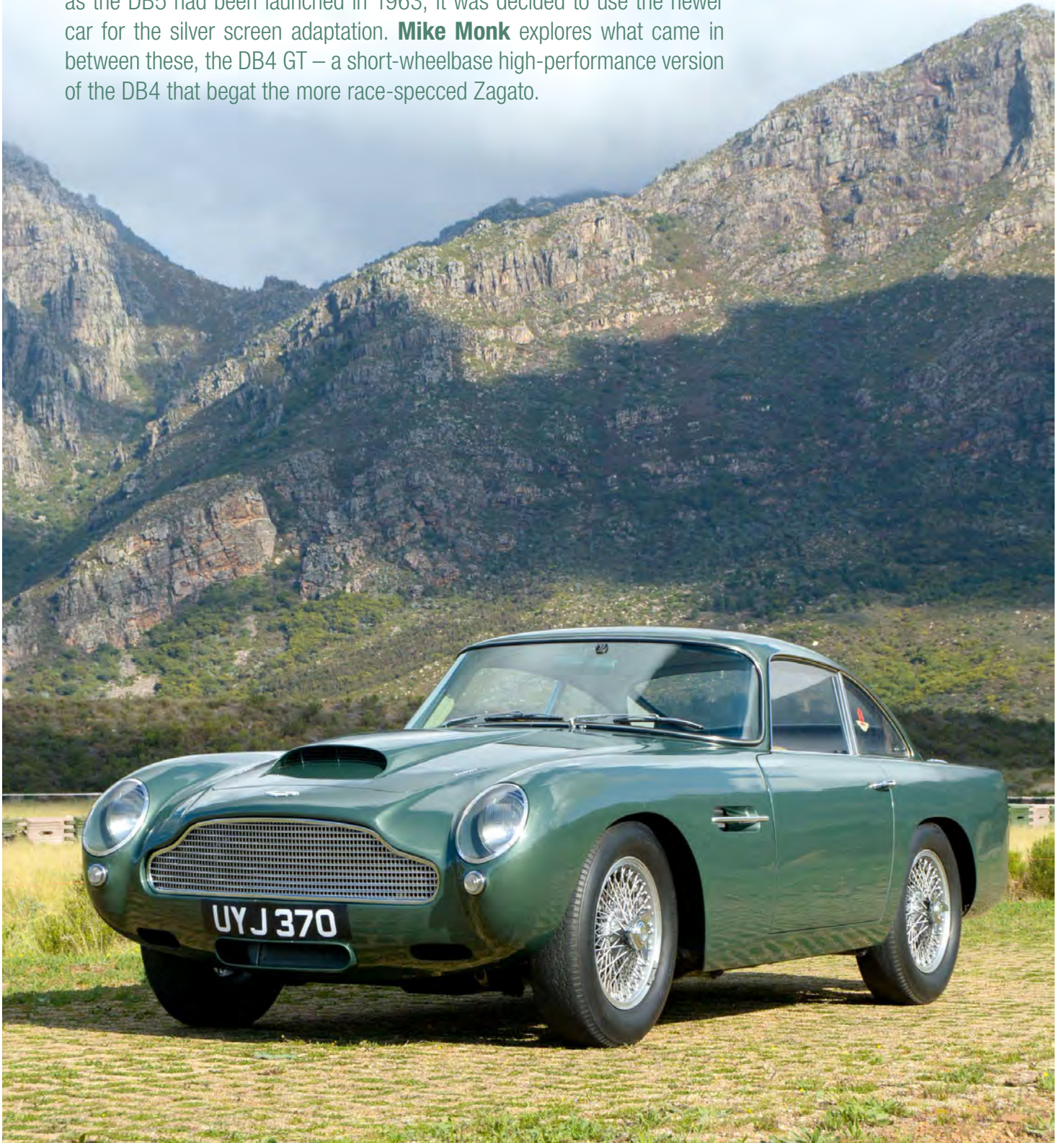
SOUTH AFRICAN ENDURANCE RECORD – 1969

RECORD	OLD FIGURE	NEW FIGURE
50 miles	55m 26.5s	51m 34.7s
1 hour	55.19 miles	58.21 miles
100 miles	1h 48m 53.1s	1h 42m 49.8s
3 hours	169.26 miles	172.64 miles
200 miles	3h 35m 13.7s	3h 28m 47.3s
6 hours	338.16 miles	343.16 miles
500 miles	9h 7m 35.8s	8h 44m 39.4s
12 hours	626.20 miles	680.27 miles
1 000 miles	18h 49m 9.7s	17h 43m 37.8s
24 hours	1 261.07 miles	1 342.72 miles

A SMALL 4-TUNE



If ever a brand had a hero then Aston Martin and James Bond epitomised the perfect partnership. It started in 1964 when 007 used a DB5 as his personal transport in *Goldfinger*, the third of the Bond films, and it heralded an 11-movie relationship that lasted almost half a century. In the novel, author Ian Fleming had placed our secret service agent in a DB Mk3, but as the DB5 had been launched in 1963, it was decided to use the newer car for the silver screen adaptation. **Mike Monk** explores what came in between these, the DB4 GT – a short-wheelbase high-performance version of the DB4 that begat the more race-specced Zagato.





The DB Mk3 was actually a DB 2/4 Mk3 produced from 1957 to 1959, not to be confused with the DB3/DB3S sports racing car of 1951-'56. The Mk3 was, as the name suggests, the third variation of the DB2/4 that first appeared in 1953 and the facelift included the grille shape that was to become a trademark styling element for all future Aston Martins. The DB4 appeared in 1958 to challenge Ferrari and was to stay in production until 1963, a fairly short lifespan during which there were five series upgrades, essentially an annual tweak to coincide with the UK's Earls Court Motor Show.

Aston's British engineer Harold Beach was responsible for the chassis development. Front suspension was by unequal-length double wishbones, coil springs and anti-roll bar, while the Mk3's De Dion rear axle was ditched in favour of a coil-sprung live rear axle located by twin radius arms and

a transverse Watts linkage. Telescopic dampers were fitted all round. At the request of Aston's technical director John Wyer, famed coachbuilder Carrozzeria Touring of Milan was chosen to design and build the bodies. Touring was famous for its patented lightweight 'superleggera' construction method, which utilised small-diameter steel tubes welded together to form the body's shape, with thin alloy panels attached to cover and strengthen the framework. Such were the DB4's handsome looks, the overall styling cues of the DB4 were to carry over into the DB5 and DB6 Astons.

The DB4 had been fitted with a new 3670cc inline six-cylinder twin overhead-cam engine, designed by Aston's renowned Polish engineer Tadeusz 'Tadek' Marek. The all-aluminium seven-main-bearing motor had equal bore and stroke dimensions (92x92mm) and fed by twin SU carburettors, pumped out 179kW at 5500rpm and 325Nm of torque at 4250. Mated with a David Brown

four-speed gearbox, top speed was 225km/h, 0-60mph (96km/h) took nine seconds and 0-100mph (161km/h) took 21 seconds. Thanks to servo-assisted Dunlop disc brakes all round, the DB4 could do

0-100-0mph (0-161-0km/h) in less than 30 seconds. Overdrive became a Series 2 option in 1960 and a Vantage version with an extra 19kW became available with the Series 4.

The DB4 was a sales success, but in keeping with Aston Martin's tradition of developing a racing version of its production cars, a high-performance model was called for and the GT design project (the prototype was designated DP199) got underway. Reducing the car's weight was a major consideration, so thinner aluminium was specified for the bodywork and the 2+2 rear seat was ditched in favour of a carpeted luggage area. Wyer also wanted an 'edgier' handling car so the wheelbase was shortened by five inches (127mm). In all, a weight saving of 90kg was achieved. Borrani 16-inch wire wheels with knock-off spinners were used and the Salisbury final drive now boasted a Salisbury Powr-Lok limited-slip differential. The boot was filled with a 136-litre fuel tank mounted under the spare wheel. The revised styling was generally considered to be even more handsome, and featured Perspex cowled headlights to reduce drag.

The engine was fitted with a new twin-plug cylinder head with twin distributors, bigger inlet valves and high-lift camshafts. Compression ratio was pushed up from

Reducing the car's weight was a major consideration, so thinner aluminium was specified for the bodywork and the 2+2 rear seat was ditched in favour of a carpeted luggage area



8.25:1 to 9.0:1 and with the fitment of triple twin-choke Weber 45DCOE carburettors, maximum power was lifted to 201kW at 6000rpm. A much-needed oil cooler was standard equipment. The GT was launched at Earls Court in October 1959 and compared with the standard DB4, the 0-161km/h time was now 15 seconds, top speed was raised to 241km/h and with the substitution of Girling disc brakes, the 0-161-0km/h time was lowered to 20 seconds. Prior to launch, in May, the prototype took part in the first GT race at Silverstone, and Stirling Moss drove it to victory at an average speed of 140km/h.

But the GT was not a success story on the race tracks, so Zagato was asked to produce an even lighter, more powerful version. The subsequent design is considered to be one of the all-time greats. The use of even lighter materials, including Perspex windows, trimmed another 45kg off the kerb mass and a higher compression ratio helped produce an extra 7.5kW.

Records suggest that 1 110 DB4s, 75 DB4GTs and 19 Zagatos were built, totals that make any survivor a rarity to some degree. The absence of bumpers/over-riders and chrome edging around the door glass signify that this car, part of the Franschoek Motor Museum collection, is a Series 1 GT. A small badge on the

dashboard shows the car to have won Class C (DB4/DB5/DB6) of the Aston Martin Owners Club Golden Jubilee Concours, which took place in 1985, and 33 years later its overall condition is still superb.

Painted in what can be called British Racing Green (the true hue of the nation's international racing colour is a story in itself...), the car oozes classic Aston Martin elegance, the cream leather upholstery and matching cut-pile carpeting complementing the exterior. The alloy-spoke/wood-rim steering wheel and fly-off handbrake, situated to the right of the driver's seat, are period details that add to the overall effect. Pedals are all mounted on the floor, and there is a small left-foot rest. The painted dashboard carries a full complement of instruments and controls, as well as a period radio. Oddly, the ventilation controls – one for each side – are mounted beneath the dash on the inside of the side panels. The sun visors are a deep blue plastic.

The broad seats offer only a reasonable amount of fore-aft adjustment but the driving position is satisfactory for most people. Twist the key and the big six purrs into life, as docile as they come. The short, straight gear lever snicks precisely into its slots as the car nonchalantly builds up speed, but once the rev counter reaches halfway towards the 6000 red

line, the exhaust's timbre hardens and the GT – which despite all the weight-saving measures, still tips the scales at around 1 300kg – begins to growl like a British bulldog. The effect is a boisterous mechanical symphony typical of big-engined Grand Tourers of the time, but this one with a distinctive muscular Aston tone.

Once into the twiddly bits, though, and that hefty lump under the bonnet makes its presence felt. There is a tendency towards understeer, which can be countered by depressing the accelerator, but be wary because although the shorter wheelbase was aimed at making the car nimbler, the rear end can step out of line more easily. Wyer's desire for edgier handling was achieved...

The DB4 and its offspring were something of a turning point for Aston Martin. The road car set a new standard for the marque and although it was not the actual Bond car, its silver screen successor, the DB5 – which was in reality just a further development – certainly caught the world's attention. That the GT and Zagato versions did not quite reach the heights of success was probably due to the company developing purely race-bred models at the same time, but collectively Aston Martin's sporty image blossomed, something the GT can rightly feel proud about. **G**

THE DIE- HARDS



Volvo might not currently sit at the top of South Africa's sales charts, but the introduction of outstanding advanced products has the Swedish firm gaining ground and re-establishing the popularity that it held here in the 1960s and '70s. **Stuart Grant** gets behind the wheel of a 1971 Volvo 144S – the car that took the firm's popularity, created by the 122S, up a level with technological developments, performance and practicality but failed to carry the company to greatness locally.

Photography by Mike Schmucker



Volvo was not the only manufacturer who didn't capitalise on the popularity gained in the period though – think of Alfa Romeo and Renault here... The common thread, of course, was the withdrawal from the SA market in the late 1970s and early '80s. Sanctions against our government were a good scapegoat, and while the rumour mill suggested that Sweden's backing of the then-banned ANC was to blame for Volvo's demise, those in the know put the reason for the pull-out down to the importers, Lawson Motors, not being able to pay the supply bills. Whatever the story, it soured a large portion of the South African motoring public's opinion of Volvo and only the die-hard fans looked past this and remembered the positive aspects of the Swedish cars.

And they had good reason to stick to the brand. Despite the harsh South African

conditions differing vastly from the country of origin, Volvo vehicles delivered an almost unbreakable ruggedness, practicality and performance. Traits that were further enhanced in true South African style with success in the toughest motorsport environments such as the LM Rally and 9 Hour endurance races – initially with the 544, then the 122S and finally the 144 and 142 (two-door model imported just for competition). Local assembly of the 122S showed the firm's seriousness in the South African market, which was further enhanced on 1 November 1967 when the all-new 144S, built at Motor Assemblies in Durban, was stamped with 'Manufactured in South Africa', becoming the first Volvo to be completely produced anywhere outside of Sweden. South African 122 assembly and 144 manufacture dovetailed until December 1970, when the world's last 122S rolled out the plant (yes, we put together the very last 122S ever).



It was bigger than the 122S too, being 190mm longer and 110mm wider, which made for a decent improvement in interior space, and the fully reclining front seats upped the comfort game with adjustable lumbar support

The new 144S, which went on sale here in February 1968, was a major styling deviation from the curvaceous 122S and ushered in a boxy aesthetic for the brand that hung around for 40-odd years. It introduced the firm's new numbering system, with the '1' referring to the series, the first '4' the number of cylinders and the second '4' the number of doors. When the rear-hatched wagon arrived a year in, it took on the 145 badge and the higher-end six-cylinder saloon wore the number 164.

But back to 144. It was bigger than

the 122S too, being 190mm longer and 110mm wider, which made for a decent improvement in interior space, and the fully reclining front seats upped the comfort game with adjustable lumbar support. Safety has always been a consideration for both Volvo engineers and marketers alike (remember Volvo engineer Nils Bohlin invented the three-point seat belt in 1959) and the 144S made strides in this department, meeting 20 (and a few more) of the American safety legislation requirements before they were even published.

To prevent accidents, minimal suspension travel and firm shock absorbers made for controllable handling, and disc brakes with a rear lock-inhibiting device featured. If these weren't enough to keep you safe, a rigid box cabin structure was added, along with a built-in roll bar hoop (claimed to hold the weight of a dozen cars), front and rear impact-absorbing body sections, three-point front seat belts, rear lap strap anchor points, padded dash and collapsible steering column – this last item taking a bit of stick from the press, who felt that the two-



section column joined by a shear plate and designed to collapse under 18kg of pressure was anything but safe when it removed steering control in a prang.

The extra size and additional safety measures did however add weight and cost to the package. When the last 1967-made 122S B18 four-door units sold in 1968, they set the buyer back by R2 642, while the 144S would have cost R3 150 on the same day. Surprisingly, although early models sported the same 1780cc twin SU carb engine as the 122S B18, the gap in performance between the pair was negligible with both hitting the 60mph mark in just over 12.5 seconds in manual guise. Keep the foot planted and the 144S maxed out at 100mph. The '68 122S and 144S were extremely close in the sales race

SOUTH AFRICAN 144 SALES

	144S		44E & TE	
1968	2 085	(R3 150)	-	
1969	2 543	(R3 350)	-	
1970	1 867	(R3 350)	-	
1971	1 645	(R3 550)	-	
1972	1 365	(R4 098)	-	
1973	1 700	(R4 265)	343	(R4 695)
1974	869	(R4 480)	353	(R4 995)
1975	898	(R4 980)	759	(R5 298)
1976	118	(R5 498)	181	(R5 995)



Chatz/Burford – 1969 Kyalami 9 Hour.



Louis Cloete – 1970 Total Rally.



Chatz/Clapham (33) and Wingels/Hettema (3) – 1965 Kyalami 9 Hour.



Dave Clapham – 1975 Kyalami Highveld 100.

KINGS OF CONSISTENCY

Volvo's South African racing success kicked off in 1958 when the pairing of Francis Tucker and Michael Renton won the Index of Performance in that year's Roy Hesketh 6 Hour in a Volvo 544. 544s then featured prominently in the 9 Hour events at Grand Central in 1958, '59 and '60. Index of Performance honours were the 122's forte, with Jan Hettema/Gary Wilson winning this award in the 1963 9 Hour. In '65 Hettema repeated the result, this time sharing with Frank Wingels. Arnold Chatz drove his Volvo to the 1965 Natal 3 Hour Index and repeated this at Hesketh and Killarney in 1967 (with Wingels as his partner). He wasn't done yet with the 122, taking the 1968 9 Hour Index with Spencer Shultz. On the 122 rally front Hettema was the man to beat, securing the 1963 and '67 SA title with Volvo. The arrival of the Volvo 144 saw Lawsons Motors enter cars for both Chatz and Clapham in production car racing, but it wasn't until the team imported a 142 that the boxy Volvo won something – Index again in the Lourenço Marques 3 Hour. 144 rallying was slightly more successful, with Jannie Kuhn and Kassie Kasselmann in the hot seats between 1971 and '73, where they won two nationals and recorded a handful of podium spots. Volvo then left SA and the Volvo motorsport flag was only briefly flown by Fanie Els in a heavily worked Volvo 164 – the most notable performance being in the 1981 9 Hour where he joined forces with Hans Kruger and finished sixth overall behind a gaggle of Porsche and Lancia prototypes.

Archive images supplied by www.motoprint.co.za.



Grand Central 9 Hour.



Per-Inge Walfridsson/Kassie Kasselmann 144 – 1974 Total Rally.



too, with 2 012 of the former leaving showrooms against the latter's 2 085. For 1969 the 122S upped its spec with the B20 1986cc engine, and the 144S followed suit. Again the boxy shape managed to outsell the 122, with 2 543 units compared to 1 465.

Off the line performance between the B18 and B20 models was almost exactly the same, although the power output went up from 100 to 118hp – most likely as a result of the reworking of the gear ratios for better open-road cruising comfort. The B20 144S continued selling steadily through to 1976, with cosmetic changes the only major difference – first in 1971, with a new grille wearing a diagonal grille bar, and then again in '73 when the dashboard received a revamp, the indicators moved to sit alongside the headlights and the grille was fettled and blacked out. In 1973 a fuel-injected 144 was also added to the line-up. Badged as the 144E and priced at around 10% more than the carb version, it sold in relatively small numbers. Both the 144S and E were on South African showroom floors when the firm upped and left.

South African Volvo fans had to endure a twenty-odd-year hiatus, frustrated by watching the 144's squared-off look continuing overseas through to the 240 model sold between 1974 and 1993. Launched in 1993, the 850 ran through to 1996 and carried on the same trait, and as the new South Africa dawned, so Volvo took some tentative steps back with the 850. As luck would have it, broadcasts of international motorsport programmes became more frequent in this period and a new breed of South African Volvo lover sprang to prominence – enamoured by the exploits of a pair of 850 station wagons squaring up against more traditional saloons in the British Touring Car Championship.

While you won't see anything square-edged in the current Volvo line-up, it's clear that as was the case with the 144S fifty years ago, the values of innovation, quality and safety are still of at the forefront of the design thinking. **C**



WIN ON SUNDAY, SELL ON MONDAY

Volvo teamed up with TWR (Tom Walkinshaw Racing) to go British Touring Car racing in 1994. Instead of basing the programme on a saloon platform, the Swedes opted for the Volvo 850 Estate with Rickard Rydell and Jan Lammers at the wheel. Legend has it that wind tunnel testing revealed that the longer rear section made for better downforce but a few years on it appears that it was more of a PR exercise aimed at increasing wagon sales. Nonetheless it had to be competitive and despite more bulk and a longer wheelbase, the powerful five-cylinder engine combined with a low centre of gravity to see the team scoop 8th overall in its debut and only competition year. For '95 aerodynamic rules changed, TWR/Volvo had to move to a conservative sedan 850 and the lessons learned from the wagon saw Volvo finish the 1995 and '96 championships in 3rd place.





RECOVERY VEHICLE

Mercedes-Benz began its post-war revival with the carry-over W136 model that was the company's top-selling model before the conflict began. **Mike Monk** takes a closer look.

Images: Mike & Wendy Monk

The looks of pretty much all of the post-war Mercedes-Benz models are familiar to anyone interested in cars, not least because of their inherent longevity, although the first completely all-new model – the W120 'Ponton' introduced in 1953 – is nowadays an increasingly rare sight on our roads. But prior to the launch of the Ponton, in the early post-war period it was the W136 model that was the mainstay of Mercedes-Benz's range; essentially a revived pre-war design that, despite the troubled times, was actually a significant model in the company's history.

Replacing the six-cylinder W15 series, the W136 was launched in February 1936 and

represented Mercedes-Benz's four-cylinder model range. The first model was the 170 V and it was an instant success, the 'V' in the 170 V's nomenclature being an abbreviation of Vorn (front), added to differentiate it from the contemporary rear-engined W28 170 H model that used the same basic motor, 'H' being an abbreviation of Heck (rear). It was powered by a new 1.7-litre side-valve inline four delivering 28kW at 3400rpm and 98Nm at 1800, and although sitting on only two engine mountings, set a standard for smoothness. The gearbox was a four-

speed with synchro on the top two gears only, but was upgraded to all-synchro in 1940. The 170 V became the company's top-selling model up to the outbreak of WWII in 1939 and by 1942 over 75 000 had been built, making it by far Mercedes-

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Benz's most popular car up to that time.

Most of the cars produced were two- or four-door saloons, but the range included two- and four-seat cabriolets, a cabrio-limousine (a four-door saloon with a full-length canvas roof) and a taxi with custom luggage racks at the back. There was even a pick-up version – the new X-Class is not the first Mercedes bakkie...

During the war the Mercedes-Benz plant suffered severe bomb damage, but the manufacturer nevertheless emerged from the conflict with a significant competitive

advantage over many of its pre-war competitors. Mercedes-Benz owned its own body shop and enough of the W136's tooling survived the Allied bombing, or could be recreated, for it to serve as the foundation upon which the company could rebuild. By 1947, the 170 V had resumed its place as Mercedes-Benz's top-seller, a position it held until 1953. Only delivery vans were produced at first, since they were in urgent demand during post-war reconstruction. In May 1946 the first platform car was completed, and then in July 1947 production of the four-door saloon was resumed.

In May 1949 the 170 D and the bigger, more luxurious W191 170 S were presented at the technical export fair in Hannover and were effectively Mercedes-Benz's first post-war models. The 170 D was

based upon the 170 V, but equipped with a diesel version of the proven power unit of its sibling. The M136 engine was a 1697cc four-cylinder indirect-injection diesel delivering a near-identical 26kW at 3200rpm and 96Nm of torque at 2000. The 170 D was the world's third diesel-fuelled passenger car and the first to be introduced after the war when petrol was in scarce supply for some time, whereas sufficient diesel oil was available everywhere. The 170 D became the basis for the lasting success of this type of car.

In May 1950 the M136 engine was increased to 1767cc, raising maximum power to 30kW and lifting peak torque to 101Nm. The 170 D received other upgrades including telescopic shock absorbers, a wider rear track and stronger brakes. The cabin was widened by 50mm, allowing bigger and more comfortable seats to be fitted, while the luggage compartment finally became accessible from outside via a bottom-hinged boot lid that housed the spare wheel.

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The Franschhoek Motor Museum collection includes an early 1952 170 D with a slightly worn patina, and it proved to be a satisfying – if slow – driving experience. The 170 D offered similar driving performance to the 170 V – 0-100km/h in just over a minute – but was naturally more economical. Its looks are typical of the period, with front and rear doors hinged on the B-pillar. Stepping inside is easy and the dual front seats live up to expectations; broad and fairly comfy with plenty of fore-aft adjustment. Starting calls back the past when glow plug delay was the thing, a diesel symptom that lasted into the 1980s. Once the ignition is switched on, a dash-mounted lever needs to be turned to ignite the glow plug that takes a little while to get up to heat, and then twisted to allow the engine to clatter into life. Absolutely no use as a getaway car, then!

And boy does it clatter. Put the long, spindly, bent gear lever into first and away it goes, the amount of low-down torque sufficient to get the 1 250kg saloon up

and running with no fuss at all. Naturally aspirated, the bigger-capacity oil burner goes about its business with a barely imperceptible change in diesel clatter, whether hauling or cruising. A tiny dash-top rear-view mirror is all that is provided to see behind but with a top speed of a little over 100km/h, driving is more a case of simply concentrating on the road ahead and enjoying the scenery at a leisurely pace.

Ride quality is surprisingly good. The front suspension is independent with coil springs, and Mercedes-Benz's chassis engineers worked hard to progressively improve the coil-sprung swing-axle rear suspension, resulting in improved handling traits as well. The pressed steel wheels carry 5.50x16 tyres. Steering is by worm-and-ball and the big three-spoke wheel is fairly heavy in operation, typifying the solid feel of the car in general. The all-drum brakes stop effectively enough. For a design that is basically more than 80 years old, it still impresses and represents a key

model in Mercedes-Benz history.

In May 1952 both D and S models were again revised. The rear track became even wider and they now had one-piece bumpers, horizontal instead of diagonal bonnet louvres and a slightly bigger windscreen, with the wiper motor now encased. Both models were built until August 1953 before being replaced by the 170 S-V and 170 S-D models, overlapping the introduction of the W120 Ponton for a couple of years.

Mercedes-Benz director G. Paulus toured Southern Africa in a 170 D to test the local markets in 1950 and 1951. He must have liked what he saw because the local company and its manufacturing facility, first as part of CDA then as UCDD, has grown into one of the country's leading motor manufacturers, with huge ongoing investment as a key player in the global Daimler-Benz organisation. But I wonder if he managed to ever have a quiet conversation with his passengers... 🇷🇺

MORE THAN NINE LIVES



The E-Type needs little introduction in the classic world. The show-stopper that was famously driven through the night for its debut at the Geneva Motor Show back in March 1961. The car that was so achingly beautiful it elicited a compliment from the great Enzo Ferrari himself. The game-changer that offered unrivalled looks and performance for a remarkably low price... But all that came thanks to Jaguar's success at Le Mans and its 'win on Sunday, sell on Monday' strategy. One that was underwritten by the company's famous twin-cam engine, designed 70 years ago, says **Graeme Hurst**.



It's interesting how project acronyms have often passed into our automotive lexicon, in some cases becoming synonymous with the maker's brand. Porsche's 911 is a case in point, with its origins in a project number (initially 901 but changed to 911 after a trademark dispute). Rover's rakish SD1 stood for the first project from its Specialist Division, a then-newly established in-house design team, while the Ro80 –

NSU's groundbreaking Car of the Year sedan in '68 – was a nod to its rotary engine, which was NSU design number 80. Jaguar's XK? That was a project designation for the 11th engine design in Jaguar's experimental department back in 1948 ('X' standing for experimental and 'K' being the 11th letter of the alphabet).

Those two letters would of course be made famous when the engine was

installed in the company's new two-seater sports car the same year; the model name XK120 being the combination of the engine and the car's 120mph ability. The same car would sire a lightweight racing version badged (on the chassis) as the XK-C (for competition); a designation that led to the racer being unofficially christened the C-Type. Ditto the later XK-D (D-Type) and even the most famous Jaguar of all, the



E-Type, which was marketed in the USA as the XK-E, such was the marketing power of those two project letters.

To understand why the XK engine enjoyed such a favourable perception one has to go back to war-time England, and specifically the dark days of the bombing of Coventry. That's when a group of engineers, William Heynes, Walter Hassan and Claude Bailly, were posted on fire watch duty at their Foleshill factory (Jaguar only moved to Browns Lane in 1950).

They whiled away their time by sketching out a design for an all-new power unit for what was then still the SS marque. Before the war, the company had relied on overhead valve versions of engines built under licence from Standard. But when the conflict and the military assembly Jaguar was focused on ended, company boss and founder William Lyons wanted a clean-sheet design to power his offerings for the future.

Led by Heynes, the team's efforts increased after the war and after successive prototypes,

they settled on a six-cylinder format of 3442cc. Their design featured a twin-cam cylinder head which – performance attributes aside – made it one of the most aesthetically pleasing engines of the 20th century. Power was an impressive-for-the-time 160bhp.

In retrospect, Jaguar's engineers likely had no idea just how good the fruits of their efforts were: the XK engine would go on to power some of the world's most memorable sports cars and saloons for over four decades, delivering substantial increases in power along the way. What's more, it would bring the famous badge no less than five Le Mans victories.

A lot of that comes down to the boldness of Heynes's team's thinking at the time. Where most manufacturers were just moving on to overhead valve technology, his engineers took that one step further by insisting on a hemispherical combustion chamber. To accommodate that, they embraced a chain-driven twin-cam design with the valves angled at 35 degrees from the vertical each side. That was considered the optimum angle to maximise valve size without compromising gas flow.

This was another groundbreaking aspect, courtesy of noted engineer Harry Weslake who curved

the inlet ports to promote intake gas swirl, allowing the fuel to mix more thoroughly. This made for a smooth idle and good mid-range torque, something the engine became known for.

It was also known as an inherently strong design, featuring a seven-bearing crankshaft with the bores 'grouped' to allow for a sturdy centre main bearing. It was this robust engineering which underpinned the XK's longevity as it would ultimately handle well over another 100bhp with ease.

A six-cylinder configuration was an obvious choice as it had been used in Jaguar's pre-war models – plus it was easy to adapt into a four-cylinder design, something the company was after for the volume sector of its future products. And that future revolved around an all-new saloon, the MkVII for which the XK engine was intended. Problem was Jaguar's body panel producer was struggling to obtain sufficient steel in the era of post-war rationing, and the saloon's launch was delayed.

But, ever keen to publicise his new engine at the 1948 Earls Court show, Lyons famously sketched out a sports car body to be fabricated from more readily available aluminium and which could clothe a shortened saloon chassis... and so the legendary XK120 was born. Jaguar still believed there was an appetite for four-cylinder power across its product range and

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the stand at Earls Court had brochures for this variant of the 120, listed as an XK100.

The Jaguar boss thought there might be enough interest to sustain a run of a hundred or two of his new sports car, but for once totally underestimated market sentiment. The stunning XK120 with its impressive engine was a breath of fresh air to a still war-weary public, and the company's order book was bulging by the time the show closed. Lyons quickly shelved the four-cylinder engine option to focus on his six-cylinder prodigy, with aluminium-based production soon giving way to all-steel construction (after 242 cars) in early 1950, when XK-engined MkVII saloons were also rolling off the assembly lines.

By then the twin-cam engine had already been garnering loads of headlines: in 1949, the company sent the second production XK120 over to Jabbeke in Belgium for an official speed run, clocking 132.596mph after some modifications to the bodywork. And it wasn't a one-off: a year later Stirling Moss famously co-drove a 120 at an average of 107.46mph for 24 hours at the Autodrome de Montlhéry, a steeply banked oval track near Paris.

The same year, Ian Appleyard would clinch the first of three Alpine Rally titles in NUB 120. 1950 was also the year in which the factory got a taste of Le Mans, entering five cars. The engines proved up

to the gruelling demands of the famous 24-hour race, but the cars suffered brake fade thanks to their heft.

A return to the drawing board saw the advent of the C-Type with its space frame design stripping out the kilos that came with the 120's hefty saloon-derived chassis. In 1951, the new car famously took the chequered flag first time out. A year later, all three of the factory's entries retired with cooling problems but a list of mechanical revisions (including the adoption of disc brakes) saw Duncan Hamilton and Tony Rolt win the race at 105.85mph in '53 – the first time Le Mans had been won at an average of over 100 miles per hour. It was a sensational international achievement for Jaguar's power unit which was now good for 220bhp after the adoption of Webers from mid-'53.

The following year saw the advent of the D-Type (with much-improved aerodynamics) which helped the marque clinch three successive Le Mans victories by '57. Jaguar had stretched the XK to 3.8-litres by that time, which was welcome news for the road car range which now extended to the MKIX and the final XK sports car derivative, the 150. By then, total XK engine production was knocking on 80 000 units – a big number considering that the marque had struggled to get into four figures with each model in the pre-war years.

The late '50s was a buoyant time for the famous Browns Lane marque, but while the engine's performance was unrivalled in its price bracket, the live-axled, separate chassis body it was attached to (in the company's flagship XK150) was becoming dated. Cue the launch of the E-Type in '61, which featured a monocoque tub mated to a space-frame front end (not unlike a D-Type) coupled to the independent rear suspension of the company's new MkX saloon. All of that, of course, was clothed in a sublime shape courtesy of chief aerodynamicist Malcolm Sayer.

But it wasn't just the shape that wowed show-goers that spring in Geneva. Thanks to the XK engine's 265bhp output in triple-carb spec, the E-Type offered 150mph pace. What's more, it cost around £2 000 at the time. That was Aston and Ferrari territory – for less than half the money. In reality, the top speed was unlikely to be available to the average owner as Jaguar is known to have blueprinted the hell out of the engine of 9600HP, the prototype E-Type with which *Motor* magazine recorded the magic number.

The preparation efforts paid off as the column inches quickly translated into sales. Demand was so high that only famous personalities and racers got the keys to one in the first year of production; Lyons was acutely aware of the power of celebrity endorsement.



Blueprinting aside, get behind the wheel of a standard early E-Type (such as this '61 3.8 Roadster) and you'll quickly understand what a revelation it was nearly 60 years ago. The ride is simply sublime; the front torsion bars and independent rear suspension soak up bumps with ease while limiting body roll. The steering is precise and relatively light while the broad torque band of the engine makes for a relaxed drive when you don't want to pile on the pace. And when you do, the acceleration is as rewarding as the view over that magnificent bonnet.

But at the time of launch the E-Type wasn't without its failings. The brakes weren't up to the job of hauling in the prodigious speed and the gearbox (a Moss unit and a hangover from the XK series) lacked synchromesh on first gear. It was also cramped inside, as feedback from American dealers attested. Browns Lane addressed this latter issue soon after launch by deepening the foot wells (with the earlier cars known as flat floors). They reshaped the rear bulkhead to get more seat travel too and, from late '64, redesigned the seats to free up space. That was with the 4.2-litre variant, which had better brakes and proper

all-synchro box too, making for a generally more refined drive.

The stretch to 4.2-litres (done to beef up performance on the hefty MkX saloon) was the most serious rework of the original 1948 engine design and involved rejigging the bores so they were paired. This was to allow for sufficient wall thickness in the block. That meant the block's bearing position had to be adjusted, along with the dimensions of the crankshaft.

Strangely Jaguar's engineers only focused their efforts on the engine's bottom-end: the design for the cylinder head remained unchanged, which meant the famed hemispherical combustion chambers were off-centre relative to the bores below. It's an engineering oddity to be avoided in theory, but in practice isn't noticeable. In fact, a 4.2-litre XK engine is surprisingly smooth and although power wasn't that different, the added torque was a bonus. And it kept the E-Type (and so arguably the marque) at the top of its game, despite increasing emissions controls in the all-important US market.

The 4.2 variant was the sole option with the E-Type, unlike Jaguar's MkII saloon which could still be ordered in 2.4-, 3.4- or – the bank robber favourite – 3.8-litre guise, which was available until '67. That was just a year before the launch of the XJ6 saloon which was also offered in 2.8-litre form – a cut-price offering using

a short-stroke version of the 4.2-litre unit. With the XK's design now 20 years old, an all-new engine under the hood of the XJ6 wouldn't have been a surprise, but the unit was retained as it was still every bit as refined as the car's famed ride from Jaguar's independent rear suspension. It would go on to become the company's mainstay for two further decades, with minor improvements along the way – including the adoption of fuel injection for the Series III XJ6.

And the power unit wasn't only installed in road cars: it famously powered the Scorpion tank (yes, a twin-cam sports car engine in a tank!) with that role coming after the British military was so impressed with the performance of a fleet of MkIX saloons that they took the engine out of one to explore its potential in military hardware in the early '70s. Assembled by Alvis, some 300 of these eight-tonne, XK-engined Combat Vehicle Reconnaissance Tracked (or CVRT) vehicles would go into service with the British Army.

In regular road use Heynes's engine design soldiered on until 1986, when the new XJ40 arrived complete with the AJ6 engine. That wasn't quite the end for the legendary twin-cam though, as the XK unit (complete with carburettors) continued to power the Daimler DS420 limousine until 1991 – an astonishing 43 years after the iconic motor debuted at the Earls Court Motor Show. In hindsight, William Lyons was spot on with his decision after the show to shelve plans for a four-cylinder version. **C**

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NO HORSE ABOUT

Durban has always been famous for its laid-back atmosphere, its clean beaches and its hospitable citizens. For 123 years the city has served all three in rickshaws – or rickshas – and the men who've pulled them throughout the 20th century. There's some disagreement about the origins of the rickshaw but, as **Gavin Foster** discusses, the best evidence indicates that they first appeared in Japan in 1869 and were a direct result of the invention of the radial ball bearing by a French bicycle mechanic that same year.



Durban's rickshaws were first brought in from Japan by sugar baron Marshall Campbell in 1892. Within a decade the city's streets were crowded with 2 170 of the clattering devices, drawn by an army of willing pullers



The low-friction new bearings allowed a two-wheeled cart, which previously needed to be hauled by a horse or mule, to be easily pulled by a single strong man. City streets back then were notoriously fouled with the droppings of the oxen, donkeys and horses that commonly pulled carts and wagons and a human being was no doubt easier to teach restraint in these matters! Rickshaws improved even further 20 years later, with the arrival of the rubber tyre bringing added comfort for passengers. The little two-seater carts drawn by a single man became the standard means of personal transport throughout Asia, and in the 1920s some 60 000 rickshaw pullers in Beijing alone transported half a million people a day – a quarter of the city's population. The little carts became a memorable part of the Chinese landscape and from then on featured prominently in every book, photograph and, eventually, movie about China.

Durban's rickshaws were first brought in from Japan by sugar baron Marshall Campbell in 1892. Within a decade the city's streets were crowded with 2 170 of the clattering devices, drawn by an army of willing pullers. Unlike in the Orient, pulling a rickshaw

Durban's rickshaw pullers developed their own style over the years, wearing first uniforms and then, when they realised that evidence of their warlike Zulu ancestry increased the allure for tourists, adding animal skins, beads and flamboyant headdresses

was considered an honourable profession because the pullers could earn in a day what a head servant in a posh home could take home in a month. Wealthy Durbanites owned personal rickshaws for some years until the increasing presence of the motor car made the contraption a dead loss in terms of status. Because of their convenience, though, they survived as affordable transport for the masses and as late as 1940 there were still around 900 operating in the city.

Durban's rickshaw pullers developed their own style over the years, wearing first uniforms and then, when they realised that evidence of their warlike Zulu ancestry increased the allure for tourists, adding animal skins, beads and flamboyant headdresses. By the 1950s their trade was mainly in tourism, centred on the beachfront, but the number of licensed operators dropped steadily to 260 in 1968, 91 in 1971 and a dismal ten tatty old examples in 1980. In 2015 there were just 26 registered rickshaw operators, with a single rickshaw each left in Durban, catering exclusively for the tourist market on the beachfront.


Moses Dlamini (52) was one of them, having left his job in the security industry eight years before to buy a rickshaw and work for himself. "It's hard work, taking two people at a time," he told me then. "We charge R80 for two people for a short round trip, and business has dropped off a lot since I started. There are far too many businesses hiring out bicycles on the beachfront and that has affected us badly. People complain that we're too expensive. We pay the municipality R800 a year for a permit to operate, and a further R50 per month to store our rickshaws in secure premises each night. At the end of the day I count my takings and if I lose, I lose."

Normal working hours are from 08h00 to 17h00, but if the weather is bad or business very slow on

weekdays, the guys pack up and go home early. Interestingly, Moses said that foreign tourists were the worst when it came to money. "People from Argentina, Mozambique, America, England, Zimbabwe – they complain about the price and offer us R8, or even 20 cents. People from Durban don't support us either – the best payers are the ones from Johannesburg and Lesotho. They keep us going." Rickshaws, that cost about R20 000 to buy, are also expensive and time-consuming to maintain. "We need to paint them often, and the paint costs R180 a litre for each colour. Then the frames sometimes break and have to be repaired. The municipality has been helpful though. They supported us with restoration work for the soccer World Cup and gave us new wheels."

I told Moses about the bicycle rickshaw operator in London who had been recently caught on camera taking R4 500 from four Asian tourists after conveying them less than two kilometres. Juris Dzjabovic, a Russian who claimed to be a budding opera star, defended himself by saying that the three-minute trip had been 'uphill'. "I don't come cheap. I work my legs hard, I look good and I play good music – you have to pay a lot if you want that kind of luxury," he explained.

I don't think Moses believed me.

Sadly, the Durban rickshaw business has lost much of its glamour, and the tribal finery is not what it used to be. "We have our skins and headgear but don't wear them all the time – we put them on if the customers ask for them," explained Moses. The rickshaw pullers supplement their income slightly by charging R10 to pose with customers for photographs, and R20 to do their famous flying leaps for video. Come on, Durbanites. Even if you don't want to go for a ride, spend the price of a cold drink, get your photograph taken and help keep an important part of Durban's history alive. 



Silent Design

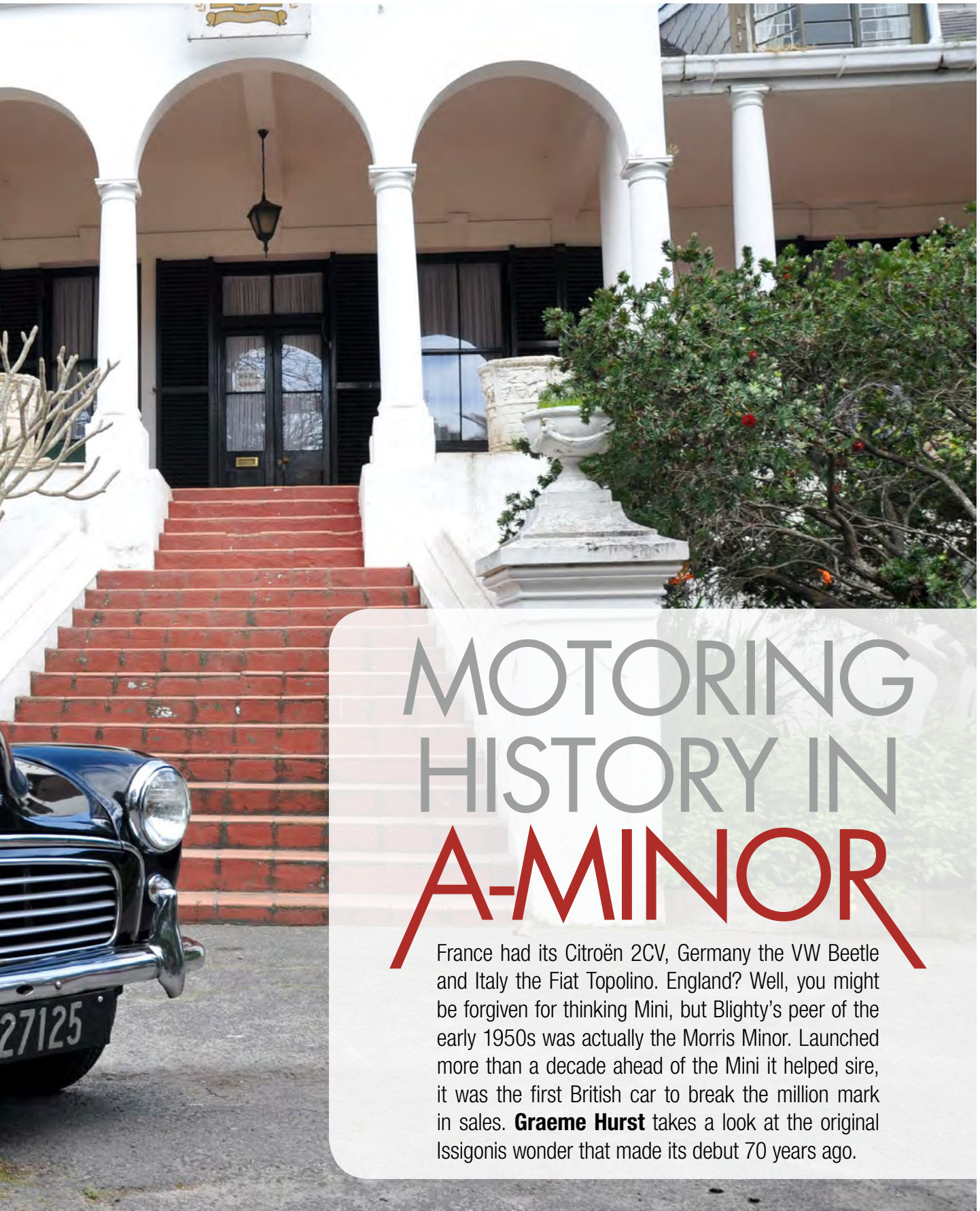
An Extractor fan with low noise levels and stylish finish to bring world class silence to your bathroom



Silence ... to relive the moment ...







MOTORING HISTORY IN A-MINOR

France had its Citroën 2CV, Germany the VW Beetle and Italy the Fiat Topolino. England? Well, you might be forgiven for thinking Mini, but Blighty's peer of the early 1950s was actually the Morris Minor. Launched more than a decade ahead of the Mini it helped sire, it was the first British car to break the million mark in sales. **Graeme Hurst** takes a look at the original Issigonis wonder that made its debut 70 years ago.



“Drive something like a Jaguar or an MG and people will ignore you,” says Capetonian Paul de Groot, the second owner of this wonderfully original 1959 Morris Minor. But when he’s behind the wheel of the most quintessential British runabout, Paul finds the reaction to be quite different: “People are always coming over and saying my grandfather had one or my music teacher drove one. Or I went to Rhodesia on holiday in one. Everyone has a Minor story to tell.” It’s testimony to just how endearing the model was; a classless car that served all walks of life across the

empire with more than 1.6 million made. What’s more, its success helped boost development of BMC’s A-series engine which would be at the heart of the Mini and its mighty role in international competition.

And, much like Jaguar’s XK engine, that success came thanks to Morris’s wartime efforts to generate a competitor-beating design for the post-war era and the subsequent pressure to launch a new car at the 1948 Earls Court Motor Show – the first motor show after the war.

It also hinged on the company’s ability to identify and nurture talent, specifically a young engineer of Greek origin by the name of Alec Issigonis, who joined the Nuffield Organisation (as the larger car-making group founded by William Morris was known) in 1935. During the pre-war years that followed, the talented

engineer impressed his bosses with his forward-thinking ideas for car design – and specifically his ideas on suspension. For the late 1930s Morris Ten, the company’s first monocoque car, he proposed independent front suspension and rack-and-pinion steering.

Although a welcome step change from the company’s beam-axle traditional approach, cost concerns meant his efforts were shelved until a decade later with the introduction of the Y-type saloon. But the thinking behind it did bring his talents to the attention of Morris’s vice-chairman, Miles Thomas. He was keen to pen an affordable car that would have mass appeal once hostilities ceased and civilian car production was allowed to resume.

Work got underway as early as 1941 and Issigonis didn’t disappoint with what came off his drawing board: a two-door car of unitary construction, featuring torsion-bar suspension all round and a radical flat-

It’s testimony to just how endearing the model was; a classless car that served all walks of life across the empire with more than 1.6 million made



four engine to keep the centre of gravity low and, thanks to the engine's reduced length, maximise interior space. That was central to his thinking, as Issigonis's later efforts with the Mini would attest; the gifted engineer believed that a small car needn't feel small inside.

The curved-yet-compact shape featured headlights mounted low down either side of the grille and represented a radical departure from the marque's sit-up-and-beg saloon designs to date. A bit too radical, as it turned out: Lord Nuffield (William Morris's peer title) commented that the Mosquito – as the Minor was known by the project team – looked like a 'poached egg'. Issigonis would later address that criticism by having a prototype sliced in half lengthways and the two sides moved apart by four inches. Which is why a Morris Minor has a four-inch ridge in the centre of its bonnet, the tooling already having been developed before the change in width.

There were changes underneath too after Nuffield's board couldn't stomach the costs of the proposed flat-four engine, despite the fact it allowed for a two-tier capacity option: a narrow-bore 800cc unit for the British market (where bore size was a factor in the horsepower tax) and a larger 1100cc unit for export. The torsion-bar arrangement was also deemed too radical for the rear end and so the Morris Minor (as it was eventually badged) ultimately rolled off the assembly line at Cowley with a conventional side-valve, inline four-cylinder engine mated to a live back axle suspended by semi-elliptic springs.

But British buyers weren't aware of the tempered technical specification and the little car hit the mark at its unveiling at the famous post-war show in September '48, where it had a price tag of £358. The 918cc engine – a stroked version of the unit out of the pre-war Morris 8 – pushed out a rather humble 27.5bhp, which meant performance was rather pedestrian with a 0-60mph time

of over 50 seconds. That didn't deter buyers and Morris built over a quarter of a million Minors before the company merged with rival Austin in 1952 to famously form the British Motor Corporation (BMC).

Being part of BMC allowed economies of scale through component sharing and the Minor's rather dated powertrain was immediately replaced with the overhead-valve unit developed for Austin's A30 – a car developed to take on the Minor in the small-car segment. Although the A-series engine was smaller (at just 803cc), it was more powerful than the outgoing Morris unit.

The tie-up also allowed BMC to expand the Minor range (which had to date been limited to the initial coupé and convertible with a four-door launched in 1950) to include what is surely the most recognised Minor model, the Traveller series – known for its external wooden frame constructed from Ash. These A-series-engined Minors are known as the Series II cars, with the earlier



derivative referred to as MMs – now highly collectible by marque purists.

As with any model facelifts took place, notably with adoption of the slatted grille in '54 and the central speedometer on the dashboard, while the split windscreen gave way to a single-piece, curved item two years later. That was the advent of the Series III, which came with a capacity boost to 948cc and a rebadge as the Minor 1000.

The added cubic centimetres made for a step change in performance – certainly by Minor standards at any rate – with top speed raised from 63 to 75mph and 0-60mph almost halved to 31.3 seconds. The gearbox featured taller ratios too and all in, Issigonis's design was adequately armed to keep up with increasing traffic speeds.

In this form, the Minor 1000 would go largely unchanged all the way to the 1970s (apart from an increase in capacity) and is the Minor that everyone came to know and regard with deep affection. So much so that many a Minor was passed down through the family, such as Paul's 1959 four-door – the rare Deluxe version (complete with leather) pictured here.

"I saw it being serviced at a garage in Rondebosch. Belonged to a little old lady and the mechanic told me she'd never sell,"

1959 was actually a big year for BMC, thanks to the launch of Issigonis's other icon: the Mini, badged as either the Austin Seven or Morris Mini-Minor

says Paul de Groot, who also has an MG TD in his garage. That was six years ago. "Two years later he rang me to say she decided to let it go. Her father bought it new in England and brought it out on the *Pendennis Castle*." In fantastically original condition, with just 96 000 miles on the clock, the Minor only needed a respray (to make it presentable) and the leather seats restored – a consequence of years of garage storage.

"The seats were so dried out they sounded like Tennis Biscuits breaking when you sat on them!" adds Paul, who called on the horse fraternity for advice. "They suggested a dubbin-type product that I had to put on once a month for three months, and now the leather is nice and flexible," adds Paul. He was going to re-chrome the car but changed his mind after advice from fellow enthusiasts. "People said: 'What for? If you get it re-chromed within 5 to 6 years you'll have to do it again, whereas this chrome has been on the car since 1959!'"

1959 was actually a big year for BMC, thanks to the launch of Issigonis's other icon: the Mini, badged as either the Austin Seven or Morris Mini-Minor. This time round his bosses – led by the mercurial Len Lord – gave him what he needed to deliver innovative thinking. The famous compact, front-drive format was the result, complete with hydroelastic suspension and a gearbox running within the sump of the car's transverse engine.

All radical stuff for the late 1950s and while the Mini was a huge hit, BMC

continued to enjoy strong sales with the Minor. It hit the million mark in December the following year – a first for a British car maker. To mark the occasion, BMC badged a limited-edition run of two-door Minors as the Minor 1000000. Finished in lilac with a white interior, 350 were produced – one for each Morris dealership in the United Kingdom.

Being part of the BMC group paid off as the benefits of developing the A-series engine (funded by volume sellers such as the Minor) continued to come the Minor's way with a capacity boost to 1098cc, which gave a 20% increase in torque and a top speed of 77mph. Other changes included a switch to more user-friendly baulk ring-based gearbox design and updated interior ergonomics.

The changes were enough to keep sales strong, with a further 600 000 Minors rolling off showroom floors before the convertible variant was disbanded in August '69, the same year Issigonis became Sir Alec, after his considerable achievements in the motor industry were recognised.

The axe fell on the saloons a year on, but the Traveller and Commercial derivatives hung on until April 1971. That was an impressive 30 years after the talented young engineer first sketched out the design for an affordable small car on his drawing board. Sketches which his sceptical bosses didn't entertain in entirety on the technical front. Perhaps if they had he wouldn't have felt the need to be so creative with the Mini? Either way, the Minor played a major role in British automotive history. Much like the 2CV, Beetle and Topolino all did. 📌

Thanks to Paul de Groot for the car featured.

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THE SINCEREST FORM OF FLATTERY

The most copied motorcycle of all time, the humble DKW RT125, was built by the Germans, cloned by the British, plagiarised by the Poles, and replicated by the Russians. **Gavin Foster** tells the tale.



It was also imitated by the Italians, the Americans and the Japanese. Despite its unprepossessing appearance and lacklustre performance, this brilliantly engineered little German wonder truly turned out to be a global phenomenon. The design was used by BSA, Harley-Davidson, Maserati and even (eventually) by Yamaha, who copied it closely when designing its very first motorcycle.

Established in Germany in 1916 by a Danish engineer called Jørgen Skaftø Rasmussen, DKW initially manufactured steam fittings but switched to small motorcycle production soon afterwards and was by the mid-1930s the largest motorcycle manufacturer in the world. The factory in Zschopau specialised in lightweight two-stroke commuter bikes, but its supercharged two- and three-cylinder race bikes led the two-stroke faction in the 1930s equivalent of today's grand prix world championships.

In an era when two-strokes were considered cheap, inefficient and gutless alternatives to four-stroke engines, DKW was the first major manufacturer to use loop scavenging with

a flat-top piston and sophisticated intake, transfer and exhaust porting that prevented a large chunk of the incoming fuel and air mixture from being blown straight out of the exhaust system unburnt. The two-stroke engine was suddenly a viable option and, in the DKWs at least, they were reliable. In some models DKW also introduced an additional 'pumping cylinder' without an ignition system that acted as a compressor/supercharger and forced huge gobs of air into the working cylinders. One of these little jewels won the 1938 Isle of Man Lightweight TT in the hands of Ewald Kluge by more than 11 minutes at an average speed of 126km/h. Legend has it that by the time Hitler's war shut down European motorcycle racing in 1939, DKW had the largest racing department in the world, with around 150 engineers on its payroll.

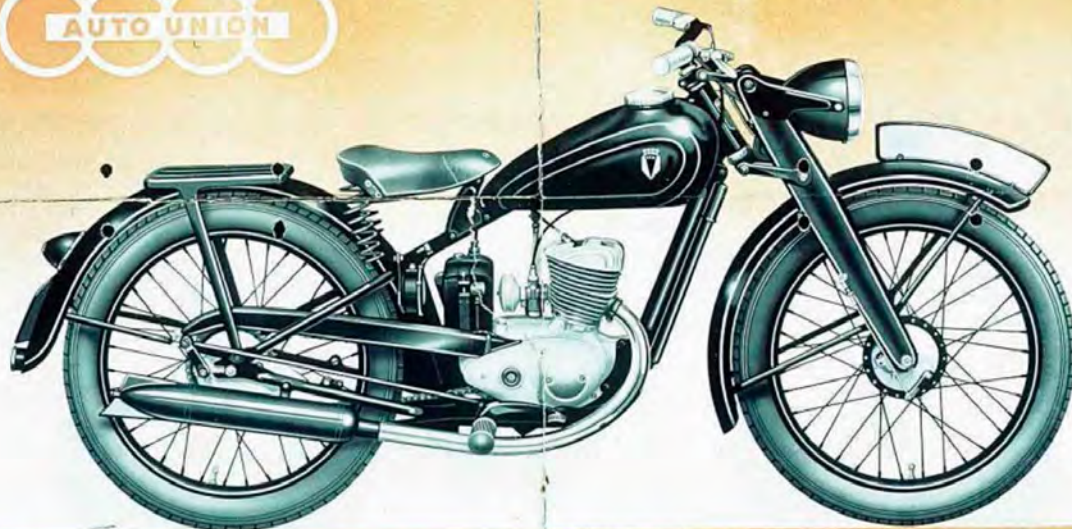
The DKW name is itself something of an enigma. Some sources claim it comes from 'Dampf Kraft Wagen' (Steam-Driven Car), the name of an experimental 1916 project, while others are adamant that it stood for 'Das Kleine Wunder' – The Little Wonder – or 'Das Knaben Wünsch' (The Schoolboys' Dream), referring to a diminutive 18cc DKW two-stroke engine built as a toy in the early days. The company

The two-stroke engine was suddenly a viable option and, in the DKWs at least, they were reliable

DKW



Die neue RT125



125 ccm, 5-PS-Zweitaktmotor mit Umkehrspülung (Patent Dr. Schnürle), Batteriezündung, starke Gleichstrom-Lichtanlage mit 35/45 Watt Leistung, elektrisches Horn, Dreigang-Blockgetriebe mit Fußschaltung und Ganganzeiger, großdimensionierte Bremsen, geschlossener Rohrrahmen für 185 kg Belastung, sozio:fest, Gummifederung. Kraftstoffverbrauch: 2,25 Liter auf 100 km

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built its first complete two-wheeler, a 122cc scooter in 1921, before moving on to proper motorcycles, and the bike that surely deserves consideration as the motorcycle of the 20th century is the humble RT125 – the ‘RT’ stands for ‘Reichstyp’ (National Type). Like the Volkswagen Beetle that was introduced in 1938, the RT125 was intended to get the German working classes mobile at low cost but, like the Beetle, its early years were disrupted by WWII before it could really reach ordinary folk. After being tested for six long years in the furnace of war, the DKW was to be made available to the public only in 1949, a decade after the first examples were built.

The RT125 used a 123cc long-stroke single-cylinder air-cooled engine with bore and stroke dimensions of 52 x 58mm, fed by Amal or Bing carburetors. The engine spluttered out a rather pedestrian 4¾hp, which was reasonable in those days for a commuter motorcycle weighing less than 80kg. Rear suspension was minimalistic in that there wasn't any, and the fuel tank held just 7.5 litres of petrol, with a two-litre reserve. The rims were skinny 19" hoops shod with 2" and 2.5" rubber, and top speed was 72km/h. Production began in 1940, after Hitler's war had kicked off, and

in the first three years 21 000 were supplied – mainly to German police forces and the military. In the later years of WWII a DKW RT125/2 was introduced with a 9-litre fuel tank, a different air filter and a few other minor mods, but by then things were going badly and Germany was losing the war on two fronts. Approximately 12 000 RT125s were built in 1944/45, and all went to the German military.

But the efficiency and quality of the cheap little two-stroke DKW had been noted by Germany's enemies. Across the Channel, England gave a hint of things to come by churning out a military-spec Royal Enfield WD/RE that was suspiciously similar to the German motorcycle. The Flying Flea, as it was unofficially known, was intended for use by airborne troops, and it was equipped with folding footrests and handlebars to facilitate efficient packaging for parachute drops during the D-Day Normandy invasion. Weight was trimmed to 62kg, power was a little less bountiful at 2.6hp and top speed was slightly lower at 65km/h compared with the original's 72km/h. Like the DKW it had just three gears, and the bike worked well for its intended purpose. Between 1942 and '44 some 8 000 were built by the Enfield Cycle

Company in Redditch.

When the war came to an end, things looked grim for DKW and its little bike. The bomb-damaged factory was captured by the Russians on 8 May 1945, and the little town of Zschopau was absorbed into the newly formed communist East Germany. The Russians dismantled the factory and took samples of the tooling, as well as a couple of dozen factory workers, back to their Russian homeland where they started churning out RT125s under various names, including as the M1A Moskva in Russia and the SHL in Poland.

DKW, having lost everything, opted to re-establish itself in West Germany, and in 1947 the parent company Auto Union GmbH started producing spares for pre-war DKW two-stroke cars and motorcycles. In 1949 they introduced an improved model of the RT125 called the RT125 W (for 'West') and the bike finally became available to the public. Meanwhile, the Zschopau factory, now a communist institution, once again set up shop as a motorcycle manufacturer, renamed itself IFA and later MZ, and finally put the pre-war RT125 back into production for sale in the Eastern Bloc.

But the looting and pillaging were not yet over...

BRITAIN – THE BSA BANTAM

At the end of the war the Allies punished Germany for its sins by imposing financial reparations upon them, and part of this included the Allied nations claiming for themselves German engineering designs and blueprints that would normally be protected by patents and copyright. England was thus given the DKW RT125 blueprints and technology, and they built a perfect mirror image of the engine with the gear lever where they insisted it should be, on the right-hand side. BSA started the ball rolling by building engines for export only, before deciding to go the whole hog and produce a complete motorcycle. In late 1949, Britain's best-selling motorcycle of all time, the BSA Bantam, was launched. Apart from the mirrored effect it differed very little from the German bike, with a 125cc engine, three gears, and fuel consumption of just three litres per 100km. Its top speed was 80km/h, which was good for the day, and the bike sold for £60 – about R120 at the time. The Bantam continued in production for the next 23 years in 125, 150 and 175cc guises and by the time production stopped in 1971, about 400 000 had been sold in the UK and overseas. While the frames, brakes and suspension had evolved, the engines remained recognisable right until the end. Power had increased from 4.5hp in the first 125 to 12.6hp in the 175cc 1971 models. The Bantams, surprisingly, were immensely popular as clubman racers, and even today members of the Bantam Racing Association can be seen in numbers at circuits every weekend around the UK. A decent 125cc BSA Bantam race bike will reach 160km/h plus on a racetrack.

A charming Australian on her B.S.A. Bantam. This model is becoming increasingly popular in Australia and indeed all over the world.

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Harley-Davidson MODEL 165
WITH Tele-Glide FORK

220 POPULAR MECHANICS



AMERICA – HARLEY-DAVIDSON MODEL 125, ST-125 AND HUMMER

The Americans too were rewarded with the DKW design and, being capitalists, got their version of the little Deek to the market months before the British or the Germans did. The new Harley-Davidson two-stroke range arrived in 1947 in the form of two models, the Model 125 and the ST-125. More than 10 000 were sold in the first seven months. The 125cc engines were replaced by 165cc versions in 1953, and an updated model known as the Hummer was added in 1955. The last of the American-built DKW-designed two-strokes were sold in 1965, when the factory started importing small Italian-built Aermacchi motorcycles badged as Harley-Davidsons. Harley eventually bought the entire Aermacchi factory in Italy and used its Harley-badged Italian two-strokes to win four 250 and 350cc grand prix world championships with Walter Villa between 1974 and '76.

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Harley-Davidson MODEL 165
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Yamaha YA-1.



1957 Yamaha belonging to Paul Ward of Startline part & accessory importers.



Genuine, original – Yamaha's very first motorcycle.

JAPAN – YAMAHA YA-1

The other big player to significantly capitalise on Germany and DKW's bad fortune was Japanese musical instrument manufacturer, Yamaha. That's a little bizarre when you consider that Japan was allied to Germany in the war, and should have been paying reparations, not benefitting from them. Launched in 1955, the Yamaha YA-1 was an instant hit. Yamaha, a late starter in Japanese motorcycle manufacture, had decided that its bike simply had to be better than anything produced by the other 100 or so post-war Japanese manufacturers. "It was a natural instinct for mechanical perfection that had steered Yamaha's designers towards DKW," says Ted Macauley in his splendid history of the factory, *Yamaha*. "Yamaha were by no means the only company to produce replicas of the DKW – its pedigree and Rasmussen's genius had guaranteed both that it would be a success and it would be copied. For that reason there was more to praise than criticise in Yamaha's decision to use the RT125 as the basis for their first motorcycle." The Japanese motorcycle was an improvement on the DKW and probably one of the best of its clones. It had a four-speed gearbox, and of all the post-war DKW copies it seems to have been the most reliable. It was also quick. Yamaha set up a very serious factory race team and the little YA-1 won its first event, the prestigious Asama Volcano Road Race, in 1955. Production was set at 300 bikes per month, and the factory built more than 11 000 YA-1s in the first three years. Yamaha has ever since then relied on racetrack performance to make its machines stand out from the pack.



DKW poster – 1939.

So there you have it. The DKW RT125 and its countless clones have probably placed more bums upon motorcycle seats and turned more commuters into motorcycle addicts than any other motorcycle – ever. The little Honda Super Cub step-through post office bike may outnumber the DKW design by far with 100 million having been produced, but the DKW was a proper motorcycle and its copies would have had a much higher conversion rate of commuters to genuinely enthusiastic motorcyclists. Most Honda Cub buyers probably never have and never will ride anything bigger than 175cc. The Honda was – and still is – a grand old thing, but the DKW was simply special. **C**

RE-ENGINEERED



At a time when American cars were big, flashy and thirsty, US manufacturers began to consider smaller cars as a viable option – particularly as the popularity of European cars of the likes of Volkswagen and Renault grew. But whereas two of the ‘Big Three’ decided to go with scaled-down versions of the ‘conventional’ American car, the third manufacturer gambled on designing an entirely new car. And it wasn’t just the car itself that was new – the design was one that had never been seen in the history of US motor manufacture – and never would be again. **Sivan Goren** gets to the bottom of the story behind the story of the much-maligned Chevrolet Corvair.

But he never stopped thinking about the possibilities of rear-engined cars, especially at a time when small, rear-engined cars like the Beetle were taking the world by storm. So he decided to begin development of an entirely new ‘compact’ Chevrolet – all on his own and in secret

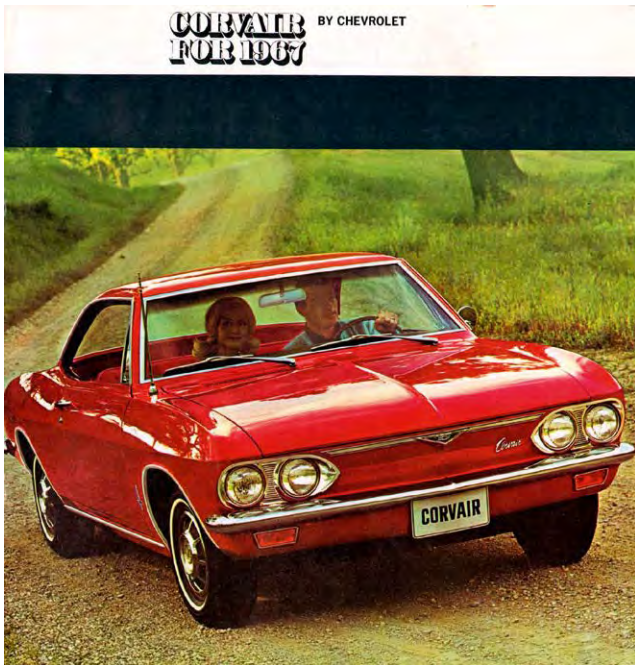
The Corvair’s tale begins with Ed Cole, a man who became a powerful driving force at Chevrolet. As a youngster growing up in a small Michigan town, Cole began tuning old cars to make them go fast and then attended the General Motors Institute while doing internships at

the Detroit motoring giant. He got involved in the Cadillac division, eventually helping to secure a tank contract with the US Army. But it was the development of his experimental rear-engined car, nicknamed the ‘Cadiback’, which would plant the seeds for his future brainchild.

In 1953, Cole was made chief engineer at the Chevrolet division of GM.

His constant pushing for engineering and design advances, along with the small block V8 engine he had a key role in developing, sent Chevrolet surging ahead of competitors Chrysler and Ford. In 1956, at the age of 46, Cole became the youngest general manager of Chevrolet. But he never stopped thinking about the possibilities of rear-engined cars, especially at a time when small, rear-engined cars like the Beetle were taking the world by storm. So he decided to begin development of an entirely new ‘compact’ Chevrolet – all on his own and in secret.

It was only in 1957, when the development was close to complete, that Cole let the powers that be in on his plan. After a lengthy interrogation, GM CEO Harlow ‘Red’ Curtice gave his approval, and development continued covertly over the next 20 months. Why the secrecy? Because at the same time, arch-rivals Ford and Chrysler were busy developing their own versions of the



compact car, brought on by the success of the Nash Rambler in the US. But whereas the other two manufacturers had decided to simply downsize essentially the exact same cars they had been churning out and continue with the traditional front-engine format, Cole was finally going to have his rear-engine dream realised and GM went to great lengths to keep this fact from getting out.

Finally, in October 1959, the new car was ready for launch as a 1960 model. The new model, called the Corvair, went completely against contemporaneous American cars: compared with the usual hulking boat-like offerings it looked positively miniature, and its design was more understated and elegant – there was not a tailfin or chrome grille to be seen. But the biggest difference was that instead of the usual roaring V8 up front, the Corvair was powered by a rear-mounted, air-cooled, overhead-valve

aluminium flat-six engine.

The first Corvairs were produced as economy four-door saloons sans any bells and whistles: the 500 series (standard model that was priced at less than \$2 000) and the slightly higher trim level 700 series. Powered by an 80hp (60kW) engine, they came with three-speed manual transmission standard, though a two-speed automatic was also an option. The Corvair's design included – for the first time for GM – monocoque construction with welded front bumpers and all-wheel independent suspension, similar to designs of certain European cars such as Porsche and Mercedes-Benz. Two-door 500 and 700 coupés followed in January 1960, with fold-down rear seating adding storage capacity, and the Monza

But whereas the other two manufacturers had decided to simply downsize essentially the exact same cars they had been churning out and continue with the traditional front-engine format, Cole was finally going to have his rear-engine dream realised



NOW!
THE REVOLUTIONARY
Corvair
 BY CHEVROLET
WITH THE ENGINE IN THE REAR WHERE IT BELONGS IN A COMPACT CAR! ★★ ★

You have your choice of two Corvairs—this one's the de luxe Corvair 700.

America's only car with an airplane-type horizontal engine!
America's only car with independent suspension at all 4 wheels!
America's only car with an air-cooled aluminum engine!

The rumors about this one were right—but they didn't go far enough. Because here, for the first time, is a truly compact U.S. car that retains the ride and 6-passenger comfort you're used to in a big one. The key to this small miracle: America's only rear-mounted aluminum engine—a revolutionary 6-cylinder power plant that combines compactly with the transmission and drive gears in one lightweight package. You'll get up to 30% more miles to a gallon—because this engine is air-cooled—you'll never need antifreeze.

Floor is practically flat for more foot room. Corvair's size makes it a joy to jockey through traffic and park in tight spots. Yet its unique Body by Fisher offers plenty of room for 6 passengers. And, thanks to Corvair's rear engine, the floor is virtually level, front and rear, so there's generous foot room. *Easy handling without*

power axials. Shifting engine weight to the rear also adds extra ground-gripping traction and gives better compact car handling and braking. And with independent suspension at all 4 wheels, Corvair rivals much more costly cars in the poised, unruffled way it rides.

A price your budget will appreciate. You'll find the most practical thing about this new Corvair is its price. Visit your Chevrolet dealer soon—and see what a wealth of engineering, a modest amount of money buys! . . . Chevrolet Division of General Motors, Detroit 2, Mich.

THE FLOOR IS PRACTICALLY FLAT for more foot room. Trunk's up front—and you can also have a handy loading rear seat (optional at extra cost) for added storage space. Lightweight rear engine, compactly combined with transmission and drive gears, is world's first production 6 with ultra-smooth power of horizontally opposed pistons. And wrapping up all these brilliant features is Corvair's brilliant new styling—pure and simple as modern architecture. THERE'S NOTHING LIKE A NEW CAR—AND NO COMPACT CAR LIKE THE CORVAIR . . . BY CHEVROLET!

900 coupé with 4-speed arrived a few months later.

There were several advantages to the design of the car: firstly, being air-cooled, owners did not have to trouble themselves with leaking radiators or faulty water pumps, thermostats and hoses. The Corvair engine was very durable thanks to its forged crank and connecting rods, torsional vibration damper, hydraulic lifters and oil cooler, and aluminium heads and engine casing. Plus, with the engine/gearbox not up front there was no gearbox tunnel and the interior floor was flat, which meant that passengers had more space. And because the engine was smaller and less powerful, the car's fuel consumption was half of what other traditional American cars could claim, a huge bonus at a time of economic recession.

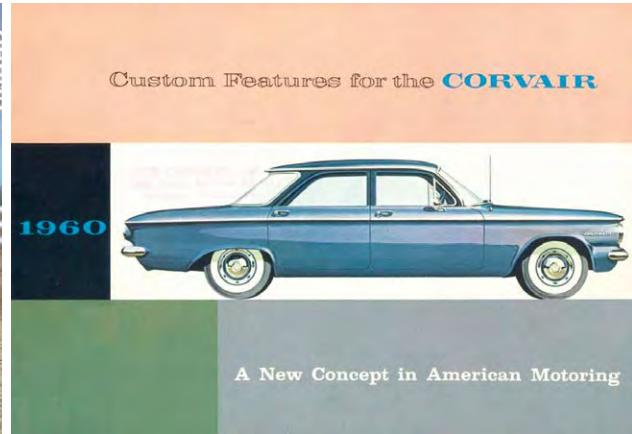
America had never enjoyed a domestic car with such unique features and for a while, the Corvair and its manufacturer basked in the glow of success. According to *Sports Car Illustrated* the Corvair was "the most profoundly revolutionary

car... ever offered by a major manufacturer." The car, along with Ed Cole, even made it onto the cover of *Time* magazine in 1959, with Cole ecstatically gushing: "If I felt any better about our Chevy Corvair, I think I'd blow up." In hindsight, Cole's choice of words at the time was eerily prophetic...

Because, as it turned out, the innovative design also had some major issues. Firstly, putting the vehicle's heaviest component behind the rear axle gave these cars an unfortunate tendency to spin. In fact, in Czechoslovakia during WWII, so many Nazi officers were killed while driving the zippy-but-deadly rear-engined Tatra's that they were officially banned. The Corvair also had a habit of leaking copious amounts of oil and its heating system often pumped engine fumes into the car. This in itself might not have been too much of a disaster if it wasn't for the other major flaw – the car's swing-axle rear suspension.

The Corvair's semi-independent swing-axle rear suspension, invented and patented by engineer Edmund Rumpler, made for a comfortable ride but resulted in handling that was questionable at best. Because there was no universal joint at the wheel/

The Corvair's semi-independent swing-axle rear suspension, invented and patented by engineer Edmund Rumpler, made for a comfortable ride but resulted in handling that was questionable at best



hub end of the axle, excessive camber change during extreme cornering could make the rear wheels 'tuck under', causing the car to roll. Engineers at Chevrolet were aware of this, and had in fact recommended a front anti-roll bar to management, but this was rejected in order to keep costs down.

So Corvair engineers were forced to rely on tyre pressure; the driver's manual specified low front and high rear tyre pressures, which would induce understeer. But for obvious reasons relying on this was a bad idea – the tyres could easily be unknowingly over-inflated. This happened very frequently, mainly due to the fact that amazingly, despite the fact that correct tyre pressure was crucial in the Corvair, this requirement was not made clear to Chevrolet salespeople and Corvair owners. As a result, all four tyres were often inflated equally, as was standard for conventional cars of the time, resulting in dangerous oversteer. From the beginning, there were public expressions of concern regarding the safety of the Corvair. And the growing number of serious accidents in Corvairs didn't help...

Enter Ralph Nader, a lawyer who had started researching automotive safety in 1956 as a second-year student at Harvard. He was inspired by books that brought about change and in his spare time he wrote occasional articles about auto safety. A letter from a disgruntled General Motors employee first brought the Corvair to the unknown lawyer's attention and he gradually began to notice the growing number of injuries and fatalities caused by Corvair accidents. In 1965 Nader published a book called *Unsafe at Any Speed* in which he blasted motor manufacturers in general as far as safety of the motoring public was concerned. But he honed

THE NAME GAME

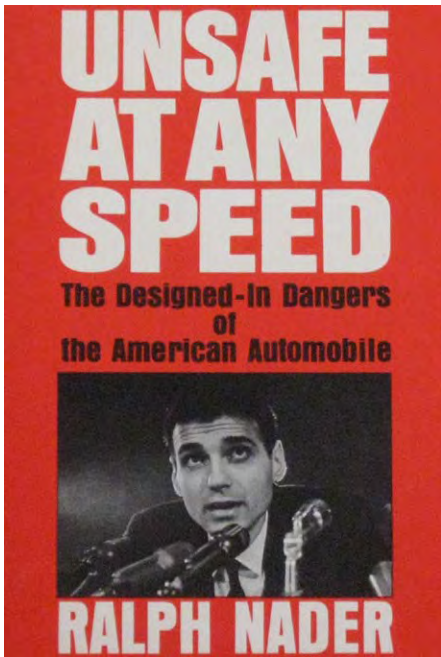
So how did the Corvair get its name? Well, there are several theories. One goes that Ed Cole liked the name 'Corsair', which was a well-known type of WWII fighter plane but that the 's' was misread as a 'v' and so the name 'Corvair' was nothing more than the result of a typo.

Another suggests that because the Corvair was an air-cooled car, its name was a mixture of the name 'Corvette' and the word 'air'.

The last, and probably the most popular, is that the name is a portmanteau of 'Corvette' and 'Bel Air', the thinking being that the Corvair was a perfect combination of the sportiness of the Corvette and the family-friendly package of the Bel Air.

In fact, the name Corvair was actually first used on an experimental Corvette body that was first shown at the New York Auto Show in 1954. It was a coupé version of the original open-bodied 1954 Corvette, known as the Corvette Corvair, and never actually went into production.

Tony Fiore, author of *The Corvair Decade: An Illustrated History of the Rear-Engine Automobile*, says that Cole had always liked the combination of 'Corvette' and 'Bel Air', never forgot the name and decided it was the perfect moniker for his new car.



in on the Corvair, and an entire chapter of the eight-chapter book was dedicated to lambasting the car. And he did not mince his words. “The Corvair was a tragedy, not a blunder,” he accused.

Despite the fact that by the time the book was published, Chevrolet had remedied the inherent faults of the first-generation Corvair and an entirely overhauled second-generation car was by then on the market, the damage had already been done. By the time the book was published, GM faced 106 Corvair lawsuits around the country, and Nader was often called on as an expert witness. But instead of formulating a defence, GM did what any rational company would do – hired a detective agency to spy on Nader in order to discredit him! Of course when this information came out, Nader’s credibility only strengthened in the public eye. So GM lost out not only in reputation, but financially too when Nader sued for damages.

But here’s the thing: despite the fact that Nader targeted Corvair, there were several other vehicles at the time that were similarly configured and all potentially just as dangerous to drive. Mercedes-Benz, Volkswagen, Porsche and Triumph all used similar swing-axel designs in their cars. It seems then, that the Corvair took the fall for the motoring

manufacturing industry as a whole. The car was vindicated in 1972 when a safety commission report conducted by Texas A&M University concluded that the 1960-1963 Corvair possessed no greater potential for loss of control than its contemporary competitors in extreme situations. But this all came too late for the Corvair, because after a 10-year run, with a total of 1 786 243 cars built, it was discontinued in May of 1969.

Nader’s best-selling book, however, continued to surge forward and bring change. In September 1966, 10 months after the book was published, President Lyndon B. Johnson signed the National Traffic and Motor Vehicle Safety Act, requiring the adoption of new or upgraded vehicle safety standards, and creating an agency to enforce them and supervise safety recalls. And as a final slap in the face of General Motors and Ed Cole, it was Nader who made it onto the cover of *Time* in December 1969.

Love them or hate them, these pioneering cars undoubtedly made an impression – and people who own them are truly passionate about them. “This is a wonderful road car,” talk show host and car collector Jay Leno said about his ’66 Corvair. “A lot of people put down the Corvair, but I consider it one of the 10 best General Motors cars of all time because it was just so different from anything else they built. They really handle. They’re built nicely. They’re a lot of fun.” 🚗

Despite the fact that by the time the book was published, Chevrolet had remedied the inherent faults of the first-generation Corvair and an entirely overhauled second-generation car was by then on the market, the damage had already been done



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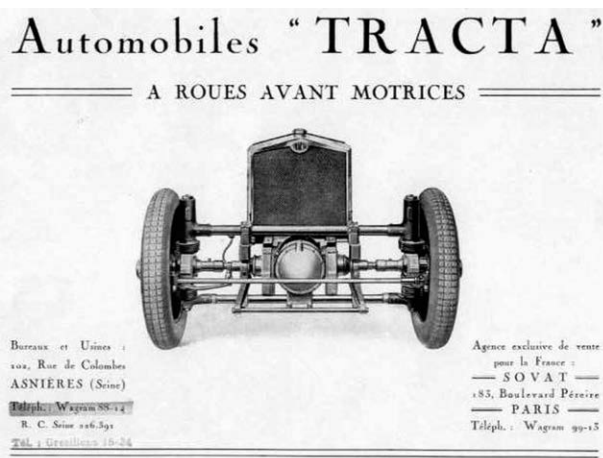
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FRONT-RUNNER

Jean-Albert Grégoire (7 July 1899 - 19 August 1992) was born in Paris and spent most of his working life promoting front-wheel drive and the use of aluminium in cars. He was lucky enough to get some of his ideas incorporated into cars built by other companies, but unlucky enough never to get the recognition and financial reward that should have come his way. This month's fictitious interview

differs from the others in that it does not deal with Grégoire's complete career, but rather the early days of front-wheel drive and his role in developing the first successful CV joint. **Jake Venter** interviewed Grégoire in Paris in July 1931 at a time when he was negotiating with a number of French and German manufacturers who were on the brink of introducing front-wheel drive. After a few pleasantries, the interview began.

I also found that boring and tried oil prospecting in Madagascar. This venture did not last long, so I used the last of my inheritance and bought a garage in Versailles

JAKE: You've been campaigning for front-wheel drive for a long time. Where did your interest in cars start?

GRÉGOIRE: I suppose it's my uncle's fault. My parents died when I was nine, and I was subsequently brought up by my uncle. I was lucky because not only was he a motoring enthusiast, but he also had enough money to send me to the Ecole Polytechnique to study engineering.

JAKE: I suspected you were an engineer.

GRÉGOIRE: No, alas, I got bored with all the mathematics, so I changed to law. I also found that boring and tried oil prospecting in Madagascar. This venture did not last long, so I used the last of my inheritance and bought a garage in Versailles together with my friend Pierre Fenaille, who had a private income.

JAKE: Did you know enough about cars to keep your head above water?

GRÉGOIRE: No, but Fenaille and I were very enthusiastic, and we managed to find some

good mechanics. The garage has made a profit up to now, and has given us the workshop space to play around with various modifications to existing designs.

JAKE: I believe you were very active in rallies and hillclimbs during the early twenties.

GRÉGOIRE: Yes, Fenaille and I entered a number of different motoring competitions, each in our own car. I love to drive and at various times have owned an Amilcar, Mathis and a Bugatti, but Fenaille sat in the back while Armand, his chauffeur, drove his Farman coupé.

JAKE: When did you first develop your enthusiasm for front-wheel drive?

GRÉGOIRE: I hate to admit it, but it wasn't my idea. It was Fenaille's suggestion. His father was very rich so Fenaille did not have to work and consequently he spent a lot of time dreaming up weird designs. One day he said to me that we should build our own competition car and take part in the 24-hour race at Le Mans. I loved the idea and wanted



Tracta in the 1927 Le Mans 24 Hours driven by Grégoire and Lucien Lemesle.

to build something conventional, but Fenaille insisted that the car should have front-wheel drive. It was his money, so he won the day.

JAKE: It was almost unheard of in those days, not so?

GRÉGOIRE: Yes, Miller in the USA built some fairly successful racing cars utilising front-wheel drive, but there were no cars on sale in 1925 with this layout.

JAKE: What engine did you use?

GRÉGOIRE: I found a supercharged 1.1-litre four-cylinder engine from a car built by the S.C.A.P. company and we put our heads together to build a car around it. Special chassis components were made by a firm of engineers, and the open two-seater body was constructed by a body builder. We decided to name the car Tracta.

JAKE: How did you arrange the front-wheel drive?

GRÉGOIRE: The engine was fitted with the gearbox pointing forward. In front of this we

mounted a transmission brake and at the very front we mounted the differential unit. We added a Cardan universal joint (called a Hooke joint in English-speaking countries) on each side of the differential casing and this was coupled to shafts carrying the drive to spherical joints at the hub. The front wheels were independently suspended by means of vertical tubes and coil springs, like on a Lancia.

JAKE: The first drive in the new car must have been a thrill.

GRÉGOIRE: Well... yes and no. The remote location of the gearbox made the gear change mechanism very sloppy and it took us a long time to get it right. On the other hand, I was so impressed with the road-holding that I was converted to this drivetrain layout practically overnight. At the time, I owned a Bugatti and felt that our little car gripped the road a lot better. Some of this was due to the very low centre of gravity. The suspension was really too hard, but this could be modified. Overall

On the other hand, I was so impressed with the road-holding that I was converted to this drivetrain layout practically overnight



1958 Tracta Grégoire Sport Cabriolet.



1952 Socema Grégoire Turbine.



1958 Tracta Grégoire Sport Cabriolet.



1951 Hotchkiss Grégoire.

it was a really good little sports car, with a maximum speed of about 140km/h due to the extra power released by the Cozette supercharger.

JAKE: Did you face any opposition to this unusual drive layout?

GRÉGOIRE: Yes, a number of engineers expressed their opinion in the press and even to me personally that front-wheel drive was dangerous on fast cars. One of them even said that on full lock the universal joints would lock up and cause the car to crash. I didn't care. I was young, and taking bends flat out to the sound of an open exhaust quickly banished all fears.

JAKE: Did you have any mechanical problems with the car?

GRÉGOIRE: Of course. We were unbelievably inexperienced and faced all sorts of mechanical disasters. The frame cracked more than once and the engine bearings

failed a number of times, most likely because I drove really hard to ensure that by the time we entered the car in serious competition it would be ready.

JAKE: I believe you had some success in local events.

GRÉGOIRE: Yes, I entered the car in some local regularity trials and hillclimbs and proved that it was very competitive in its class.

JAKE: Was the Le Mans entry your next step?

GRÉGOIRE: No, not immediately. We decided to enter two cars, so we had to build another one. The most serious problem with the first one was the violent kick in the steering at large steering angles due to use of a Cardan joint. This movement is unpleasant for the driver and causes abnormal wear. It is well-known that such a joint transmits a shaft's motion with a jerk that increases in magnitude as the angle gets bigger. This does not matter on a rear-wheel-drive car, but certainly affects the steering when front-wheel drive is employed.

This can be cured by fitting another Cardan joint at the other end of the shaft in such a way that the input and output yokes are parallel. The

end motion will be smooth but the shaft's motion will remain spasmodic.

JAKE: What did you do?

GRÉGOIRE: Fenaille suggested fitting an enclosed double universal joint inside the hub and utilising sliding elements instead of a cross and rollers to save space. This idea, improved over the years, became the Tracta joint.

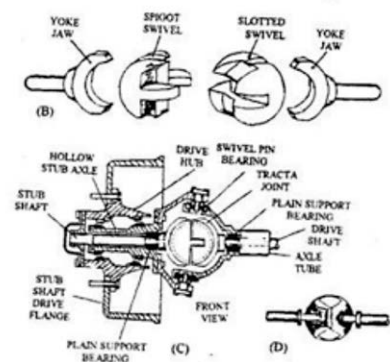


FIG 1: two views of a Tracta joint.

JAKE: How did the two cars do at Le Mans?

GRÉGOIRE: The 1927 race was, for the most part, a disaster. One car, driven by a mechanic called Lemesle and me, was

Fenaille suggested fitting an enclosed double universal joint inside the hub and utilising sliding elements instead of a cross and rollers to save space



Front-wheel drive system – 1929 Tracta.



1927 Tracta Type A.



1929 Le Mans 24 Hour Tracta.

one of seven cars to finish out of 29 starters and gave us a lot of welcome publicity. Unfortunately, on the way to Le Mans, Armand (Fenaille's chauffeur) took a corner too fast and crashed Fenaille's Panhard. I had a number of scratches but Fenaille was severely injured. He was unconscious for 15 days and we could only enter the original car because Fenaille was supposed to have driven the other one.

JAKE: I believe you built many more Tractas.

GRÉGOIRE: Yes, I went to see Pierre's father, Maurice, and he agreed to put the Tracta company on a firm footing. In the last five years (between 1927 and 1931) we built more than 200 Tracta cars. We used engines of various sizes sourced from S.C.A.P, Continental and Hotchkiss – but always with front-wheel drive.

JAKE: Well, that's quite a story. I can see that my time is up. I'd like to thank you for your time and wish you well for the future.

We shook hands and the dapper little Frenchman was gone. 🇫🇷

Grégoire continued to develop and promote the first successful CV joint. It was used by DKW from 1929 to 1936 and by Adler from 1932 to 1939 on their front-wheel-drive models, but Grégoire could not get much money out of these companies. The Nazis had placed all sorts of restrictions on paying money to foreigners. He also tried very hard to persuade André Citroën to use the Tracta joint. Citroën was planning to mass-produce his famous 11CV front-wheel-drive car, but Grégoire's modified version of the Fenaille design proved to be disastrous and was rejected.

The Bendix company in England decided to mass-produce the joint and induced him to accept a very low royalty fee because the joints were used in thousands of 4WD military vehicles. During WWII more than a million Tracta joints were manufactured. WWII Jeeps and the first Land-Rovers were fitted with these joints, but British tax laws and wartime anti-profit regulations ensured that Grégoire got very little reward for all his efforts.

At present, the majority of CV joints in use are based on a ball-and-groove design patented in 1926 by a Ford Motor Company engineer called Alfred H. Rzeppa.

Grégoire spent many years promoting lightweight front-wheel-driven cars using boxer engines. His prototypes inspired engineers to design cars like the Citroën 2CV, Dyna-Panhard, Jowett Javelin and the Hansa 1100. I owned one of the latter models in the '60s. It had a four-cylinder water-cooled boxer engine and was a very entertaining car to drive due to the vicious oversteer that occurred if you reduced the throttle opening while cornering. This is rumoured to be the model that Subaru bought at an early motor show and studied before venturing on the same path.

SMALL WONDERS

In part one of his series on microcars **John Rabe** looked into what defines the category and got the ball rolling with a look into offerings from Messerschmitt, FMR, Iso and BMW. In this issue he continues looking at microcars that were available in SA with the Goggomobil, Vespa, Lloyd and the locally assembled Fuldomobil.

GOGGOMOBIL

(Manufacturer: Hans Glas GmbH, Dingolfing, Germany)

T-250 SEDAN

Hans Glas accomplished what most of microcar manufacturers could only dream of – the large series production of a very popular car over a very long period of time.

Manufacturers of agricultural machines, Glas and son Andreas developed their prototype small car with Isetta-style front-opening door in the autumn of 1954. The pre-production series of 50 cars had no rain gutters. Until September 1955, fenders were screwed rather than welded together and incorporated intake scoops on the rear.

Roll-up windows were introduced in October 1956. From September 1956 a 300cc motor (15hp) was available in addition to the 14hp 250. The revised car now had a 'bonnet' pressed in, louvres on the rear fenders and a fake grille at the front. A tuned 20hp 400cc motor became available but



was seen mostly on US export cars. The doors were front-hinged from March 1964, this being the last major change for the sedan, called 'limousine' in Germany. An electric pre-selector transmission was also available.

By November 1966 BMW was the new owner, and the last limousine left the factory in June 1969.

MODEL: T-250 SEDAN	Motor: Glas two-stroke	Body: monocoque
Produced: April 1955 - 1968	Cylinders: 2	Chassis: none
Number produced: 174 548	Displacement: 247cc	Suspension front: coil
Number surviving: unknown	Horsepower: 13.6	Suspension rear: coil
Length: 2 900mm	Gearbox: 4 + rev	Steering: rack & pinion
Width: 1 280mm	Starter: Dynastart	Brakes: hydraulic
Weight: 415kg	Electrics: 12v	Four wheels: 4.00 x 10"
Interior: four-seater front bucket/rear bench	Ignition: 2 x coil	Top speed: 85km/h



TS-300 COUPÉ

With an eye to the American market, this elegant and very stylish version was built on the standard Goggomobil floor pan and received all the same upgrades. From March 1957, the electric gearshift was introduced on this model.

Available initially only as a hardtop coupé in two-tone finish, a single colour was offered towards the end. A 'Coupé-Cabriolet' was also available. The 300cc engine was made until September 1965 and the 400 to September 1967, but the 250 soldiered on until June 1969. The 'Mayfair' name was used in the UK.

MODEL: TS-300 COUPÉ	Motor: Glas two-stroke	Body: monocoque
Produced: 1957 - 1969	Cylinders: 2	Chassis: none
Number produced: 67 000	Displacement: 293cc	Suspension front: coil
Number surviving: unknown	Horsepower: 15	Suspension rear: coil
Length: 3 050mm	Gearbox: 4 + reverse	Steering: rack & pinion
Width: 1 370mm	Starter: Dynastart	Brakes: hydraulic
Weight: 420kg	Electrics: 12v	Four wheels: 4.80 x 10"
Interior: 2 + 2	Ignition: 2 x coil	Top speed: 95km/h



T600

The 'big Goggomobil' with space aplenty for a family of four and their luggage made its debut in September 1957 at the Frankfurt Motor Show, but volume production only started around a year later.

In autumn 1959, however, it was rebranded as the Glas Isar to place it upmarket from its microcar predecessors. A 'Kombi' (estate car) version also joined the range. A minor facelift occurred in August 1960 and the Isar continued in production until the end of summer 1965.

The new car incorporated several fashionable transatlantic styling features of the time such as a wraparound windscreen, small tailfins and a two-tone paint finish. Its taillights and silhouette resembled a smaller version of the stylish Opel Kapitän. A 700 version followed.

Although the Glas Isar T700 was sold as the 'Royal' in the UK, the Goggomobil name was used in South Africa. *CAR* magazine of May 1964 listed the 700cc Royal Saloon and Kombi at R1 120 and R1 244 respectively. The Austin/Morris Mini cost R1 125, which tells its own story.

MODEL: GLAS ISAR T600/T700	Motor: Glas four-stroke	Body: steel monocoque
Produced: 1958 - 1965	Cylinders: 2	Chassis: none
Number produced: 25 092	Displacement: 584/688cc	Suspension front: coil
Number surviving: unknown	Horsepower: 20/30	Suspension rear: leaf spring
Length: 3 430mm	Gearbox: 4 + reverse	Steering: rack & pinion
Width: 1 470mm	Starter: Dynastart	Brakes: hydraulic
Weight: 650kg	Electrics: 12v	Four wheels: 5.20x12"
Interior: four-seater (2 x bench)	Ignition: 2 x coil	Top speed: 98/110km/h

GOGGOMOBIL DART

(Manufacturer: Buckle Motors Pty Ltd, Sydney, Australia)

Bill Buckle's father had sold cars, but the idea of actual vehicle production seemed much more challenging. He was particularly interested in the advantages of fibreglass as a medium for body construction. His first prototype, a roadster based on Ford Zephyr Six components, was completed in 1955. The Buckle 2.5-litre Coupé, with performance modifications to the Zephyr motor which debuted in 1957 after further development, proved successful in motor racing. Only 20 were made.

Buckle became the Goggomobil distributor for the country after it became clear that Australia's punitive import taxes could be significantly reduced by importing chassis only. Substantial numbers of the German company's Transporter model's chassis were brought in and fitted with fibreglass copies of the steel bodies.

Buckle commissioned a local racing car designer to bring his idea for a small open sports car based on the Goggomobil Coupé chassis to fruition. The resulting two-seater was pretty but the tiny and cramped convertible top made for difficult access. A small door was later offered, as well as a 400cc motor.



MODEL: DART	Motor: Glas two-stroke	Body: fibreglass
Produced: 1959 - 1961	Cylinders: 2	Chassis: steel pan
Number produced: 700	Displacement: 293cc	Suspension front: coil
Number surviving: few	Horsepower: 15	Suspension rear: coil
Length: 3 050mm	Gearbox: 4 + reverse	Steering: rack & pinion
Width: 1 370mm	Starter: Dynastart	Brakes: hydraulic
Weight: 380kg	Electrics: 12v	Four wheels: 4.80 x 10"
Interior: 2 x bucket seats	Ignition: 2 x coil	Top speed: 105km/h



VESPA 400

(Manufacturer: ACMA Ateliers de Construction des Motocycles et Automobiles, France)

Post-WWII, Italy's aircraft industry was severely restricted following cessation of hostilities. Piaggio's Pontedera fighter plane plant had been totally destroyed by bombing. Italy's crippled economy and the disastrous state of the roads inhibited redevelopment of the motor industry.

Enrico Piaggio, the son of Piaggio's founder Rinaldo, left the aeronautical industry to tackle Italy's pressing need for a modern and affordable mode of transport for the masses. A patent for the Vespa scooter design was filed in April 1946. Sales were slow after its public debut at the 1946 Milan Fair, but sales rocketed after the introduction of instalment sales. In 1959 control of Piaggio passed to the Agnelli family, the owners of car maker Fiat S.p.A. When expanding into foreign markets it was common for Vespa to partner with, or licence certain models to existing manufacturers. Vespa's president felt that Fiat's status in Italy should not be contested, so production of Piaggio's Vespa 400 was licensed to ACMA.

The two-door cabrio/coach with rolltop roof made its high-profile public debut on 26 September 1957 at a press presentation in Monaco. 'Luxe', 'Tourisme' and 'GT' versions were available. All seated two with room behind the seats for luggage or two small children on an optional cushion.

The car did not always live up to the stylish image created at launch. An awkward gear change, poor soundproofing and high fuel consumption, before a modification to the carburettor specification, came in for criticism.

Handling was sports car-like and it performed well in the 500cc class in rallies. Thousands were sold in the US in the late 1950s and early 1960s, at around \$500 less than a VW Beetle. Production ceased in 1961 to concentrate on motor scooters.

MODEL: 400	Motor: two-stroke air-cooled	Body: monocoque
Produced: 1957 - 1961	Cylinders: 2	Chassis: none
Number produced: 34 000	Displacement: 393cc	Suspension front: coil spring/roll bar
Number surviving: unknown	Horsepower: 13 (later 14)	Suspension rear: coil spring
Length: 2 850mm	Gearbox: 3 + reverse; GT: 4 + reverse	Steering: rack & pinion
Width: 1 270mm	Starter: electric	Brakes: hydraulic drum
Weight: 375kg	Electrics: 12v	Four wheels
Interior seating: 2 + 2	Ignition: coil	Top speed: 80/90km/h

LLOYD LS 300

(Manufacturer: Lloyd Maschinenfabrik GmbH, Bremen, Germany)

Carl F. W. Borgward, who easily survived the turmoil and upheaval of WWII, was described as an exceptional entrepreneur. Successful, headstrong and imaginative, he had built virtually anything that had four wheels and ran on roads. His company made both cars and trucks, and in addition to the makes Borgward and Goliath, Lloyd was also established in 1949.

The first car – the Lloyd LP 300 – made its debut in 1950 and became affectionately known as the 'Leukoplastbomber' (Band-aid Bomber). The plywood framework of its body was enveloped by imitation leather. Large wheels, a decent performance and room for four made it stiff competition for the cramped 'bubble car' competition. By 1954 the lower part of the body shell had been replaced by steel and a year later the whole body was replaced.

MODEL: LS 300	Motor: Lloyd two-stroke	Body: wood
Produced: 1950 - 1952	Cylinders: 2	Chassis: tube
Number produced: 109 898	Displacement: 293cc	Suspension front: transverse leaf spring
Number surviving: very few	Horsepower: 10	Suspension rear: swing axle
Length: 3 200mm	Gearbox: 3 + reverse	Steering: rack & pinion
Width: 1 320mm	Starter: electric starter	Brakes: cable
Weight: 480kg	Electrics: 6v	Four wheels: 4.25 x 15"
Interior seating: 4	Ignition: coil	Top speed: 75km/h

LLOYD LP 600 'ALEXANDER'

By 1958 the Lloyd motor had reached 600cc. Due to insurance technicalities, however, the engine was de-tuned to 19hp. This stretched acceleration for the 100km/h 'sprint' to a leisurely 60 seconds. The 600 'Alexander' featured a higher trim level than the basic 600, as well as a four-speed fully synchronised transmission.

The rear boot lid could now be opened from the outside instead of luggage having to be stowed behind the rear seat from inside. The 'Alexander TS' boasted 25hp. A joint venture between Carl Borgward and Laurence Hartnett in the late 1950s saw the Lloyd 600 assembled in Australia from December 1957 as the Lloyd-Hartnett. 3000 cars were built before production ceased in 1962.

Lloyd tried to stay abreast of its competition, but it accumulated substantial debt like other divisions of its Borgward parent company. Although the whole group was bankrupt by 1961, Lloyds such as the much larger and attractively styled Arabella LP900 were still built until 1963, by which time it was known as the 'Borgward Arabella'.



MODEL: LP 600 ALEXANDER	Motor: Lloyd four-stroke	Body: steel
Produced: 1957 - 1961	Cylinders: 2	Chassis: tube
Number produced: 176 524	Displacement: 592cc	Suspension front: transverse leaf spring
Number surviving: unknown	Horsepower: 19	Suspension rear: swing axle
Length: 3 355mm	Gearbox: 4 + reverse	Steering: rack & pinion
Width: 1 410mm	Starter: electric starter	Brakes: hydraulic
Weight: 570kg	Electrics: 6v	Four wheels: 4.25 x 15"
Interior seating: 4	Ignition: coil	Top speed: 100km/h

FULDAMOBIL

(Manufacturer: Elektromaschinenbau Fulda GmbH of Fulda, and Nordwestdeutscher Fahrzeugbau ('NWF') of Wilhelmshave)

NWF chose this moniker for a series of small cars it would produce from 1950 to 1969. Although production was relatively limited, the interest that was created led to construction under licence on four continents including Europe. In its final globule form it is one of the main candidates said to have inspired the description 'bubble car'.

Soon after WWII, director Carl Schmitt employed freelance designer Norbert Stevenson to refine the latter's earlier concept for a microcar. Stevenson, a freelance journalist who had completed only one term of mechanical engineering studies, had designed a very basic three-wheeled car to carry two people. Two wheels at the front provided stability and drive was by a small engine at the rear.

Fuldomobil's little car would bear various names. Chile, the UK and Turkey called it the Nobel. In the Netherlands it was the Bambino while Sweden and several others knew it as King Fulda. In South Africa it was manufactured in S-4/6 form under the original German name. Bambi was used in Argentina and their pick-up version was the Sporty.



N-2 (1953)

The earliest prototypes used Baker & Polling chainsaw and Zündapp 198cc air-cooled single-cylinder two-stroke motors. Their flat, angular body sides were reminiscent of the miniature trailer caravans of the time. A glider company made the solid, heavy bodywork of wood, which was mounted on heavy tube frames and employed centre point steering.

A lack of power remained a problem until the fitment of a Fichtel & Sachs 360cc stationary engine enabled the new Type N-2 to reach 80km/h. Enveloping the wooden bodywork with distinctive hammered aluminium sheet, prompted the nickname 'Silver Flea'. A smooth painted finish was also available.



MODEL: N-2	Motor: Fichtel & Sachs two-stroke	Body: wood and aluminium
Produced: 1952 - 1953	Cylinders: 1	Chassis: tube
Number produced: 380	Displacement: 359cc	Suspension front: transverse leaf spring
Number surviving: 3	Horsepower: 9.5	Suspension rear: coil
Length: 2 850mm	Gearbox: Hurth 3 + reverse	Steering: chain and gear
Width: 1 397mm	Starter: Dynastart	Brakes: cable, front only
Weight: 305kg	Electrics: 6v	Three wheels: 4.00 x 8"
Seating: 2 on single bench	Ignition: coil	Top speed: 80km/h

S-4 (1956)

Although the nickname, comfortable ride and roomy cabin of the N-2 brought initial market success, Stevenson set about reducing weight and the labour expense of hand-fabrication. His S-series shell, which used a large, bulbous, aluminium body, achieved this in June 1953.

VDM, who could form curved shapes from these lightweight sheets, was chosen to construct the new body. The initial run of S-1 Fuldas was built by NWF under licence, using ILO motors. The S-2 was Fulda-built, using the previous Sachs 360. Two S-3 prototypes trialled the new Sachs 200 (Messerschmitt) motor.

The S-4 eventuated after the 1955 elimination of the tax advantage previously enjoyed by three-wheelers. A pair of rear wheels, spaced 400mm apart, enhanced stability, being driven by the reversible Sachs motor via a custom enclosed chain case. The wiper motor was moved to a position above the windshield and an 'Isetta-type' sunroof was fitted.

MODEL: S-4	Motor: Fichtel & Sachs two-stroke	Body: wood and aluminium
Produced: 1955 -1956	Cylinders: 1	Chassis: tube
Number produced: 168	Displacement: 191cc	Suspension front: transverse leaf spring
Number surviving: unknown	Horsepower: 10	Suspension rear: coil
Length: 3 100mm	Gearbox: 4 forward + 4 reverse	Steering: rack & pinion
Width: 1 470mm	Starter: Dynastart	Brakes: cable, front only
Weight: 390kg	Electrics: 12v	Three wheels: 4.00 x 8"
Interior: 2 + 2 seating	Ignition: coil	Top speed: 85km/h

Towards the end of 1955, Karl Schmitt signed a contract for licensed production with Fritz Neumeyer, the head of Zundapp. The expected modifications to the car at Zundapp, including the fitment of their own engines, did not eventuate and the Zundapp project was cancelled in early 1956. Fulda made some chassis and front suspension changes to cut costs and the rear hatch was replaced by a larger fixed window.

The revised car, the S-6, debuted in October 1956 when two-tone paintwork was offered for the first time. The bloated but charming Fuldomobil could probably lay claim to being the longest produced microcar. During almost twenty years of production, however, only around three thousand examples were made. Production of microcars had always remained a side line for Fulda whose core business was electrical devices and

distribution for Bosch.

So far we have looked at diminutive machines that the masses will immediately section off as bubble cars or microcars but in the next instalment the lines between microcar and car are blurred by Fiat's 500 and 600 derivatives, as well as the NSU Prinz and Champion offerings. We will also round off the list of microcars you might have seen in South Africa with a peek into the tale of Heinkel, Trojan and Berkley. 🇿

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Image: Phillip Schedler



CLUB TOGETHER

Real car enthusiasts are all cut from the same cloth. It doesn't matter if your chosen genre is of the vintage, veteran or classic persuasion. This commonality, the desire for more knowledge, sharing the enjoyment and the goal of preservation are the core reasons why so many historic car clubs were set up years ago. And while recent technological advances and social media has changed the way enthusiasts interact, it definitely doesn't mean that car clubs are dead.

Image: Phillip Schedler





Image: TayeedZA



Image: Phillip Schedler

Club membership nowadays doesn't mean posting a cheque to the secretary or attending monthly noggins, but rather clicking the 'Follow' tab on a Facebook page or being added to an exclusive WhatsApp group. As an example, we tagged along to a recent get-together of Subaru and Mitsubishi future classics that although organised through the use of modern media, still accomplished exactly what the 'traditional' car clubs did in the 1950s, '60 and '70s – car usage, appreciation, information sharing and a register of vehicles. Four passionate Subaru and Mitsubishi owners dreamt up the idea, and besides hunting on social

media, sleuthed their way around Gauteng, down to Durban and on to Secunda and Bloemfontein to rope in some rare vehicles.

While these cars are relatively commonplace in Japan, it's a different story for South Africans, with very few Subaru and Mitsubishi 'Holy Grail' models officially imported over the years. The motorsport and rally pedigree that both brands sport has also seen to it that a large percentage of the vehicles have gone the way of the boy racer and are modified extensively. So there is reason to document and encourage correctness, and the organisers

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Image: Phillip Schedler



Image: Phillip Schedler

made this clear by only inviting machines in factory or OEM+ upgraded form. Subaru South Africa sponsored venue hire and Gerotek testing facility was selected. With the dynamic handling track, skidpan and high-speed oval, it proved a fitting backdrop to such performance-orientated machines.

43 cars were on hand, and included Subaru SVXs, four Version 6 Subaru Impreza WRX STi sedans (just 11 came to SA in 2000), the only Version 6 Impreza WRX STi sport wagon and an Impreza 22B (number 272 of 400 worldwide). Subaru South Africa released a handful of local special editions in the early 2000s and a pair of 2004 Impreza WRX STi Stimulating Editions, a 2006 Impreza WRX Prodrive

and 2006 Forester XT Prodrive represented this cool period in local Subaru history – hopefully examples of the missing 2001 Africa Champion Prodrive Impreza WRX and 2006 Legacy Prodrive ‘GTR’ can be traced for the next meeting. On the Mitsubishi front, a Bloem-based Lancer Evolution MR FQ400 (number 76 of 100) had the heart thumping but was backed by a range of Lancer Evo models, a trio of 3000GTOs and a Paris-Dakar-inspired Pajero Evolution.

Want to see more of the day’s events? Don’t expect a club newsletter delivered to your door. Rather access Flickr.com and search for SMGenerations2018 or follow Modern Japanese Classic Cars’ Facebook page. 📷

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A PARALLEL UNIVERSE

KTM's rocketing popularity amongst hard-core adventure riders has caused BMW executives countless sleepless nights over the past couple of decades. Their big single-cylinder and V-twin offerings have outgunned pretty well everything the German manufacturer has come up with at both ends of the market, and if power's what you're after, the Austrian bikes have it in spades. **Gavin Foster** climbs aboard KTM's latest offering, the naked 790 Duke, a bike that has really set the cat amongst the pigeons.



The bike itself doesn't pose a great threat to BMW here because the street-fighter market is very small in SA, but the twin-cylinder 790cc engine tucked away in its steel tubular frame most certainly does. This is the first-ever parallel-twin engine to come from KTM, and it kicks German butt from the get-go. This engine in the nimble dual-purpose KTM 690 Adventure arriving next year will undoubtedly pinch sales from BMW's 800 and 1200 offerings alike.

Parallel-twins, also known as vertical-twins, ruled the roost for decades in the motorcycle world, particularly after Edward Turner and Val Paige come up with the Triumph Speed Twin in 1937. The twins powered most of the iconic British sports bikes of the day, like the Triumph Bonneville, the Norton

Commando and the BSA Lightning, and when the Japanese arrived in the 1960s it was with well-built and lively middleweight four-stroke twins like the Honda CB350, CB450 and Yamaha 650 that they poked holes in the British manufacturers' aura of invincibility. Then came the 1970s' wave of four-cylinder Japanese motorcycles that became the norm, and the parallel-twin virtually disappeared from the scene. Until a decade or so ago, that is. Now Honda, Kawasaki, Yamaha, BMW and Triumph all offer vertical-twins displacing between 650 and 1200cc, and they're all popular.

When mounted across the frame a parallel-twin is not much wider than a single and a lot skinnier than a four. A V-twin with the cylinders aligned fore and aft is potentially narrower, but it's also longer and the bike's wheelbase then has to be a fair bit lengthier, depending upon the angle of the V. The closer the cylinders get to parallel, the shorter the bike can be. A V-twin mounted across the frame as in a Moto Guzzi can be

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A lot of existing KTM owners who've outgrown their big singles will find the new twin very exciting while considerably less intimidating than the bulky V-twin package

very short, but hey – see those pots sticking out the side! That's almost as wide as a BMW! The cherry on top is that a vertical-twin engine is cheaper to build and easier to maintain than a three- or four-cylinder inline engine, a V4, or a V-twin with its two cylinder heads.

KTM's 690 one-lung engine has taken the single-cylinder design about as far as the factory is prepared to go, with a hefty 73hp and 74Nm surging from that big, heavy piston. For KTM's new middleweight the marketing guys wanted an engine to fill the gap between the big single-cylinder and the massive V-twins with their huge horsepower – does 177hp not sound like a bit of overkill to you? The short-stroke 799cc parallel-twin promised the best return, with a bore and stroke of 88mm x 65.7mm making it good for 105hp at 9000rpm and 87Nm of torque at 8000. A lot of existing KTM owners who've outgrown their big singles will find the new twin very exciting while considerably less intimidating than the bulky V-twin package.

The dual-purpose KTM adventure bike with the new engine is only scheduled to arrive in 2019, but you can bet that lots of potential buyers will be cadging test rides on the street-fighting 790 Duke in the meantime.

KTM has packed the new Duke with a full house of electronic riding aids, including four ride modes (Rain, Street, Sport and Track) as well as lean angle-sensitive traction control and cornering ABS braking. There's also launch control, anti-wheelie to stop you getting flipped over on launch, and a slipper clutch to prevent rear-wheel hop under hard braking. For me, the most impressive thing about the electronics is the ease with which everything can be adjusted via one control on the left handlebar. The guys in suits had to cut costs somewhere, and that they did with the suspension. The White Power front and rear units are pretty basic in terms of adjustability, with rear preload offering the only choices.


For me, the most impressive thing about the electronics is the ease with which everything can be adjusted via one control on the left handlebar



The KTM 790 Duke is a tiny little motorcycle. Climbing on board is a cinch, and looking down once you're in the saddle all you can see ahead are the handlebars and instrument binnacle. The bike could easily be mistaken for a 250 or 400cc single-cylinder city runabout to the uninitiated. Any misunderstandings would be cleared up at the first twist of the throttle, because the Duke gets moving like there's no tomorrow. It doesn't need to be revved hard though. There's a marvellous wide band of torque from 5000rpm to above the power peak at 9000, with the red line coming up at 9500. A UK magazine tested the bike's straight-line performance at a drag strip and it reached 60mph (96 km/h) in 3.11 seconds, with 160km/h coming up in 6.83 seconds and the top speed of 137mph (220km/h) needing just 18.16 seconds of your time. Not bad for a bike that feels like a toy when you first clamber aboard!

The KTM weighs just 169kg dry but feels even lighter, and pulls top gear comfortably from

around 2500. For such a short bike it's also very stable – I expected the front-end twitchiness associated with short wheelbases and steeply raked forks, but the bike felt dead stable. The standard hydraulic steering damper may help, but inherent stability is impressive. Winding roads are a joy at speed, and I felt no need to lament the lack of adjustability in the suspension. And that engine. Ah, that engine. Parallel-twins have inherent vibrations that need to be quenched with balance shafts, and the KTM has two – one driven from the crankshaft and a second in the cylinder head. Nothing to complain about there, then. What I can have a moan about is the quick shifter that also comes as standard. The one on the test bike wasn't set up properly and felt so rough and notchy that I elected to avoid using it. People who've ridden other 790 Dukes tell me that this is not the norm.

The KTM 790 Duke retails at R147 990, which is a little less than I expected. If I had money to throw around I'd buy one now to tide me over until the Adventure version arrives in 2019. The Duke is just so much fun I'd probably keep it as well... 

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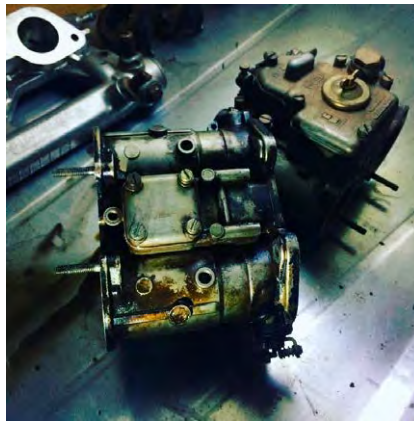
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TIME, MONEY AND AN EVER-CHANGING PLAN

When it comes to classic car work there is always one factor that gets in the way... TIME. Of course time comes in two formats – the one read on a clock or calendar and the other measured with a diminishing bank account. The work on the pair of *CCA* project cars has already started swallowing time and there is not really much visible difference in either car. But we soldier on with the hope of having two very cool and usable machines in the near future. **Stuart Grant** gives an update of the progress that has been made this month.



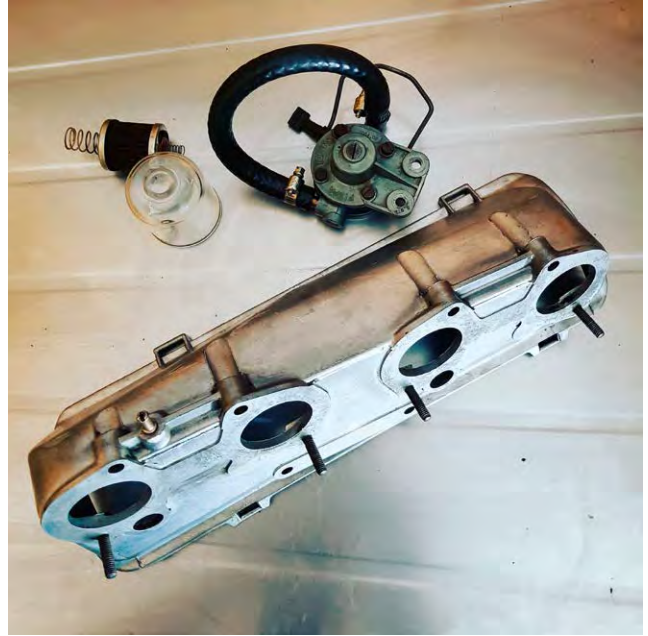
Project number one, the Matador Marauder Mk3, leads the way in the go-slow department. The car has no papers and we are not sure if it ever made it onto the eNaTIS system, so we have an expert in this field doing the homework. Once this is under control, the work will take off in earnest. In the meantime, we've managed to track down the correct taillights and, as mentioned, a fellow Marauder owner will help with a mould of the nose section so the correct profile can be grafted on. Following the repair of this and filling of

all unnecessary holes, the fibreglass body will be lifted off the chassis and sent for paint. With it out of the way, the exposed mechanicals can be assessed and repaired where necessary. Of course we all need some instant gratification to keep

the motivation running, and for us this was the fitment of a battery, some fresh fuel and firing up the 2-litre BMW engine. Thankfully it appears to be in top condition, but the way the lump flopped around the engine bay when revved indicates some new engine mountings might be needed – this might also sort out the issue of the exhaust banging against the chassis from time to time.

Our second project, the Alfa Romeo 1600 Deluxe, also has the paperwork in for some investigation and enjoyed a fire-up. Following a decade or so off the road, it was surprising to see that when petrol was added to the tank and a few fuel filters put in place, the twin-cam started. It wasn't all glory though as fuel tank rust and grime soon blocked the filters and starved the twin Weber carbs of juice. This was fixed by changing filters and blowing air down the fuel line to temporarily move the gunk away from the fuel pick-up. Running again,

Of course we all need some instant gratification to keep the motivation running, and for us this was the fitment of a battery, some fresh fuel and firing up the 2-litre BMW engine



the car didn't respond well to throttle inputs and a loud air-sucking noise was heard. This turned out to be tears across all four tops of the rubber carburettor mounts – attributed to old age and also the fact that the carb support stay was missing, so the weight of all of these and the air-box was hanging on them. At £140 or so for a pair we were lucky that AK Classics in Johannesburg were able to dig out some usable second-hand items and are on the hunt for the support stay.

While this was on the go we pulled off the air-box, carbs, manifold, fuel pump and fuel filter/regulator for a clean-up. A few hours with a toothbrush had them looking much better but when re-fitted in the engine bay, they made the over-sprayed brake booster look very scrappy – so those are now out for a strip, check and tidy.

It's the nature of the classic car beast... you think you have a game plan and then some stumbling block or curveball comes along. 🇸



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1974 AMC/Rambler Hornet Sportabout. Good original condition with standard 4.1-litre straight-six engine. All paperwork is in order and the licence up to date. R35 000. Contact Fanie in Welkom: fanie1955.nothnagel@gmail.com.

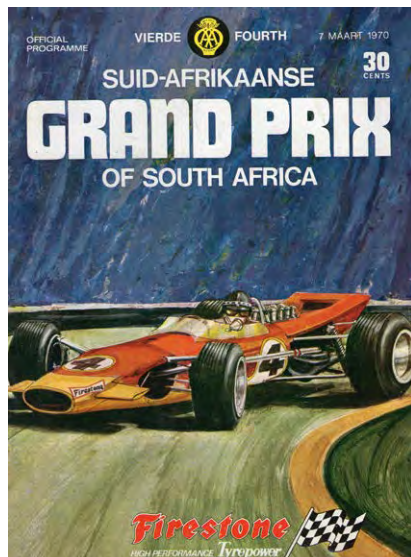


VW Beetle parts. Bonnet grille, engine lid and plates for door handles as per attached photo. Make an offer to SW Burger on 073 306 8993.



1998 Ford Ranchero XR6. Show car with 66 000 original kms on the clock. Totally original and unmolested with no accident damage. White with grey cloth interior, working original radio and antenna. The load bay has not been used while the Michelin tyres (first set), exhaust system, all oils and filters and fan belt were replaced at 62 000km. Fitted with Radical canopy and towbar. Never been used to do any work. R125 000. Contact Jack on 082 892 0583.

Lancia Fulvia S1 engine. The engine turns freely and seems to be in good condition. Email sales@lancia.co.za for more information.



1970 SA Grand Prix programme. Regrettably for sale to the highest serious offer, my rather tatty 1970 SA Grand Prix programme autographed by every driver who took part in the race. Signatures include Stewart, Hill, Surtees, Brabham, Hulme and Rindt. Rindt was posthumously awarded the championship at the end of that year. Signatures of Ken Tyrrell and I believe World Sports Car Champion Pedro Rodriguez and Jo Siffert are among those in the programme. Most of the signatories are sadly at the big Grand Prix in the sky. Jody Scheckter is also named in the programme driving his Renault R8. An article on my programme was published in *The Star Motoring* on Thursday 2 December 2004 when the only missing signature of the late South African Peter de Klerk was obtained. In two years' time this unique item of South African motorsport memorabilia will be 50 years old. Contact Dave on 083 978 3355 or email ranson@mweb.co.za.



1965 Morgan 4/4 race car. Well-known South African race-winning Morgan 4/4. Fresh Johan Coetzee dry sump. Ford crossflow motor (one race since full rebuild). Twin Weber carburetors. Full alloy Quaife type 9 gearbox. Limited-slip differential. 9mm alloy body with fibreglass wings/cowl weighing in at 650kg. Comes with moulds for wings/cowl. Spare set of Compomotive three-piece rims and South African Historic Technical passport. R500 000. For full details and photos of the car being built and in action contact chrisclarkesa@gmail.com or 082 443 6963.

WANTED



1974 Alfa Romeo 1600 GT grille. Ideally the complete setup from a 1600 Deluxe or 2000 Alfa Junior. Contact Stuart on 082 921 4583.

Vintage Kyalami racing programmes. Looking for specific programmes between 1965 to 1973 for Grand Prix and 9 Hour Endurance race and also original Kyalami event posters. Please contact John at vintageracer73@gmail.com or John Gabriel on Facebook.

Experienced mechanic/restorer. Required for classic car workshop. Must have a good working knowledge and experience of classic cars from 1935-1990. Must have traceable references. Please forward CV to thys@route101ccc.co.za.

South African Grand Prix Programmes. Needed to complete my collection for all SA GP. The missing years are 1963, 1965, 1967-1973, 1977, 1993. Please contact Robin at f1weekly@telkomsa.net or on 083 296 4944.

Various car magazines.

All in excellent condition. R 20 each.

TITLE	QUANTITY
<i>Motor Sport</i> (UK) (from 1993 to 2017)	258
<i>Christophorus</i> (Porsche factory: Germany) (from 1972 to 2016)	262
<i>Porsche Panorama</i> (USA) (from 1986 to 2013)	271
<i>Excellence</i> (Porsche) (USA)	35

I also have a complete collection of *National Geographic* magazines (January 1981 to December 2015) in excellent condition. A total of 420 magazines at R20 each and approximately 190 LP records (vinyls) in top condition at R50 each. Please email Phillip on philip.vanrooyen@dpw.gov.za for a complete list or call on 082 816 4270.



1996 PORSCHE 993 RS CLUBSPORT - RECENT REFURB - POA



1995 PORSCHE 993 TURBO - R 2 799 950



2014 PORSCHE 911 GT3 991.1 - SHARKWERKS EXHAUST - R 2 349 950



1973 PORSCHE 911 2.7 RS REPLICIA - VERY AUTHENTIC - POA



1984 PORSCHE 930 TURBO - RECENT RESTO - R 1 850 000



2004 PORSCHE 996 GT3 MK2 - 35000km - R 1 599 950



2011 PORSCHE CAYMAN R - ONLY 9563km - R 879 950



2007 PORSCHE 911 (997) CARRERA 4S - R 765 000



1985 PORSCHE 911 CARRERA TARGA - VERY SORTED - R 699 950

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FRANSCHHOEK MOTOR MUSEUM

The Franschhoek Motor Museum offers visitors a special opportunity to look back at more than 100 years of motoring history with its unique and exciting collection of vehicles, motorcycles, bicycles and memorabilia in the magnificent setting of L'Ormarins. Across the length and breadth of Southern Africa, only one place can adequately portray the evolution of the automobile, The Franschhoek Motor Museum.

Admission prices are: R80 adults | R60 pensioners | R60 motor club members | R40 children (3-12yrs)

BY APPOINTMENT ONLY

Phone ahead for confirmation. No motor bikes. No pedestrian access from the gate.
Maximum size of tour bus allowed is 22 seater, larger groups please book in advance.

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