

Wyres & Tyres

March 2021



www.memphisbritishcars.org

British Sports Car Club, LTD Memphis, Tennessee

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Membership Meetings

Coletta's Italian Restaurant, 2850 Appling Rd.

3rd Monday of each month
6:00 p.m. if you wish dinner
7:00 p.m. for our program

Mark your calendar

For now, write TBD on all calendar pages!!!



We hate bringing and especially starting with sad news, but another of our former members has died. We're still waiting to see an obituary in the press, but word reached us that Patricia (Pat) Bryant was recently lost to cancer.

I'll always remember a window sticker Pat had on the rear window of her Mini - it read, "Actual Size". Pat, herself, wasn't overly tall but even she towered above the diminutive red car, the only original Mini with an automatic transmission that your editor has encountered. Both Pat and her daughter drove Minis but only Pat's was one of the original true Minis.

We will pass on more information as it becomes available.

What Up, Bro!

Snow and arctic cold gripped our area when the last issue of Wyres & Tyres struggled out the door. It got even colder and snowier soon afterward - thermometers read a bone-chilling ZERO(!) degrees with TEN(!) inches of ice and snow on the ground less than two weeks ago here in the Bluff City. And, we spent nine



consecutive days with readings below freezing!

Showing an amazing turnaround, February ended with an afternoon temperature of 75 degrees, only 3 degrees cooler than than ever recorded on that date - spring will arrive after all.

All this weather talk doesn't really have anything to do with British cars, but it partly explains why we haven't had them on the road of late.

Now with the winter blast behind us, it is time to heed President Terry Robert's call to get our LBCs on the road and organize a few socially distant drives to blow the cobwebs out and get our engine oil up to temperature.

So, weather permitting, let's meet at Greenbelt Park on Mud Island at 1:00 p.m. on March 14th and take an urban - country jaunt north along the Mississippi to the Meeman-Shelby Forest area. There are some very nice driving roads in that area on which to flex our well-rested, maybe even flabby with non-use, horsepower. Stay tuned for later word and more detail as we near the Ides of March.



Enlightening Moments In Cars

by Wil Wing

I had been SCCA racing for a year or two, and going to races much longer. Like many amateur drivers, I thought I had the potential to be as good as any. That was not, of course, entirely true. My records show I was mostly next to best at my level (admittedly low level) of racing. There were occasions that justified my being very pleased with my performance, but that is a different story.

The first enlightening moment was watching Mark Donahue race an Elva Courier at Lime Rock. He ran away from his competition. Mark set a pace far faster than needed to win his race. You could see that he was successfully dancing on the edge of traction all the time and he loved it.



After the race he could hardly stop laughing because it was so much fun, and he won so easily. He had a very fast, well prepared car, but watching him I saw something new.

I had previously seen outstanding driving – Walt Hansgen, for one – but Mark Donahue made it look both easy and graceful. Drat! I knew I was capable of winning after a fight, but easily and gracefully? I'd never be that good. (Or have that superior a car) On the other hand, if I'd been as good as Hansgen or Donahue, I'd probably also have died long ago.

One of my most enlightening but not entirely admirable car moments happened on one of our group rides years ago. We met at the

Fayetteville baseball stadium as usual. Someone had invited a friend to join us, who was a life-long American muscle car enthusiast and active in that club.

In the parking lot before starting our drive and he



told us about his background and all the powerful, fast cars he had owned.

On our drive he ended up one or two cars behind me and I noticed immediately that he was having trouble keeping up with the group. After we finally got to our destination he stood next to me and his ranting began. I'll give some of his quotes and then what I was thinking in brackets. He was really upset.

"I didn't know I was going on the Mille Miglia!" (*It was obvious that you were unprepared for brisk driving.*)



"You guys are crazy to drive like that on public roads." (*Yeah, I can see how upsetting it must be to look down your nose at 'Little Foreign Cars' all your life and then find that they are faster on the road than your beloved muscle car.*)

"When we go for rides in my club, we drive at

cruising speeds, so that everyone can admire our cars!" (*Yes, I get it: "Look at me everyone, look at me!"*)

He didn't want to join us at Mark's house. He wanted to get away from us. Finding out that you are not competent among 'slow' cars can be very upsetting.

There's nothing wrong with not being a fast driver! Slower drivers can, I hope (small hope, since so many don't seem to be paying attention), still be alert and safe, which should be the goal of everyone. My objection is with pretending to be something false. I had enough of blowhards in high school.



Rabbit Hole Adventures

Last issue carried Charles Well's short article about how he passed on an opportunity to acquire a 1909 'Briton' automobile. If you're



like me, you had to do a spot of research to learn about that short-lived car. This issue, Charles brings us word on another somewhat star-crossed British Car – the Aston Martin Atom.

"What?," you ask, "I thought the 'Atom' was made by the Ariel Motor Company of Crewkerne, Somerset, England, not the venerable Aston Martin of Warwickshire." Like you, your editor would have thought the same, and would not thought Aston Martin to have created the car described in the letter to Octane Magazine, quoted by Charles, below.

“My compliments to Simon Clay, whose photographs of the Aston Martin Atom make it appear almost svelte when compared with those of my father taken at the 1941 Chessington Rally, which by the way was neither a race nor organised by just 'a few wealthy businessmen': Rivers Fletcher, Sam Clutton and Eric Giles deserve a little more respect than that.

almost the most imposing of the racing cars, and the hot-spot arrangement to the four carburettors was well worthy of inspection. The streamline Aston-Martin saloon represented a most interesting contrast to the older cars, and was aptly described in “The Motor’s” leaflet as the “post-war” Aston-Martin. I hope to have a chance of testing it in the future, and meanwhile consider it a very stout effort for a war-production, work of a conscientious-objector mechanic, although the appearance, faintly reminiscent of the last Willys, might be enhanced by the employment of wheel-discs, don't you think ?

Copy of August 'Motor Sport' report on the Chessington Rally

Whilst searching for the photographs of the Atom, I came across a snap of my father's Frazer Nash-BMW Type 327/80. Considering that the BMW and the Aston Martin were both produced at about the same time, it surprises me that Gordon Sutherland with his experience of so many other cars did not make a better job of the Atom, albeit only a prototype. The BMW is a genuinely attractive car with a modern look, whereas the design of the Aston Martin is still steeped in the 1930s. Why Claude Hill could not develop a more spritely engine is also difficult to understand, because BMW managed to produce a 6-cylinder 1971cc 80bhp unit that was able to propel its stoutly built cabriolet from rest to 60mph in a more respectable 15.2 seconds. BMW also designed its engine to cruise at 80mph, something which The Autocar considered refreshing and unusual in a country without autobahns.

Thank goodness Bristol chairman George White, AFN's H.J. Aldington, and others had the vision to see that the shape of motoring after the war

lay in the BMW 327 rather than something like the Aston Martin Atom.

Charles Wells”

Charles’ less than laudatory comments and a persistent curiosity caused your editor to investigate the erstwhile Aston Martin Atom, another stranger to my ears. Is Charles leading me, like Alice, into another rabbit hole?



The ‘Atom’ was a concept or prototype car designed in 1939 by Claude Hill with help from Aston Martin owner Gordon Sutherland.

Sutherland said the Atom was to be “the smallest, lightest enclosed saloon possible,” and the car would equally blend performance, handling, comfort and quiet. Instead of a traditional ladder frame chassis, the Atom used a lightweight frame of



rectangular steel tubes, which varied in both dimension and thickness based upon anticipated stresses. To add rigidity, a second rectangular tube space frame, this one intended to support the car's aluminum body, was welded to the car's chassis, creating a light yet strong platform from which to build a grand touring car.

Underneath, Aston Martin the automaker's first-ever independent front suspension, while keeping a live axle and traditional leaf springs in the rear.

Breaking new styling ground for Aston Martin,



the Atom had fenders that flowed into the body eliminating the need for running boards. The Atom's headlamps recessed into the front fenders for a cleaner look and improved airflow. The car lacked any grille to speak of. Instead, a series of 12 slits, tall in the center then each smaller moving outward. Wartime material shortages may have influenced the car's lines, but it's clear that Hill and Sutherland always



intended the car to have a cutting-edge, futuristic look. Inside, that theme was carried over with "hammock style" seating borrowed from the aircraft industry.

Power came from a 1950cc, single-overhead cam, four-cylinder engine that had been used in the 1937 Aston Martin. A Cotal electromagnetic

semi-automatic gearbox drove the wheels via a Salisbury rear axle. Finished in late July 1940, the functioning Atom concept was registered in the U.K. that year, and Sutherland drove the car when petrol rationing allowed, putting more than 100,000 miles on the clock in the duration.

Aston Martin was in need of a new financial blood by 1947. Responding to a tiny classified ad in The Times newspaper, listing a High Class Motor Business for sale, David Brown, the head of tractor manufacturer David Brown Limited, became Aston Martin's new owner (supposedly for less than \$100,000!) after being impressed by the Atom concept.

The Atom never saw production, as Brown wanted the firm's first postwar effort to be a roadster and not a sedan. It did, however, serve as the basis of the Aston DB1. Thanks to ideas pioneered by the Atom, the DB1 came to market with a tubular space frame design and an independent front suspension, along with headlamps integrated into the flowing front fenders, just as the Atom had pioneered for the company eight years earlier.

With Brown's checkbook, and Claude Hill still heading up the design department, the space-frame construction of the Atom was the basis for postwar Aston Martin cars up to 1957 with the DB3.

Some rabbit hole, huh?

By the way, the Aston Martin Atom, in appearance reminds your editor of other mid-late 30s aerodynamic cars - such as the 1935 Voisin Aerodyne.





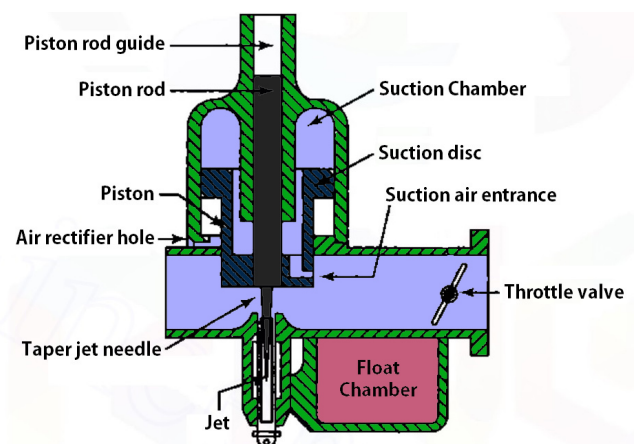
Ms Shilling and the Battle of Britain

In the pantheon of iconic aircraft, perhaps none is more revered than the Supermarine Spitfire. Considered one of the most beautiful fighters ever designed, along with its stable mate the Hawker Hurricane the Spitfire has become emblematic of Britain's determined resistance against Nazi Germany in the early days of the Second World War. Yet despite its legendary reputation, the Spitfire was far from a perfect machine. Its narrow landing gear made landings precarious, its widely-spaced wing-mounted guns reduced its concentration of firepower, and at higher speeds its elegant elliptical wings had a tendency of flexing, often leading to fatal crashes. But the Spitfire's greatest Achilles heel lay in a component almost as celebrated as the aircraft itself: its Rolls-Royce Merlin engine.

Whenever the Spitfire executed a negative-G maneuver, such as entering a dive or flying inverted, the engine would suddenly lose power, cut out, or stall altogether – a potentially lethal occurrence in a dogfight. Indeed, German fighter

pilots quickly learned to exploit this weakness, and when attacked by British fighters would suddenly pitch down, causing the pursuing Spitfire or Hurricane to lose power and giving the German pilot enough time to escape or come up from behind.

The issue lay with the Merlin's SU carburetor, which was a standard float-type originally developed for automobile engines. Carburetors regulate the mixture of fuel and air reaching the engine; in the SU type, a



piston exposed on one side to the air inlet manifold is linked to a jet and needle valve connected to the fuel supply system. When the throttle is opened, more air is drawn into the engine and the air velocity in the manifold increases. This in turn lowers the pressure in the manifold, drawing the piston down and opening the needle valve, allowing more fuel to enter the airstream. The fuel supply is thus matched to the engine's demand for air. Before reaching the jet and needle valve, the fuel first passes through a float chamber, in which a float linked to an inlet valve keeps the fuel at a constant level – and thus a constant pressure. While this works perfectly well in an automobile or civil aircraft which stays more or less level, exposure to negative Gs causes the float tank to flood and deliver an overly-rich fuel-air mixture to the engine, decreasing its power. The Spitfire's opponent, the Messerschmitt Bf-109, did not suffer from this fault as its Daimler-Benz DB-605 engine was fuel-injected.

With Britain fighting for its life, the race was on to find a solution. Rolls-Royce attempted to develop an improved carburetor, but Fighter Command could not afford to send any of its aircraft or their engines back to the factory to be modified. In the end, a solution was found by one Beatrice Shilling, an engineer working at the Royal Aircraft Establishment. Miss Shilling's fix was simplicity itself: a small thimble-shaped flow restrictor fitted to the float tank inlet valve, which allowed just enough fuel to flow through it to supply the engine at full power while also preventing the float tank from flooding under negative Gs. And as a bonus, it could quickly be fitted to aircraft in the field. Simplified to a plain steel washer, the



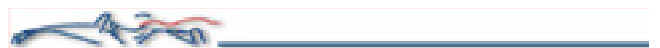
restrictor was quickly fitted to all of Fighter

Command's aircraft by RAE teams – often lead by Miss Shilling herself. While officially known as the “RAE Restrictor”, appreciative RAF pilots soon dubbed the device “Miss Shilling's Orifice.”

While countless factors contributed to Britain's victory against the Luftwaffe in the summer of 1940, Miss Shilling's elegant solution to the Merlin's cut-off problem doubtless played a significant role by allowing the Spitfire to tangle toe-to-toe with the Bf-109. Of course, Miss Shilling's Orifice was only ever intended as stopgap solution, and eventually all Merlin-equipped fighters were fitted with new Bendix pressure carburetors which did not rely on gravity to operate.

As for Beatrice Shilling, she would go on to a long, productive career at the RAE, working on such projects as the Blue Streak ballistic missile and measuring aircraft braking distances on wet runways until retiring in 1969 at the age of 60. Her personal life was no less eventful; an avid motorcycle racer, in the 1930s she set numerous records with her modified Norton M30, becoming one of only three women to win the British Motorcycle Racing Club's Gold Star for completing a lap of Brooklands racing circuit at 160 km/hr. Indeed, it is sometimes reported that she refused to marry her husband, bomber pilot George Naylor, until he himself accomplished the same feat. After the war, she raced cars at Goodwood circuit until shortly before her retirement from the RAE. She died in 1990 at the age of 81.

On a final note, many sources refer to Shilling by the nickname 'Tilly', but this moniker is unlikely to have ever been used in her presence. 'Tilly' being military slang for a utility truck, the name was likely intended as a dig at Shilling's supposedly plain appearance – a cruel jab at a woman who did so much to save Britain in her darkest hour.



Dirty spark plugs

(and the birds and the bees)

By Wil Wing

“But my spark plugs are only six months old!”

“But my spark plugs are only six days old!”

Yes, yes.

I’m sorry, but the engine oscilloscope does not lie. If your spark plugs are shorting out there is no denying the fact. Here is a truth that gets to the heart of the matter: If your choke isn’t working properly, a super-rich mixture may coat your spark plugs with electrically conducting soot in six seconds! You probably already know about the birds and the bees, but here is another fact of life: black, electrically conducting soot sticks as easily to new plugs as it does to old plugs. Shocking, isn’t it?

Sometimes a drive, with the choke off and the carburetor/s performing correctly will burn off the soot and your plugs will self-clean. And sometimes not. These are the facts of life, regarding our old carburetor equipped cars. And then there are the special problems attendant with our SU or Zenith-Stromberg carbs; improper use of the hand choke, electric chokes (Jag) that are either ‘on’ or ‘off’ (no temperature modulation, the idiots) and our old friends the plastic SU floats – or, as they should be properly called, the SU Just Barely Floats.

Then again, sometimes spark plugs short out when they look fine.

A member had had problems with his Jaguar 3.4 after the Blytheville show. It wouldn’t start. Recently his Champion spark plug cleaner – which he has generously donated to our club garage – was used to clean all six. I can see why he was reluctant to blame them; they were very expensive Bosch platinum plugs and he had cleaned them well –no soot and they looked

fine. The Champion spark plug cleaner has an essential testing ability, allowing the plugs to be tested in a pressure chamber while you watch the proceedings via an angle-mounted mirror. The owner was half right. Sitting on top of the machine attached to the test leads the plugs worked fine, but under pressure the spark went out at 100 p.s.i. In other words, they were worthless. Just to show that he

wasn’t alone in thinking that plugs that look good must be good, here is a little story about me falling for the same delusion – and I should have known better.

On a cross-country trip in 1992, my newish Kawasaki Concours sport-touring bike started misfiring under load. Being then in Colorado and in the middle of nowhere, I pressed on with ever larger throttle openings and ever less power. Eventually I found myself entering the dark Eisenhower Tunnel on Interstate 70 in the uphill direction. It had no shoulder for breakdowns. And my maximum uphill speed was now

about 35 – 40 mph. I figured my chances of getting out of the dark tunnel before being splattered on some truck’s radiator were less than 50%. No fun at all!

At the motel that night, I met my brother from California, who had ridden his bike to our agreed meeting point in Billings. I told my brother that my coils must be failing, because I’d pulled the plugs and they looked perfect. He didn’t believe me (brothers never believe



their brothers) and insisted on running to the next town and buying me a set of new plugs. Meanwhile, I dumped all of my gas. Needless to say, he was right and I was wrong. The bike ran perfectly. Earlier, I'd been running on fumes and pulled off the Interstate into a one-antique-gas-station 'town' and filled up on their premium gas. Actually, I think the gas station was the town. I suspect their 'premium gas was years past its expiration date.

Sometimes things just aren't what they look to be. I'm surprised no one has coined a phrase on this subject.

Hey, I've got an idea! How about this: TEST, DON'T GUESS!



Electrifying News!

Jaguar will only make electric cars starting in just four years - 2025! Though it has been a good while since the leaping cat began the I-Pace, the abrupt change is a surprise that the luxury marque's plan for only battery power arrived so soon.

Making the change will mean getting rid of the XJ sedan, a best-seller, the XE and XF models are likely to merge into a single electric sedan offering while the I-Pace and E-Pace will be united into a single compact SUV. Thus, today's are the last Jaguars with internal combustion engines, and that no new gas or diesel-engined models will be introduced between now and 2025.

But Jaguar's rapid transformation to only electric cars asks other questions: Will Jaguar buyers approve, or does the Jag want to attract an entirely new audience, one used to EVs?

Where does that leave the 68% of Jaguar buyers who would seek a gas-engined Jaguar? Will they go to other luxury brands with internal



combustion engines?

With today's EV adoption rates in the U.S., which vary quite a bit by region but don't exceed 6%, how does Jaguar expect to maintain sales volume after the switchover happens? Additionally, after western Europe, China and the U.S., there are many countries where Jaguar has a footprint EVs aren't even up to 1% of all vehicle sales - that's unlikely to change by 2025.

Then, there's brand identity. Will F-Type buyers and other marque devotees go with the change to electric power, or will they still yearn a sporty Jaguar driving experience with throaty gas engines?



A drunk staggers out of a bar and collides with two priests. The drunk says, "I'm Jesus Christ."

The first priest says, "Son, you're not." The drunk says to the other priest, "I'm Jesus Christ."

The second priest says, "Son you're mistaken." The drunk says, "I can prove it." So he takes the two priests into the bar, and the bartender says, "Jesus Christ, you're back in here?"

What the heck is that?

Wil Wing

I just bought the object below from a friend who wasn't sure what it was, or the purpose.

Perhaps you already know or would like to take a guess?

A) Ah... this is a precision 'C' clamp, used by cabinet makers to get real square corners.

B) This device, when the legs are extended, could be a way to measure...um... I give up.

C) Something else entirely.

As it happens I began my working career, one day (actually about 12 hours) after graduating from high school, using measuring devices just like this one, although this particular example may well go back farther than those 70 years past.



Through my older brother, I started as a machinist/lathe hand in June of 1951 at Reaction Motors, in New Jersey. Space buffs may remember them as the manufacturers of liquid-fuel rocket engines for the Bell X-1 (Chuck Yeager) and later X-Series planes, plus then for the Navy Viking sub-orbital missile, pre-NASA. It was a wonderful start for a beginning machinist, as the standards were so high that if precision wasn't already a part of your personality, it soon was – or you were out the door. The disparaging old term “Good enough for government work” had nothing to do with the level of quality demanded at Reaction Motors. Only perfect parts got past the inspectors, and I don't mean perfect to the eye. Small parts were

taken to the inspector's room and viewed on a Bosch & Lomb Comparitor, with the image perhaps 100 times larger than the tiny part you had just machined. A tiny scratch on the side of that thread? Rejected!

So, the tool shown above is a machinist's dial indicator gauge. This one was made by Starrett, one of the oldest and most respected brands of American precision tools. If you chucked up a cylindrical piece of bar stock steel in your lathe to begin a new project, it is necessary to first make it run concentrically, relative to the lathe's cutting tool (bit). A piece of chalk and adjusting the chuck jaws will get you into the ball park of getting the rotating piece running true.

But if you are trying to index a previously machined part, or have just turned it around to continue some machining, it must then run absolutely true and square with the earlier machining. That is why the dial indicator is calibrated to one one-thousands of an inch. The dial indicator base is first clamped to a stationary part of the lathe to hold it steady; often to the tool post holder. But this type of indicator can also be used on a milling machine or shaper, to correctly align the work piece. The outer rim rotates the dial so you can center the indicator needle on zero.

A more modern dial indicator is shown below



– same function, but smaller and perhaps not as fine quality. For demonstration purposes,

I've chucked up an old piston in my lathe and clamped the dial indicator for measuring eccentricity. This style is smaller and better in small spaces, but lacks its own clamp.



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