

THE OFF-SIDE UNDO

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English Motoring Club of Mississippi

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‘A gentleman does not motor about after dark.’ —Joseph Lucas

South Alabama British Car Clubs British Car Festival

Story and Photos by Gene Johnston

On October 17, 2025 four EMC members gathered with many folks traveling with the British Motoring Club of New Orleans at Wintzell's Oyster House in Mobile Alabama to start a great weekend in Fairhope for the SABCC's British Car Festival. The Bar B Que reception on Friday night featured great food and door prizes galore. Registration was open on Friday night which made for a quick entry on the show field on Saturday morning. From start to finish it was a great weekend with sunny skies and mild temperatures. The show drew over 100 entries, and the crowds enjoyed the day out. Clay Johnston was recognized in the MGB chrome bumper class. If you missed the 2025 show, make plans to attend the 2026 show. It's not that far off!



The lunch crowd at Wintzell's on Friday afternoon.



The Friday night reception good food, friends and door prizes!



MGB's on the field at Fairhope.





Sunbeams Alpines and Tigers.



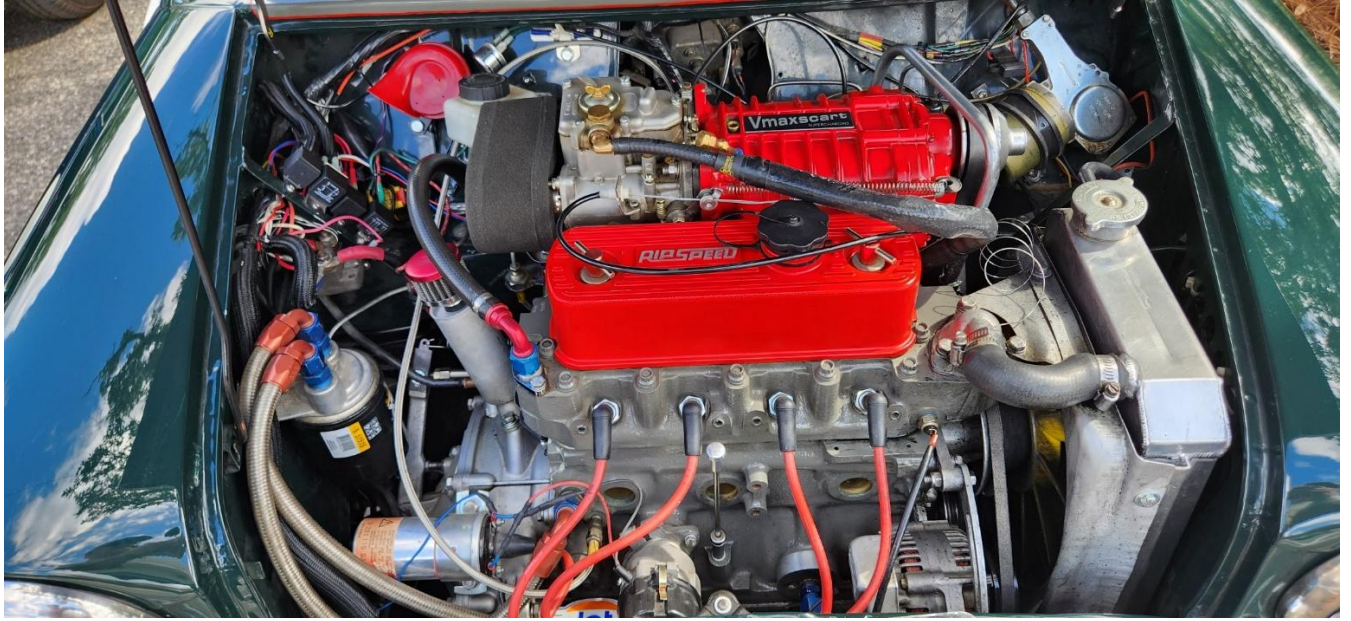
Morgan was the featured marque and there was a great turn out.



Three Jags all tipping their bonnets.



Triumphs and Minis were in attendance!



And the Mini had something special under its bonnet!



And in closing we had a great time.

Now, how about a little techie article.

Read – on

Opening Pandora's Box

Story and Photos by Charlie Durning

Ever since I purchased my 74 MGB GT the engine has had a strange running issue, a slow idle when warm. I mostly ignored that issue and when the idle slowed I would pull the choke for a faster idle, problem fixed. It also had an erratic oil consumption issue. Sometimes it would use a quart in 30 miles and other times would not use any in 1300 miles. There were rumors about this engine. It had a history of burning pistons. In spite of all of that, the engine ran great and had plenty of power, for me. In a weak moment it decided I would investigate the slow hot idle. I initially thought it could be caused by heat soak of the electronic ignition module or the ignition coil. Those items were eliminated and deemed to be OK. What I did notice was a rough idle when the engine was warm. Using the pull the plug wire one at a time test, it was discovered that #2 cylinder was weaker than the rest of the cylinders. A compression test netted the following numbers in order #1 - 120, #2 -30, #3 - 90, #4 - 120. Seeing those numbers a leak down test was in order. Cylinders 1,3, and 4 had no discernable leakage that could be heard with a rubber hose. However, 2 was leaking badly into the crankcase. Hoping for just a breached head gasket, the head was pulled to investigate. With the head off I was alarmed to see that the head and block sealing surfaces were awash with oil. After cleaning those surfaces, there were clear imprints of all the gasket reinforced sealing rings and no signs of any breaches. It was further found that the black composite areas of the 2-year-old Payen head gasket had never sealed against the block or head. No wonder there was constant oily residue on the engine and engine bay with no obvious oil leak. Apparently, the oil mess was wicking from the pushrod holes and running amuck between block and head. Next step was to check the head for valve leakage. The head was inverted and solvent poured into the combustion chambers. All looked good there. Next was the solvent on top of the pistons test. Cylinders 1, 3, and 4 held fast. The solvent just poured past the rings on #2. That meant something had to be done. With the GT in the "Lotus" position and getting the pan down, Bro Clay pushed the #2 piston out of the hole. That culprit was found. Both top rings were broken!



Aside from that the piston looked pretty good and thought was given to re-ring that piston and call it good. But the little voice inside slapped me upside the head. So #3 was pushed out of the hole. That piston also had broken rings, but the ring lands were destroyed by the broken rings. Well, so much for the re-ring idea. Next was #4. That piston also had broken rings and destroyed ring lands. Piston #1 had broken rings also. Also noted there were 3 different brands of pistons in the engine. Perhaps those rumors of burned pistons were true.



Pistons 3 and 4 with damage

At first, it was considered to replace the +040 pistons with a new set of pistons and rings and put the engine back together. To get a better look at the bores, a straight hone was run down the bores. What was found were 2 or 3 ridges in each cylinder and cylinders 3 and 4 had deep gouges in the areas where those pistons were damaged. That made it clear that the engine was running with broken rings for a long time. Since it was unlikely those gouges would clean up with a +060 overbore and the crank was ground undersize at .040 and .020, it was decided to scrap that engine and explore other avenues.

In this case, opening Pandora's Box was quite a blow. In the end it's for the best in that a catastrophic engine failure, on the road somewhere out in the boonies, had been avoided.

The Next Chapter

On the bright side, I did have a spare engine that I had been saving as a future engine for the GT. This engine came from a rust bucket car that I salvaged a few years ago. Upon disassembly, this engine is an excellent place to begin. Since the head on the original engine from the GT was in excellent condition, all I needed was a candidate for

a re-buildable short block. Aside from the rusty exterior, the bores are straight at $+.030''$ and the crank is standard size on all the journals. Next stop is the machine shop. When I got there the machinist said that he did not have tooling for removing the main caps. I ended up making an adapter for my slide hammer and solved the problem. The guys there cleaned and decked the block, renewed the crosshatch in the cylinders, installed new cam bearings, cleaned and polished the crankshaft, installed new pistons on the rods, and generally confirmed that everything is within spec. We called it good.

Once all the specs were confirmed, the parts were ordered from a major parts supplier. Normally parts will arrive within 3 or 4 days. This was not the case. My first order was lost in the US Postal system for about a month or so and never arrived. I called the supplier and they offered to send out another order and upgrade the shipping to UPS 2 day air. Those parts arrived on time.

Let the Assembly Begin

In an effort to make the cylinder block as clean as possible, I removed several of the oil gallery plugs. The process is to drill the brass plugs and then tap to $\frac{1}{4}$ -20 thread. Then use an assortment of a bolt, a nut, and several washers to make a tool to remove the plugs. I then used a riffle cleaning brush to clean out the oil galleries. What I didn't realize is that the 4 main oil gallery openings are drilled at $.498''$ and 5th oil gallery port near the rear cam bearing is drilled to $.508''$. I have no idea why BMC did that.

Unfortunately, the only plugs available are $.500''$. Those plugs fit well in the main oil galleries and just fell into the gallery near the cam bearing. Rats!!! The only option for the 5th port is to find a larger plug, none were available, find a cup plug, those are too big, or tap the port to 1/4NPT and put in a pipe plug. Since the new cam bearings were already in the block, the risk of getting debris behind the cam bearing was too great so tapping the port was out. The last option is to braze up the hole in the one larger plug and reuse it. That option worked. One challenge came up with assembling the pressure relief valve. The spring is stiff and getting the cap threaded into the block was frustrating. To solve that issue I made an insert for a $1 \frac{1}{8}''$ socket, attached an extension into the socket.

Now it is much easier to control the cap while compressing the spring. Before any real assembly could occur, the crankshaft had to be laid in the block. The new bearing inserts were installed and the #2, #3 and #4 main caps installed. The challenge here was with the #1 and #5 main caps. For those there is about a $3''$ press fit between the cap and the block. That means there is lots of room for misalignment during installation. To solve that problem I made a set of alignment pins out of a pair long studs intended for mounting the front cross member to the car's frame. Using a buddy's lathe the studs were modified for the task. The smooth bodies of those studs would allow for a proper alignment of the main caps as they are installed. Once the alignment was established, I needed a way to press the main caps home without using a mallet. That was solved by removing the alignment studs and replacing them with all thread studs. With the addition of some washers and nuts the caps were evenly pressed into place.



Assortment of custom fabricated tools

The rest of the reassembly of the engine was straight forward with one exception. For some reason I couldn't get the camshaft to "degree" where I wanted it at 106 degrees at max lift. After about an hour of frustration, I threw in the towel and went to the house. I gave my buddy Joe a call to see if he had an answer. He said he would be up in the morning. Before Joe arrived, a light came on and I decided to look at the parts that came in the new ROLON timing set. What was found is the position of the timing marks on both the old and new cam sprockets are different. BINGO, found the problem.



A bad outcome averted

The new cam sprocket was made wrong. The timing mark was off by about 1 and $\frac{3}{4}$ teeth. The old sprocket was installed, aligned the marks, and the cam timing came in right at the desired 106 degrees. Joe confirmed that all is correct. It is a good thing the decision was made to degree the cam and not just slap in new parts and call it good. That disaster was averted.



Once the engine was assembled, Bro Clay and Bro Gene came by to help install the engine and transmission back into the GT. With their help the install went smoothly.

I want to thank Bro Clay, Bro Gene, and Joe for their help in this project. Those guys made this engine build and replacement go smoothly. The GT is now back on the road and ready for many years of motoring fun.

Take A Ways

- 1) Be aware that any project can balloon into something unexpected
- 2) Only remove core plugs if there is a replacement part available and the block is still dirty
- 3) If one does remove the plugs be prepared to exercise options r
- 4) Not all replacement parts are made correctly, check twice
- 5) Don't be afraid to make a special tool to get a job done

6) Enjoy the process, that makes the job easier

7) Pay for 2 day UPS otherwise your order will get lost

8) And most of all be good to your friends. You may need them to roll around on the ground and do a dirty job.



And as always,

Happy Motoring!

The EMC