

March, 2025 Edition

OIL SPOTS

A Newsletter of the Plateau British Car Club



The Prez Sez

Well, we have almost survived the worst the that winter can throw at us. A few more weeks and the sun will shine, the birds will sing, and the tops on our LBCs will begin to drop as they come out of hibernation. We already have a few things lined up to aid us as we greet the spring. The April Fool's Bash and Springtime in the Smokies are just a few weeks away.

In other news, we have had some tech session days as Nick has been working on his TD. It was a rather informal thing, no announcement was made, just a few friends getting together to help, observe, and learn. We would love to do the same again for others, either as a formal group announced event or as a more spontaneous call-out for help.

As we have repeatedly said, if anyone has an idea for a drive, a meet up at a favorite eating place, or a trip to a special meeting place, let us know. There are some fantastic places to go and do within easy driving distance, but none of us know all of them. Let's work together to make this the best year ever.

See you soon. - Jack

Of course I talk to myself. Sometimes ya just need great advice.

Oil Spots is the official monthly publication of the **Plateau British Car Club of Tennessee**. Material is actively solicited for the newsletter and every effort will be made to use appropriate material from the membership. Unsolicited material from non-members is also encouraged. The editor reserves the right to edit for length and appropriateness. No placement of material is guaranteed. Your contributions should be submitted to: dprainey@att.net

Deadline for submissions is the 20th of the month prior to publication.

PBCC Officers and Support Positions - 2025*

[Jack Spradling](#) - President- shadowfever@yahoo.com - 931.255.2040

[Pat Rainey](#) -Vice President - dprainey@att.net - 256.486.8605

[Richard Lockhart](#) - Treasurer/flowers/membership - rwlockhart54@aol.com - 865.548.9891

[Larry McDonald](#) - Secretary - larry.McDonald53@gmail.com - 210.912.5546

[Dennis Rainey](#) - newsletter editor - dprainey@att.net - 256.744.4909

[Paul Barker](#) - Webmaster - barkerpa@gmail.com - 423.442.4482

All British Cars/Owners Welcome

The Plateau British Car Club was created to band together owners of the Little British Cars (LBC) to provide a way of exchanging ideas, technical data, amusing stories, and just plain fun. All LBC owners are invited to enjoy the "LBC experience" to the fullest with friends. Ownership of a British car is not required for membership, but non-British car owners are classified as Associate members and have no voting rights.

0-0-0-0-0-0-0-0-0-0-0

“Difficult Roads Often Lead to Beautiful Destinations”

The Membership Chair report.

We have no new members for this reporting period. - Edna

[Membership applications for 2025 are available on the club website at PBCCTN.org](http://PBCCTN.org)

0-----0

**January Treasurer’s Report -
Edna Horony/Richard Lockhart**

PBCC JANUARY 2025 FINANCIALS

0-0

1-31 Jan 2025	Income	Expenses	Total
Beginning Balance	\$1,107.73		\$1,107.73
Membership Dues 2025	\$300.00		\$300.00
Polo Shirts	\$144.00		\$144.00
Name Tags	\$30.00		\$30.00
Xmas Dinner Winner		(\$27.00)	(\$27.00)
Total for Month	\$1,581.73	(\$27.00)	\$1,554.73

NOTICE

PBCC members, We've come to that time of year again when our annual membership dues are due. If you were part of the Plateau British Car Club in 2024 and haven't yet renewed your membership for 2025, we strongly encourage you to do so. We're already in the planning stages for numerous exciting activities throughout the upcoming year, and you wouldn't want to miss out on the fun. Keep an eye out for the 2025 calendar of events, which will be available soon on the club's website and Facebook page.

For new members or those returning after an absence, please visit the club's website (PBCCTN.org) to download the application form. Complete the form and send it, along with the annual membership dues of \$25 USD, to the PBCC Treasurer, Richard Lockhart, at the following address:

Richard Lockhart -7809 Gracemont Blvd., Knoxville, TN 37938

Make the check payable to the Plateau British Car Club.

Thank you for your continued support!

A tough old cowboy counseled his granddaughter that if she wanted to live a long life that she should sprinkle a bit of gunpowder on her oatmeal every morning. The granddaughter did this religiously every morning until the age of 103 when she died. She left behind six children, eighteen grandchildren, forty four great grandchildren and a forty foot hole in the ground where the crematorium used to be.

Proposed Schedule of Events - 2024

(Listed in chronological order)

- April Fool's Bash - 29 March. **
- Springtime in the Smokies - 10 May, 2025 **
- **See Details Below or TBA via PBCC FB page

We will add to and update this schedule as and when we have additional events or changes to the schedule. We are, after all, a driving club and as with driving, sometimes ya have to make turns.

Making Contributions to the *Oil Spots*

Your stories, photos, tech tips, questions and anything LBC or PBCC related are always welcome in the *Oil Spots*. Please make your contributions to the editor by the 20th of the month preceding the issue in which you would like to see them appear. You may email them to Dennis Rainey at dprainey@att.net.

The *Oil Spots* is the official news letter of the Plateau British Car Club. It is not the only form of communication that the club is using, nor should it be. Its purpose is pretty straight forward as it is intended to keep the membership abreast of what's going on within the club and to provide a measure of entertainment. Another widely used form of communication is the club's web site and its function is very similar to the newsletter. It is an excellent method of checking event schedules and related information. The third method being used by the club is the mass email announcements which you receive periodically. Once again, this method is used to alert the membership to changes in schedules and to act as reminders of events about to take place. All three methods overlap considerably, and all three have their needed place. Please make sure that you use of all three of these methods and you won't be left behind.—Thanks Ed.

This section of the Oil spots can be used by our members to advertise items they may no longer need or want. If you've decided that car must go or you've decided to clean out your garage for example, here is a place you can let the rest of the world know. If you are trying to find that elusive part or car, this might be the place to find it. In the case of cars, pictures are a must. The old saying, "If ya don't have pics, then it didn't happen" applies here. If you are successful using this section for selling, please let the editor know that your ad can be removed.

0-0

Those Pesky SU Fuel Pumps

In the last issue of the Oil Spots, we talked a bit about fuel for our classic cars. Well, in this issue it might be appropriate to know how that fuel gets from the fuel tank, at the rear of your car, up to where it is needed in the engine room where it is used to make your car go down the road.

The following, is an article that was written a while back by the undisputed guru of fuel pumps used in our classic cars. His name is Dave DuBois. Unfortunately, Dave passed away in 2019 but most of his writings are still available for our use. Please enjoy.

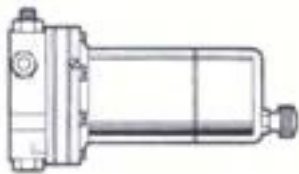
SU Fuel Pump History

First of all, a brief history of the SU Fuel pump. As you all probably know, SU stands for **Skidders Union** and was the brainchild of George and Carl Skinner. George, in spite of taking over his father's business, Lilly & Skinner footwear distributors, had a better idea for a carburetor in the early automotive days. In addition to building the well known and much loved SU carburetors, they also went into the fuel pump business. They started in the 1932/33 time with the L, low pressure pumps.

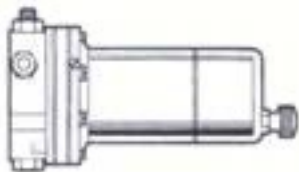
In approximately 1939, they developed the HP, LCS and Dual pumps and in 1942 they even came up with fuel injection pumps (I wonder if those also go tic, tic, tic?). In 1958 they came up with another 'High pressure pump' (this may be the AUF 300 series pumps found in the later MGBs). For a more in depth history, go to Burlen Fuel's [History of SU](#)

SU Fuel Pump Types

Some of the more common SU pumps that those of us with MGs can run into, along with their pressure and flow rate are as follows:

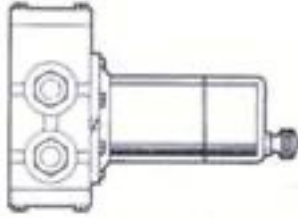


L (low pressure pumps) — These are found on the T series (TA, TB, TC, TD and early TF) and earlier MGs.

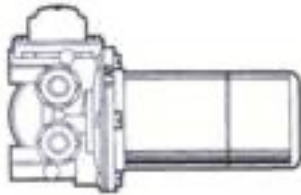


HP (high pressure pumps) — These are found on late TF, MGA, Z Magnette and early MGBs.

They are the same outline and size as the Low Pressure pumps or

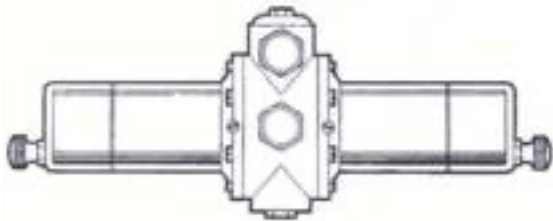


LCS pumps — These were used on the MGA Twin Cam and on the Austin Healey.



AUF 300 series pumps (now AZX 1300 series) — These are found on all of the later MGBs plus many other British cars of the mid 1960s and later.

They have what is called a "plain air bottle" on the inlet side and a flow-



Various configurations of Dual Or Double Ended pumps including L, HP, AZX 1400 series and AZX 1500 series. Some of these operate both ends

SU Fuel Pump Flow Rates

- L (both ends working simultaneously) 1.5psi, 3.2 pints per minute (24 gallons per hour)
- HP (both ends working simultaneously) 2.7psi, 2.6 pints per minute (19.2 gallons per hour)
- AZX 1400 series (both ends working simultaneously) 2.7 or 3.8psi, 4.8 pints per minute (36 gallons per hour)
- AZX 1500 series (one end working at a time) 3.8psi, 2 pints per minute (15 gallons per hour)

SU Fuel Pump Operation

The SU fuel pump is an impulse type of pump. That is, when power is supplied to the pump, current flows through the points and the solenoid coil. The energized coil acts on the iron disk attached to the diaphragm, pulling it and the diaphragm toward the coil. This movement of the diaphragm develops a vacuum in the pump body, which pulls fuel from the tank, through a check valve and into the body. The movement of the diaphragm also causes a shaft that is attached between it and the lower points bridge or carrier to push the carrier up, making the carrier to 'throw over' and open the points. Once the points open, the flow of current through the coil is interrupted, allowing the diaphragm to be pushed back to its original position by the volute spring, which in turn pushes the fuel in the pump body out through another check valve to the carburetors. Once the diaphragm reaches its original position, the points carrier 'throws over' to the points closed position and the whole action is repeated - thus the familiar tic, tic, tic sound of the pump.

The pump pressure is established by the strength of the volute spring which resides between the iron disk on top of the diaphragm and the bottom of the coil. The check valves can be either a simple brass disk that held against the valve seat by combination of gravity and back pressure in the system in the case of the L, HP and LCS pumps or a plastic sheet in a valve assembly that closes against the assembly's valve seat and is held against the seat by system pressure in the case of the later AUF 300 and AZX 1300 series pumps. In both cases, the system pressure is developed on the carburetor or outlet side of the pump, so the valves act as check valves to keep fuel from flowing back to the tank.

As with anything that uses a set of points opening and closing, there is point wear, both mechanical (slight) and electrical arcing (major) that eventually causes operation to deteriorate and eventually stop all together. Over the years, various methods were employed to suppress the electrical arcing at the points. Originally, on the L type pumps, the only suppressor used was a swamping resistor, in the form of resistance wire wrapped around the coil and attached in parallel with it. As stronger coils that draw more current were employed, a 0.47 microfarad capacitor was added to assist the swamping resistor suppress the arcing (by the way, even though it looks like an electrolytic capacitor, it is not and therefore is not polarity sensitive).

With the introduction of the AUF 300 and AZX series pumps, the capacitor was replaced with a diode to work in conjunction the swamping resistor. This arrangement made the pumps polarity sensitive. All of the systems of arch suppression worked fairly well with the series of pumps they were designed for, giving the pumps a reasonable life expectancy (except the expectancy of the owners). Finally, the all electronic pumps were introduced, which replaced the points with a Hall effect circuit to control the current flow in the coil. These pumps look and operate the same as the points style pumps, complete with the familiar tic, tic, tic sound, but there is no longer any problem with point wear and the life expectancy of the pumps is now established by the life of the diaphragm and check valves.

The following are some of the more common problems with SU fuel pumps:

1. Burned and/or sticking points - usually causes intermittent fuel starvation and stalling. When this happens, the silence is deafening with the normal tic, tic, tic sound missing. A sharp rap on the side of the coil housing will sometimes bring the pump back to life, but the long term solution is replacement of the points.
2. Diaphragm stiffens with age - this will usually cause the pump to run slowly or erratically. The only solution for this is to replace the diaphragm.
3. Leakage past valves - pump will seem to run at normal or faster rate, but no fuel is pumped, a vacuum gauge on the input to the pump will bounce up and down in time with fuel pump clicking. On the L or HP pumps, this will necessitate new valve disks and/or re-facing the valve seats. On the AUF 300 or AZX 1300 series, one or both of the valve assemblies will have to be replaced.
4. Broken pedestal (bakelite platform under the end cap where the points mount) - this is usually a problem only on the L and HP type pumps where the pedestal is not supported around the mounting screws, and then usually a owner induced failure by over tightening the mounting screws. This condition will stop the pump completely and is corrected with a new pedestal.
5. Fuel leak - caused by loose coil housing to body screws, loose inlet/outlet fittings, split diaphragm or cracked pump body. A cracked pump body is a very unusual situation and with the price of new bodies, the

best solution is a new pump. A split diaphragm requires replacement of the diaphragm while loose screws or fittings just requires tightening. It is a good idea to use some sealing compound on fitting threads and lock washers on screws.

6. Air leak - This will usually show up as fuel starvation at higher speeds. To check for this situation, disconnect the fuel line from the last carburetor in line and route it into a jar. Turn on the ignition and as the jar fills above the end of the line, watch for a stream of bubbles. The fix is the same as the above, plus checking the lines and fittings between the pump and the fuel tank.
7. Clogged lines - this can happen before or after the pump. Disconnect the line from the pump to the carburetors and replace it with a line into a jar or can, then turn on the ignition and see if fuel is pumped out of the pump. If so, the output line is clogged. If no fuel is pumped out, disconnect the line from the tank at the pump and turn on the ignition. If the pump runs, the line from the tank is clogged. Note: since a clogged input line will cause the pump to fail in a current on condition, leaving the ignition on for a long period of time in this condition will cause the swamping resistor wire to burn out, which will, in turn, cause excessive arcing at the points and a reduced points life. If the pump is an all electronic pump this situation can result in a burned out circuit board which gets into many \$\$\$.



More Information

Instructions on repair, reassembly and adjustments of the pumps can be found in the shop manual or the Haynes manual for all of the cars. The information on the fuel pumps for the TD is in Section B.2 of the shop manual and section D.3 of the shop manual for the MGB (pre 74). In the Haynes manual for the MGBs it is in Chapter 3 sections 4 through 11. For all the other models, you will have to search your manuals for the information. Repair parts for the pumps can be purchased through Moss Motors, or directly from Burlen Fuel. - Dave DuBois

Dave DuBois was a gifted technician who started driving MG sport cars early on, and never ceased driving them as his family's "Daily Drivers". Over the years he used his experiences in the Navy Yards of Bremerton, WA, to bring simple fixes to some of the perplexing problems of our cars, mostly related to electrical contacts, fuel pumps and safety. He became world famous as the go-to guy for SU fuel pump restoration.

For years Dave's writings have been available on his homepage, homepages.donobi.net/sufuelpumps/. With Dave's passing from cancer in January 2019, his writings were no longer available. For almost 50 years he graced those of us in the hobby with solid advice, good humor and perfectly working fuel pumps. He is and will be sorely missed. His son, also Dave DuBois, has granted permission to publish his writings here. -Dave Braum

This is a caricature sketch of Dave Dubois in his beloved MGTD



X-X

APRIL FOOL'S BASH

Wow, spring is just around the corner!



Each year, a different area club hosts this event. This year, the English Auto Society of Knoxville (EAS) will be the host club. It is considered to be the first driving event of the year for most of us and in years past the weather has been great for some top down driving. This event is coming up fast, so you'll need to get your LBC out, dust it off, check the oil, put back on whatever might have fallen off over the winter and let's go for a ride.

We are planning to go as a group (always safety in numbers) and depart from the Dollar General store located at 2516 US - 70 E. in Crossville at 9:00 a.m. on Saturday the 29th of March. It's a 48 minute - 33 mile drive which across a time zone on our way over to Kingston City park. The address for this event is 333 W. Race St. in Kingston, TN. This route avoids I-40.

The EAS will provide chili and fixin's and coffee. Please bring your own drinks but remember this is a city park and **NO ALCOHOLIC BEVERAGES** are allowed. You are encouraged to bring appetizer or desert to share.

Please RSVP with Larry McDonald at his email address, which is larry.mcdonald53@gmail.com. As usual, everyone is on their own for the return. - Ed



Springtime in the Smokies



41st Anniversary



A GATHERING OF

BRITISH & EUROPEAN CARS & BIKES

Food Truck All Day

Charitable Event

Free Admission for Spectators

100+ CLASSIC CARS

Major Awards

Silent Auction



Saturday May 10, 2025

9 AM – 3 PM

Talley Ho Inn

8314 TN-73, Townsend, TN



Net Proceeds Benefit 4 Local Charities

INFO: (865) 805-7907

SpringtimeintheSmokies@outlook.com



A registration form can be accessed from the site at the bottom of this flyer or from the English Auto Society website which is englishautosociety.org.