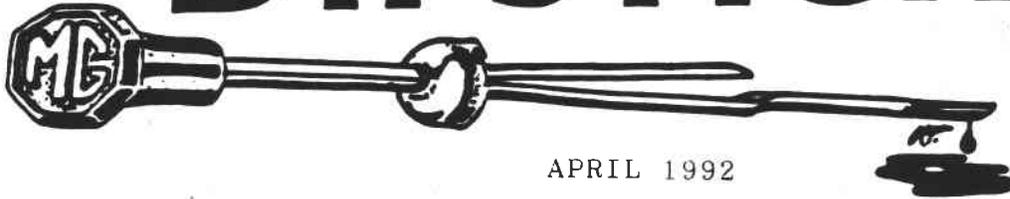


THE DIPSTICK



APRIL 1992

PRESIDENT.....Bill Keeler

SECRETARY.....Bob Miller

VICE PRESIDENT..Susan Bond

TREASURER.....Jim Villers

EDITOR....Chris Holcomb

MARQUE TIME

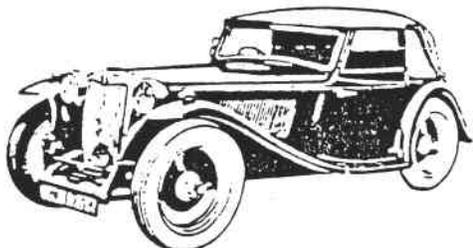
Our thanks this month goes to John and Janet Wessel for hosting the March meeting. Their MGA is coming together, and John just finished painting it himself. Mike and Denise Branon, and Dan Gillespie returned; and Bob McClaren signed-up new comers Ned and Judy Kuhns before they could enter the house. The Kuhns have a '51 TD. It was nice to see all these folks. It was also great to see Andy Miller out and about. Now, for a limited time only, you too can sign up to host a meeting. October is still open, but you better act quickly.

Phil and Stacey Ash are moving to Whales; and Ken Bond and Amy are headed to Houston. We wish them the best in their new locations, and hope they keep in touch.

Sunday March 15, 1992, the CVMGC co-hosted a Chili Cook-off in Richmond. They were gracious in extending an invitation and chili challenge to our members. It was unfortunate more from our club were not able to attend, but what we lacked in quantity, we made up in quality as Mike and Jennifer Ash took fourth place. We appreciate the invitation and hope to show up in greater numbers next time. If it was anything like the outstanding job done by Ken and Carol Bingham, and Mike and Jennifer Ash for our own Chili Cook-off, then we all missed an excellent event.

It's spring, so bring out the MGs in vast numbers to our first Tech Session for 1992. Frank and Gloria Linse will be hosting this event, and much is already planned. There will be a demonstration on installing a rear end anti-clunk kit, and I've heard of some other projects to be done. This will be an opportunity to learn, help, or just mingle with fellow enthusiasts and our favorite cars.

See you at the Tech Session, and then at George and Sue Ulrich's for our April meeting. There are a lot of activities planned, so volunteer and get involved, and don't all you new members be shy.



Safety  *Fast!*

Bill

Bill Keeler

MINUTES OF THE MG T CLASSICS MEETING HELD MARCH 4, 1992

The meeting was called to order by Bill Keeler, President, at 8:06. Our hosts for the meeting are John and Janet Wessel. Guest for the evening included Ned & Judy Kuhns.

The minutes of the last meeting were approved as published in "The Dipstick".

Treasurer's Report - The beginning balance from the February meeting was \$1,708.18 with receipts totaling \$72.50 and disbursements of \$150.05. The new balance as of the March meeting is \$1,630.63.

Committee Reports

Activities - Remember the tech session at Frank Lindsey's on March 29th. The club will be having a champagne brunch on a date to be announced. A host is needed for the October meeting and an organizer is needed for a car event in October. The Richmond club is having a chili cook-off on March 15th, the flea market at the Chesapeake Auto Museum is on March 21st and the British Car Day will be on September 27th. The club is sponsoring a car rally on July 11th.

Membership - A new data base has been established for the club membership. Now all Bob needs to do is figure-out how to print the information.

Newsletter - Please contribute to the newsletter. The deadline for the next "Dipstick" is March 16th.

Old Business - Cynthia distributed the new club business cards that she had printed.

New Business - None

Marque Time - Ken Bond brought in what was left of his GT's grille. The MGB-GT lost in the accident. Hank has his "Y" for sale. Bob bought a 72 MGB-GT, runs good but needs body work.

Raffle - There was no raffle tonight.

The meeting was adjourned at 8:45.

Respectfully submitted,

Bob Miller

Bob Miller, Secretary

DEADLINE FOR MAY DIPSTICK: MONDAY APRIL 20, 1992.
SEND NEWSLETTER ITEMS TO: CHRIS HOLCOMB
601 HEAD OF RIVER RD.
CHESAPEAKE, VA 23322



THE TIDEWATER ASSOCIATION OF CLASSIC HEALEYS
INVITES YOU

T.A.C.H. to cordially invites ALL your club members to join with us for our MAY 1992 meeting. We call it our:

MAY SHINE AND SHOW

COLONIAL WILLIAMSBURG VISITORS CENTER

17 MAY 1992

10:00 AM UNTIL

Our membership thought it would be fun to invite members from the other British Car Clubs in the area to join with us for an INFORMAL gathering of our different marques. A chance to swap lies about our babies, praise Lucas the prince of darkness, drink some warm beer, and kick off the summer season.

We have arranged with Colonial Williamsburg to have as much of the parking lot at the Visitor Center as we need roped off for us. We can show off our cars to the visitors to that old English colonial city, as well as to ourselves.

There is **NO REGISTRATION FEE**, and there will be **NO AWARDS**. Just informal fun and the chance for us to get to know each other. Our club hopes that there will be a big turnout. If we get a good number, we might try to do this each year to start the summer show season.

Colonial Williamsburg has offered discounts on rooms in any of their Hotels. Contact us for further information.

We ask that a club contact person notify us if there is an expected large group [more than 4 cars] with the number expected. We want to make certain that you can all be together.

CHEERS!!

Contact:

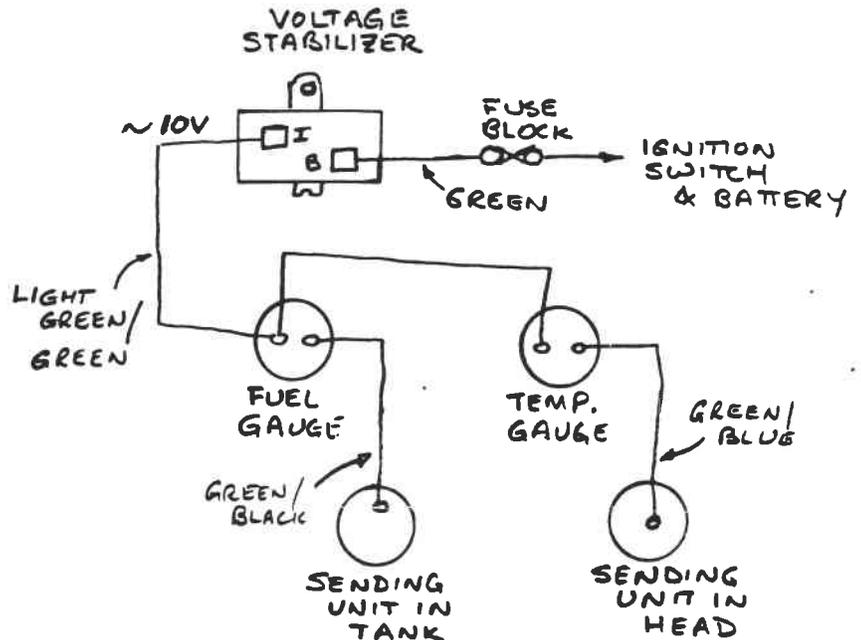
Harold H. Weiler
4808 Berrywood Road
Virginia Beach, VA 23464

804-495-1458

Well, it has been some time since I wrote a tech article for The Dipstick. Robert Davis took over for a while to regale you with tales of engine swaps and other "upgrades" to his fleet of MGs, and I got out of the habit of writing an article every month. Now that Robert is into his fleet of Land Rovers, I suppose I had better get back into the habit!

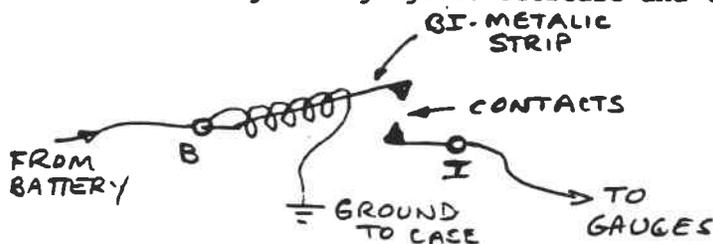
The topic for this month is the MGB instrument voltage stabilizer. This little "goodie" first showed up on the 1965 MGB in the circuit of the fuel gauge and the water temperature gauge. Its purpose is to improve the accuracy of these two gauges by eliminating the effects of circuit voltage fluctuations. Unfortunately, it can only effectively serve its purpose if it is working correctly. When it begins to fail, the gauges are far from accurate, usually reading low.

The circuit for the fuel and temperature gauges is as shown in Figure 1. The physical appearance of the stabilizer is as shown in figure 2 and, on my 1969 MGB, it is located on the vertical part of the firewall behind the dashboard, just to the left of the steering column. The stabilizer has two terminals, one marked B (for Battery) which is connected back to the fuse block by a dark green wire, and the other marked I (for Instruments) which is connected by a light and dark green wire to the gauges. The case of the stabilizer is grounded to the car chassis by its mounting screw. As shown in figure 1, the purpose of the stabilizer is to accept an input voltage from the battery, which can range from 12 to 15 volts depending on the condition of the battery and the output of the alternator, and provide an output voltage to the gauges that is effectively stabilized to about 10 volts.



① FUEL & TEMPERATURE GAUGE CIRCUIT

Before I get into the operation of the stabilizer, a few words about the operation of the gauges might be appropriate. Ignoring the stabilizer, both gauges are connected to a voltage source (the battery) on one side and an electrical resistance to ground (the sending unit) on the other. The reading of the gauge, i.e., the position of the needle, is dependent on the current flowing through the gauge which, in turn, is dependent on the electrical resistance to ground. As the engine warms up, the resistance of the temperature sending unit in the thermostat housing decreases, which causes the current through the gauge to increase and the needle to move toward the right. Similarly, as the fuel level in the tank goes down, the resistance of the sending unit increases, which causes the current through the gauge to decrease and the needle to move toward the left.



② STABILIZER DESIGN

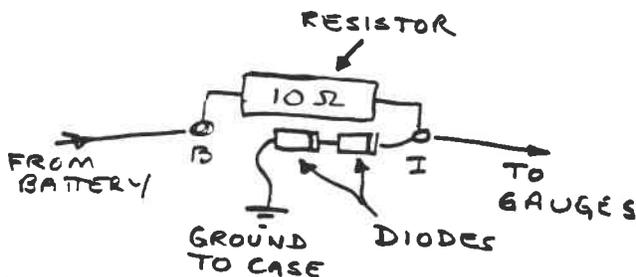


As shown in figure 2, inside the stabilizer is a coil of resistance wire wrapped around a bimetallic strip that activates a contact. The stabilizer is in series with both gauges, and all current passing through the gauges also passes through the stabilizer. As the current passes through the resistance wire coil around the bimetallic strip, it heats up the strip which causes the strip to bend up which, in turn, opens the contact and breaks the circuit. With the circuit broken, there is no current heating the strip which, as it cools down, straightens out and remakes the contact. When the contact is made current flows again and heats up the strip, and the cycle is repeated. Consequently, the output of the stabilizer is either 12 volts (or battery voltage) when the contacts are closed, or zero when the contacts are open.

When the stabilizer contacts are closed, current flows through the gauges and the needles seek a position that is dependent on the electrical resistance of their respective sending units. When the stabilizer contacts open, there is no current flowing through the gauges, and the needles fall to the left. However, the gauges are very sluggish in the movement of their needles, and the frequency at which the contacts open and close is such that there is no obvious and visible movement of the needles. This frequency, which is probably about once per second, is controlled by the heating effect of the coil on the bimetallic strip and is designed so that the effective average output voltage to the gauges is about 10 volts.

Now, I have told you that story so that I can tell you of the problems I had with the stabilizer in my MGB and the solution. The symptoms of the problem were low or intermittent readings on both gauges, probably caused by deteriorating contacts in the stabilizer. This went on for a while until eventually both gauges were reading zero most of the time. The solution to the problem was, of course, to spend about \$20 on a new stabilizer; which I did. All was well for a couple of months and the symptoms began to re-occur. I tried eliminating the stabilizer altogether but the direct battery voltage caused both gauges to read unacceptably high by making me think that the engine was running dangerously hot or that there was still gas in the tank when it was empty! However, running without the stabilizer produced consistent and stable readings on the gauges, which indicated that there probably were not any bad or intermittent connections in the circuit to cause the symptoms. So the obvious solution, once again, was to buy another new stabilizer for \$20. Since \$20 every couple of months works out to over \$100 a year, I decided to look for an alternative solution.

While the new stabilizer was in one of its intermittent working moods, I used a voltmeter to determine that the average effective output voltage to the gauges was about 10 volts. With this information, I "designed" a simple solid state stabilizer. It is so simple that it can be built with three electronic components and a couple of solder lugs from your local Radio Shack store, for a cost of \$1.96 with tax, and will fit inside the original stabilizer case. The circuit is shown in Figure 3, together with identification of the components and their Radio Shack part numbers. The required stabilizing item is a 10 volt Zener diode. However, since Radio Shack does not stock such an item, I used two 5.1 volt Zener diodes wired in series. The Zener diodes have a band at one end, and it is important that they be wired the correct way around.



RESISTOR: 10Ω, 2 WATT
(271-080)

DIODES: 5.1 VOLT ZENER
(276-56S)

③ SOLID STATE STABILIZER

To modify the stabilizer unit, first, gently pry open the edge of the case to separate the base from the metal housing. Drill out the rivets that hold the connectors to the base, remembering which connector goes where because they are not the same. With short #6 machine screws, re-attach the connectors to the bottom of the base, with #6 solder lugs under the nuts at the top. Connect the 10 ohm resistor between the two solder lugs so that it lays flat along the side of the base. Solder the two diodes in series, with the "banded" ends in the same direction as shown, using as little heat as possible to prevent damage to the diodes. A pair of needle nose pliers clamped on the diode leads between the diode body and the connection will also help protect the diode from heat damage during the soldering process. Connect the "banded" end of the diode pair to the stabilizer output (I) terminal solder lug, and lay the diodes along the other side of the base. A piece of sleeving over the outside of the diodes will prevent them from shorting out in the case. The other lead from the diode pair should be bent around the edge of the base so that its end is outside when the housing is fitted back on the base. To be safe, insulate the inside of the housing with some pieces of masking tape, insert the base into the bottom of the housing, and crimp the edges of the housing back around the base to secure it. The resistor is rather large and is difficult to stuff into the case, but it will fit. Be careful that no leads can short circuit to the case. When all is satisfactorily stuffed in the case, the end of the lead of the diode pair should still be sticking out between the housing and the base. Bend the end of the lead over the edge of the housing so that it can be soldered to the edge of the housing.

That completes the conversion. Install the unit back in the car and it should work. I have had one in my MGB for about a year now, and it is working fine. I haven't checked the accuracy of the gauges, but they seem to read about where they should.

M.G. s FOR SALE

1948 MGTC - GREEN, RESTORED BODY, ORIGINAL INTERIOR, MANY SPARES.
(Garaged in Summerville, SC) \$14,000 OBO

1953 MGYB - BLACK, GREEN INTERIOR - A once beautiful car - placed second in an accident with a Detroit Iron & Plasticworks product - too much for me to mend.
(Covered in Virginia Beach, VA) \$1500

1952 MGYB - GREEN, TAN INTERIOR - Rusty but restorable.
(Garaged in Ladson, SC) \$2000 OBO

1961 MGA 1600 CONVERTIBLE - GREEN, BLACK INTERIOR - My first car, now wrecked and too much for me to handle.
(Covered in Charleston, SC) \$1600

1974 MGBGT - WHITE, TAN INTERIOR - No rust, running, but needs brake work.
(Garaged in Lake City, SC) \$2000

1974 MGB - YELLOW, BLACK INTERIOR, RESTORED - Overhauled engine, transmission, brakes. Good runner.
(Garaged in Lake City, SC) \$3500

CONTACT

MIKE WEST
(CHARLESTON, SC)
(803) 723 8226

ALTERNATIVE MG CLUB FORMS IN CHESAPEAKE

In recent years there has been discontent among MG owners who feel that the various MG clubs were better serving the needs of some other group of MG owners. One club is intolerant of concours enthusiasts; another caters only to those purists. This register is too snooty for some because it only allows pre-war MG owners to belong, while the alternative club is a bit too heterogeneous for others. The newsletter has too many (or too few) technical articles. There is too much advertising, too much attention to vintage racing and performance tuning. Midgets are ignored. Midgets are allowed. The events are cliquish or there is no strong core group. Too much beer. Not enough beer. The wrong brand of beer. The wrong brand of brie! Too many meetings. Too many girls. Not enough girls... Club memberships have been literally divided by these kinds of disagreements.

Finally, there is a new MG club to which all can belong and truly feel a part of without being annoyed by the idiosyncracies of fellow club members. There are no meetings or events and no newsletter. Mailing lists will not be exchanged with other clubs so you won't be getting unsolicited MG stuff from people who shift to a different drummer. No telephone tree. No committee assignments. No chapter liaisons. All members are treated equally regardless of whether they own and personally maintain several rare models of MG or only know where there is a late B roadster with rusted doglegs that they are thinking about stopping to look at.

In-town and out-of-town membership dues are the same-- \$20.00 per year. This may sound like a lot but look at all the grief you're not having to endure! To make life easier there is a Renew-for-Two plan which allows members to sign up for two years of membership for only \$40.00. Actually, we're so anxious to get along with everybody that you can renew for as many years as you like by sending the check for the appropriate amount.

Mail to: B. T. and the MGs
P.O. Box 15242
Chesapeake, VA 23322

When you send your check, please send along a note to let us know what kind of MG things you would prefer that we not get into.

THANKS!, Booker.

NORFOLK ←

Rt 44

OCEAN FRONT →

1816

Lynnhaven Parkway

Potters Rd

International P'Way

LONDON BRIDGE RD

NAS OCEANA

OLYMPIC

PLACID PLACE

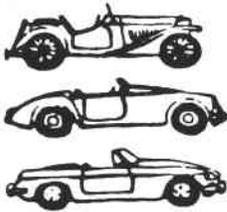
MIARDR LAKER RD

CASCADE CT.

LAKE PLACID

1808 CASCADE CT.

APRIL MEETING
TUESDAY APRIL 7, 1992
KICK TYRES 7:30 PM
BUSINESS MEETING 8:00 PM
HOSTED BY GEORGE AND SUSAN ULRICH
1808 CASCADE CT
VA BEACH, VA
427-0043



THE HOLCOMBS
601 HEAD OF RIVER ROAD
CHESAPEAKE, VA 23322

FIRST CLASS