

# THE DIPSTICK



NOVEMBER 1990

President.....Dave Bowling  
Vice President.....Don Jones

Secretary..... Bob Miller  
Treasurer.....Frank Benson

Editor.....Chris Holcomb

### Marque Time:

We had another record turn-out for the October meeting at the Lund's home! Could this be attributed to our stimulating MG car talk or Jeanne's long standing reputation for serving the finest in gourmet delights with a cajun flair? This year she presented both an MG cake and MG shaped cookies! Thanks Tom and Jeanne for your hospitality!

Our annual election of officers for the coming year came off again without controversy. We wish our new president, Bill Keeler, a successful tour. I hope he enjoys the same fine support from his officers and chair people that I've received over the past two years!

A special thanks to Chris and Shelley Holcomb for another great pig roast at their ranch in Chesapeake. Their hard work in doing all the cooking and setting up for this annual event was enjoyed by an enthusiastic crowd of members and guests. Susan Bond's innovative impromptu car show was also a blast!

The main business of the November meeting will be to line up hosts for meetings and tech sessions for the coming year. Discuss your schedule with your spouse and be prepared to commit for specific dates.

Hope to see you on the road. Stay

Safety fast,

Dave



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Our officers for the coming year are:

President.....Bill Keeler  
Vice President.....Susan Bond

Secretary.....Bob Miller  
Treasurer.....Jim Villars

Please come to show your support as they start planning for a busy year.

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**DEADLINE FOR DECEMBER DIPSTICK MONDAY, NOVEMBER 26, 1990.**

**NOTE: WE DO NOT HAVE A DIPSTICK FOR THE MONTH OF JANUARY SO PLEASE PLAN AHEAD**

**Minutes:**

The October 3 meeting was held at the home of Tom and Jeanne Lund. The meeting was called to order at 8:10. New members Chuck and Alice Baldrige, '76 MG Midget owners, were welcomed. Previous minutes erred in place of the next meeting - details inside. Frank Benson reported a starting balance of \$1,543 and an ending balance of \$2,290. Pig roast expenses not paid yet.

Activities: British car day at Evelynlon Planatation was discussed. Bill Keeler won 4th place for MG-T's and Terry Bond took motorcycle honors. The annual pig roast was a huge success with good attendance despite a few afternoon showers. We almost broke even on the money. Thanks, Chris and Shelley! Susan Bond and family also did a great job organizing an impromptu car show complete with winner awards. The Waynesboro car show, October 7, was discussed - also the proposed England tour, February 1991.

Technical: Next tech session at Ron Stoops and next month at the Bond's. Bring your MG problems and projects.

Newsletter: Be sure to include maps for future meetings and events.  
Spares: Robert Davis still has conversion tube shock kits available for MGA, MGT and MGB's. He also has MGT tune-up kits for about \$10.00.

Regalia: In answer to out-of-town member inquiries, we presently have pink or blue large and extra large T shirts available for \$9.00, MG ball caps for \$9.00, car badges for \$12.00. Key fobs for \$3.50 and patches for \$3.00. Contact Susan Bond.

Elections: Officers nominated during the September meeting were elected by acclamation. New officers Bill Keeler, Susan Bond, Bob Miller and Jim Villars will take over in November. Dave thanked his fellow officers and committee chairpersons for their support.

New Business: Chris Holcomb will investigate the costs and benefits of building our own pig cooker. Mike Ash will follow up on a letter critical of MGB association leadership.

Marque Time: Jock McGregor reported that modification of his MGB to British specs may cost his wife a bundle.

Raffle Drawing: Was won by newest members - the Baldriges. Adjourned at 9:15.

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PIG PICKIN'S

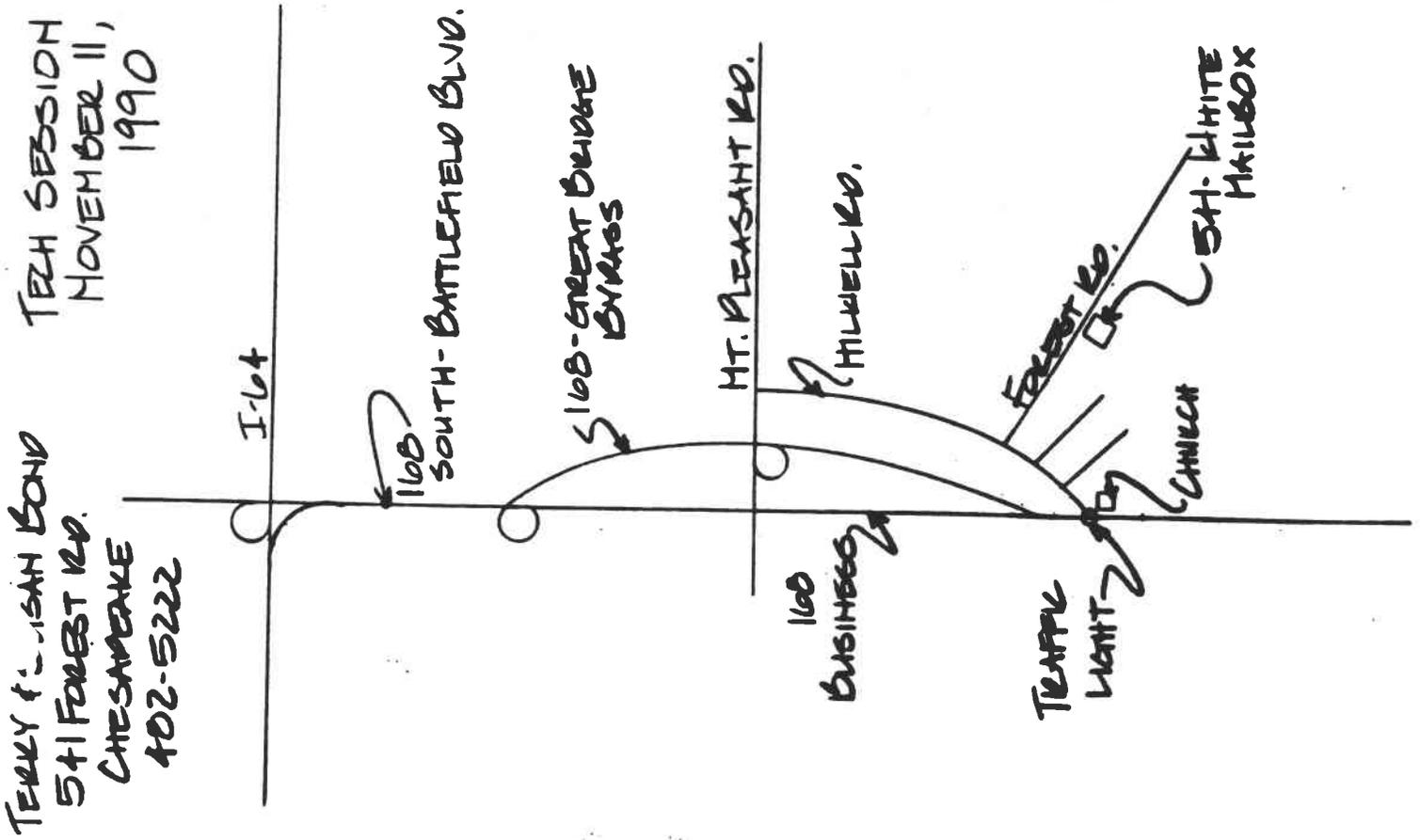
Thanks to everyone who braved the dreary weather to come to our pig roast last month. Shelley and I really enjoy having the event at our house.

Special thanks to the Bonds for the car show! Also special thanks to everyone who pitched in to flip burgers, etc.

Chris Holcomb

## UP-COMING ACTIVITIES

- NOV. 6 (Tue) MONTHLY MEETING at the home of DAVE & JOAN BOWLING (see map). at 7:30 p.m. Dave and Joan kindly stepped into the breach when John and Janet Wessell found they had to be out of town. (Janet & John will host the January meeting instead)
- 11 (Sun) TECH. SESSION at Susan & Terry Bond's huge garage and memorabilia museum (all heated, I believe!). 10 a.m. until whenever you get through, or it gets dark - whichever comes first - unless Sue throws y'all out.
- DEC. 8 (Sat) HOLIDAY-TIME PARTY! Start off the Festive Season with your MG friends at a good party at the home of our new President and his wife. BILL & LIBBY KEELER. Mark your calendar NOW, and start planning what super-duper finger-food recipe you will bring. 7:30 p.m. Sometime after Thanksgiving, start to let Libby know what you will bring, so that she can co-ordinate the feast. Call 547-2709 in the evenings; this will also allow us to plan to have enough beverages on hand! There will be another reminder in the December "Dipstick". but that will be leaving it a bit late....



## ONE MANS' NIGHTMARE, ANOTHER MANS' DREAM

My wife wants an MGB to drive this summer. Who am I to deny? I pick up the Sunday paper and there it is! My dream car. A '74 chrome bumper with a factory hardtop, that needs work, for a reasonable price. I hustle over that same day to look; nobody will beat me to my dream car. It sits there, steering wheel locked, hastily primered, body shot, interior shot, tires shot, top shot, plenty of rust; his nightmare, my dream. I offer a price, to my dismay he readily accepts. He can sleep tonight, my dream begins. I bring it home with the help of my friend Terry. It is a tradition that we have developed. I help him collect rusting hulks, he helps me, a mutual denigration society. The car sits in the driveway, Fran will never drive it this summer.

A month later a friend from work calls with news of a neighbors' 74 MGB that begs for a new owner. I hustle over to look, garaged car, no rust, nice interior, nice chrome, 50,000 miles, one owner from new. His nightmare, my dream. I offer less than the first car, he accepts. I'll pick it up on Saturday. I immediately put my nightmare up for sale in the newspaper. The first caller wants to come over in a 50 MPH rainstorm to look at the car. I quickly hide the factory hardtop behind the house to await his arrival. He inspects, he has a dreamy look in his eyes. He makes an offer; to his dismay I readily accept. I can sleep tonight. My nightmare is over. His dream can begin.

Bill McShane #2746

FRANK & TROISE



Road & Track AUGUST 1990 43

### FOR SALE

1972 MG-B, overdrive, an original car, inspected and driven daily, \$1700. Charlie Dixon, 58 Bob Circle, Forrest, Va 24551. (804) 525-6787.

Note: This article and the above classified have nothing to do with one another.

## TECH SESSION - by Mike Ash

We had a Tech Session on Sunday, October 21 at the home of Ron Stoops. Attendance was light in the form of Dave Bowling, Jim Villers, Bob Miller and myself. Significant work was accomplished on the Bowling TD, the Villers MGB and the Stoops TD, but not enough to for a write-up.

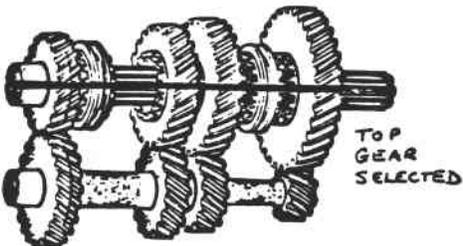
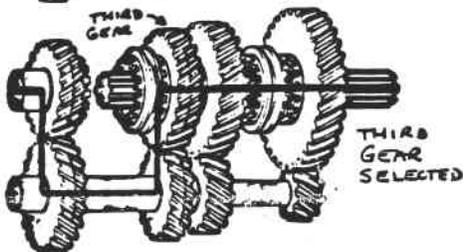
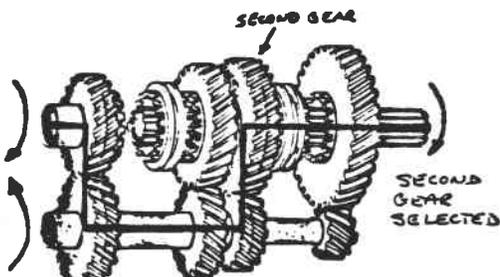
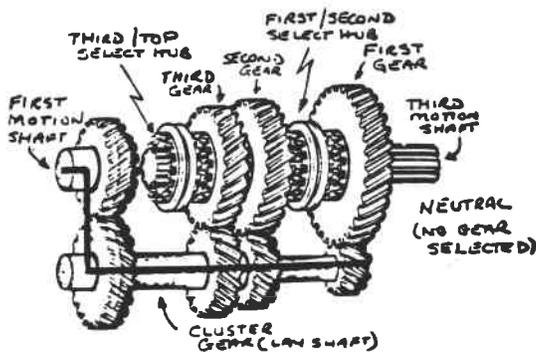
So, as previously promised, I will embark on a several-part article on rebuilding MG transmissions. It will be based on a series of articles I am writing for the MGA register newsletter, but here, since they are all quite similar, I will try and cover the T-series, MGA and MGB transmission simultaneously. In preparation for the rebuild, I will spend this issue describing the basic operating principles of MG transmissions. An understanding of these principles is the first step in potentially diagnosing the source of transmission problems, as well as dispelling the myth that a transmission is a vastly complicated piece of machinery and that a rebuild is beyond the capability of the average MG owner. Let me assure you now that an MG transmission is a relatively simple item, that it can be rebuilt by following the procedure in the workshop manual (with some amplification), that no special tools are really required, and that, if you are careful and take your time, it is impossible to screw up!

As you all know, the MG transmission has four forward gears and reverse, with synchronizers on the three highest forward gears up to about 1968, when the four-synchro transmission was introduced for the MGB. When you shift gears, up or down, the synchronizers match the rotational speeds of the selected gears so that the shift can be made smoothly and quietly. Without synchronizers, the gears could not be shifted smoothly and quietly unless the driver matches the rotational speeds of the selected gears by a coordinated manipulation of the gas and clutch pedals, known as the application of the dying art of double clutching. On pre-1968 MGs, first gear has no synchronizer and can only be selected (without protest) when the car is stationary.

All synchronized manual transmissions operate on the same principle, as shown in the figure (next page). This was the best diagram I could find, but it shows first gear synchronized. The drive is transferred through the transmission by three primary shafts - the first motion (or input) shaft, the cluster (or lay) gear on the second motion (or lay) shaft and the third motion (or output) shaft. For the three lower forward gears, the drive comes from the engine to the first motion shaft via the clutch, is transferred to the cluster gear and then to the third motion shaft, which is connected to the rear axle via the drive shaft. For top gear, the cluster gear is bypassed and the first motion shaft is connected directly to the third motion shaft.

Referring to the figure on the next page, the top picture shows the situation when the transmission is in neutral. Here it can be seen that the first motion shaft drives the cluster gear and that the third motion shaft is independent from the first motion shaft. Since the first, second and third gears with which the cluster gear is engaged are completely free to rotate on the third motion shaft, there is no drive to the third motion shaft. Therefore, although the input (first motion) shaft is turning at engine speed, the output shaft is turning at road speed if the car is moving or is stationary if the car is stopped, and the first, second and third gears are all turning at different speeds proportional to their respective diameters.

Also on the third motion shaft are two selector hubs. These hubs are fitted on splines such that they always turn with the shaft, but are free to slide back and forth on the shaft under the control of the shift lever. The selector hubs have "teeth" on each side that can engage with similar teeth on the sides of the adjacent gears. In neutral, the selector hubs are located mid-way between the adjacent gears and are turning at the same speed as the third motion shaft.



When second gear is selected (I'll ignore first for now), movement of the shift lever by the driver moves the first/second select hub to the left, as shown in the second diagram of the figure. The teeth on the side of the hub engage with the teeth on the side of the second gear and solidly lock the rotation of the second gear to that of the hub. Since the rotation of the hub is locked by the splines to the rotation of the output shaft, the drive is transferred from the cluster gear to the output shaft. The speed of rotation of the output shaft is less than that of the input shaft and is proportional to the relative diameters of the first motion shaft gear and its meshing gear on the cluster gear, and the second gear on the third motion shaft and its meshing gear on the cluster gear. Notice that the input and output shafts turn in the same direction, while the cluster gear turns in the opposite direction.

For the selection of third gear, the first/second selector hub is back in the neutral position, and the third/top selector hub is moved to the right to engage the third gear. With the rotation of the third gear now locked by the hub to the rotation of the output shaft, the drive from the engine is now transferred to the output via the cluster gear and third gear. Again the output shaft rotational speed is less than that of the input shaft but, since the third gear is smaller in diameter than the second gear, the output speed is now faster than it was in second. For the selection of top gear, the third/top selector hub is moved to the left to directly engage with "teeth" on the end of the first motion shaft. The rotation of the third motion shaft is now locked to the rotation of the first motion shaft and the input and output shafts turn at the same speed. In top gear, the cluster gear is still turning but, as in neutral, it is not transmitting any drive.

The diagrams of the figure show the first motion shaft gear, the second and third gears, and the meshing gears on the cluster gear as helical (angle) cut gears. This is the same as in the pre-1968 MG transmission. These gears are constantly in mesh, and their relative diameters define the second and third gear ratios. However, because these MGs do not have a synchronized first gear, the first gear on the third motion shaft and its corresponding gear on the cluster gear are "straight" cut and are not in constant mesh as shown in the diagrams. In these MGs, the first gear is part of the first/second selector hub and, if shown correctly on the diagram, would move to the right when selected to engage with a corresponding gear on the cluster gear. This situation should become more apparent in the subsequent descriptions of the operation of the MG transmissions. For the MGB with the four-synchro transmission, the gears are as shown in the figure, and first gear is selected when the first/second select hub slides forward to engage the teeth on the first gear and to lock the rotation of the third motion shaft to the rotation of the first gear.

Next time I will relate the workings of this generic transmission to that of the real inner workings of the MG transmission.

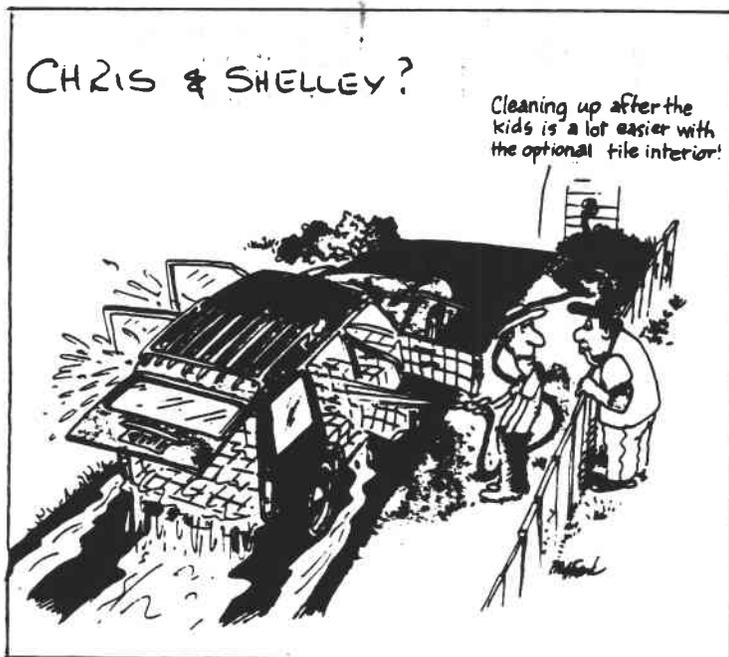
## WAYNESBORO SHOW

The Shenandoah Valley British Car Club held its ninth annual British Car Festival Oct. 6, 1990. This is in a beautiful park, with a nice play area for the rest of the family. It is also on the same weekend as the Waynesboro Foliage Festival, so there is a lot to do. The weather was perfect this year, but this event is just a little early for those in search of colorful leaves.

Now, on to the important information. Participation was good this year with 125 cars registered. Among these, 80 had pre-registered, and the Shenandoah Club had planned to present three awards in most of the 13 classes. As always, pre-registration is necessary in preparing for the maximum number of awards. Of the MG T Types, 1 TA and 3 TDs, only one had pre-registered. The vendor section seemed larger this year with TRF and several other commercial spares folks there. A nice feature of this show is their Premiere Class. Previous winners and strict show cars are encouraged to compete against each other, making it a little more fun for "The Drivers".

Next year, make the Wayneboro Show a part of a family weekend in the mountains. I returned with no additional spares, but a lot of apples.

Bill Keeler



**FIRST LAW OF "T" MECHANICS:**  
When the need arises, the tool or object nearest to you becomes a hammer.

**SECOND LAW OF "T" MECHANICS:**  
No matter how minor the repair or maintenance task, you will inevitably end up covered with grease and oil.

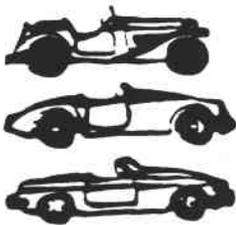
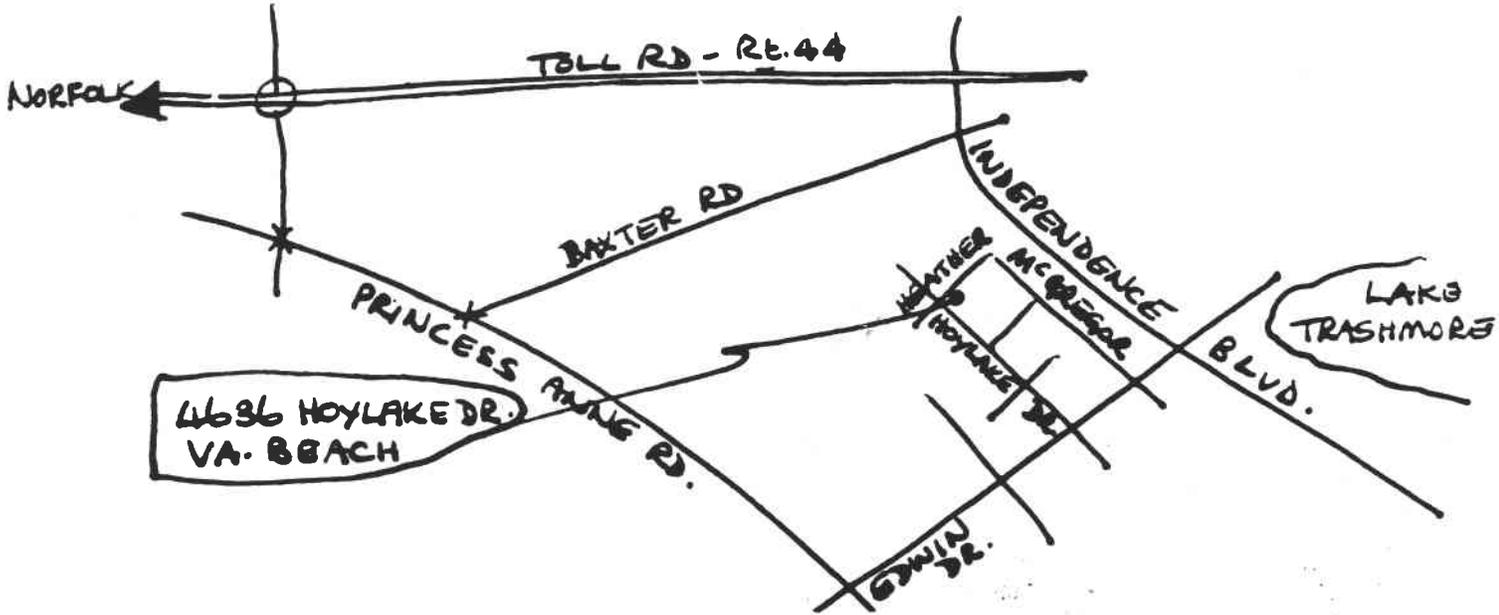
**THIRD LAW OF "T" MECHANICS:**  
If you drop a nut or bolt in the engine compartment, it will never reach the garage floor.

**FOURTH LAW OF "T" MECHANICS:**  
If you finally get access to the faulty part, you won't have the tool to get it off.

**FIFTH LAW OF "T" MECHANICS:**  
If you can get the faulty part off, both Moss and Abingdon will have the replacement backordered.

NOVEMBER MEETING  
TUESDAY NOV. 6, 1990

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Dave & Joan Bowling's - 7:30pm  
499-6632



FIRST CLASS