



June 2009



The Nugget



Members throughout
Northwestern, North Carolina

Ah, to be in England in the spring time! What's happening in the UK this month



The Sovereign's Official Birthday
"Trooping the Colour"
is a British custom dating back to the time of Charles II in the 17th Century.



37th Historic Motoring Extravaganza is a new event to the series run as part of the Borders Vintage Owners Clubs Extravaganza weekend, based in Lauder, 20 miles south of Edinburgh.



Royal Ascot is a unique event in the summer social calendar, steeped in tradition, heritage and pageantry dating back almost three hundred years. It is without doubt the greatest race meeting in the world and a celebration of everything that is uniquely British.

Now the rest of us here in northwestern North Carolina are waiting patiently for a break in this unusual English style weather to get our LBCs on the road. As I sit here waiting for the grass to dry so it can be mowed, the sun suddenly retreated, more rain and now the sun is timidly peeking through the clouds again. Does anyone still miss last year's drought?

Club News: New car badges are now available

Bob Ravich presented the new club badges during the May meeting. From personal inspection they are quite handsome. The picture is a bit misleading as the club's logo sits on a heavy gauge metal, either a highly polished chrome or stainless steel.

The car badges are being supplied to us through our buddy, Joe Kaiser, a fellow British car owner, newsletter editor and the source for our club clocks.

Bob has informed us that the car badges are available for \$22.75 each. So, if you are interested, please send Bob a check made out to Piedmont British Motor Club for each badge. Each badge will come with a miniature badge key fob at no additional cost.

So, let Bob know as soon as possible if you're interested in a car badge so he can place the order.



Send you check as soon as possible to Bob Ravich, 22824 Torrence Chapel Rd., Cornelius, NC. 28031.

Bob anticipates the orders will take about 4 to 6 weeks to process and be delivered. *dj*

END of the ROAD

University Motors will cease fulltime business on Wednesday, July 1st, 2009, after 34+ years of service to the MG



Community. When our Governess promised in her 2006 State of the State Address that "In five years, you're going to be blown away by the strength and diversity of Michigan's transformed economy," little did we imagine that it would be our own business that would be demolished in the ensuing economic storm.

We have ceased taking appointments and will use the month of June to complete the work in the shop. We will continue to receive bench work. In late October we will have an auction of parts, tools, and MG memorabilia. Books, DVDs, and technical publications will be forthcoming.

All good things must come to an end. It's been a simply wonderful run! *jt*

From the Editor: I originally contacted John Twist to write the story of his life and business. There has been so much publicity about his decision to close the business however that I will merely list the notice taken from his website. Since John opened University Motors Ltd on January 25, 1975 a lot has changed in all of our lives. John's decision to close his business will be a sad day for everyone who owns or enjoys the British car hobby. John wrote me "There will be a great many more chapters by the time I'm done. The way I've written it so far is so hopeful..... This shouldn't be happening!"



£

Automotive Memorabilia Auction Company

A recent Hagerty's magazine article reported on the growing hobby of collecting vintage license plates. I myself bought a few more contemporary plates recently via eBay just because they were so attractive or had some historical significance. However, as Jim Brown relates here, there are even more related automotive hobbies to consider. Jim's recent purchase makes me wonder what happened to that old ESSO sign I saw leaning against a long abandoned service station during one of my recent drives. *dj*

Here a photo of an old BP sign that I purchased at a local auction this weekend.

There is a local auction company here in Salisbury that features sales of petrolina and other old advertising. Most of their items are listed on their web site prior to the auction so people on the web can email bids. I have been fortunate to pick up a few foreign signs there as the local buyers don't have an interest in them. Last year I purchase a nice porcelain two sided Dunlop sign and a British railroad town sign at a reasonable price. This weekend they had one large BP sign mixed in with all the large American gas signs that went for big bucks. I was able to purchase it for a third of the money the American signs were bringing. All I need now is a large garage to hang it in.

This is the web site for the auction company: <http://www.rowanauction.com/Home>
Go to past auctions to view items from this past weekend. (Salisbury is about 30 miles from Statesville.)



dj

A fully serviced steering rack will transform the feeling of the car

(SECOND INSTALLMENT)

May 26, 2009

This tech session is submitted by Jack Austin who has a small British car business in Blowing Rock, NC. There was a short commercial break here so you will have to refer to last month's newsletter article if your attention span requires it. dj

Assembly is essentially in reverse order, but you want to be mindful of several things as you go along. Stuff some grease up into both ends of the tube before you insert the rack itself. I use bearing grease formulated for boat trailer bearings as it has an extra additive that repels water even more than normal grease. Slather grease all over the rack bar and then wipe it down a good bit before you insert it into the tube. Hand repack grease into the ball bearing at the end of the column. After inserting the rack into the tube, install the column/pinion taking care to end up with the rack evenly spaced left to right in the tube and the column reset to it's earlier position relative to the plane of the rack. You might have to have someone hold the rack bar in position in the tube while you thread the pinion gear onto the rack teeth several times before you achieve the correct relative position.



A visitor to Jack Austin's shop, either as a customer or just casual company quickly turns to his passions ...British cars or politics. But always expect to learn something

Once the column is "timed" correctly put some grease in the cavity of the thrust plate and bolt it back into position on the rack tube, but don't tighten it down too much yet, just snug it up. Now put the bronze pressure slug back into position in its bore greasing it well, especially on the face where it presses against the rack bar. Then install the spring and cover over it making sure that you replace the same shims that came off with it. Carefully turn the column back and forth a few times making sure that there is no binding at any point along the rack bar's travel.

Now torque the cap screws for the cover plates and test for binding again. There should be none. When you assemble the rack to tie rod spherical joint make sure that everything inside has a good coating of grease, the ball end, nut/cup, spring, thrust plate, etc. Now with the rack set equally in the center of the tube pull each of the boots over the tie rods and onto their place over the ends of the rack tube. Use the supplied cinch clamps to secure the boots to the tube. It is good practice to position the clamps in such a way that the heads of the screws are going to be available for removal at a later date with the rack in position on the car.

Make sure that the small opening of the boots are positioned over the slight relief in the rods and secure the rubber neck around the rods with the supplied clamps, but don't tighten them fully just yet. Screw the jamb nuts back into position on the rods. Smear some anti-seize grease over the threads of the rods and install NEW tie rod ends counting the turns as you go and ending with the number of turns noted on our paper. Have someone sit in the driver's seat and hold the steering wheel centered dead ahead while you and another assistant install the rack assembly. Do so by offering up the rack assembly and inserting the splined end of the column into the flex joint according to your notes as you position the rack tube over its clamp beds.

Install the rack clamps and bolts making sure that nothing is squished or binds. Re-install the column flex joint clamp bolt and secure the nut well. Have your sitting assistant turn the steering wheel slowly fully left and right a few times to make sure all is well and then return it to a centered position. Now reconnect the tie rod ends to the swivel steering arms fully tightening the nuts. Lower the car to the floor and jounce the front end to settle the suspension. With the steering wheel still being held firmly dead ahead, step back from the front of the car, kneel down and sight down one side along the plane of the outside edges of one front tire toward the rear wheel. You should just be able to see the outside of the rear tire. If not, use slip joint pliers to turn the steering rod on that side into or out of the tie rod end to adjust the wheel direction as needed. Repeat this effort on the other side.

Now jack the car back up again until the tires clear the floor. Hold a screw driver firmly against something stable like a jack stand with the tip just

touching the center of the tire tread and have an assistant rotate the wheel so you can make a mark on the rubber all the way around the tire. Rub chalk on the tread if you can't easily make the mark on the bare rubber. Repeat on the other front tire.

Lower the car to the floor and jounce the suspension again. With an assistant use a flexible tape measure to gauge the distance between the lines on the tires both on the front of the tires and the rear. You might want to do the rear measurement first as you will have to thread the tape between the exhaust down pipe and the body. Stretch the tape as high up as you can without fouling anything. When you move to the front of the tires try to take the measurement at about the same height off of the floor as you did on the rear measurement. Compare the readings. You should end up with the front measurement being 1/8th of an inch smaller than the rear. If it isn't, re-sight each wheel in turn and adjust the tie rod ends as carefully as you can to get that sight line to the rear wheel just right. Work with this measurement and sightings and adjustment process until you feel like the front wheels are straight with the body structure but are "toed in" just that little 1/8th inch. When you feel comfortable with your effort, tighten the tie rod end jamb nuts and the small cinch clamps around the ends of the rack boots.

Then take the car out for a spin. If you feel that the steering is too twitchy the chances are that the wheels are not toed in enough. If it feels a little too clumsy the toe is probably set in too much. Work with the adjustment as needed to get the correct

sight lines, toe measurement and feel when driving. Remember to loosen the clamp at the small end of the bellows before you try to rotate the tie rod and remember to work with BOTH sides evenly in order to keep the steering wheel really centered.

BTW: I bought one of those toe gauge thingies sometime back and immediately found that it wouldn't work because the cross bar would not pass through the exhaust pipe. Imagine that! LOL. I used a couple of the parts to make my own version. It is not particularly elegant, but it does work. If you want to make one yourself, it will take about ten bucks of stuff from Lowe's and about an hour of your time. Just ask and I'll draw up a sketch and send it to you.

Another alternative of course is to put the car on an alignment rack and let a front end guy do the setting, but in any event always have someone sitting in the driver's seat holding the steering wheel in a straight ahead position. I have used this method countless times and although it might seem to be a bit time consuming, I have never put a car on an alignment rack and had to do further adjustments. VIOLA! A fully serviced steering rack will transform the feeling of the car.

Jack Austin



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Some local businesses that deserve your support. If you are aware of a British Car friendly business please let me know) dj

Brushy Mountain Drive

Earlier this month a group of “Triadians” got together for a drive up to Wilkes County, put together by Jim Haley who also a member of the Piedmont British Motor Club. The little convoy, many from the Winston-Salem area, met at Jim’s house on a Saturday morning for an adventurous back country drive through the foothills of the Brushy Mountains. After the drive and then a relaxing lunch at a local favorite BBQ place, some continued the cruise over to nearby Elkin for the Wine Festival later that Saturday afternoon.



Besides NASCAR, Wilkesboro is also infamously known as the Moonshine capital of the east. The short tour features miles of switchbacks through the Brushy Mountains, rolling country roads and some straight-aways. There are vistas of the Blue Ridge Mountains from the top of the “Brushy’s.”

I believe all of us were invited to join this drive via the Piedmont British Motor Club’s email alert. Many were unable to join in. So, I am presenting their route for those of you that may be interested in making your own trip. It might be fun for those of you living in other areas to share your drives with the club as well. Here are the directions for this drive:

Travel time is about 1.5 hours. Distance is about 45 miles.

Hint: Follow paved roads with yellow double lines where appropriate otherwise you may end up seeing more back country than expected! Mileage show on the right in parenthesis is cumulative mileage.

Starting at the Highway 421/Brushy Mountain Road Exit Intersection

- 1) Continue on Brushy Mountain road – bear LEFT (5.5)
- 2) At the stop sign take a LEFT on Linney Mills Road (13.3)
- 3) At the stop sign take a LEFT onto Rt 115 (20.0)
- 4) Take a RIGHT onto Hunting Creek Road (24.4)
- 5) Take a LEFT onto Jarvis Store Road (26.7)
- 6) At the stop sign take a LEFT onto Mitchell Mill road (27.4)
- 7) Continue over 421
- 8) Take RIGHT onto Antioch Church Road (34.5)
- 9) At the stop sign, take a LEFT onto highway old 60 (it is not marked) (36.7)

- 10) At the stop sign take a LEFT onto highway 115 (42.9)

- 11) Hwy 115 will take you back to Hwy 421 and home.

There is an optional longer drive if desired which add at least an hour to the driving time and another 50 miles through Hiddenites and Taylorsville back to Wilkesboro.

Follow directions 1-4

At #5, take a RIGHT instead of LEFT. (The name of the road changes in route)

- 6) Stay on this road all the way into Hiddenites

7) At the stop sign in Hiddenites, take a RIGHT. (Note there will be a Gas station on the left at this intersection)

- 8) Follow this all the way into Taylorsville.

9) At the light in Taylorsville, take a right onto Route 18 towards Wilkesboro.

- 10) Stay on 18 all the way to Wilkesboro past the Wilkesboro Middle School will lead you to Hwy 421 and home.

Got a favorite drive in your area? Share it with the club here. Better yet, email and let us join your next drive.

Thread: Replacing Leaf Springs

There was an interesting discussion about MGB leaf springs recently on the MG Enthusiasts "technical" website.

Our car bottomed out a couple times in the recent Moonshine Rally which drew my attention to this article.

In one of the posts someone commented that "One must bear in mind that MG only allowed 150lbs per occupant." That means I must either find stronger springs or give up my fast food diet. Seriously, does anyone imagine the average weight of an American is any where close to 150 lbs? So let's speculate that the average 60 year old male driver of an MGB weighs about 200lbs and, how shall I word this diplomatically ... his navigator weighs in a 160 or so. So instead of the 300 lbs the cars were designed for, we're driving the hell out of them with closer to 400 lbs packed on board.... and that's not including the lawn chairs or the picnic basket loaded up with fried chicken and beer! dj

R.W Anderson, Stillwater, Minnesota

Okay, I almost went on Ebay and started bidding on a pair of new 6 leaf springs for my 72B, but ended up talking to my neighbor first.

I mentioned that it is odd, that when I drive up around 70 mph the front end feels like it is floating. I recognize the feel from when I piled my trunk full of sidewalk pavers until the rear end bottomed out and I slowly

drove home with very little feel in the steering.

This prompted the neighbor to comment that when I drive by, the front end of my B is raised. Others have commented that my B rides too low. I've checked specs and I'd agree the rear fender arc is down an inch or more too far when compared to tire, even without my 250 lbs in the car.

This all points to new leaf springs.

So, here are my questions...

1. Should I purchase Moss or VB or LBC 6 leaf springs, in the hopes new springs will help?
2. Should I purchase 7 leaf springs, (for GT), to give a bit more resistance for my 250lbs,
3. Should I consider heading to a spring shop in the Metro here, and ask them to either re-torque my springs and firm them up a bit extra, or
4. Should I head to spring shop and have them build a set of springs for car that meets my larger bulk?

Steve, Virginia, USA

Bob- You can have your rear leaf springs re-arched, but they will sag again before long. You can also have your rear leaf springs custom-made, but the ones from Brit Tek are the closest to Original Equipment quality that you're going to find pre-made. Whatever you do, don't get the rear leaf springs from Victoria British unless you like having your car sit very high at the rear. No, they won't settle to correct height. Seven-leaf MGBGT rear leaf springs on a

Roadster will give a very stiff ride.

John H, Wisconsin- Hunt around for a good spring shop that can build you a set of springs. Last summer I broke a spring on a trip and was lucky to find a local shop that made a new main leaf. When I asked him about spring quality he stated that unless you use US or Canadian spring steel you will have problems, his opinion was that the off-shore spring steel was of poor quality. They hand made the new main leaf for my car and were within 1/4" of matching the ride height.

Tore, Norway, I know opinions differ on this, but I have used GT rear springs on my '63 roadster for six years now, and am very happy with them. The ride may be a little stiffer, but I rather like it that way. We use our car for many long trips with lots of luggage, and neither I nor my wife are featherweights.

In Norway this is a very common modification, people just get tired of driving on the rubber bump stops when touring with luggage. I was lucky to find a pair of decent quality NOS Unipart springs with interleaving.

I also find that the slightly stiffer rear end makes the MGB more neutral through the bends. With 28 psi tyre pressure front and rear and polyurethane bushes everywhere the car is now very responsive, and yet very comfortable. Tore

Paul Hunt, UK, Like Tore I was fed up with bottoming and grounding when touring fully

loaded, even with new OE springs, and like him I fitted up-rated rear springs. However unlike Tore I didn't like the harsh and choppy ride they gave over some surfaces so I reverted to the correct type and opted to extend the rear shackles instead and am happy with the result.

One must bear in mind that MG only allowed 150lb per occupant, higher than that and you may well have to go harder. The most common complaint with rear springs is that they are too hard/and or arched, meaning that you can't get the rear shackles or rebound straps attached using just the weight of a fully equipped car without adding considerable extra weight to the boot, and giving a very rear high stance afterwards. I've bought three sets of springs over the years from different suppliers and never had that problem, even with V8 rears which are the hardest. Front springs have been a different issue though, being noticeably taller in free height as well as ride height.

What are the distances between the centre of the hubs and the bottom of the trim strip with you out of the car and in? I would have thought you would have to go a lot higher at the front than the rear to get any kind of lifting at speeds, my fronts are an inch higher than the rears unladen now (but then I'm inside Abingdon's allowance) and I haven't noticed any handling issues, but like you I have experienced what it can feel like with a very heavily laden boot.

Tore, Norway, As I said I think I have been very lucky with my particular pair of springs being of original quality. I had no trouble at all with shackles or rebound straps.

With the quality problems that seems to be the rule now, Paul's combination of extended rear shackles and roadster springs is probably a better solution. But I think you should definitely use blue polyurethane shackle bushes to keep the rear suspension stable. Tore

RIC LLOYD, CT USA, Listen to John H., A good local spring shop can build what you need. How it works is when you find the right shop there will be a 'guy' who will ask you the right questions and build the springs you need I've done this from the 70s with zero problems and always at a reasonable price. Local people with American raw materials, how can you beat it? RIC

R.W Anderson, Stillwater, Minnesota, I measured my loaded and unloaded heights last night. I measured from the center of the hub to the bottom of the trim.

Unloaded: LF = 13 1/8" LR = 13 1/2"
Loaded: LF = 12 7/16" LR = 12 7/16"

This implies the car is more level when loaded, but it also shows the rear drops more than front (11/16" drop in front & 1 1/16" drop in rear, which makes sense.

A side-view of my car shows the top of the rear tire well up in the wheel well.

rich osterhout, Ohio. I was told by a spring manufacturer that you can't get the British size steel (width) to properly make the rear springs. Comments? I was also told that old springs are really not to be re-torqued. Thanks, Rich

Steve, SC. I was having the same problem with bottoming out when loaded in my BGT with V6. I put on air shocks and solved the problem. My 74 BGT was sagging in the back so yesterday I put air shock on it also. It doesn't sag anymore.

As far as the springs it depends on what you use the car for. But I would suggest Brit Tek as an earlier post stated. Also I have seen on the MG Experience forum where you can use Suzuki Samari springs as well. Check the Chicoland MG club website on springs.

Paul Hunt, UK yesterday I put air shock on also. It sure doesn't sag now. Whilst harder dampers of any type will reduce bottoming at the expense of a harder ride, only if you replaced the damper *and* spring assembly, ie, leaf and lever-arm for a coil-over would you be able to change the static ride height i.e. correct sag. Changing the dampers (the air shock?) only will not affect static ride height (unless they are seized!).

Any additional comments, better ideas from PBMC members? Please share here. *df*



Another club tour, this one a little further from home

Last Sunday was our MG Classic Tour called Oost Grunneger Rit. All week the weather was good until it came to Sunday. Just like the MG tour I organized last year this one ended up in the rain. "Months of preparation 'had fallen in water.'" Even though the weather was not good, 13 cars turned up for our tour. We had MGAs, MGBs, an MGC, a Triumph TR3A, and a Rover P4.

The tour winded its way through Germany where I organized a stop at the Neuhreder Oltimerkollegen. There was a warm welcome waiting for us in Germany.



Welcome to Bundes-republic Deutschland (Germany), the border, near Wymeer, Germany about 15 km from our home

They offered us coffee, tea, and home-made bread with home-made marmalade. It was "real real nice." Also **Thorsten Nübel**, an MG enthusiast from Germany, was our guest driver. He drove a nice 6 cylinder MG C. He is not a member, but found out about our MG tour. He got enthusiastic about the tour so we invited him to join us, which he did. He lives in Ashendorf, Germany about 25 km from here. "He is not a famous celebrity as you thought, Danny."

This was the first time we met him and it seems he has quite a few MGs in his collection. He invited us to visit his collection of cars, which includes an MG Magna of about 1933.

In Germany there is a (old-timer) classic car club called Neuheder Oldtimer-Kollegen (NOK). Neuhede is a village in Germany near to where we live. (22 km)

Once every two years they organize a big classic car event there. Last year about 750 classic cars were entered during the weekend. Information about the Neuheder Oldtimer Kollegen can be found on <http://www.oldtimer-kollegen.de/> but it is only in the Dutch and German languages. They have German as well as Dutch members. They have more classic farm materials, fire engines, tractors etc.

During the tour questions had to be answered and photos had to be put in right order. So photos were taken before the tour and were mixed up. During the tour the mixed up photos had to be put in right order to earn points.



Hermann Egges counting "the points" in Landhuis Westerlee

After the tour the points were tallied and prizes (Poedel) were awarded to nr 1,2,3 cars. Winning a prize meant the team answered all their route questions correctly as opposed to the other teams who also may have had more technical difficulties / troubles, etc with their cars, for example.

1st prize was a luxury wash and shine package for cleaning the car and a coloured MG A which was coloured by our son Tim, seen here.



Tim, Hermann's son, presented the first prize, his own painting of an MGA

The “poedel” (prize) went to our new German friend, even though his team had filled in a few answers and collected no points on the tour. The prize was a color pencil framed drawing of an MGA. So this was a “do it yourself” gift that Tim contributed. Danny, remember the painting Tim made for you of your baby blue MGA? This was the same painting but a different color. “Your bleu MGA original picture is still in my drawer.”



This was the first prize, a framed painting by TIM. I have heard this will be placed in our MG Car Club, Club house. So it will get a good home

Tim gave out the prizes after the tour was over, the points counted, and the winners were known.

We have normally black on yellow license plates with bleu NL in left or left top corner.



Notice the 2 types of Dutch license plates on these MGBs

The old style white on bleu (seen on the yellow MGB) is the classic license plate. Original cars are allowed this plate. This old style is not allowed however. I want to ask the authorities to change my number to a classic registration in the future. Also the license number will then change on the car. In Holland the license plate belongs to the car and not the owner. In Germany they have black on white plates. These plates belong to the owner, so is a personal license plate. If a German car is sold the license plate remains with the (previous) owner. In Holland the plate stays on the car.

My car was imported from Beverly Hills, California. Therefore I have the new license plate. I have not taken the time yet to change it to a classic plate registration. This has become possible only in

the last couple of years. The bleu plates are more or less the same as are the original black plates which were used in California.



A TR3a making a quick turn during the tour in the rain. Hermann’s red MGB is being driven by his brother-in-law.

In this picture the weather sure seemed cold and dreary. But according to Hermann “it was not so cold, but rainy it was.” This woman looks cold to me!



This welcome sign greeted those members of the rally who did not get lost

“NOK” (Neurheder Oldtimer Kollegen) organized a fashion show for us. This was their bill board welcoming us.

Gas? European get a kick out of Americans use of this word... But “it” costs Euro 1,33 / liter Diesel Euro 0,95 / liter and that is not so funny





The views ain't so shabby around here, either. Here's a picture of PJ's MGB near Winston-Salem, NC



The Linn Cove Viaduct on the Blue Ridge Parkway. (Picture taken from Danny Jacob's MGA)



June 14, 2009. North America's second longest running British Car Show moves to a new venue at Frank Liske Park in Concord, NC. The show is featuring the MG Marque in 2009, especially MG race cars. Trophies will be awarded in over 30 classes covering all British car marques and models. For more information and registration go to www.BritishCarDaySouth.com

A little more newsletter fodder by Jack Austin (twigworks)

Here is the text of a response that I just made to someone in England who was having problems getting good clutch pedal action. I thought that you might publish it as some sort of "filler" for the newsletter sometime.

Unless you ask that I don't bother I might continue to dump these little epistles on you. Jack (keep 'em coming, Jack. dj)

Bleeding clutch hydraulics correctly.

Please forgive me if what I say sounds elementary, but I have seen many folks over the years waste tons of time trying to bleed hydraulics incorrectly. If you already know this, it's all the better. But, if you don't, doing it right will save a lot of time and considerable wasted fluid.

"Pumping" the pedal rapidly and then holding it

down before opening the bleed screw results in aerated fluid, lots of tiny bubbles. Kind of like in a shaken cola that cannot be fully discharged until the fluid is allowed to sit for a while and the air coalesces back into larger units.

The correct way is to fill the reservoir about half way and just let it sit for as long as you can stand it before doing anything else.

Next, under the car use your hands to compress the slave push-rod/piston back up into the slave bore. This forces whatever was in the slave, fluid or air, back up into the system toward the master cylinder. Hopefully a large portion if the air will rise naturally back to the reservoir and be out of your way.

Now, still holding the fork/push-rod/piston in a retracted position, have an assistant slowly half-stroke the pedal down and up several times to sort of pump the slave piston out into it's rightful state. You will be able to feel this pulsation after the third

or fourth stroke as you still have your hand on the fork clevis. It is important to do this stroking slowly and methodically.

Once the push-rod has been pushed out a bit and there is at least minimal contact between the release bearing and the thrust surface of the pressure plate, you may begin the actual bleeding process.

You begin by having your assistant very slowly stroke the pedal ALMOST to the floor a few times and then letting that sit again for a couple of moments. You are still under the car observing the push-rod clevis movement.

I say "ALMOST" because it is not a good idea to be ramming the master cylinder piston completely to the end of its travel at this point.

Next, you have your assistant stroke the pedal, ALMOST to the floor, again at your command, while you operate the bleed screw. Call out "Down" and have your assistant respond with "Down" when the stroke goes to about 7/8ths down and is held there. When the pedal is down AND HELD THERE, you open the bleed screw for a moment and watch for bubbles. You then immediately close the screw and then command "Up". Your assistant responds with "Up" when the pedal is all the way up. These are single stroke movements, up and down, with no pumping.

Wait for ten seconds and then repeat the

A little humor to distract you

I went to the psychiatrist, and he says "You're crazy." I tell him I want a second opinion. He says, "Okay, you're ugly too!" (Rodney Dangerfield)

I would never want to belong to any club that would have someone like me for member. (Groucho Marx)

Sincerity is everything. If you can fake that, you've got it made. (George Burns)

The next meeting of the Piedmont British Motor Club is June 30, 2009 at Wise Guys Restaurant, Statesville, NC. Attendance has been down lately so please make an effort to attend and make your voice heard.

Volunteers needed: We need contributions for the raffle prizes. If any one has a speaker in mind we need a program as well. This Spring is almost over and it would be great if someone would organize a drive before the summer heat sets in. We also have several great weekends open for a tech session. So, how about jumpin' aboard?

command/action sequence. Repeat this several times. It doesn't hurt to still have your hand on the slave joint as you will be able to feel the pulse with the stroke and more easily gauge the increasing effectiveness of the process.

Anyway, repeat all of this until you have a full stroke down at the release arm. You can either have a second assistant be the "keeper of the fluid" with the responsibility of maintaining a good fluid level or you can have the fellow in the driver's seat hop out and refill the thing every two or three stroke cycles. It is obvious that to allow the fluid to get very low in the reservoir, even once, will invite more air into the system and you will have to start all over again. Also, filling the fluid "to the top" is not a good thing as during the process of stroking there will be a slight back flow at the beginning of each stroke that might cause the reservoir to overflow and cause a mess.

Once "stroked" enough, usually six to ten cycles, you should easily see the movement of the clevis joint and roughly gauge the effectiveness of your work.

Now wait a few minutes, perhaps three or five, and recheck the fullness of the pedal stroke and feel and for full movement down at the release arm.

Jack