



# Buckeye Triumphs Newsletter

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## BUCKEYE TRIUMPH 2001 Holiday Party was a Great Success

I want to thank all who worked on arranging and making the Holiday Party the success that it was. We had 50 members in attendance and many door prizes. There was a great buffet, drinks and a lot of camaraderie was renewed amongst the attending members. I won't go into an in depth article as there is a better description elsewhere in the Newsletter.

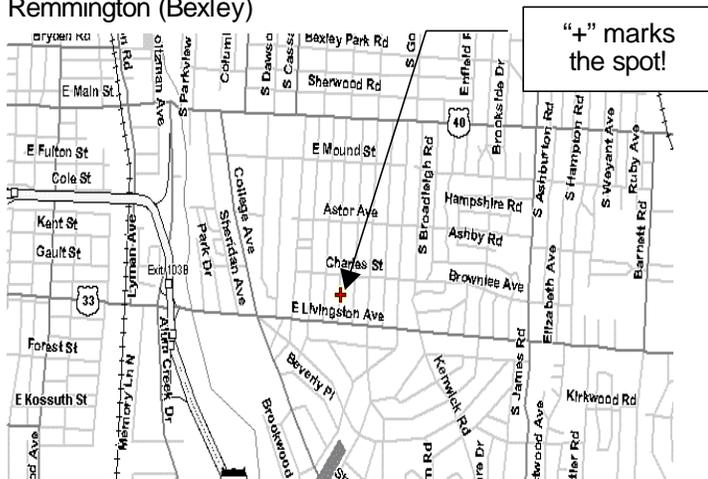
My purpose is to say thanks and recognize those who helped arrange this party and contributed door prizes. I want to thank Bill & Sandy Blake, Doug & Susi Braden, John & Becky Hartley, Dave and Sharon Hutchinson, Bob & Lisa Mains, Murry & Jacqueline Mercier, Bruce, Ryan & Kim Miles, Peggy & John Schilling, and my wife Gayle.

I know that is a pretty long list of people, but it takes many people to make this party the success that it was. I apologize if I missed anybody; please let me know if I did. Again I want to say thanks to all those who attended and look forward to seeing you in the coming months.

Jim VanOrder

## BT Business/Social Meeting - February 6th, 6:30 PM

Terry Graham and Charlie Bruce's home, 1006 South Remmington (Bexley)



For further directions, call Terry or Charlie at 237-4228

Please bring your beverage of choice. We will order pizza, so come hungry.

## Editor's Corner

As I was driving to work today (pouring down rain) I was very pleased to see most of the accumulated snow going away. I know we are quite a ways from spring but I'm starting to get the itch!

Ryan and Nelson have been very busy with their respective Triumph projects. Nelson has tech articles for the next few months and what promises to be a great tech session on Saturday, March 24<sup>th</sup> (mark your calendars!)

Nelson has his 76 ready for the painter, Ryan has the itch to get his body back on the frame. He has been shopping for wheels and has spent several hours at [turerack.com](http://turerack.com)

Last week Ryan completed the installation of his new roller rockers and test fired the 74 in the garage (now not so loud with an exhaust system installed) I can't wait to go for a ride. (I wonder if he will ever let me drive it?)

Personally I am preparing my own winter parts order to try to complete the new "matador red" interior. We'll have to see how the funds hold out.

## WE NEED VOLUNTEERS TO HOST UPCOMING DRIVING EVENTS!

Please talk to John Huddy about this!

Finally – thanks to Bob Mains for his presentation of the framed BT Logo at the holiday party. That was really special for me. I am looking for the perfect place to hang it!

**Bruce Miles** [bmiles@INTInfo.com](mailto:bmiles@INTInfo.com)

Next Newsletter Article Deadline – February 25<sup>th</sup>, 2001

## President's Corner

February, 2001

Thanks to everyone who made our second Buckeye TRIUMPHS Holiday party another great event to remember. I would miss someone if I tried to name all the members who joined Jim and Murry on the party committee. Thanks, y'all.

The rooms at Schmidt's provided an excellent opportunity to get to know each other a bit more as we tried to guess the name of the 'special guest' we each had tagged on our backs as we registered. The bar provided the libations and space to 'work the crowd'.

We were all surprised to learn that Elvis was in the building after only five probing questions. However, I was soon outdone as Terry Graham identified her guest in only three precise queries. So, Terry, can you also help me identify the cause of the oil leaks under my car? During the cocktail hour many other 'special guest' searches provided for the ice breaking dialogues that led to invitations for dinner partners as we settled down in the dining room.

Bill Blake, Doug Braden, Bruce, Murry, Schmidt's and the committee arranged for a pile of guy/gal gifts to be given away during the evening. Thanks for the generous donations.

(I probably forgot someone). Jacqueline Mercier and Bruce Miles helped in the drawings for the gifts. We intended to have everyone carry a gift home and hopefully no one left empty-handed. Becky was especially lucky to take home a very nice book on Triumphs.

I still don't understand how she was able to get my winning ticket.

During the evening we were entertained by a tremendous computer based visual display of photos collected during our 2000 events. Bruce again demonstrated his skills and dedication to our club. We recognized Bruce later in the evening for his newsletter quality and production along with his creative driving events by presenting him with a framed print of a club logo.

The 2001 slate of officers officially assumed their duties with very few acceptance speeches.

John Huddy, our 2001 Events Coordinator will be looking for activities, hosts and helpers to ensure we have fun, drive our cars and attract members. Please help John in making 2001 our best year for creative activities. We will continue our meeting and events planning at our next social and business meeting on Tuesday February 6. Terry Graham and Charlie Bruce will again host this meeting at their home in Bexley. So, brown bag a dinner if you want and join in some discussion and direction of your interests for our club in 2001.

A Special Thanks to those that have already demonstrated your support of TBDTCITL, Buckeye TRIUMPHS, by paying your 2001 annual dues. Jim VanOrder awaits the next wave of payments, so please let him know that your check is in the mail, really.

Encourage a friend to join, ensure another club member renews and plan to participate in at least one more activity in 2001. Help us understand what we should do to make the club what you want it to be. We can begin an outstanding 2001 Odyssey with your help! See ya soon.

**Officers and the Fine Print**

The Buckeye Triumph Newsletter is a publication of Buckeye Triumph Club, and the content herein is not officially endorsed by the staff or members of the Buckeye Triumph Club, their families, or lawyers. If you decide to follow the advice of anything inside this newsletter, you do at your own risk. We are all adults here, so if you do something stupid, own up to it and don't sue the club. Heck, we don't have any money anyway... Club address: Buckeye Triumphs, P.O. Box 584, Lithopolis, OH 43136-0584

**Annual Dues: \$20.00** General email: [buckeyetriumphs@ameritech.net](mailto:buckeyetriumphs@ameritech.net)  
Web Site: [www.nextek.net/BuckeyeTriumphs](http://www.nextek.net/BuckeyeTriumphs)

Our current crop of Buckeye Triumph Officers include:

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**A Chronicle of Triumph: how I became addicted**

*Editor's Note – The following is the first of what I hope are many articles from my son Ryan. In this installment, he tells how it began for him....*

**1. The Infection:** As I sit here writing this article, it is still amazing to think how much I have learned in the past four years dealing with these fun little cars. In 1996~7 my dad and I decided that we needed to get a convertible or sports car to have fun with in the summer months. I had tentatively decided on a BMW Z3, but this being a rather expensive and "impractical" car requiring a rather extensive waiting period before it could be purchased. WHAT LUCK! While I was chasing dreams of my elusive Z3, dad brought to my attention a classified ad for a late model pimento red TR6 that was in the Lancaster area. It was a sports car and I knew that he used to own one long ago, so I gave no objections to going to look at it. That weekend definitely opened my eyes to the TR6. We had short drive around the block, and I definitely liked riding in the little car, but dad decided that the car was priced too high. Then in the early spring of '97 dad again come to me with an auction listing for a 72 TR6 in Columbus. It was at this point that I decided that to own a an old Triumph would be much cooler than a Z3 ever could be, and I think it was love at first sight when I saw the lovely purple car at the auction. It was definitely rough, but definitely not beyond saving, and we had all the time in the world to work on our new baby.

**2. "Wow What Ya' Got There?"** Dad and I began to live the Triumph experience as soon as we rolled into Granville with the car on the trailer. We stopped for Ice cream at our favorite ice cream stand, Knuckle Head's, which is how we met our first new friend. The owner of the stand, Ron, told us about one of his neighbors that had "a whole bunch of those" in his garage. We thanked Ron for the information and decided to go home and get our new toy off the trailer and play for a while. When we pulled into the driveway at home, we noticed that another car had followed us in. This person had spotted us in town and had followed us home to ask about the new car. As it turned out David Hannah, who has since moved away, lived about two miles away from us, and he was more than willing to help us with many questions and problems. The first contact made at the ice

cream stand was none other than the notorious Nelson Riedel, who has helped me tremendously to get to the stage that I'm at today with my various projects.

**3. They Multiply:** It wasn't long before I decided that I should have a TR6 of my own to work on. Honestly I can't remember how I talked my mom into the notion, maybe she just decided to be nice, but in July of '99 she drove me to Sylvania, Ohio to look at and eventually buy my 74 TR6. Between the two of these cars they have really enhanced my knowledge of automobiles. When we first brought the '72 home dad decided that the car needed a new fuel pump, and the first question out of my mouth was "who will we get to work on it," to which he replied "you're looking at him". This was quite a shock to me, as I had never seen my dad turn a wrench before. Now between the two of us we have gone through many bottles of Fast Orange Hand cleaner, and many hours of fun have been spent under and driving our LBC's.

NEXT MONTH \*\* roller rockers

Ryan Miles [RJHMile@yahoo.com](mailto:RJHMile@yahoo.com)

### Easton Show Updates:

From John Huddy, BT Events Coordinator:

Last Thursday, I attended a British Car Show meeting at the Elephant Bar. The following are some details that have been worked out (or are being worked on) to date:

- As it was last year, the show will be at Easton Town Center.
- The Show will be on Sunday, May 20th.
- The featured marque will be MG Midget (because this year marks the Midget's 40th anniversary). Next year's marque will be Healey and Triumph will be the featured marque in 2003.
- I volunteered Triumph folks to count popular vote ballots this year, so I will need volunteer names by the April meeting. (The ballot counting is much faster since Tony Burgess has color-coded ballots by marques and models.)
- Awards will be different this year, but we are still in the process of evaluating alternatives.
- There may be a "Cruise-in" in one of the Easton parking lots on Saturday evening. (We are in the process of determining interest and logistics.)
- As usual, there will be door prizes, vendors and an "auto jumble" (which is what the Brits call a swap meet).

### Buckeye TRIUMPHS Events 2001

BT Business/Social Meetings are generally held the first Tuesday of the month at 7:00 p.m. - those wishing to order food generally arrive at 6:30 p.m. at the meeting location.

BT Driving Events are generally held the third Saturday of the month.

All dates are tentative – WATCH FOR UPDATES AND EVENT LOCATIONS!!!

Please send ideas, suggestions and updates to Events Manager John Huddy email: [jhuddy@columbus.rr.com](mailto:jhuddy@columbus.rr.com)

614-846 2321

February 6	BT Business/Social Meeting hosted by Terri Graham and Charlie Bruce, 6:30 PM, 1006 South Remington Road, Bexley. Phone # 237-4228 (We will order pizza, so come hungry!)
March 6	BT Business/Social Meeting – Host unassigned as yet.
March 24	BT Technical Session @ Nelson Riedel's home. Subject: Transmission Rebuilds
April 3	BT Business/Social Meeting – Host unassigned as yet.
May 1	BT Business/Social Meeting – Host unassigned as yet.
May 20	Easton British Car and Bike Show, Easton Town Center, 9:00 AM until 4:00 PM. Contact John Huddy with questions.
June 5	BT Business/Social Meeting – Host unassigned as yet.
July 6 & 7	Len Immke Arthritis Foundation Cruise-In and Car Show, Metro Center, Dublin. This is a biggie and shouldn't be missed. Contact Murry Mercier with questions. Phone # 888-0838
August 7	BT Business/Social Meeting – Host unassigned as yet.
Sept. 4	BT Business/Social Meeting – Host unassigned as yet.
Oct. 2	BT Business/Social Meeting – Host unassigned as yet.
Nov. 6	BT Business/Social Meeting – Host unassigned as yet.
Dec. 4	BT Business/Social Meeting – Host unassigned as yet.

### Triumph Events 2001

The following is a work in progress of future events that are attended by BT members. All dates and times are subject to change - watch for future updates! Please send additional info and dates to Events Manager John Huddy email: [jhuddy@columbus.rr.com](mailto:jhuddy@columbus.rr.com) 614-846 2321

May 10 – 12	Import/Repicar Nationals, Carlisle, PA. Contact John Huddy with questions.
June 15 – 17	Triumph Register of America National Meeting. Venue to be announced.

<p>Aug. 10 - 12</p>	<p>The Roadster Factory Summer Party, Armagh, PA. (This is another event that you shouldn't miss. Charles Runyan invites one thousand of his closest friends.) Contact John Huddy with questions.</p>
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## Notes from Nelson

### Gearbox Tech Session

I'll be hosting a gearbox tech session in my basement workshop in Granville on one of the Saturdays in late March.

I have a TR250 – early TR6 Gearbox with A type OD that we can disassemble, overhaul and reassemble. Anyone can bring their own TR250 – TR6 gearbox and we can overhaul it on the spot. Please call to let me know if you're bringing your own gearbox --- I'd like to keep count --- the most we can accommodate is about three. I also have a couple suggestions on things to check before hand. Also --- - please drain and scrub both outside and inside. We'll be doing the operations described in the December article, the following article and Part 2 to be published next month.

### Gearbox Overhaul - Part 1

Last December we described the disassembly of a gearbox. The following describes how an amateur mechanic can successfully (we hope) overhaul a gearbox and put it back together. The same parts nomenclature as The Roadster Factory TR6 and TR250 Catalogues is used. These catalogues have excellent diagrams showing how the parts are assembled on the shafts and should be used in conjunction with the following description.

You might recall from the previous article that the object was to overhaul a TR250 gearbox with A Type overdrive. When the gearbox was examined the **constant gear** (the big gear on the front of the countershaft that mates with the gear on the input shaft) was found to have some broken teeth. A spare early TR6 non-overdrive gearbox was also available. It was that spare gearbox that was disassembled in the previous article to get good gears for the overdrive gearbox. The only difference between an overdrive and a non-over drive gearbox is the mainshaft; the overdrive gearbox uses a shorter mainshaft that mates with the overdrive unit that is installed in place of the gearbox rear extension. The plan had been to use all the gears from the TR6 gearbox and only use the shorter mainshaft from the TR250 gearbox.

### Differences in early gearboxes

After the TR6 gearbox was disassembled and the parts compared with those from the TR250 gearbox, two big differences were noted. The first difference is the length of the needle bearings used in the countershaft assembly; the later design uses a slightly longer bearing. After researching parts supplied by TRF and Moss, it was found that both now supply the later bearing for both applications. The TRF parts book explains that the beveled washers in

the earlier countershaft should be left out to make room for the longer bearing.

The second difference is the bearing and associated mating surfaces between the input shaft and the mainshaft. The earlier design uses a pressed-in needle bearing whereas the later design uses a slide-in needle design. Since the diameters of the part of the main shaft that mates with the input shaft is different between the earlier and later designs, the earlier mainshaft (this is the short mainshaft used with an overdrive and in this case had a pressed-in bearing) couldn't be used with a later input shaft designed for slide-in bearing.

The gearboxes in this project have serial numbers CD7371 and CD24638. The Moss catalog indicates that the change in mainshaft design was made around gearbox CD20281. This was a bit of a dilemma since the early input shaft (which has the gear that drives the countershaft gear) must be used with a mating countershaft gear from the later gearbox because the countershaft gear from the earlier gearbox has the broken teeth. The gears were examined closely and all seemed to have the same tooth design. This is supported by data in the TRF catalog. The only problem is that the input shaft and the mating constant gear on the countershaft were always supplied as a matched pair. Since the old input gear and newer countershaft gear seem to mate perfectly they were called a new pair---rationalizing that since both are worn a bit they should work fine together. (The same can be said for some older folks.)

Note: I'm in the market for a cheap pre CD20281 TR250/TR6 gearbox with good gears ---- I'm collecting spare parts.

### Replacement Parts

The overhaul consists of replacing all bearings, synchronizer cups, mainshaft seals and some thrust washers. A TRF Gearbox Overhaul Kit had been purchased for the project. The kit contains the following parts:

- 3 mainshaft bearings
- Front and rear seals
- 2 countershaft bearings with circlips
- Front and rear countershaft thrust washers
- Countershaft locking plate with screw
- 4 synchronizer cups
- Gasket set
- That nasty mainshaft clip retaining third gear

The prices of individual parts weren't checked to see if they discount the parts if purchased in the kit. However, in many cases, all the parts are not needed. The rear mainshaft bearing and rear seal are not used if you have an overdrive. (The OD unit uses a different bearing and rear seal that those supplied in the kit. Replacing the bearings in the OD unit requires special tools and was not attempted in this overhaul. The rear seal for the OD unit was ordered separately.) The list price of the rear bearing – seal combination is ~ \$15 (I have a several new sets from overhaul kits for sale cheap).

The new synchronizer cups are probably also overkill. One should measure the distance between the cup and the associated gear with feeler gauges (next photo) and if greater than .030 inches, the cup need not be replaced. The cup should be held firmly against the gear when this measurement is taken. This measurement can be taken just as easily when the gears are off the mainshaft. For this project all the synchro cups were well within specs but were replaced anyway since there was a new set in the kit (not sure that this makes sense). The synchro cups are ~ \$80 for a set of four. Next time everything in the kit except the synchro cups and rear bearing will be purchased. I have a whole stack of used cups that are well within specs.



**Input Shaft Rebuild**

The work on the input shaft involves replacing the bearing between the input shaft and mainshaft (pressed in the rear of the input shaft), replacing the front gearbox bearing (pressed onto the input shaft), and replacing the front seal pressed into the front-end cover (the thing over which the throw-out bearing sleeve slides). The operative word here is pressed. The **unpressing** is, in one case, is no easy task.

The TRF catalog says that one can identify the early input shaft design because it has a pressed-in, closed-cage bearing which is **hard to remove**. After inspecting the bearing it seemed to be no big deal. A rag was wrapped around the front of the input shaft, which was then mounted in the vise with that difficult bearing facing up. (This shaft is literally irreplaceable; hence it is probably appropriate to wrap the shaft in a heavy bath towel. A bath towel was not available for this job because the spouse was setting between the workshop and the linen closet.)

Next, a tool was designed to catch behind the lower lip of the bearing and pull it up. It didn't work; the lower lip shattered and the needle bearings fell out while the outside race was still firmly pressed into the input shaft.

At this point it was clear that the outside race would have to be removed in pieces. Several chisels were tried with some success at breaking off pieces. It finally became obvious that a channel would have to be broken out the length of the bearing race to relieve the pressure before it could be removed. A center punch was the tool that worked. A new point had to be ground after every few whacks so that it

would bite between the hardened thin outer shell of the bearing and the input shaft surface. (You don't need to worry much about scratching the inside of the input shaft; that surface is hardened and the bearing surface is part of the new bearing anyway.) Following photos show working on the bearing and the old outer shell compared to a new bearing.



The next job is to press in the new bearing without smashing it. A piece of aluminum rod was turned so that the smallest diameter just fit inside the bearing and the next bigger diameter just fit inside the input shaft. The mating surfaces were coated with grease and then the rod and hydraulic press were used to press the bearing into the shaft; see photos. One could have also left the shaft in the vise and tapped on the rod with a small hammer to insert the bearing. Note that on the later gearbox, one merely slides out the old bearing and slides in a new one.





The next job is to press the large gearbox front bearing off the input shaft and press on a new one. One way to do this is to set the shaft on a vise with the jaws open enough for the input shaft gear to slide through but narrow enough to catch the outer bearing race. One can then place an aluminum plate or piece of wood on the end of the input shaft (to avoid damaging the shaft) and then whack the plate or wood with a large hammer to drive the shaft out of the bearing. The hydraulic press was used here as shown in following photo. Be sure you remove the circlip that holds the bearing in place before you try to press off the bearing.



The next job is to replace the seal in the front cover. The front cover is secured in the vise (wrapped with a rag) with the seal facing up. The outside surface of the seal is then cut with a sharp chisel and part of the outside surface is then bent toward the center forming a tab. This tab is then grasped with pliers and pried out. It's a bit more difficult than one might guess from this description but much less difficult than getting that small bearing out of the input shaft. Next, the outside surface of a new seal is greased and the seal is tapped in using a small flat ended punch against the inside front of the seal. The next photo shows installing the new seal. That is the old seal beside the new seal.



When installing a new bearing, one should avoid transferring lateral forces through the bearing between the inner and outer race. In this case the input shaft is being forced through the inner race so it should be pressing against the face of inner race. One can use the vise with the jaws open just enough to let the shaft clear but still let the inner race rest on the top of the jaws. The mating surfaces should be coated with grease. The shaft can then be tapped into the bearing, being sure to place a piece of wood or aluminum between the hammer and the shaft. The press was used again here as shown in following photo. The circlip is installed after the bearing is in place.



One final note on the input shaft: use very fine (1600 grit) emery cloth to polish the area of the area that mates with the front seal. This is probably a futile exercise because there is one thing that is nearly certain about Triumph seals --- they don't.

### Mainshaft Rebuild

The first step in rebuilding the mainshaft is to remove all the gears, washers and bushings. The first speed gear and the synchro hub assembly for first and second speeds and the reverse gear together with bushings and washers are held in place by the center mainshaft bearing. The mainshaft was pressed out of this bearing in the process of removing it from the case. Hence, these parts are free to slide off the mainshaft. These parts were wired together in the order they were removed to ease assembly later.

The third and fourth speed synchro hub is held in place by the input shaft. This slid off the front of the mainshaft when the shaft was removed from the gearbox.

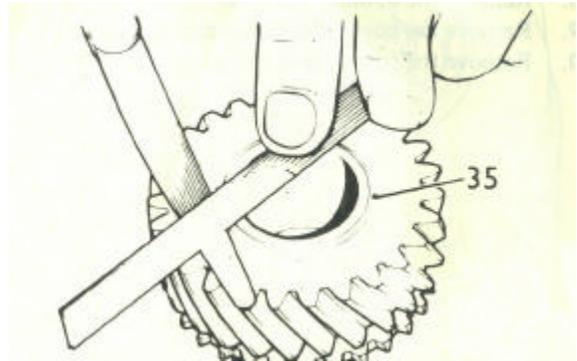
Second and third speed gears together with washers and bushings are held in the front of the main shaft by a heavy clip. To remove the clip, place the mainshaft in the vise (wrapped in a rag) and pry out the clip with a couple old screwdrivers. With perseverance, the clip will finally give up and come off. If you're lucky, you can get part of the clip out and break it in half which then eases removal. (There is a new clip in the overhaul kit.) Wire this set of parts together to ease reassembly. The gears together with the input shaft, mainshaft, and bearings are shown in the next photo.



Each part was inspected when taken off the mainshaft and all were OK except for the bush under the second speed gear. The end was broken off this bush that is also called a top hat bush. The following photo shows the broken bush beside the new replacement. This same bush was broken in the same way in both gearboxes disassembled. The TRF catalog indicates that this bush is very failure prone, possibly due to inattention to proper end float. (The later gearboxes were redesigned to use steel bushes instead of these brass bushes.)



The next job is to measure the end float between first second and third speed gears and their respective bushes. To do this one places the gear and bush upright on the bench, lay the edge of a steel rule across the end of the bush and measure the end float between the rule edge and the gear side with feeler gauges. I forgot to take a picture of this. The following illustration is taken from a repair manual. The correct end float is .004 to .008 inches. The first and third speed bushes can be interchanged if required to get all within specifications. Reducing the length of the respective bush can reduce end float. If there is insufficient end float, the bush must be replaced. Fortunately, the end floats were within specs.



The next job is to assemble the second and third gear bushes together with spacers, washers and clips on the mainshaft and then measure the bush end float. When attempting this using the new top hat bush it was found that the inside diameter was too small --- it would have to be driven onto the shaft. It was then recalled these bushes had to be driven off the mainshaft of both the gearboxes. It seems futile to measure end float when the bushes won't float. This may be why the top hat bushes are prone to break; they are supplied in the wrong size. The bush was mounted in the lathe and the inside honed with 300 grit Emory cloth just enough so that it could be pressed on the mainshaft by hand.

It was then possible to assemble everything and measure the end float as shown in the next photo. The front washer can be reversed and the back edge of the front clip can be slid into the groove for this measurement thus avoiding the difficult task of installing and removing the clip. The specs are for an end float of .003 to .009 inches. The measured end float was .010 inches ---- just a bit too much. The rear washer is an adjustment washer that is available in different sizes to adjust the end float. It looked like a thicker washer would have to be ordered.



To measure the end float on the rear (first gear) bush it is necessary to assemble the parts and then press on the center bearing --- see next photo. After this is done and the clip installed, the bearing should be pressed back so that it is snug against the retaining clip. The end float specs are the same as for the front bushes. In this case the end float was .003 inches --- at the minimum. The rear set uses the same type adjustment washer as the front set. Each washer was measured and the front one was found to be thinner than the rear one. Reversing the washers yielded

an end float was about .007 inch on both (**even old guys get lucky once in a while**).



The next step is to assemble all the gears on the main shaft. The mainshaft is mounted in the vise and the front set of gears is slipped on together with washers, bushes, synchro cup, etc. The bushes should be lubricated with gear oil before installation. Next, that nasty clip is installed. (Three old screwdrivers were driven into the mainshaft grooves to expand the clip and then the clip was driven on using a punch --- see photo.) Next, the shaft is set on the bench and the rear set of gears, synchro hub, bushes, washers, etc lubricated and slid in place followed by the front synchro hub and synchro cups. The rear set of gears and the front synchro hub are not held in place until the mainshaft is installed in the gearbox. Everything is wired together to ease the later installation into the gearbox as shown in photo.



### Countershaft Rebuild

The major wear point on gearboxes is the rear countershaft bearing and the countershaft under that bearing. This is near the first speed gear that must endure the greatest forces, especially if one likes to **peel rubber** to impress the girls.

A few years back the gearbox in my '76 TR6 was making funny noises. Maintenance was deferred till the OD quit shifting. Upon disassembly it was found that the rear

countershaft bearing had disintegrated with some of the pieces apparently getting into gears causing teeth to break. Some pieces made it into the OD unit hydraulic pump damaging the piston and cylinder. It took ~\$150 worth of parts to repair the OD unit. The only thing salvaged from the gearbox was the mainshaft that was used in another late gearbox to assemble a working gearbox - J type OD combination. The moral of this story is to attend to a whining gearbox at once --- things will only get worst if not attended to (the same can probably also be said about a spouse).

In the two gearboxes disassembled for this project, one countershaft was good and the other was heavily worn as shown in the next photo. A countershaft with any sign of wear should not be used --- pay the ~\$30 for a new one.



The next step is to remove the clips from the end of the countershaft assembly, remove the bearings, slide in new lubricated bearings and reinstall the clips. Since the later of the two assemblies is being used here, the bearings fit without removing the beveled washers on the inside of the bearings. The countershaft parts are shown in the following photo. The large washers with holes are thrust washers (new ones supplied in the overhaul kit) installed at each end of the countershaft gear assembly.



We'll finish the job next month.

**Late TR Guy**

The Continuing Adventures Of...

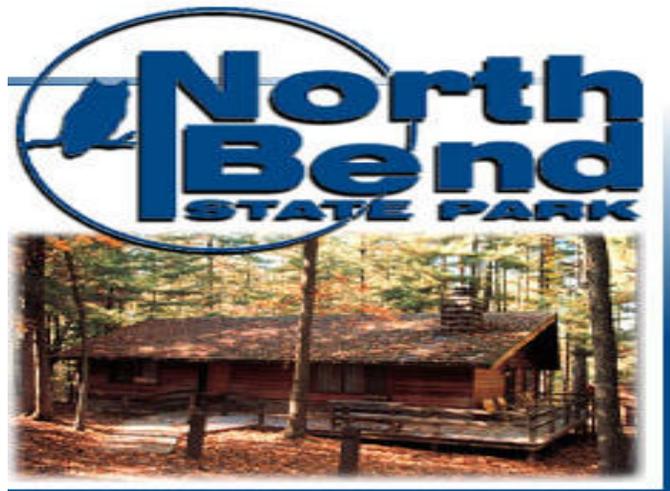


Feb 2001 : By Bruce Clough ([clough@erinet.com](mailto:clough@erinet.com))

**Big Plans – Real Big! – The Update**

February – time for an update on my planning. I've made some progress on both trips that I would like to share with you. .

**Spring Tour**



Lotsa news – The places to visit list is starting to flesh out. Looks like Marietta's going to see a bit of us along with several Ohio Parks, and I'm not near done yet. Twisty roads – you bet. For the night I've found a neat place to stay: North Bend State Park in West Virginia. Now hold on, don't panic – it's just across the Ohio River slightly east of Parkersburg, and I promise not to make everyone learn hammer dulcimer music (although I've got some good stuff!), nor will I bring my banjo along! Listen to the advertisement:

*Named for the horseshoe curve of the North Fork of the Hughes River, North Bend State Park offers a multitude of*

*recreational facilities in a beautiful pastoral setting. The fishing streams, hiking trails, abundant wildlife and excellent overnight accommodations are among this year-round park's most popular features. The park also features the 72 mile North Bend Rail Trail, which is a trail designed for hiking, mountain biking and horseback riding. The rail trail runs along the old B & O Railroad bed from Parkersburg, WV to Wolf Summit, near Clarksburg, WV.*

*North Bend is in the process of constructing a new 305 acre recreational lake. Along with the lake, additional camping, hiking and swimming facilities will be constucted. This project is scheduled for completion in the year 2002.*

If you don't believe me, try their Web Site at [www.northbendsp.com](http://www.northbendsp.com) ! Now to get you a room - I reserved 12 rooms under my credit card for the night. What you need to do is to give them a call at (304) 643-2931 and get your own name, and credit card, on one of those rooms. I'm going to release the remaining rooms (except ours) two weeks prior, or 14 Apr 01. They only have 29 rooms total (unless you want a cabin!), so make your reservation early and let me know via email ([clough@erinet.com](mailto:clough@erinet.com)) that you did. Please mention Miami Valley Triumphs or Buckeye Triumphs when you talk to reservations since I've placed them under those names.

Right now the only crisis, if you will, is looking for a meeting point on the morning of the 28<sup>th</sup>. I'm trying to find a place not too far from Dayton-Cincinnati area, yet convenient to the Columbus folks. Goaad luck! Last time I did this I tried Washington Court House. This time maybe farther east – anyone know a decent meeting place in Circleville? If anyone has any suggestions, please let me know – oh, and that goes for places to visit and roads to drive on – I'm open for ideas.

**Trip To TRA National Meeting**

So where is that TRA '01 at anyway – well, according to the latest TRA Newsletter which is hot off the presses, it's at the Hunt Valley Inn, just north of Baltimore. If my web search is correct, Marriot owns it and here are the particulars:

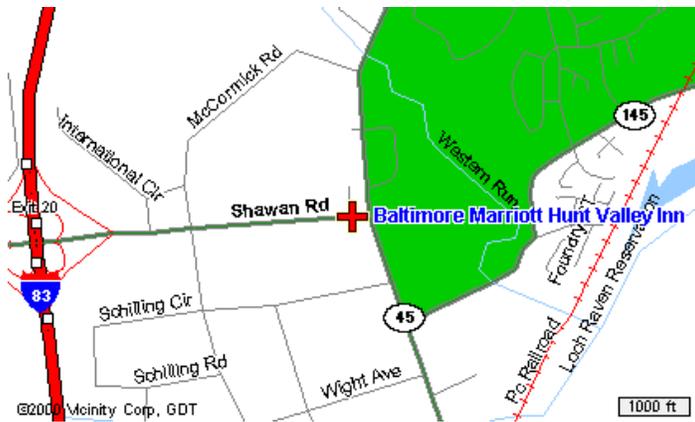


**Baltimore Marriott Hunt Valley Inn**  
 245 Shawan Road, Hunt Valley, MD 21031  
 Phone: 1-410-785-7000, Fax: 1-410-785-0341

So where is this on the map – well, downloading the latest maps from Mapquest, the general area map is:



Now, since some really want to know, here's the close-up:



Ladies (damn ,that's a sexist comment), and some guys too – what the TRA Newsletter doesn't say is that right across the street from the Hunt Valley Inn is the Hunt Valley Mall.

Great, now we've established where it's at, so what are your plans for getting there and back Bruce? Well, remember the trip tp Cleveland for TRA 97, a raucous week-long affair? Yes, it's back! However, I need your input on several nights on how far to push.

**Tuesday, 19 Jun**

- Caravan leaves Dayton area around noon
- Spends afternoon cruising & sightseeing
- Spends night in Logan-Lancaster area

**Wednesday, 20 Jun**

- Leave Logan-Lancaster area after linking up with Buckeye Triumphs and COCTRA Members
- Lunch somewhere around Marietta
- Spend Night In Cumberland, MD

**Thursday, 21 Jun**

- Leave Cumberland after breakfast for Baltimore via roads less traveled.
- Early Afternoon – Arrive at Hunt Valley Inn

**Thursday, 21 Jun, through Sunday, 24 Jun Morning – TRA '01 at the Hunt Valley Inn**

**Sunday, 24 Jun**

- Choices – do we stay for a bit of the Bowie British Car Day that might down the road? I'm assuming folks would want to do that, so I'm assuming that we wouldn't hit the road until 3 to 4 pm, so we wouldn't want to go much further than say, the Chambersburg, PA area.

**Monday, 25 Jun**

- Leave fairly early since it's a busy day. How busy? Don't know, but I do want to visit Falling Waters!
- Stay that night in the Uniontown, PA, Washington, PA, Wheeling, WV triangle.

**Tuesday, 26 Jun**

- Everybody gets home, but not before a few more good roads and a stop or two!

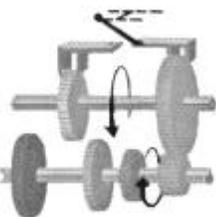
*Now, that's what my initial plans are. Over the next month I'm going to be firming up things, setting inns, restaurants, shop stops, parks to visit, etc. I want your input to the process, and if you're going, I'd like your name! The '97 tour was a wonderful time for the Clough Family, and I'm shooting to make this an even better tour!*

**Tech Tips**

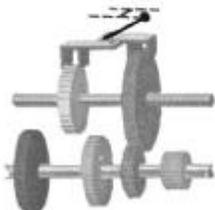
This month the tech tip is a little article on how transmissions work. I was inspired by Nelson Reidel's "TR Trannie Rebuilding" tech article in the BT Newsletter to scan this out of a great little book that my mom bought for me – "The Golden Guide To Sports Cars" a la 1966! Page 1:

**THE GEARBOX**, which most Americans call the transmission, transmits the engine's force to the car wheels through a variety of gear combinations. At any particular speed or load one gear combination is better than others. The position of the gear-shift lever determines which combination is used—which two gears are meshed. One gear is on a shaft that turns at the same speed as the engine. The gear you mesh it with is on a secondary shaft that ultimately turns the wheels. The action of the gear-shift lever is to slide a gear on the secondary shaft into or out of engagement with a gear on the primary shaft.

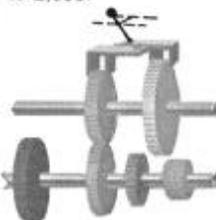
First speed, for starting, lets the engine run fast and the wheels slow. This is "reduction" gearing; the gear on the primary shaft may have 10 teeth and be turning at 3,000 rpm while the corresponding first-speed gear on the square secondary shaft has 30 teeth and consequently turns one-third as fast: 1,000 rpm.



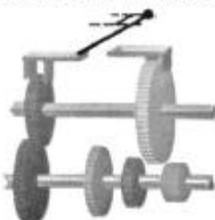
Second speed slides the gear on the secondary shaft into engagement with another one on the primary shaft so that the ratio between the two causes less reduction, perhaps 20 teeth to 30, converting the engine's 3,000 rpm to 2,000.



Third speed usually is a direct drive 1:1 ratio that makes the secondary shaft turn at the same rpm as the engine; both gears have the same number of teeth.



Fourth speed "steps up" the secondary shaft to a higher rpm than the primary by giving its gear fewer teeth. If it has 18 teeth to the primary's 24, then the engine's 3,000 rpm will turn it at 4,000.



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Now I'm sure that one can't wait for the next installment, but you'll have to turn the page to see it!

Over the next few months I'm going to pull some more articles from this "antique" sports car information treasure well spring.

## Buckeye TRIUMPHS REGALIA

- Golf Shirts –Outer Banks - 100% Cotton \$35.00
- Style 17434-Solid body color with Collar of contrasting color
  - Wine, with Navy Blue
  - Spruce, with Navy Blue
  - White, with Black
  - Navy Blue, with Green
  - Oatmeal, with Green
- Style 17489-Solid body color with a striped Collar
  - Spruce, with Blue Stripe

- White, with Black Stripe
- Black, with Red Stripe
- Red, with Blue stripe

- T-Shirts - Lt Grey Cotton \$14.00
- BTC Logo - front
- Large Wreath Logo – back

- Patch Embroidered Logo \$10.00
- Buckeye TRIUMPHS Logo \$10.00
- Embroidered on your article

Select your favorite jacket, shirt or bag since the logo can be added to almost any cloth article at a cost of about \$10.00.

Send or bring your articles to Bob Mains. Turn-around is usually about 2-4 weeks. (Names or lettering can be added for additional costs).

## Classifieds:

These classifieds are free to BTC members, given, of course, that they relate to Triumphs, and are for private (not business) use. No, you cannot sell that old couch here! We'll run classified ads for two months, beyond that you'll have to ask for an extension.

### FOR SALE

1973 Triumph TR6  
Mimosa Yellow, 84K Miles New Interior & Under carriage, Very Good Condition / Runs Great  
\$5,400  
Contact John Szlag @ 614-297-7249

### Now Taking TR6 Orders:

1971 TR6 Due out of bodyshop in October. Fresh signal red paint job, black interior, new carpet, dash top, refinished dashboard, fiberglass front fenders. This is a nice driver, or could easily be for show. \$5500.00

1971 TR6 Due out of bodyshop next spring. This will be racing green with a fresh light tan interior, all new interior panels, carpet. Seats redone by TriTex. Rebuilt engine by Eric Jones-runs strong. Factory hardtop, overdrive, new fenders, new redlines on steel wheels, new reflective stripe top, NOS trim rings, detailed engine, all bumpers show quality replated, no expense spared. For show or concourse, mid to upper teens.

New Triumph convertible tops by Crown, TR4, 4A, TR250, TR6, TR7/8, Spitfire, and Herald \$185.00 in black or white continental grain vinyl.

Triumph TR6 black standard cut-pile carpet set \$135.00

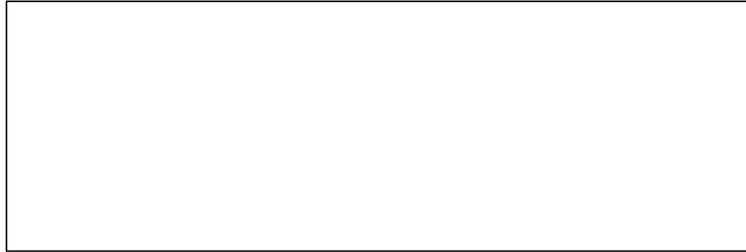
Contact Doug Braden at:

**PARTS...PARTS...PARTS** - Triumph and LBC parts available... New, Used & NOS... The Roadster Factory, Moss & Victoria Br. items at discount prices. Many common parts in stock.

Doug's Parts 614-878-6373

[Braden.13@OSU.edu](mailto:Braden.13@OSU.edu) <http://www.triumphparts.com>

**Buckeye Triumph Club**  
**P.O. Box 584**  
**Lithopolis, OH 43136-0584**



Buckeye Triumphs Newsletter – February 2001  
Business Sociel Meeting Tuesday February the 5th  
See inside for details...