Buckeye Triumphs Newsletter

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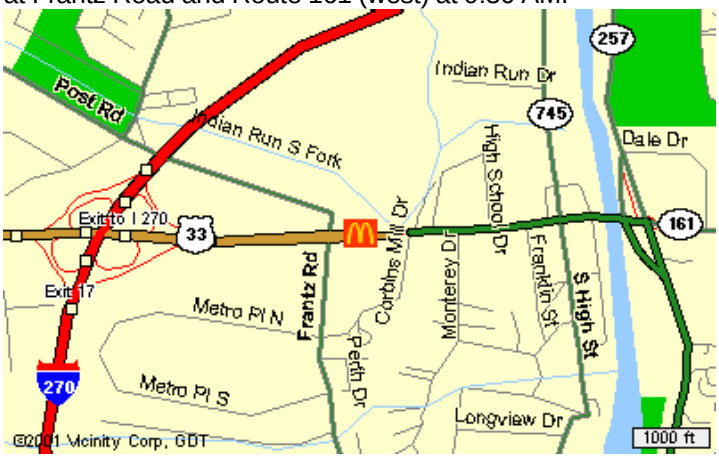
Please let me know of updates by calling. Bruce or Ryan Miles 740-587-4179 or bmiles@intinfo.com

November BT Social / Business (and "Driving") Event

As was discussed at the October BT business and social meeting, we have decided to stage our last BT driving event for the season to an Amish home outside Marysville on Saturday, November 17th. We will meet at the McDonald's at Frantz Road and Route 161 (west) at 9:30 AM.



We will plan to leave by 10:00 AM and head toward Marysville. (Maps and route instructions will be provided at McDonald's.) After some scheduled (and possibly unscheduled) stops, we should arrive at the Amish home in time for a 1:00 PM lunch/dinner sitting. Bring $15.00 (cash) per person and an empty stomach. If you have any questions, you may call Bob Mains at 890-7767 or John Huddy at 846-2321. Although it may not be a top-down day, it should still be a chance to drive your Triumph for one last time this year. Don't miss out on all the fun!

Editor's Corner

Well, I have a neat Triumph story this month.

Ryan found a 250 body tub (almost completely rust free) on the internet. Here is a picture of the Prize: (try not to notice the Miata sitting in the background!)

About 14 years ago it had a front end "boo-boo" and has spent those years in the owner's basement.

The only problem was that it was located in Milwaukee, WI. I had a business trip that would be in Holland Michigan (that's close, right?) – so I left early on Sunday morning with Kim's truck and a Hobie Cat trailer.

We bought a body tub and just about the cleanest frame that you could imagine. The fellow that we bought it from was a nice fellow. He had 2 younger boys - their names you ask? "Lucas" and "Leyland" (I am not making this up). I got a transmission for Nelson for $25, too.

So now I have quite a "funny looking" load on my truck. I made it through Chicago OK (I can't tell how nervous I was that I would get a flat tire in 6 lanes of traffic) and on to my training appointments in Holland MI.

I'm sure that many of you have seen the name "Tim Holbrook" on the 6 pack list, well Tuesday evening I moved from the West coast to Mt. Clemens MI on the East coast and Tim's parents live in Brighton MI (on the way) Ryan and Tim had talked at the Summer Party and Tim had told Ryan that he had a Monza exhaust system that he was no longer using and he was welcome to it. Tim no longer lives at home but I visited with his parents, Chris and Griz – it turns out that Chris has a very nice Stag (which he insisted would be a much better car for me that the TR6) and Chris used to work for Triumph when they lived in England. I had a very nice visit with them.

Now, to the best part of the story. I left the Holbrooks and continued on to Mt Clemens. I was about 5 miles from my hotel traveling north on MI 53 (similar to a Morse Road) when a fellow pulls up next to me – flashing his lights and blowing his horn – shouting "that's my car!, that's my car!

This is a 10:30 at night and I am a bit apprehensive (although he did have an Ohio State sweatshirt on), but I pull over in a parking lot and indeed, it was his car (17 years ago) when it still lived in the Detroit area. We had a very nice conversation and he pointed out several things that he had made and special touches that he had incorporated into the trunk area. He has promised to send me a photo from when the car was a "show winner" as he put it. He sold the whole car 17 years ago to a fellow in Michigan (for $500) who was going to "restore" it. (Hint – never believe this line…) Just think how remote the chances were that we would have bumped into each other like that!

We are now into full TR250 disassemble and clean mode. More pictures next month.

The mufflers that Ryan got from Tim did not fit on his stainless exhaust system, but they look great on mine! (and they are MUCH louder) I sound like Huddy! ☺ The weather has been so nice that I haven't had the heart to take it apart yet.

We sure had a busy driving month in October. Nelson did a superb run in southern Ohio with wonderfully twisty bits. We saw lots of signs like the one on the left!

We had 2 "casualties" though. Margo Washburn stepped in a ground hog hole and broke her ankle (she is on the road to recovery but not able to drive or walk for a while). One of our numbers (name withheld) got carsick. I know I've taken you down some fun roads, but Nelson is the first one to actually promote carsickness!

Instead of working "on" cars this month I have been working on a "place" to work on cars. I'm just about done refurbishing, electrifying and insulating a barn to be used for restoration purposes. We'll have to have a tech session sometime this winter.

Nelson passed along the following disclaimer in response to comments about him last month: *I feel compelled to defend Marianne. Last month our editor suggested that sometimes I claim she said something that she claims she didn't. My major in graduate school some 30 years ago was Communications Theory. The emphasis was sending data though noisy channels, so I'm somewhat of an expert on martial communications. Marianne, like most people, sometimes doesn't say what she really means, and other times she doesn't mean exactly what she says. Combine this with the fact that I sometimes don't hear all of what she says and other times don't hear what she says at all. Also, I frequently don't listen to what I hear, so it's not surprising that when I intentionally misquote her, she claims it's not what she intended to say. Hope that clarifies everything.*

Late breaking news…On a final note, our trusty Secretary Becky and her Husband John Hartley were in an automobile accident last weekend. They were hit by a drunk driver, John escaped with bruises but Becky's knee and leg were torn up pretty badly. They did bone graft, repaired kneecap and put two screws in her tibia. She came through in good spirits. Must be immobile for a week and cant support any weight for 6 weeks. Our prayers are with you Becky!

Drive carefully everyone! See you on the 17th

Bruce Miles *bmiles@INTInfo.com*

Next Newsletter Article Deadline – November 25th, 2001

October Event / Meeting Minutes

The October meeting of Buckeye Triumphs was held at On the Border in the Easton complex. There were approximately 30 members and 11 TRs present.

The meeting was brought to order by Bob Mains.

Nelson Riedel went over his plans for his upcoming run and trip. His trip to West Virginia will be the third weekend in October.

Bob stated that they need someone to do the November meeting. He suggested that we may go to Marysville and have lunch at an Amish home.

Bob stated that he would look into this.

Murry Mercier stated that there would be an organizational meeting soon for the 6Pack Trials that are going to be held next September. Murry will let us know.

Bob Mains is working on the logo.

The Holiday Party is still in the works. Bruce Miles is checking out the Granville Inn, he will get back to us on that.

Bob Mains adjourned the meeting.

Becky Hartley, Secretary

President's Corner

November, 2001

It is cooler- and - the leaves have been falling steadily but we still can have at least one more 'top-down' drive before we put the LBC's away for the winter. Due to the November election day conflict on our usual Tuesday night social and business meeting date we will focus our efforts on a great turnout for the last driving event for 2001.

We have a drive planned for Saturday 11/17 that will depart at 10am from the McDonald's at Rt 161 and Franz Rd in Dublin and head north to the highest point of earthly elevation in Ohio. So, bring something to deal with the nosebleeds or the other side effects of oxygen deprivation at an altitude of 1549 feet. From this high point we will coast downhill towards another high point for the day, a full meal of home style cooking as we have lunch with an Amish family just north of Bellefontaine. Well known for their fresh pies, I know you will enjoy a meal that starts with a layered salad, then Roast beef and Chicken Cordon Blue with Au Grautin spuds, noodles and mixed veggies. Rolls and drinks are included. Of course you will need to save some room for the Pie to celebrate a grand feast. Plan on a donation of $15pp to cover our share of the costs of our family style meal on the Farm.

Note: I really need to have a CONFIRMED head count by Wednesday morning 11/14!!

So please reconfirm and 'pledge' your cost of the meal to Murry.

John Schilling will help with maps/directions to the farm and a return drive following the

Meal and the usual recovery period from that dreaded Food Coma affliction that is unique to the males of our species. There are no couches available there and seats in the TR's are our best antidote. Let's make this a Big Day and a good social event. You will want to hear the inside scoop on our leaf peeper's grand tour and the Great Cass Train Trip. There will be shortened versions of these events in other newsletter articles but join us for the real deal. There you can ask the really tough questions that are usually avoided in the documented newsletter articles.

Let's have another good showing of Triumphs!

Remember - Our turn is coming up for hosting 6-PACK TRials 2002. Murry is leading the committee through their planning efforts and we will soon turn to you for help. I have a first draft of the logo for this 'Ohio Homecoming' and want you thoughts / suggestions. So come to the drive or planning meeting scheduled for November.

If you have access to cable and the extra channels for motor racing then you will want to plan on viewing and taping the SCCA Runoffs events that Speedvision has and will be broadcasting. Of special interest of course should be the 11/30 Friday evening airing of the EP Runoff race. The 'Top Triumph' in the SCCA, built and driven by Sam Halkias, was very visible in these Valvoline Runoffs at MidOhio. So get another 'Buckeye Britfix' and remember to tape it. Some of the club membership may not be able to view this cable Speedvision show and you could be a big help for some of us.

Remember, we have the TR 6 Valve Adjustment by Halkias Video tapes–Cost to club members is only $12 and $15 to non-members. Get one soon; the detailed comments and visual guide is priceless.

Thanks for your continued support and participation, let's keep our club going as we look into our planning for next year's activities, Elections, annual party and more driving events. The year will be a challenge for our club as we will have a major support role in two National Events in 2002. TRA and 6-PACK need all of us to make IT happen, so plan to be a Big Part or a small part; JUST Do IT. Do IT with Buckeye TRIUMPHS .

Go BUCKS –Go BUCKEYE TRIUMPHS.

Bob Mains ims_mains@ode.state.oh.us

Officers and the Fine Print

The Buckeye Triumphs Newsletter is a publication of Buckeye Triumphs, and the content herein is not officially endorsed by the staff or members of Buckeye Triumphs, 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
Web Site: www.nextek.net/BuckeyeTriumphs

Our current crop of Buckeye Triumphs Officers include:

President: Robert Mains (614) 890-7767 ims_mains@ode.state.oh.us	Vice President: Ryan Miles (740) 587-4179 rjhmile@Yahoo.com
Treasurer: Jim VanOrder (740) 967-2110 vanorderj@cham-cor.com	Events: John Huddy (614) 846-2321 jhuddy@columbus.rr.com
Newsletter Editor: Bruce Miles (740) 587-4179 bmiles@intinfo.com	Secretary: Becky Hartley: (740) 753-1066 jhartley@frognet.net

Technical Consultants:
TR2's & 3's: John Hartley 740-753-1066 email: jhartley@frognet.net or John Huddy 614-846-2321 email: jhuddy@columbus.rr.com
TR-4's: John Thomas 614-855-4175 or Bruce Clough 937-376-9946 clough@erinet.com

TR250, TR-6: Robert Mains 614-890-7767 ims_mains@ode.state.oh.us or Jim VanOrder 740-967-2110 vanorderj@cham-cor.com
Spitfires and GT6: Doug Braden 614-878-6373 braden.13@osu.edu ,

TR-7 & 8's: Ron Fowler 614-833-6885 tr8@msn.com

Affiliations: 6-Pack Chapter -- Center of Triumph Register of America -- VTR Zone Member

A Chronicle of Triumph: how I became addicted (Part 9)

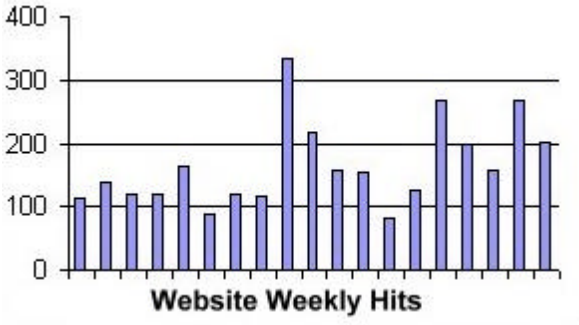
Well, I guess this is it. I'm near the end of my term as vice president of Buckeye Triumphs Club. November is upon us and though many of us would like to deny it, its just about time to start putting cars away for their winter sleep. Though the season is a little depressing, I do have some exciting news from the Miles garage; I'm starting to pick up speed on my tr250 project. By the end of this week I should have all the suspension parts removed and ready for sandblasting and painting. Within the next two weeks I will have all the parts to finish the frame repairs, and hopefully a rolling chassis is not too far away, but I don't want to set any *really* lofty goals, as I intend to finish and install the engine/transmission before I install the springs on the front suspension (the extra weight makes the job much easier). I initially thought that the engine that would go in the 250 would be relatively stock, but as I have done a little research I discovered an interesting fact….Did you know that a high performance cam costs much less than a new stock cam?

I still have a few tricks up my sleeve for this car. It may be really interesting to see if I can have a new car to make a video of at the autocross in Pa this summer. I will submit some more things this winter with photos and keep you all apprised, and maybe I will find a way to host a tech session in the newly refinished workshop that dad has been working on! For now, happy motoring (I still have my top down!)
Ryan smokintr6@yahoo.com

Notes from Nelson:

Editor's Note: After the October "runs" – note the "s" for Nelson……

Website: The website is up on the new server. It became too much of a chore to maintain both the old and new sites so requests to the old site are routed to the new site. The activity has been pretty brisk recently, in part due to the addition of a series of technical notes on clutches.

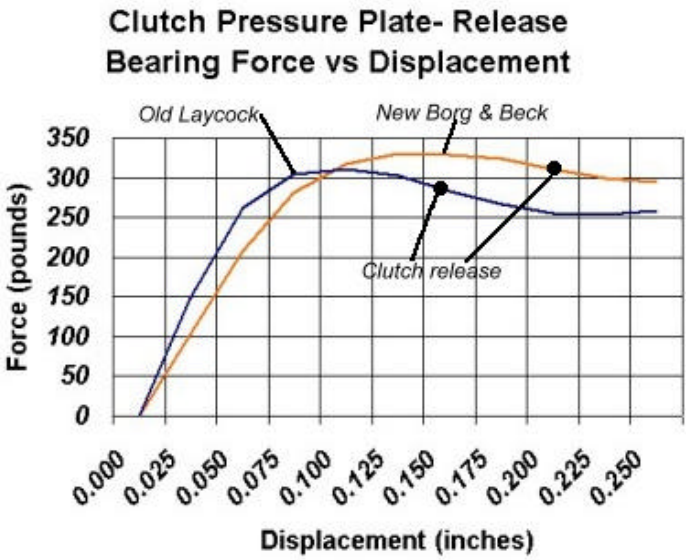


Received a nice note from a gentleman in New Zealand who had been referred to the site by his son in the UK who was pointed to the site by someone in the US. We also get requests from sites to add their URL to our Links page. Last week got one from the Netherlands. Went to the site and couldn't understand the language. Tried one of the links and ended up at pages with thumbnails of nudes. After considerable study, I decided that we probably shouldn't link to that site.

Clutch Measurements: There has been much written about the force required to release the various clutches used on the TR250 & TR6. One document on the Internet speculates that the original Laycock pressure plate (no longer available) requires about 200 pounds force to release while the current version of the Borg & Beck clutch requires about 400 pounds force. This nearly double force is blamed for all sorts of clutch problems including release bearing failures, busted hydraulic hoses, leaking cylinders, broken clutch fork pins, left knee fractures, etc.

I have an original Laycock pressure plate (at least 25 years old) and a new Borg & Beck so I measured the releasing force of each at various displacements and plotted the results in the following graph. It is clear that there was very little difference. I had expected the Laycock to require much less force because the spring should be weaker due to age. Details of the measurement procedures are shown on the website under the Technical button.

This is a work in progress since I would like to include LUK and Sacks pressure plates for comparison. If anyone has one of those that they can lend me for a few days for a little squeeze in the hydraulic press, let me know.



Release Bearing Woes: Last month we discussed the TR250 -TR6 sticky clutch. We also noted that the release bearing on Murry's Magic Clutch was busy eating through the pressure plate spring fingers. I promised to look at release bearings this month, so here goes…...

My kids and I have put in excess of 200K miles on TRs over the last 20 years and we've never had a release bearing failure. I've also taken apart or observed others take apart about ten clutch systems, none of which had defective release bearings. However, many others have had considerable problems recently with the standard (RHP) bearing. Some folks had repeated failures with less than a thousand miles usage. Apparently one or more of the big three acknowledged that there were some bad bearings produced. These things have no lot number etc, and there was no information as to how long the problem existed, etc. As mentioned earlier, I've never had the problem, but wonder if the bearing I buy now is one of the bad ones that has been on the back of some shelf for the last five years.

The Fix - The Koyo Bearing: If you can't be assured that the standard bearing is of good quality, then the natural reaction is to try to find a substitute. One substitute is the Koyo bearing used in the 1975-1986 Toyota Land Cruiser. It has the same inside diameter as the RHP so it can be pressed on the standard sleeve. The Koyo bearing is shown on the left with the standard RHP bearing on the right in the following photo. The Koyo bearing is clearly a confidence builder because it is larger, more rugged, stiffer, and has a much greater mass. Unfortunately, it is not without problems. This bearing is used in the TRF "Magic Clutch" along with a Sachs pressure plate, new clutch disk, operating shaft, fork & bushings.

The next photo shows the Sachs pressure plate in Murry Mercier's '73 TR6 after less than 5,000 miles service. It is pretty clear that the Koyo release bearing is eating through the pressure plate spring fingers. At the present rate, one would expect the spring fingers to start breaking off in less than 20,000 miles.

The problem is clearly that the force holding the bearing against the slave cylinder is insufficient to transfer enough torque to turn the stiffer bearing. As a result, the system works like a lathe, with the release bearing the tool --- a rather blunt one with little force, but like nagging, will wear things down over a long period. The external symptom is a constant chirp or squeal that stops when slight pressure was applied to the pedal.

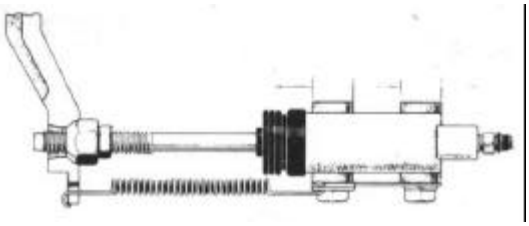
I recently inquired of the Triumph and 6PACK email lists whether others had encountered the bearing squeal. Many responded and a large percentage had had the problem. Some gave up and took the system apart again and installed the RHP bearing. Others had modified the linkage between the slave cylinder and operating shaft arm to pull the release bearing away from the pressure plate.

The Fix For The Fix: I spend many years in communication system development. Development of fixes was routine and sometimes a fix caused other problems that requires a second fix. A long time associate referred to these fixes for the fixes rather distastefully as "**second order bug killers**".

It was fortunate that Dick Taylor responded to the list enquiry mentioned earlier. He has been working this problem for months and offered many suggestions and measurements of the clutch system. One of our first questions was " how is the bearing configured in the Land Cruiser?" He inquired of the technical experts at TRF. They were unable to tell him anything about the use in the Land Cruiser.

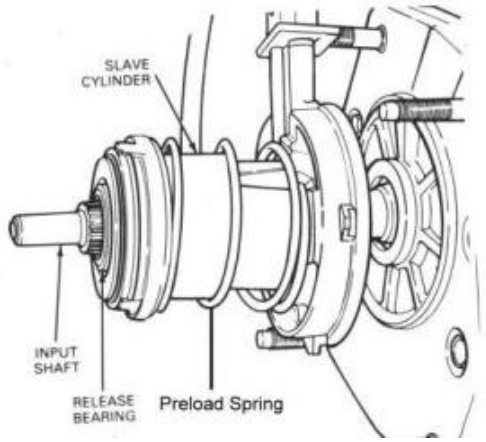
I finally purchased a Haynes manual for the 1968 through 1982 Land Cruiser. The next sketch shows the release bearing arrangement.

Observe that a lever type fork arrangement is used to push the release bearing. The following sketch shows the linkage between the slave cylinder and the fork in more detail. Note that there is a spring that pulls the lever (and bearing) back and an adjustment to push the bearing close to the pressure plate. The specified play at the adjustment nut is 0.12 to .016 inches. This is very similar to the TR3 & TR4 arrangement described in more detail later.



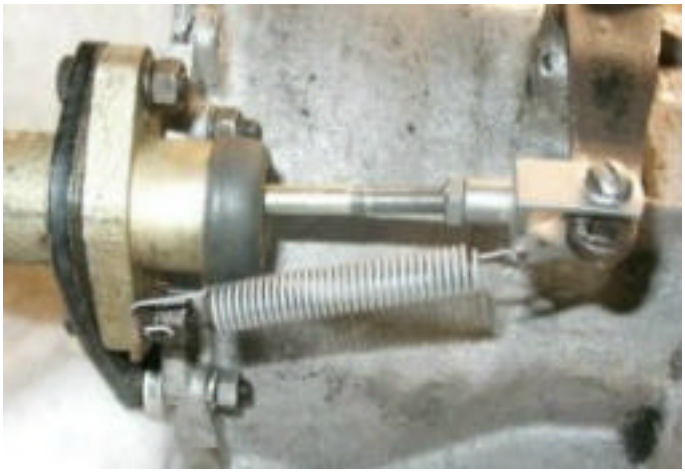
While thinking about this I tried to check out the slave cylinder in my son's 94 Ranger to see if it has a return spring. It 's a 4WD that sets pretty high and he had parked it on the grass, so I slid under and looked for the slave cylinder. There wasn't any. Further investigation revealed that the hydraulic pipe went from the master cylinder through a hole in the side of the transmission. I then pulled out an old Haynes manual covering the 1983 through 1992 Ranger. Apparently the slave cylinder was moved into the bell housing in 1985. The next sketch shows a representative slave cylinder. Note that it is concentric to the gearbox input shaft. Also note that there is a preload

spring that holds the release bearing against the pressure plate --- similar to the TR6.



Koyo -- Alternative #1 -- Pull the bearing away from the pressure plate: One alternative that many have used is to pull the release bearing away from the pressure plate as is done in the TR3/TR4 and the Land Cruiser. The TR3/TR4 linkage hardware can be used except for the pushrod that is too short. The configuration is shown in the next photo.

The push rod is 5.5 inches long and made from 5/16 steel rod threaded 24 TPI. Threaded rod can also be used. The push rod end is I think from a TR4. The push rod that came with the end was 4.75 inches, too short for the TR250/TR6 application. The spring is the same as used on the TR6 accelerator, somewhat weaker than the spring used on the TR3/TR4. A small flat bracket with a 5/16 inch mounting hole and a 1/8 inch hole to secure the front of the spring was fabricated. The TR3/TR4 slack adjustment is 0.10 inches. One way to achieve this adjustment is to remove the spring, loosen the nut, back the rod out of the end to the point where the slack disappears, then screw the rod back into the end 2.4 turns. The slack can be adjusted to less, such as 0.040 inches (one turn) and readjusted more frequently. The need for readjustment will be noted when the release bearing develops a constant squeal. Of course, if you wait long enough the squeal will stop as the clutch wears enough to give a constant preload -- just like using the clutch pedal for a footrest



The good point with this arrangement is that there is no wear on the pressure plate or the release bearing when the pedal is not pressed.

There are however negative points with this solution:

1. The Koyo bearing has significant mass. When the stationary bearing is pushed against the rotating pressure plate, it slips for a short period, wearing the pressure plate spring fingers. Many using this fix report a short squeal every time the clutch pedal is pressed.
2. This fix introduces slack into a system that has little margin.
3. This fix requires readjustment as the clutch disk wears. There is a tradeoff between frequency of adjustment and the amount of slack introduced into the system when it is adjusted. A small amount of slack requires more frequent adjustment whereas a lager amount of slack may prevent normal clutch operation.

Koyo -- Alternative #2 -- remove all the springs: Dick Taylor has tried a second approach of just removing the spring in the slave cylinder. The theory here is that the run out of the pressure plate should kick the bearing back enough so that it is next to but doesn't touch the pressure plate. The good point is that no adjustment is required and little or no slack is introduced into the system. It still has the problem of getting the bearing up to speed when the pedal is pressed (#1 above). One concern I have with this arrangement is that vibrations could cause the bearing to move away from the pressure plate necessitating that the clutch pedal be pumped. On the other hand, this is similar to the front brake pads and vibrations don't seem to cause the pads to move away from the rotors. Some folks have suggested that the TR4A used this arrangement --- neither a return nor a preload spring. I've been unable to either confirm or refute this. Apparently some current replacement slave cylinders are not equipped with springs.

Koyo -- Alternative #3 -- stiffer preload spring: This alternative is to use a bigger preload spring. The first question is "Will the bearing take the constant rotation?" I don't think that will be a problem. Dick Taylor tested the bearing under loads from 15 to 100 pounds for 15 minute periods at 1000 RPM found it didn't get hot. He also found than a force of about 30 pounds is required to keep the bearing turning. Because of the different lever lengths, this translates to about 20 pounds additional at the slave cylinder. Dick has added a second spring to his slave cylinder and the system seems to work perfectly. This restores the original configuration. I described this to Ryan Miles and he asked how would the additional load on the pressure plate affect the crankshaft thrust bearing? Ouch! Hadn't thought about that. The thrust bearing is a weak link in the engine. While the 30 pound force is miniscule compared to the 250 to 350 pounds force necessary to release the clutch, it's constant. I just don't know whether it's a problem or not.

Dick has promised to keep us posted as to performance of this preloaded system.

Find a good standard bearing: As I mentioned earlier, I've never had a standard bearing fail nor have seen one that has failed. Although the Koyo bearing seems to be a much more rugged bearing, it doesn't match well with the TR6 design. In my opinion, the best choice is to use a good quality standard bearing. The data from Dick Taylor and others suggest that the bad bearings fail quickly, in most cases in less than 1,000 miles. So, how about if I test each bearing for the equivalent of a thousand miles use and, if it still good, then I should feel safe using it.

I counted 67 clutch operations on a 10.4 trip to a couple stores in town. That's about 6 operations per mile or 6,000 operations per 1,000 miles. The clutch pedal is in about a half second for the shifting and maybe a second for startups and a bit longer when backing out of garage, parallel parking, etc. If we assume an average of one second per operation, then the release bearing is under full load for 6000 seconds or 100 minutes per 1,000 miles. A drill press could be used as a test vehicle. My drill press has speeds of 750, 1250, 2400 and 4700. A good test might be to run under a 400 pound load for 10 minutes at 1250 then with a 20 pound load for 10 minutes at 4700 rpm. This could then be repeated until a total of 100 minutes under load and 100 minutes under the light load are logged. I could do this while working on other projects in the workshop. The major concern would be to see if the bearing overheated. After each 10 minute period the bearing would be inspected to see if still tight and smooth. I postponed this test after talking to TRF as described next.

TRF HP122 Long life high-performance bearing: I just received TRF's TR250 & TR6 Quick Reference Catalogue Volume 1 and noticed that they are offering a long life high performance bearing under part number HP122. I called technical support at TRF and chatted with Dave about the specifics. He said it was the same Koyo bearing used in the Magic Clutch Kit. I commented that it had problems because it ate into the pressure plate spring fingers. He said it wouldn't eat into the proper plate. I mentioned the Sachs plate and he said that would work fine (recall that it didn't work so well on Murry's Sachs pressure plate). During the ensuing discussion Dave made the following observations based on his 30 years experience.

- The current RHP bearing is different than the original design, of poor quality and he wouldn't use it.
- When questioned about the small preload spring in the slave cylinder he said "what spring?" After I described it he said that the spring was only used in the very early TR6s and is not in replacement cylinders. He also said a spring should not be used. (I told him both the '76TR6s I purchased in the early '80s had the springs. Others have commented that the current replacement cylinders don't have the spring. However, Dick Taylor found a spring in the slave cylinder he purchased from Moss this past spring.)
- He said the best arrangement is to pull the bearing away from the pressure plate by about 1/8 inch. I commented that there isn't much slack in the system. He said the system has 3/4 inch motion and the 1/8 inch won't be noticed. (I assume these distances are at the center pin of the operating arm.)
- He said there is information on the Internet that suggests adding external springs to the system. He said this is bad information and shouldn't be used. (I assume he was referring an to external preload spring. I can't imagine how one can pull the release bearing away from the pressure plate the preferred 1/8 inch without using a spring.)

Summery: Well, I still don't know what I'll use the next time I must replace the release bearing.

I guess at this point my first choice will be to use the Koyo bearing and pull the bearing away from the pressure plate and put up with the squeal, as the bearing gets up to speed every time the clutch pedal is pressed. The available 3/4 inch motion that Dave from TRF suggests is a little high. The geometry suggests that the maximum one can expect for the 0.75 inch master cylinder is 0.6 inches and a little over 0.5 inches for the 0.70 inch master cylinder --- if everything is in good shape. Wear around the pin between the pedal and master cylinder push rod degrades the available motion to 1/2 inch or less for the 0.70 inch master cylinder. The 1/8 inch slack Dave suggests translates to 1 inch pedal motion. Both my '76 TR6 (0.70 MC) and my TR250 (0.75MC) have several inches spare pedal when the clutches are disengaged, so that would not be a problem for me (at the moment). As mentioned earlier, the slack need not be that great if one checks the adjustment more frequently.

My opinion is that the best choice is to use the Koyo bearing and preload the system as the original design except with an increased spring pressure to keep the stiffer bearing moving when the clutch is engaged. This matches modern systems. However, I'm reluctant to subject the trust bearing to the constant load. If I can find some sort of an upgraded high-performance thrust bearing, I'll go to this solution.

At this point I'm reluctant to use a new RHP bearing.

If it ain't broke…… Conventional wisdom is that whenever you remove the gearbox, all clutch components should be replaced. Similarly, if you dismantle a gearbox, replace all the bearings, etc. I put less than 5K miles per year on each of my TRs. The normal life of these components is well over 50K miles. There are more than a few examples of replacement parts lasting 1000 miles or less. Therefore, in the future I will probably not replace any working clutch component unless it shows excessive wear. Ditto for the gearbox. As a matter of fact, I have a bunch of dirty rusty old bearings, clutches etc that I'll part with for only five times the price of the shinny new inferior products. If you're

interested in any of these little gems, you should act quickly as they will likely go fast.

Nelson Riedel -- nriedel@nextek.net

Late TR Guy

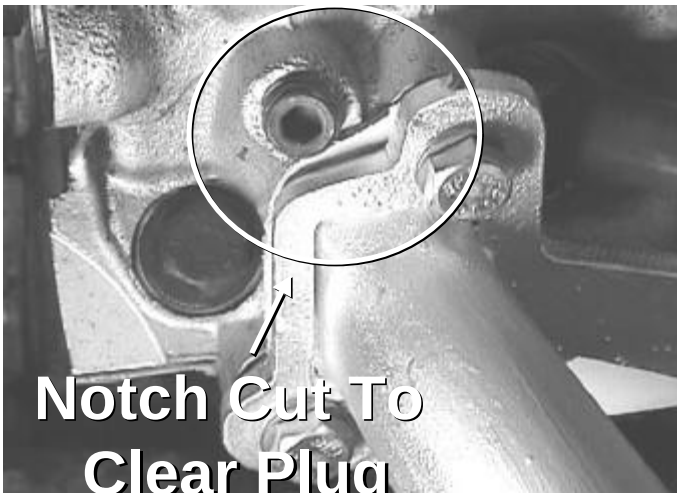
November 2001: By Bruce Clough (clough@erinet.com)

More Power, More Power!!! Episode One Of A Long Month

In the never-ending quest to get more power without really doing the things that get you more power, I put headers on the TR8. I went with TS Imports (Ted Schumacher's company) since I know Ted, and since he owed us $200 anyway for the Rover SU set-up that wouldn't fit the TR8.

Well, got them in, actually much quicker than I thought, so I thought I'd just stick them in. Wrong, it took me a while to install. What follows is my commentary on the effort. I chose bullet format since I'm lazy.

- The headers had been packed bad, just stuck in a box and shipped without any packing. Needless to say the paint was shot and there were a few dings here and there. I stripped them and repainted them with high-temp paint. They look better in aluminum color anyway.



- As shipped they don't fit the car. I had to cut a ¾" wide, ½" deep notch at each flange so they would clear the air injector plugs. Then I had to repaint. Moral – trial fit no matter how good they look!
- The #4 pipe was bent too close to flange. The 3/8 NC Stainless bolts I wanted to use wouldn't fit since the bolt head was too wide. I had to use the bolts that came with the headers, which accepted a 7/16" wrench, but are of gold cad plated steel that will rust. I also had to fit the bolt to the headers prior to attaching, and it had to be the first bolt secured.
- The extension pipe supplied for fitting between the headers and the existing exhaust system was too long and bent too much. I had to shorten each one 2" , and when put on the pipes are closer to the underside. Not close enough to rub, I hope…

Fired it up after fitting and no leaks, so something went right. That is, until I turned off the car and noticed the coolant puddle under the front. Great, water pump leak, and not from the weep hole, but from the bottom of the housing where it contacts the block….Gotta take that apart and look at it, new hoses while I'm at it! Hopefully I can just put a new gasket, yeah, right!

Headers Installed – Whoopie…

Okay, So What's The Leak? Episode Two

Wrong. Pulled the pump and immediately knew it was shot. What was the hint? Well, having about 0.2" sideways movement on the impellor is a good hint. The grinding noise the bearing made was also a giveaway.

I thought I could go to NAPA and get the thing rather than spend $140 that Victoria British wants for the pump (new ones, by the way). Hey, it's a Rover pump, but it also fit 60's Buicks. Should be easy. "$39.95 rebuilt" was the reply from across the counter. Great. We then determined that not only didn't they have it, but no NAPA warehouse in the USA had one. "We could send your old one to the manufacturer." No thanks. Pulled the VISA card and called VB. (we did determine that the 231 Buick had the same pump with a different pulley, so if I wanted to make a pulley…)

The VB pump was anticlimactic. It fit right on with no problems. I just hope the seal holds around the boltholes. I had problems with several other GM V8s in this area… Now to fix the intermittent miss in the ignition.

All this mess to get rid a few wires and intermittent miss…Episode Three

Miss? Yes, miss. Every once in a while under acceleration or deceleration the tach would go to zero (immediately) and the car would die, but the interval was very short until the ignition picked up again. This only happened under accel or decel, never idle or constant rpm operation. Gee, what happens during accel and decel? The optical pickup will move relative to the distributor body due to the vacuum advance/retard mechanism moving. If something is loose then it might not work right during the transient. I thought I had fixed this, having the distributor apart, taken the aftermarket (Allison) optical pick up out and epoxied the wires where some obvious wear had shown. I guess not. Going to another ignition system would solve a couple of other things:

- Eliminate a wiring bundle coming across the drivers side of the engine compartment. Less wires mean less things to fatigue and break.
- Eliminate the sharp heat sink ends on the Allison amplifier module. These puppies were sharp. If you don't believe me I have the scars to prove it!

I originally just wanted to put a Petronix ignition module in it like the one that went in the blue TR7. Neat fit, just two wires, and no separate amp module. No luck. Petronix didn't make a unit for the TR8 distributor, but they made ones for GM distributors and the Rover 3.5 used to be a GM block.

Hmmmmm…

Bingo – just get a GM distributor and slap it in, but which one? Some email traffic on the Wedge list indicated that a small-block Chevy would fit. Great, billions of those around. Went to the Cars & Parts swap meet and bought two for $5, and spent another $70 for a small-block Petronix module (#1181). What a deal.

What a flop. Comparison of the Lucas and GM units showed the GM one was way too long. Need one for the Buick engine. NAPA didn't have a listing for the 215, but they did for the Buick 350, which had the same distributor. Wonderful – got the following at NAPA:

- '70 Buick 350 non-HEI Distributor, NAPA 48-1813
- Rotor NAPA RR169R
- Cap NAPA RR165

About $60 worth of stuff. I could probably gotten it cheaper at Advanced Auto, but the folks at the NAPA on Linden near Carroll High School are very helpful, so I'll support them. Enthralled, I rushed right home to do the install. Yanking the Lucas unit I did a quick comparison (see the photo) Distances were the same. There were a few differences in the location of the vacuum advance and the relative height of the stuff from the block. I'm sure that would make no difference.

I did know I was going to have to replace the GM gear and cut off the oil pump drive dog on the shaft. The hole for the Rover gear pin was larger than the GM hole, so Mr Distributor had to visit Mr Drill Press, but besides from that it was pretty easy, even the bottom gear fit was good so no shims were needed. Wonderful. Now for the Petronix unit.

The Petronix "pick-up" unit is designed to bolt to the points holes, with the pickup ring mounting under the advance weights under the rotor.

Comparison of Distributors. Good 'Ole Lucas Is To The Left, GM On The Right

Petronix Kit For The GM Distributor: Pickup Unit Is In Front, Ring That Attached To The Weights Is In Back

The pickup mounted easily, but I noticed that it was slightly "cocked" on it's mount, something which happened during manufacturing. The ring also was a bit warped. Fortunately, Petronix must have known their manufacturing process wasn't up to 6-Sigma since they provide six shims.

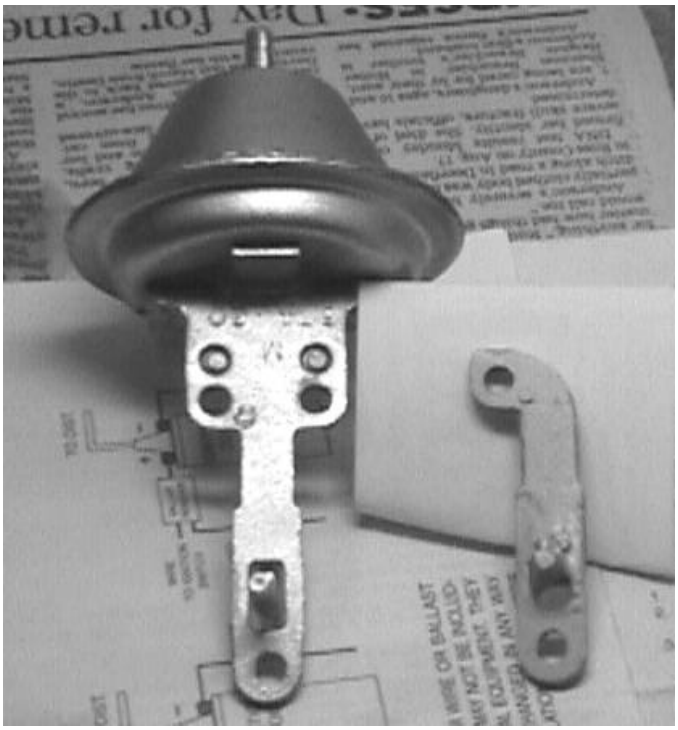
Some shimming of the ring recovered the proper clearance (or so we'll see).

Now we were to the point of trial fit.

Surprise! There's a very limited range of distributor body movement with the vacuum advance on. In fact, this range is about 20 degrees, the unit fitting between the back of the water pump and head . Not good. Not too many options here. Okay, remove the vacuum advance. What does it do to the engine operability? Well, I did notice that all the "cool" TR8's at TRF Summer Party use Mallory distributors that have no vacuum advance (vacuum advance only works at low engine demands, what's low RPM to racers?), and they seemed to work okay. A bit of Internet searching revealed that no vacuum advance could lead to:

- Lower CO production at low RPMs
- Increased heating due to retarded timing
- Decreased efficiency due to retarded spark
- Increased fuel consumption

…or about what I would have expected. I also noticed that our TR7 only has vacuum retard, no advance, and some Triumph sites record no difference between using the stock Lucas set-up and no vacuum advance. I also note that the old Lucas unit has both an advance and retard unit which tend to cancel each out over a significant rpm range. Off with the advance unit! But wait, it's not that simple. The points mounting base is held in place by the vacuum unit, so I was going to have to make something to keel it in place. No problem, I had those small-block distributors, I'll just modify an old vacuum advance to hold the plate in place.

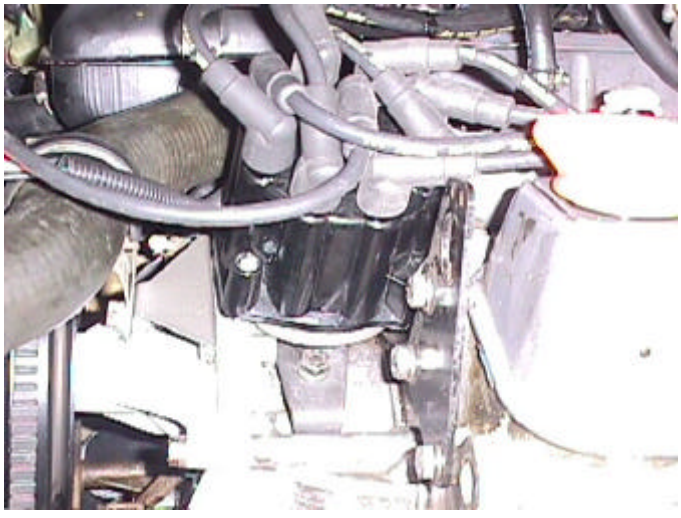


Original GM Vacuum Advance Unit On The Left, Clough Unit On The Right

Clough Unit Holding Points Plate In Place. Note Ring Mounted Under Rotor And Pick Up Unit Underneath Ring

I just cut off the vacuum unit flush with the distributor body. I had to epoxy (JB Weld – good stuff) the arm coming out of the advance unit that actually attached to the plate to the cut off bracket. Again, not a big deal. We'll have to watch this over time to insure no failure due to heat cycling and vibration.

Contrary to some email traffic I have seen the distributor fit into the oil pump drive fine, and Surprise #2 – it started up the first try. I've set the timing a bit ahead of the book specs (about 4 degrees) at idle to make up for no vacuum advance. If that leads to pinging I'll retard it a bit, but right now it seems to be running fine.



GM Distributor In Lucasland. Right At Home, Three Less Wires And No Scars…

Oh, one more thing. If you are using Accel sparkplug wires be warned, you can't just buy a sparkplug wire or two. I had to replace two wires using the GM Dizzy, and I had to buy a

complete set to do this. (If anyone needs wires I can give them a decent deal…)

Interested In Woody's Car?

Somebody last month wanted to know what Woody Cooper has in his car (slightly(!) modified TR8 FHC). Similar question on the email list came up and this was his reply:

…the block is a new 4.0/4.6 4 cross bolted 4 bolt main block, bored .20, JE pistons, crank is lightened and offset ground to make the motor 300cu, heads are Buick 300 with Vitesse valve, ported & polished & Extrude Honed, BIG Erson cam, Hartcourt open plenum manifold. Barry Grant Carb ,lightened flywheel, Centerforce clutch, Mallory Comp 9000 Dist. with Microprocessor box and Big Tubed Headers. Also 3:73 Posi rear end…

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

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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

1960 TR3A Dave Frazer III wrote:

Does any one know someone interested in a 1960 TR3A?

It needs to be restored and comes with an extra rolling chassis. It ran when parked but the body is rough. Belonged to my sister and I want to get rid of it.

The location is Southwestern, MI for the TR3A. It is a very complete car with an extra chassis with splined hubs for wire wheels. It is very complete but "tired". If I were buying it I would take the time and restore it.

I am asking $2,000. for both.

E-mail is dsfiii@yahoo.com
Located in Dowagiac, MI
Once again, Thanks!

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