The Midget Chassis
David Edgar, Editor
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First Class Mail



December 2009



What's Inside
McLish's Garage -TC Motorhouse Ramblings 3
November General Meeting
TCMG Holiday Party 6
VW Dual Circuit Master Cylinder for MG TC 8 -12
October Potluck & Meeting
VMG Parts Exchange



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#### The MIDGET CHASSIS December 2009

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All contributions: articles, letters, advertisements, and captioned photos for the next issue should be sent to:

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## **TCMG Executive Council 2009**

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Last time, the main and only really useful purpose of any apartment building swimming is for soaking TC frames back from the dipping place before priming and paint. This type of covert operation must be carried out late at night and early AM. If anyone asked, it accidentally slipped into the pool as you carried it, not that I would know.

It is amazing how pool lights one is taking care of can mysteriously fail at such times, and no one sees anything. Then the freshly pool soaked and rinsed frame and firewall can immediately be blown dry with an air compressor, and primed with several coats of good primer ready for black paint, probably, BUT officially "I do not recall." Legal ramifications of all this may still be settling, you understand, so while waiting, time to delve into the Holiday TC wish list for the serious TC enthusiast. Save time, save money, who knows, all this and more may show up at the Holiday Auction Dec 12:

#### TC HOLIDAY WISH LIST

- Tonneau cover
- · Brooklands steering wheel
- · Alfin brake drums
- Tripod headlights
- Bus rear blinker lights with gold lenses

- Shorrock supercharger
- Marvel Mystery Oiler
- Flip top radiator cap
- Coffin shaped Valve cover with flip up lid
- Polished aluminum valve lifter side cover
- Car cover
- Chrome and polished wood picnic basket rack
- High quality polishing kit and wax
- TC picnic basket
- TC blanket
- · Clear distributor cap
- Clear fuel pump cap
- A \$25 spare towing car (\$26.50 is OK now with inflation)
- Fine wine by bottle, case, or pallet of cases
- Biscuits (you need more wine than biscuits - biscuits may last longer then the TC.)

Gradually, various parts on my wish list were purchased as they became available. After all, searching for parts is half the fun. In the 70's, there was no eBay. The Los Angeles Times was the best source for TC ads, and were watched by folks from all over the country, but they rarely listed TC parts of any sort. You had to take your time, and get to know people who introduced you to still other (continued page 7)

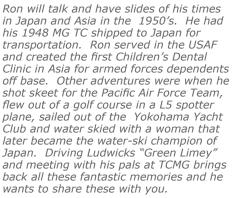




## Tuesday, Nov 24th

8:00 PM

Dr. Ron Wong talks on his TC in Japan





Citibank Community Room, 2350 Honolulu Ave, Montrose GPS coordinates: N 34.206 W 118.229 Meeting room entrance is at the rear of the bank - downstairs.

#### New TCMG Member

Don & Suzanne Scheu

40 Stony Point Drive Lancaster, VA 22503

Phone:804-435-0247

pointabino@hotmail.com 1948 TC 6761 XPAG 11047 Blue / Tan

Don always liked the TC lines and finally bought one. The TC was in North Carolina so was shipped to Virginia. The day after it arrived Don took it in to be stored for the winter while he winters in Florida. He is most anxious to get back and enjoy it. As far as history, Allan Chalmers once owned this TC.





Don & Suzanne, Welcome to the TC Motoring Guild

## TCMG Annual Meeting / Holiday Party

Saturday, Dec. 12

Make Your Room Reservations

Hotel Huntington Beach 7667 Center Ave Huntington Beach, CA 92647 877-891-0123 714-891-0123 www.hotelhb.com

Remember to bring auction items. TC or MG items are nice but other items will do as well.



Get Your Dinner Reservations In

Fun Auction Good Company **Excellent Dinner** Worthwhile Toy Drive

Toys will go to the McKinley Children's Center in San Dimas.

They prefer board games for ages 6 and older. Also sports equipment (bats and balls, footballs, soccer balls, volleyballs, basketballs, etc.) Another option are model kits or art supplies. They work mainly with young males.

Leave items unwrapped.



Dinner Reservations must be received by Monday, Nov 30

Amount sent

Entree Choice

\_\_\_\_ Chicken @ \$20

\_\_\_\_ Prime Rib @ \$20

Salmon @ \$20

Veggie @ \$15

(Note: Dinner costs in the Nov Midget Chassis was wrong. Use these amounts.)

Make check payable to: TCMG

Send Dinner Reservations to: Joyce Edgar 1454 Chase Terrace El Cajon, CA 92020

McLish Garage Ramblings continued

British parts people. You learned who serviced what, and who had what, and then slowly and methodically would find the things you needed. I did not have to rush, because I could look how the parts went any time now at Mikes. He always had things disassembled to various stages, so you just looked and OK that's how that goes. What cars were there that you looked at in those days, Don?

One of my favorite memories of that era was the final stages of the restoration of Art Ludwig's beautiful limey green TC, and the most happy day when Art came in to pick it up. Mike was making some final tuning adjustments, and I remember how Art ceremoniously put on his wonderful matching limey green British cap, and drove off. It was a wonderful day. It is fitting that this part of the story comes now because Ron Wong the current owner of that car will be presenting the November program "The TC in Japan" and Art is scheduled to run the Holiday Auction in traditional grand Ludwig style.

Over the years, it is great to witness how so many folks have fitted these little cars with their own personality, you know, fine items that can only be found at the TC Motoring Guild Holiday Meeting Auction, of course! You can find out first hand what was originally correct on so many nice cars owned by various members, in original and custom colors and look carefully at details of how various members have made these little cars their own.

Summarizing the year, in California there are so many beautifully restored TC's. The Guild and the Rough Riders drive them around everywhere, most inspiring! I hope that EVERYONE and I mean EVERYONE will show up for the Holiday party this year with the lowest prices we have had for years, same great location at the Hotel Huntington Beach,

central location easy access for everyone. Come please, lets break all records. They can accommodate us. You can stay overnight at the hotel. Who knows how many more times you will get to see old and great friends all together at a close venue. You deserve it! So mark your calendar NOW, Saturday Night Dec 12, no excuses, drinks start at 5:30 pm, hors d'oeuvres at 6 then dinner, program, and Art's amazing auction till? Contact Joyce, and get your reservations in early, details on page six. Great people, great location, great prices, great auction. See you there. You know you need this. You can't depend on the stock market, but you can depend on the TC Motoring Guild Holiday Party.

It has been a great year, and I have really enjoyed this. Thank you for the honor of serving as your president for the year 2009. Peace and Blessings to you and your families.

> HAPPY HOLIDAYS AND A JOYOUS AND BLESSED **NEW YEAR**



Don and First Lady Jan McLish



by Jim Buell

For those of us who race our MG TC's, having reliable brakes is a must. In addition, many

of the sanctioning bodies recommend the use of dual circuit master cylinders (m/c) on the brake system. Conversion of the Lockheed "tin can" m/c to a dual circuit system based on the VW m/c meets both criteria.

Little has been written that helps in setting up and implementing such a conversion. Having just undertaken this installation on TC 9806, I thought I would capture some of my thoughts and experiences.

I would like to give several notes of thanks for help in this undertaking:

Bill Hollingsworth for his pioneering efforts and information;

**Kevin Mitz** (RennWerks Motorsport, Mountain View, CA) for the fabrication and installation of the mounting plate;

Oz Ruvalcaba (The Hose Shop, Santa Cruz, CA) for helping me sort out all the "plumbing" and building the transition lines:

The folks at vw-resource.com for much of the technical information on the VW master cylinder (m/c).

This discussion is broken down into the following sections:

- 1. Parts required
- 2. Removal of the TC m/c and modification of the stock brake lines
- 3. Installation of the VW m/c
- 4. Plumbing the VW m/c
- 5. Installation of the VW fluid reservoir
  - 6. Bleeding the VW m/c
  - 7. Adjustments

## VW Dual Circuit Master Cylinder for MG TC

#### Section 1 - Parts required

- 1 VW Super Beetle\* (1971-79) Master Cylinder (VW part # 113611015BH)
- 1 VW Dual Circuit fluid reservoir (VW part #113611301L)
- 2 Brake fluid lines from reservoir to m/c
- 4 Hose clamps for the brake fluid lines
- 3 10 mm caliper adapters
- 3 Transition lines from the caliper adapters to existing brake lines OR all new brake lines (see text)
- 1 VW two contact pressure switch (for brake light wires).
  - \* The Super Beetle m/c is more desirable than a standard VW m/c because the mounting flange is on a 45 degree angle, allowing mounting in a narrow space and better alignment to the push rod.

#### Section 2 - Removal of the TC m/c and modification of the stock brake lines

The entire TC m/c setup including mounting bracket, heat shield, banjo fitting and switch is removed and the area cleaned and ground smooth.

I wanted to keep as much of my existing brake line system as possible for several reasons. First, because my lines are new, and this kept the transition line length to a minimum, and Second. I wanted to preserve the original look. To do this:

- Remove the right front brake line (it will not be need as it is too long to fit the new m/c).
- Remove, straighten and install the crossover line (that is the line that goes from the old banjo on the rear of the TC m/c to the union on the left front brake line) to the right front brake. It will be about 8" short of the new m/c – that's OK as will be seen in section 3
- Remove the brake union on the left side - it will not be used.

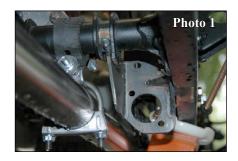
· Relocated the line to the rear brakes by having it come out of the frame just in front of the hand brake cross shaft. -



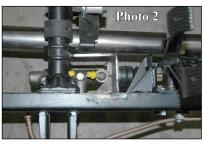
Section 3 - Installation of the VW m/c

The VW m/c has 4 outlets, two forward and two rear, and in the VW it is mounted against the forward bulkhead, pointing forward. When mounted in the TC it is mounted facing the rear of the car and requires a new mounting plate and stiffener (see photo 1 & 2 as well as the sketches at the end of the article.)

Note: In the VW the car is plumbed so that one end of the m/c feeds a front and opposite rear brake and the other end feeds the other front and its opposite rear brake. This takes up only two of the outlets. The other two outlets are for dual pressure switches Also, I have seen several VW m/c where the holes in the outlets are not the same size. You should check them and open up any smaller holes to the same larger size.



For our purposes, three of the outlets will be used for brake lines (one for the rear brakes, two for the front brakes, and one for the pressure switch. Make sure you are feeding both front brakes from one circuit and the rear brakes and pressure switch from the other circuit Because of



the use of 3 lines, one has to cross over the other (see photo 3 & 4.)

There are two critical dimensions that define the centerline of the m/c mounting hole. These dimensions are shown on the sketches but should be verified on your car. The first is the distance from the top of the frame to the centerline of the brake rod (when it is in the horizontal position) and the second is the distance from the inside of the frame to the centerline of the brake rod. Once verified the plates can be fabricated and welded to the frame and transmission mounting tube. (Ignore the gusset shown in photo 1, it was our first attempt to brace the mounting plate and it proved to be inadequate)

When mounting the VW m/c make sure that both of the reservoir inlets face the rear of the car.

Note: Since this installation, we have determined that it may be desirable to make the mounting plate 6" high (add material below mounting holes) and eliminate the 45 degree cutoff, and modify the stiffener by eliminating the cutoff and increase the height to match the new bottom of the mounting plate. This provides for extra protection as well as act as a heat sink against the exhaust pipe. (The advantage of this change can be seen in photo 1).

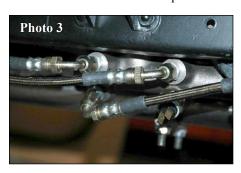
#### Section 4 - Plumbing the VW m/c

The existing TC brake lines are male 7/16-20 UNF thread, inverted flare. The VW m/c is female 10 mm. The caliper adapters convert the VW m/c outlets to male 10 mm x 1.0 DIN seat (because of the difference in brake line size. I was unable to find a single fitting to transition to the TC lines). These are now the threads that must be connected.

Three new brake lines will be required to make this transition.

- Each line is 7/16-20 female (this is usually a fixed non swivel) fitting on one end and a 10 mm x 1.0 DIN seat 90 degree swivel to fit the caliper adapter on the other end.
  - o The 90 degree fitting is required to keep the brake lines inside the frame line. . .
- The lines are stainless steel braided brake hoses, available plain or vinyl coated (see photo on pg. 12) Fortunately, this is easily accomplished by having these lines made up by a local hose shop.
  - o The length that I used was 8" to the right front line, 35" to the left front line and 20" to the rear feed line. Your length may vary and should be checked
  - o The lengths are measured from the center line of the 90 degree fitting to the end of the 7/16-20 fitting

Photos 3 & 4 show the final setup.





Note: If replacing the entire brake line system use a 7/16-20 male inverted flare fitting instead of the female fittings. All lengths will have to be carefully measured. You may also want to consider reversing the entire brake line system on the rear end. This will put the rear feed line on the same side of the car as the m/c and would substantially shorten the length of line required to feed the rear brakes as well as making it a straight run down the right side frame rail.

## Section 5 - Installation of the VW fluid reservoir

Selection of a mounting position for the fluid reservoir will be an individual decision based on the configuration of your car. The only considerations are:

- keep it as high as possible above the level of the m/c
- be able to feed the lines through the frame to the m/c.

I mounted mine on the front of the tool box. To accomplish this, I had to move the regulator forward about 2". Feed the supply lines to the m/c and secure with clamps on both ends. You may also wish to use a couple of clips along the length of the hose to hold it in place.

#### Section 6 - Bleeding the VW m/c

The instructions that came with my VW m/c called for bench bleeding prior to installation. The idea is to get as much air out of the m/c as possible before installation. For me this proved impractical as I had to have 3 of the 4 outlets open during installation. One of the lower outlets (rear circuit) is plugged with the pressure sensor. It would be possible to plug the other lower outlet prior to installation, bench bleed then carefully and quickly change from the plug to the line connection before loosing too much fluid. For additional information on bench bleeding see a very good explanation at: vw-resource.com/ bench bleed.html

Bleed the brakes in the normal manner. If you are pumping the pedal and you feel no resistance and nothing is coming out of the bleeder valve at the wheel cylinder, the m/c is probably air locked. To fix this, loosen the union nut for each brake line a bit (one line at a time). Have someone push on the pedal as you watch what oozes from the connection. When air and or bubbles stop coming out and only fresh fluid is oozing, tighten the union nut. When you are doing this, you want to have the other person press on the pedal and hold it as long as the connection is open. Close the connection before you have them let up on the pedal so that no air is sucked backing to the m/c This process can repeat this as necessary.

Note: if the m/c is air locked, you will get a lot of air out and then fluid. This will make the fluid level in the reservoir drop. Make sure you top it up before you continue bleeding the wheel cylinders.

#### Section 7 – Adjustments

Apart from the standard brake adjustments typical to all TC's, the only other adjustment necessary for the conversion is the brake pedal free play adjustment.

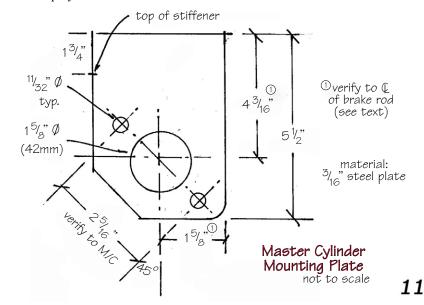
Brake pedal free play is the amount of

pedal movement before the pushrod touches the piston inside the m/c, before the piston starts to move. There needs to be 1 mm (0.040 in.) of free play - measured with a dial indicator. This distance is critical to assure that after braking the piston comes back far enough (but not too far) so that it does not block the transfer ports to the reservoir, allowing the pressure built up during braking to return to the reservoir and relax the system. Failure to release this pressure will keep the brakes tight to the drums, overheating them and eventually locking them.

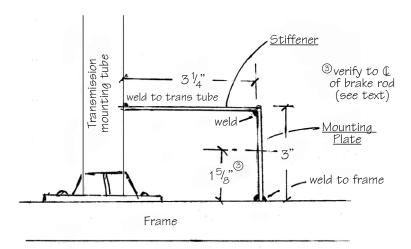
These thoughts and comments are from my experience at the conversion. I encourage users of this article to make corrections, additions or comments. They should be addressed to:

Jim Buell 2900 N Government Way, #312 Coeur d'Alene, ID 83815 (208) 437-0804 gmparcr@lambgroupinc.net

Jim was gracious to give us permission to print his article. Some of you may remember him from the Vintage MG Club where he was am member back in the '80s.



## Parts for VW master cylinder mounting material: <sup>3</sup>/<sub>16</sub>" steel plate radius to fit trans mtg tube <sup>②</sup>verify to Q of brake rod Mounting Plate Stiffener (see text) thehoseshop.com



not to scale

Master Cylinder Mounting Plate Assembly not to scale (831) 425-4673



## October Dinner and General Meeting



Thelanders were



Centerpiece contest brought out some creative MG theme ideas. Winner was the Hendrickson's display below.

















### 34th VMG MG Parts Exchange

#### Sunday, November 22 7am to 1pm

College Park, College of Communications 2600 E. Nutwood Ave. Fullerton, CA

Across the street from CSU-Fullerton

A not to be missed event if you need parts for your TC (or other MGs) or if you just like to talk MGs.



Admission: General: \$5.00 Vendors: \$20.00 (initial space and \$10 for additional space.

#### For more information:

John Seim 949-786-5697 kingseim@earthlink.net Bob Christian 714-998-7281

Bob.Christian@minarikcorp.com

Vintage MG Club of Southern California web site: VintageMG.com

#### For Sale





Pair of front fenders for a TA TB or TC. Stripped, surface rust, need a good metal man to sort front tips and build new rear mounts for running board attachment. Cheap. \$100 each or make offer. More pictures available. Can deliver at the VMG Swap Meet. Allan Chalmers, 415-566-9796 (home) 415-823-9796 (cell) allanchalmers@vahoo.com

#### For Sale

1947 TC 3405, XPAG 4089 \$10,500 Restoration started but have run out of time and enthusiasm. The chassis, engine, rearend, front end are all pretty much redone, although some serious final work remains in those areas. No work on the upholstery, top, or trim done, but everything is there. I live in Washington and the MG is stored in Fairfield, CA.

Dennis Sparks Phone: (360) 733-6223 home (707)738-2660 cell

(707) 252-9493 office, Napa e-mail: dms@napanet.net



Other photos and description in the November AAR Review abingdonroughriders.org/TheARRReview.html

# DRIVE THROUGH TIME... WITH PEACE OF MIND



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