

The Midget Chassis

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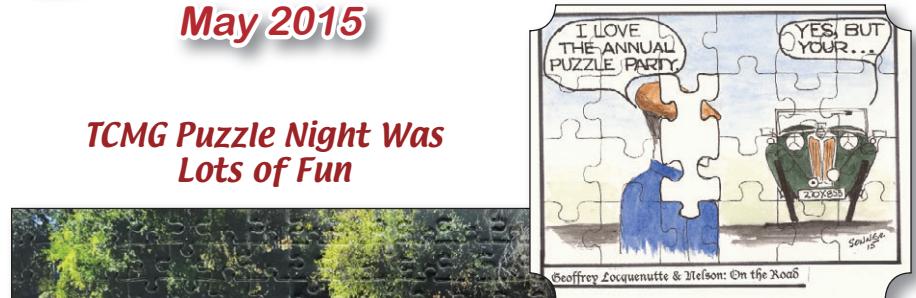
First Class Mail

TC Motoring Guild **MIDGET CHASSIS**

Published by the TC Motoring Guild, Inc.

May 2015

**TCMG Puzzle Night Was
Lots of Fun**



See pg 14,
Regalia,
on how to
purchase
one of
these
puzzles

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May 2015

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NOT AT MONTROSE

TCMG Meeting held at:
Dave Spiegel's Home
2250 Hornet Road
San Marino, CA 91108
(about 10 miles southeast
of Montrose)

Park on street and walk up driveway

Lost ???

Curt: (805) 341-7710 (C)
Dave Spiegel: (626) 796-4419



**Tuesday,
April 28th**
6:30 PM 
**Visit to a MGSA
Restoration Project**



David Spiegel restored his fabulous TC and it turned out great. But then he found this older MG SA that needed to be completed so he jumped in. OH, what did he get himself into? Find out. Above photo was when it arrived in 2009.

May 1-3 Santa Barbara Weekend

NOTE: This is an RSVP event!
Contact Steve Simmons ASAP if you
plan to attend and to get reservations.
mail@mgnuts.com or (805 area code)
four nine seven-one nine one one

Meet at the Simmons home for a light brunch before embarking on a memorable weekend trip to Santa Barbara! Our journey will take us along a relaxing 80-mile scenic route to Santa Barbara on Friday. Saturday

will include several activities including a special tour of Moss Motors, and finishing the night with a group dinner at a local restaurant. We return home on Sunday morning.

Book your rooms early, as they will fill up! Contact Steve Simmons for reservation info. Additional details including meeting time and other activities for the weekend will be announced as they are worked out by the organizers.



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▪ Greg Stroop — Moss customer for 42 years

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By TCMG member Brian Sonner

Welcome to Our Newest TCMG Member

Welcome

Brinkerhoff, Kevin & Julie

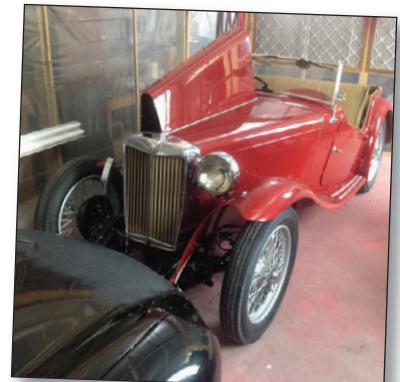
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kbrink53@hotmail.com

1948 TC 4936 XPAG 5556 Red / Biscuit



Kevin says he will be finishing the TC later this spring. And from the photos, it certainly looks like he is close (but is a TC ever done?). It is pretty much stock except for some oil seal mods. He also has a 1962 MGA, 1969 MGB, 1961 Healey 3000, 1962 Healey 3000 and a 1954 XK120. He joined the TCMG because the TC is a special car and deserves its own Guild of enthusiasts. (Ed. note - and we agree don't we?)



Kevin has a paint booth for his projects. Looks like the MGA is being prepped next.



Kevin

Julie



VW Steering for About \$200

Have you thought about converting over to the VW steering but did not want to outlay \$1400 for the kit? Well here is how TCMG member Reed Dickinson solved the problem his way for a lot less but does require some fabrication. Note that some photos were supplied by Reed and some were taken from the Internet.

The steering box used in the MGTC is not the most robust design possible. It is weak in that it uses a worm and peg design that has inherent strength problems. The air cooled VW steering, on the other hand, uses a worm and sector design which is much more durable as well as stronger. This article will cover adapting the VW steering box into a TC using only the VW parts plus a few readily available seals and hardware. This installation will cost about \$200 depending on the availability of VW parts. All the other parts are American made and of low cost.

YOU WILL NEED:

- Metal cutting lathe
- Mill, I have a mill-drill which worked well
- Acetylene torch
- VW steering assembly for the old air cooled Beetles (steering box, two vibration dampers, pitman arm, steering shaft and steering tube)
- Thick wall steel tubing 5 1/2" long, OD 7/8", ID 5/8"
- Metric shaft seal 16x22x4 mm
- Splined shaft about 7" long to fit the TC steering wheel hub. FTFU part ST206 (if available)
- Patience!



This shows the VW box on the left and original TC box on the right. VW box is very slightly larger.

THE BASIC STEPS:

- modify the VW steering box to a right hand drive system. Install seal for input shaft and install seal on unused bottom shaft opening.
- Fabricate a 2" diameter steel block to support VW steering box
- Make an insert to fit the VW pitman arm such that the input shaft from the TC drag link is inserted from the bottom.
- Bend the pitman arm to clear the sump and frame when steering goes from lock to lock.
- Modify a VW steering damper assembly such that it has two male shafts.
- Prepare a shaft about 5 1/2" long from thick wall tubing with an OD of 7/8" and an ID of 5/8". Mill slots and crosscuts in each end to accept the VW clamps.
- Fabricate an adapter plate to support the VW steering tube on the engine side of the scuttle.
- Fabricate a holding device to support the VW steering tube under the dashboard. I used a 1 1/2" muffler clamp

DISASSEMBLY

Remove the bolts securing the TC steering box, the drag link ball joint nut and cotter pin, the steering wheel, the retaining hardware at the top of the TC steering column and at the scuttle. Slide the steering box out of the car through the space under the headlight bracket. Set these parts aside as they will not (except for the steering wheel) be used again. You will not have to make any modifications to the original TC parts so they may be re-installed at any time. Remove the plate at the base of the steering tube that bolts to the scuttle. You will later use this plate as a pattern to make an adapter plate used to secure the VW steering tube to the engine side of the scuttle.

STEERING BOX MODIFICATIONS

The input worm shaft to the VW steering box, VW part number 311415131E, needs to be moved to the other side of the steering box to provide enough room for the steering box to fit into the available room in the MGTC. To do this remove the top cover from the VW box by taking off the 4 bolts and removing the jam nut on the slotted shaft in the center top of the box.

Once the cover is loose use a screwdriver to turn the slotted shaft clockwise until the cover is free. Unscrew the large jam nut holding the bottom plug and remove the plug. Now gently lift the sector arm up just enough to clear the worm shaft and pull the worm shaft out of the top of the box. Turn the worm shaft around and insert it in the opposite end of the box. Make sure the bearing is seated properly. Bore a 3/4" hole to accept the input worm shaft in

the threaded plug. Cut a recess .866" diameter and .160" deep in the inside of the plug and install a National 16x22x4 metric shaft seal. The seal side goes on the open side of the plug. Cut a thrust washer about .075" thick with a center hole 1.0" diameter and an outer diameter of 1.39 inches. This thrust washer is used to transfer bearing preload pressure from the plug to the worm shaft bearings. Replace the threaded plug with jam nut, seal and thrust washer into the box. Find a nut that measures 1" across the flats, drill a 3/4" hole through the nut and use it to snug the input worm shaft until the shaft rotates freely but there is no end play. While holding the plug with the 1" nut tighten the large jam nut. Recheck for a free turning input worm shaft.

Position the top cover and start the center threaded shaft into the cover. Continue rotating the slotted shaft CCW until the cover is securely positioned on the box. Insert the 4 bolts but do not snug them yet. Rotate the input worm shaft while adjust the slotted shaft until the input



worm shaft rotates freely from lock to lock. Now snug down the 4 bolts and recheck that the input worm shaft still rotates freely. Readjust the top slotted shaft if any binding is noted. Tighten the jam nut around the top slotted shaft.

The hole at the other end of the steering box is open and a 24mm plug must be inserted to exclude road grime. Fill the remaining void with silicone caulking compound. Check for oil leaks after filling the box with 140 weight oil. Do not use grease in the steering box as it will adhere to the sides and not properly lubricate the internal bearing surfaces.

STEERING BOX MOUNT

The steering box will use the existing holes where the bracket that supports the right front brake line is. Remove the right front brake pipe and flexible hose and center mark the rivet head. Drill it out until the head falls off. Do this to the second rivet also. Now run a 3/8" drill through these holes. There are 3/8" ID pipes from one side of the frame rail to the other side. Do not replace the brake hoses yet.



Steering mount ready to bolt to frame.

PITMAN ARM

Modifications to the VW Pittman arm. The VW pitman arm comes in designs that have more than one diameter taper in the two holes. Select one that has a small diameter of about .42". Cut off the spur and the longer part of the arm that has the tapered hole. Sand the cut away areas for cosmetic purposes. The tapered opening has the large end down when the VW pitman arm is mounted on the sector shaft with the retaining bolt head away from the TC frame. To gain adequate clearance between the pitman arm and the exhaust down pipe the pitman arm must be mounted with the retaining bolt head closest to the frame. But this means the tapered hole is now upside down and the drag link tapered shaft would have to be mounted from above into the pitman arm, sufficient clearance for this arrangement does not exist. To fix this situation, clamp the pitman arm in a secure vice and bore the tapered hole out to 5/8". Make an insert that is the height of the pitman arm and .6235" in outside diameter. Bore the center of the insert with a Z drill and coat the inside with blue dye. Set your tool holder on the lathe for 3 degrees, the taper used in the MGTC drag link, and remove material until the blue die is all gone in the inside bore. Silver braze this insert into the pitman arm with the large diameter of the taper downward when the



Original VW pitman arm on left, and steps to the modified arm on the right

of the arm is toward you and the hex head of the retaining bolt is to the right. Install the modified steering box in the car and with a large 'C' clamp locate the position on the frame that appears to give the best overall clearance. Using a 3/8" centering punch, mark one hole in the 2" diameter by 2" long piece of steel rod. Remove the steering box and drill and tap a 3/8X16 hole at the centering mark. Make sure the hole is normal to the flat end of the 2" piece of steel. Now mount the steering box on the 2" bar and bolt it into place. Recheck for adequate clearance and mark the second hole. Drill and tap like the first one. It will be necessary to heat and bend the pitman arm to gain adequate clearance between the sump and the frame when the steering is rotated from lock to lock. When you are all done with the pitman arm prime it and paint it if desired but do not paint the tapered hole.

STEERING SHAFT ALIGNMENT

Mount the VW steering box on the 2" mount with the V in the VW clamp facing forward. Temporarily slide one end of the original VW steering shaft onto the shaft from the VW steering box and secure with a VW clamp. Slide the VW steering tube with a VW steering shaft bearing over the steel tube and use this location to fabricate a mount on the scuttle side. The plate on the scuttle side has been removed with bolts from the inside of the car. Carefully measure the location and fabricate a mount to support the lower end of the VW steering tube

fitted with a VW steering shaft bearing. Fabricate a mount to support the upper end of the VW steering tube, also fitted with a VW steering shaft bearing, where the original TC steering mount was located. Remove the VW steering shaft as it was only installed to aid alignment. It will be necessary to replace the front bolt securing the front lower hood attaching plate with a 1/4" by 3/4" long carriage bolt. The carriage bolt fits nicely in the oblong slot in the plate. Grind the front portion of the carriage bolt to get extra relief between the steering box and the frame.

ATTACHING STEERING COUPLER

Cut a section 5 1/2" long from the thick wall tubing and bore out each end to accept the 16mm metric shafts. Mill two 5/16" slots perpendicular to the axis of the tube about 1/2" from each end. Cut notches in both ends of the tube similar to the one in the VW steering shaft. Prepare the VW steering damper by removing the female end and replacing it with a male end, there are now two male ends on the damper assembly. Attach one end of the 5 1/2" shaft to the steering damper and the other end to the VW steering box. Secure both ends with VW clamps. The



7/8" OD tube is slightly larger than the inside diameter of the VW clamp so it will be necessary to use a Dremel tool to grind a little from the diameters.

ATTACHING STEERING WHEEL

Slide the original VW steering shaft into the upper bearing and through the lower bearing and attach the lower end to the other male end of the steering damper using another VW steering clamp. Turn the OD of the selected splined shaft to a proper diameter to fit into the ID of the VW steering shaft and silver braze this splined shaft into the VW steering shaft cut to the proper length. The splined shaft may be available from FTFU as part number ST206. Use a 1" OD steel ring, with an internal diameter of the VW steering shaft to secure the lower end of the VW steering shaft and associated



spring into the lower steering shaft bearing. Bleed the brakes as you had to remove the right front brake hose and road test your baby.

Reed Dickinson

Queen's English Car Meet

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AND AUTO JUMBLE
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9am to 4pm**

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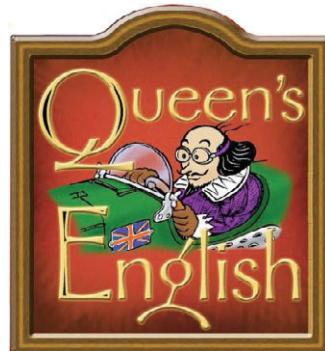
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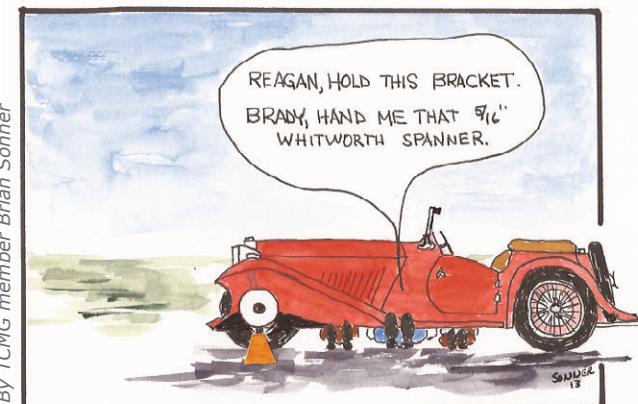
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By TCMG member Brian Sonner

Strathearn Historic Park Tour

March 28th was a great day for a TC tour and Steve & Linda organized a nice one. Four TCs, a couple other MGs and other iron toured over to Strathearn Historical Park.



Driving TCs were Loe, Ellis, Spindler, & Buckeridge. Simmons brought out their MGC & MGB since TC was being repaired and they had niece and nephew (Kate & Connor) with them. Also in attendance were Crandall's, Hunsberger, Lutz's, Simon's and Sorensen's



Photos by Sandra Loe
& Steve Simmons

March 24th Meeting Minutes

Gorden called the meeting to order at 8:05pm and took note that we did not have any guests to introduce. Next on the agenda was accepting the minutes of the last meeting as printed in the newsletter, which was done after a motion and vote.

Joyce indicated a full financial report was posted on the wall for those that were interested but did give some highlights. She went on to membership and said that Edwin Fuller reported his wife had died when he sent in his dues, of which he paid for three more years. Official dues renewal deadline for 2015 is up as of this meeting, but we of course will continue to take renewals if they are sent in. However late renewals are subject to not being included in the 2015 directory.



Two TCs and a B signal that this is the TC Motoring Guild meeting location

opposition of it during the following 30 days, then we can expect the trademark to be issued 11 weeks later. So we are progressing as expected.

New Business

Steve reported on upcoming events starting with the Strathearn Historic Park tour on March 28th. Wildflower tour is up in the air and dependant on weather. Reserved rooms for the Santa Barbara, May 1-3, weekend will be released soon so grab them if you are going before they are gone.



Gathering before the meeting starts

Old Business

Curt thanked David for the great SU Carburetor discussion at last month's meeting.

Our Sunshine Chair is getting quite a workout lately. Bobbie will be sending out cards to Edwin Fuller (wife's passing), Phil Mays (recovery), Jan Gardner (recovery) and the Wilmers (thinking of them). It was also mentioned that George Kershaw was still recovering from his last stroke and keeping a positive attitude.

Richard Loe said that our trademark request was published March 12, 25, 2015. As long as there is no



Fran, Linda, Sandra, Curt

Discussion on Conclave venues brought up possibility of Mammoth Lake. Carmel River Inn at Carmel-By-the-Sea and Lover's Point Inn in Pacific Grove were also said to be affordable.

Curt spoke on what he has lined up for meeting programs.

Scheduled meeting programs are:

- March (tonight) - Jigsaw puzzle night
- April - Visit MGSA restoration by Dave Spiegel



Steve, Pete & Malcolm



Team Henkels/Simmons



Team Bundy/Sorensen



Team Edgar/Simon



Team Loe/Thelander



Winning Team
Henkels/Simmons

Register NOW

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**Rohnert Park, CA
June 15-19**

Come for a fabulous time of MG fun. Rohnert Park is about 50 miles north of San Francisco.

For more information and registration just go to:

gofwest.org



Does Restoring a TC Make Sense?

Many times the decision to restore/refurbish a car is an emotional one, not a financial one. Taking on any car to "save" is done because it is wanted, not because it makes financial sense. Some people like to spend a lot of money on going to shows and concerts; there's little to nothing tangible left afterwards except the memories (not that there's

ANYTHING wrong with that!); Some people may decide to spend (waste, in some people's eyes!) money on parts for cars, most of which it doesn't make financial sense to do so.

As long as there are folks who restore a car for their pleasure, cars will continue to be saved and restored.

*Note: TClinics now available on-line at no cost.
tcmotoringguild.org*

Club Regalia

TCMG Car Badge A \$25 (\$30 if mailed) members only
TCMG Car Vintage Badge B \$30 (\$35 if mailed) members only
TCMG Cloth Patch \$5 (\$6.50 if mailed) members only
TCMG Lapel Pin \$3 (\$5 if mailed) members only
TCMG Lapel Vintage Pin \$3 (\$5 if mailed) members only
MG TC Pin & MG Car Club Pin (inquire)
"MGTC Specifications" -What is and what isn't stock on the MG-TC?	
A "must" for restorers \$3 members, \$5 non-members, Postage \$3.50
MG TC Color Specs \$2 members, \$3 non-members, Postage \$2
TCMG Photo Puzzles \$15 plus postage (contact Linda for postage cost, design and availability)



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Linda Simmons linda@mgnuts.com

Prices beyond our control subject to change



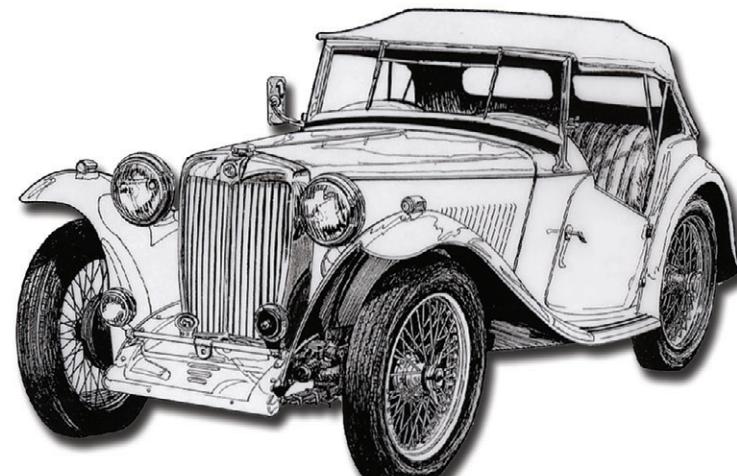
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