# TRIUMPH TRUMPETER

### OFFICIAL NEWSLETTER OF THE DESERT CENTRE – TRIUMPH REGISTER OF AMERICA

Founded: 1980



Triumph Register of America



#### PROMOTING TRIUMPHS AROUND THE WORLD

WITH OUR SISTER CLUB
THE ISLE OF WIGHT TRIUMPH CLUB, U.K.









#### **DECEMBER 2013**

Vol 34, Issue 5

http://www.dctra.org

#### **NEXT CLUB MEETING**

Tuesday, December 10, 2013

Meeting starts @ 7:00 p.m.
6:00 p.m. - Come Early to Dine & Socialize with Club Members

#### **DENNY'S RESTAURANT**

650 N. Scottsdale Road, Tempe, AZ 85281 580-858-8276

#### **2013 CLUB OFFICERS**

 President
 VP & Events

 John Nuss
 Matt Reynolds

 480-983-3945
 480-968-6078

 jknuss@live.com
 bsatr6@yahoo.com

SecretaryTreasurerPete PetersonJohn Reynolds480-488-4872480-968-6078packratpete@gmail.comjohntempe8@q.com

#### **2013 Appointees**

AAHC Reps
Jim Bauder (East side meetings)
480-309-9525
jimbpps@cox.net

Membership
George Montgomery
480-290-1310
georgemonty32@gmail.com

jimbpps@cox.net georgemonty32@gmail.

Joe Minnick (West side meetings)

Webmaster

602-214-0203 jminnick@cox.net

Historian
Armand LaCasse
602-904-1037
big.blue.truck@live.com

Tech Advisors
Armand LaCasse
602-904-1037
big.blue.truck@live.com

Roy Stoney 602-231-0706 royston469@msn.com

#### Dave Riddle 480-610-8234 dave@microworks.net

Newsletter
Pete Peterson
480-488-4872
packratpete@gmail.com OR
bev@carefree.org

#### **ADVERTISING**

ONE YEAR placement in the newsletter AND a link on the www.dctra.org website:

AD SIZE – COST

On the Cover: Photos by Paul Jordan - Breakfast Run (11/17/13)

#### Prez Sez – December 2013

#### **John Nuss**

Welcome to the Holiday Season. You can say "Merry Christmas, Happy Hanukah, or Happy Holidays," I'll respond to any and all wishes for a good time!

I forgot to write this piece- needed a reminder from Bev and Pete. I was thinking about the new member packet, the January meeting, and thinking how good it was to have these things out of the way. Thanks to all who participated in making this happen - Ron Gurnee, Betsy Kavash, and George Montgomery.

Still, there is more to do. We might take time to review the by-laws regarding the membership and dues. Do we want to recognize households or individuals? Is it worthwhile to have a year of activities in place?

Remember there is a meeting, as usual, on Tuesday, December 10<sup>th</sup> at Denny's and then the Christmas Party on Saturday, December 14<sup>th</sup> at the home of Pete and Bev Peterson.

Merry Christmas, Happy New Year, Happy Holidays to all.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### **EDITOR'S DESK**

#### PETE PETERSON

FOUR NEWSLETTERS! I agreed to finish off this year as newsletter editor and can't believe I actually made it. Thanks to George Montgomery for volunteering to take on the newsletter for 2014. We'll be handing over all the articles sent to me up to now. Thanks to all the members who have contributed lots of knowledge and great photos for everyone to share.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### **Minutes**



#### **DCTRA Meeting Minutes - NOVEMBER 12, 2013**

**President John Nuss** opened the meeting at 7:00 p.m. on Tuesday, November 12, 2013 at **DENNY'S RESTAURANT** at 670 N. Scottsdale Road in Tempe.

#### 55 people signed the roster:

Jim Andres - drove a TR Ned Bailey - drove a TR Dennis Barnes Jim Bauder - drove a TR Mike Blachut - drove a TR Pete Bowen Marlene & Virgil Cole Bob Morey - Visitor Ian Cordwell – Visitor Denine Muré

Trudy Crable - drove a TR Gary Nelson - drove a TR Linda Nicholson

Bill Davenport

George & Chris Durkin John & Kathy Nuss - drove a TR

Dave Fore - drove a TR Jacob O'Neil Ron Gurnee Pete & Bev Peterson

John & Cheri Heisser John & Matt Reynolds - drove a TR

Ken Schmidt John & Beth Horton

Paul Jordan Bo & Laureen Shaw - drove a TR

Dave Smith

Rick Stacev

**David Stephens** 

Craig Kenyon - drove a TR Dennis & Nona Simons

Jody Kerr - drove a TR Chuck Kerzan

Simon & Marie Kotsailidis - drove a TR

Armand LaCasse

Roy Stoney Stu Lasswell - drove a TR Marie Thompson Pete Thompson Joe Minnick - drove a TR Kiwi & Patsy Treloar George Montgomery

Frank & Ann Montone

#### 15 - TRIUMPHS WERE DRIVEN TO THE MEETING!

**VISITORS:** *Ian Cordwell*, guest of Pete & Bev Peterson, owns a 1975 Spitfire (bought for him by his son) and lives in Cave Creek.

**Bob Morey**, former club member, drove his Bugeye Sprite.

**MINUTES:** The minutes of the October 8, 2013 meeting were approved as written.

**AAHC:** Joe Minnick was unable to attend - nothing was reported.

**TREASURER:** John Reynolds reported on the club's financial status.

**MEMBERSHIP:** George Montgomery reported on membership.

**NEWSLETTER:** Pete Peterson reported that George Montgomery will take over as newsletter editor beginning January 1st. He thanked everyone who submitted material for the newsletter.

**EVENTS:** *Matt Reynolds* reported on upcoming events:

12/08: SCCA Autocross

12/10: **DCTRA** Meeting – Denny's

12/14: **DCTRA** Christmas Party – Pete & Bev Peterson's house

12/21: British Car Christmas lights tour - Mesa

**TECHNICAL:** nothing was reported.

OWNERSHIP UPDATES: Jim Bartel sold his TR6.

**OLD BUSINESS:** *Joe Minnick* had grille badges for sale.

**Ron Gurnee** reported on new club member packets: he has completed a "recommended vendors" list; **Armand LaCasse** has provided the club history for the packet; **John Nuss** wrote a letter for the packet welcoming new members; Ron also had updated information on license plate frames. The club voted for the committee to decide between two vendors who have submitted samples, which should be available soon. **Marie Thompson** also had new club pins for sale at the meeting.

Contributions: the club voted to donate \$200 each to three charities: St. Vincent de Paul, Red Cross and United Food Bank.

**NEW BUSINESS:** Nominations for made for club officers:

President: John Nuss, nominated by Ron Gurnee/seconded by John Heisser

**Vice President:** *Matt Reynolds*, nominated by Kathy Nuss/seconded by Stu Lasswell **Treasurer:** *John Reynolds*, nominated by John Horton/seconded by Kiwi Treolar

Secretary: NO NOMINATIONS ACCEPTED: Jody Kerr volunteered if someone will fill in

during his absence in the summer months.

**George Montgomery** talked about volunteers for the Russo Steele auction. In the past, Russo Steele has made a generous donation to the club for our help.

With no other business, the meeting adjourned at 7:40 p.m.

Submitted by: Pete Peterson, Secretary

11/30/2013

\*

#### Calendar of Events

#### **Matt Reynolds**

12/08: SCCA Autocross – final one of the year at the Bondurant facility (formerly Firebird Raceway) in Chandler. All welcome, novices included. For more info, see <a href="www.azsolo.com">www.azsolo.com</a> or contact <a href="mailto:DCTRA">DCTRA</a> club member Stu Lasswell (480) 577-2685 / email <a href="mailto:debnstu2@yahoo,.com">debnstu2@yahoo,.com</a> .

12/10: **DCTRA** Meeting – Denny's

12/14: DCTRA Christmas Party – Pete & Bev Peterson's house – Please RSVP by 12/12/13

12/21: British Car Christmas lights tour - e-mail or call Shirley Blahak before December 18<sup>th</sup>

shirley@azwildblue.com 480-985-2531

1/19/2014: **DCTRA** Champagne Brunch & Election meeting - Monti's 11:30 to 2:30.

\*

#### CHRISTMAS PARTY

This year the Christmas party will be at Pete & Bev Peterson's house on Saturday, December 14<sup>th</sup> starting at 6:00 p.m. Bring a side dish of your choice and BYOB. Main course and soft drinks will be provided by the club. The usual GOOFY GIFT exchange will happen. Make it a \$15.00 limit. RSVP no later than December 9<sup>th</sup> to: packratpete@gmail.com or call 480-488-4872

We will email back directions & a map..

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### **Bo Shaw's Restoration Journal**

This is the third and fourth of a series of 16 articles written by DCTRA member Bo Shaw about his experiences restoring his 1958 TR3A. Each month we will publish another article (or two if they are short) so you can see what it's like to spend a year or more recording your progress on a major project's ups and down's and the final TRIUMPHant result.





There has been significant progress on the TR3A (at least for me) since last month's report. Most of the brake and fuel lines were installed, making it possible to reunite the body and frame for the first time in almost two years. The attached pictures document some of the progress. The dash was recovered locally and installed with the instrument panel, as were the heater with new ducting and hoses, and the windshield wiper mechanism. These were done before the body was dropped on the frame. Since then, the steering and parking brake have been installed, the new radiator roughed in, and the reconditioned speedometer/tachometer installed, along with the glove box. I still have some engine, wiring, and brake work to complete before starting on the interior, hopefully over the next month. Again, I would like to thank West and Roy for their help during the past month.





#### TR3A Activity August 2011

Made headway this month with some of the detail items and also had some frustrations.

The engine is now finished as the pushrods and roller rockers were installed and adjusted. The fuel tank was installed as well as the remaining fuel lines. The radiator installation was completed along with the various hoses. The parking brake installation was completed and adjusted. The rear bumper over riders were also installed, which turned out to be much more time consuming than was anticipated. (The bolts attaching the bumper over rider brackets to the frame are fitted through a small hole in the body, and since I had placed two sets of rubber buffers between the body and the frame during installation, the body was now too high for the bumper bolts to align properly with the frame. Had to undo the body attachment bolts, remove one set of rubber buffers and re-install the body for the bumper bolts to align properly with the frame. (Nothing is truly done until it is done at least twice.) I also installed some minor trim items and worked on the wiring some more.



**Roller Rockers Installed** 



Rear Overriders



**Radiator Glamour Shot** 

The frustrations were due mostly to parts fitment, as usual. After 3+ years (yes, <u>years</u>) of waiting, talking and emailing, EBC finally admitted that they did not have the proper blanks to produce the high performance slotted/cross-drilled front brake disc brake rotors they had promised. Apparently, they were not even aware of this fit problem (Problem? What problem?) until I sent pictures to them through TRF that showed the interference between their disc and the caliper dust boots. Albert Runyan of TRF has been a trooper through all of this, and went to the time and trouble to find another set of high performance brake rotors that TRF will send to me at cost. The rotors were produced by Revington in the UK and have since been discontinued. Revington has a couple of sets left over that they are willing to send. Albert says I should see them in a couple of weeks. Hope springs eternal! Does anyone need a new heater duct for the Triumph? VB sent it to me instead of an electric fan remount kit (don't ask) and said to keep it after I brought the mistake their attention.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# Fuel Injecting a TR6 by Craig Kenyon

Part III. Fuel Injecting a TR6 (Parts 1 & 2 were in last month's newsletter)

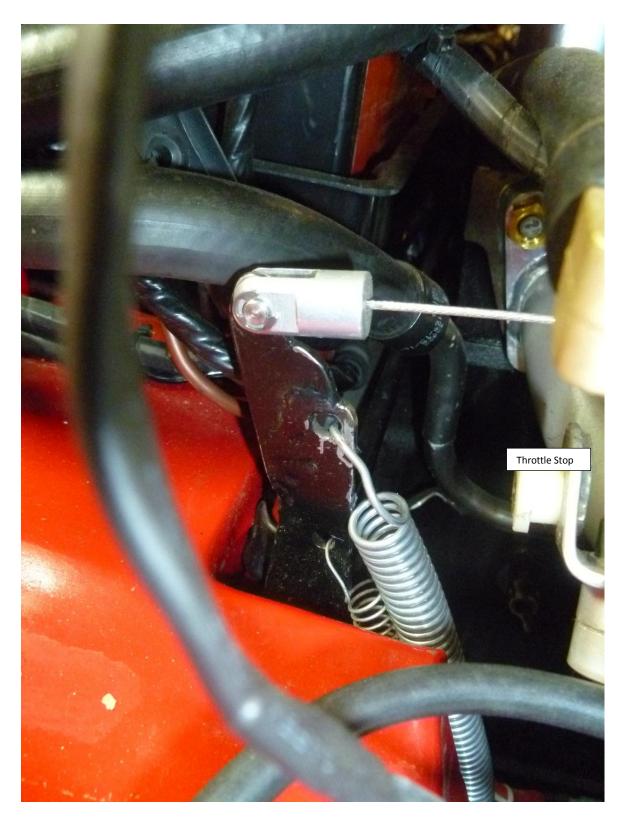
For a gasoline internal combustion engine to be useful, you have to be able to constantly control 3 things, the timing of the spark, the amount of fuel and the amount of air entering the engine. Theoretically, you would like each cylinder to get the same amount of air on each power stroke and have any changes be equal. Many factors affect the volume of air; the individual cylinder displacement, the individual combustion chamber volume, the intake valve opening/timing, the porting in the head to the valve, the intake manifold fit and design, the throttle design and the intake design from the throttle plate to the atmosphere. The last three items can be more easily addressed than the others. Since we use the throttle to drive the car, it is probably the biggest item.

Most TR6's have either 2 or 3 carburetors with a single throttle plate in each. Some TR5's have six (PI cars), though I believe they are ganged into 3 sets of two. Ask John Horton how the PI throttle is set up. In any case, we would like the airflow across each throttle plate to be the same. That way, the air/fuel charge is equal between the carbs. That is why we spend so much time "balancing" the carbs. Typically, we do this at idle and hope that it is similar at higher flow rates. Another aspect of throttle plates is tip in/low throttle response. You want enough throttle plate/intake throat area to not impede max flow at max RPM while at the same time have lots of control at tip in for the throttle at very small throttle movements. For a variety of reasons I decided to get away from the stock intake manifold set up, this decision let me go to a single throttle plate to common plenum setup. No more balancing and easier to integrate with the fuel injection computer and idle control design. However, I wanted max flow and therefore wanted a big throttle plate. The compromise was a GM throttle body that had a throttle plate with a blanking piece on one side, effectively only opening on one side of the plate at small throttle openings. The blanking piece has some effect at WOT (wide open throttle) but not much. Additionally, I could use a GM style idle air

control scheme. That is a small electrically controlled auxiliary valve in the throttle body that opens and closes by the fuel injection computer programing. It is stepped more open when cold and closes down when hot. The amount of air flowing through this IACV (idle air control valve) determines the idle speed. It does have a feedback feature wherein the computer constantly adjusts this valve to give you the idle speed you programmed in.

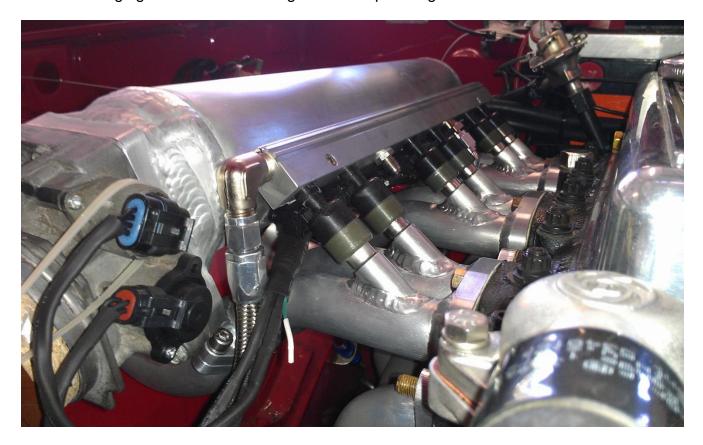


My tip in response turned out perfect. However, I needed to ensure that I could get WOT at full pedal depression. I extended the stock throttle lever to pick up the throttle cable that then goes up to the throttle body. The length of the lever determines the amount of cable pull from the gas pedal up position to fully depressed pedal. I have an adjustable stop on the intake manifold that sets the up position and the amount of pull is slightly more than the amount of cable it takes to get WOT on the throttle body. As I don't have any springs in the system other than a small one at the throttle plate and the stock one on the throttle lever. That lever spring determines the gas pedal 'feel'. I did have to go through several iterations of throttle springs to give the right "feel" to the pedal. When the springing was too light, it was easy to get into the bucking bronco on the gas pedal. Too heavy of a spring would be fatiguing and hard to control at tip in/small throttle openings. I am pretty close right now but the spring is easy to change in the future.



That brings us to intake manifold design. The most optimum place to put fuel into an engine is directly into the cylinder itself. However, that requires very high fuel pressures, high temperature injectors and combustion chamber/cylinder head design. The next position

would be on the back side of the hot intake valve. The closest we can get is to inject into the intake port from an injector positioned as close to the head as possible. That is the highest flow point we can get to and has the minimum amount of wall wetting to the intake valve. Wall wetting is the fuel that condenses out (when cold) or just hits the wall of the intake runner. As the wet wall gets fuel onto it, it also evaporates fuel, affecting the air fuel ration. Some of this can be compensated in the programming but keeping it to a minimum is best. This is one reason why TBI (throttle body injection) wasn't as effective as single port injection schemes. Another reason is flow rates due to intake runner lengths. Intake runner lengths directly affect the amount of air entering the cylinder. Different lengths will give different charging. This can lead to significant torque/HP gains or losses.



Ideally, we would like the same length for all cylinders, tuned for the expected operation of the engine. Short runners are best suited for high RPM applications and longer runners for lower RPM applications. Some modern engines actually have two sets to optimize engine operation in different RPM bands. The TR6 engine bay doesn't lend itself to runner length tuning, nor is the stock intake manifold set up very well for balance between cylinders. However, my design gave me 20" of runner length from the bell on each runner to its associated intake valve. This is tuned for operation around 3600 RPM. My intake runners ended being built in multiple pieces because when I mocked it up, it didn't look like I could access the manifold bolts with it as one piece. So, I have a set of CNC flanges with O rings and the associated complexity. Examining the pictures you can see I have good clearance for this design in the engine bay. The plenum and throttle body clear the hood with about 1/4" clearance.

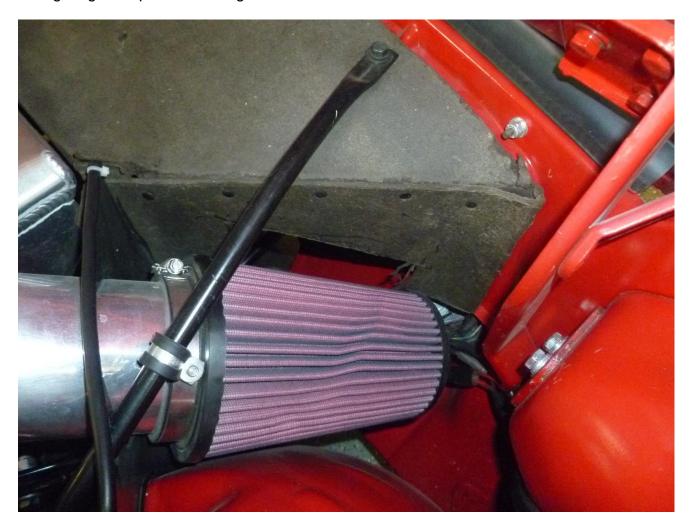


The plenum is an extruded aluminum piece that is close to the optimized volume of 2.5 times the capacity of the engine. It is a constant cross section. This isn't optimum as the flows to the rear most cylinder will be slightly different than that at the front cylinder. A tapered plenum would be best but fabricating it would be difficult. I have attempted to compensate for the flow difference by having different fueling tables. One set of tables (and O2 sensor) for the front three cylinders and another set for the back three cylinders. The plenum needs to have several air pressure (manifold pressure or load) connections. One is to the fuel injection computer, one to the fuel pressure regulator, another to the brake booster (while I had one that is) and one for positive crankcase ventilation. Additionally, I used the plenum to anchor the fuel rail. This provided a handy and elegant solution.





Last but not least is air filtration. From a flow perspective, you don't want to bolt the air filter onto the throttle body. You want a long enough pipe to smooth the airflow out before it hits the throttle body but not be too long or too small in diameter to restrict max flow. Secondly, the best air is cool air from outside the engine compartment. This gives the best performance and is why many plumb air hoses to the air filter box. I have an air dam that blocks off the right front corner of the engine compartment for my air box. There are holes in the side of the radiator cowling to provide cool fresh air to my air filter. I can't say if my tubing length is optimum but II got it all to fit in with the minimum of modification to the car.



The stock set up has a variety of issues, hot air intake, throttle plate balancing, not optimum runner length, non-equal runner length, excessive wall wetting, and a throttle linkage only Rube would be proud of. My set up has eliminated all of these problems. However, if I had to do it again, I would change the profile of the runner slightly. This would permit the runners to be one piece and fabricated out of mild steel tubing. The cost would be significantly less than my all aluminum manifold. Additionally, I could eke out another 1/2" of runner length too.

#### **CLASSIFIED ADS**

#### **WANTED:**

Looking for working speedometer gauge for a 1974 TR6.

Please Contact "Kiwi " Wayne Treloar, 480-986-1268 or cell 760-505-8504

#### WANTED:

I am working to redo the interior of a 1976 Spitfire 1500, and it is missing the center dash support. Does anyone have one that they would be willing to sell? Thanks.

Bo Shaw boshaw@live.com Cell: 760-977-6612

#### FOR SALE:

TR7 Complete Official Manual

TR2 & 3 Manual

Service Instruction Manual - TR2 & TR3

Complete Triumph Manual - 1953-61

Spitfire Workshop Manual

Shop Manual TR2-TR4A

Spitfire Maintenance Manual

4 Spitfire roll-down windows

**Assorted Tools** 

**CALL: Grace Pennell 928-537-3355** 

#### FOR SALE:

1975 TR-6 project car. All matching parts (engine, gearbox, diff). All original body steel. Boot, bonnet, quarter panels still in good shape. Was re-painted once in the original color British Racing Green. Car does not run and has not run for a long time. I have the original seats but there is no other interior. Car is missing the center dash support. I am cleaning it up now and taking note of the condition of everything. There is some rust but it isn't "bad". I have a number of factory new spare parts including a brand-new wood dash that was never installed.

Years ago, I re-bushed all of the suspension components and installed new shocks. I replaced the speedo and the new one shows around 40k on it. The old one failed at around 60k. Gauges glass are clean with no fogging but they do have a little corrosion that can be taken care of with some elbow grease.

I plan to list the car on eBay by next weekend. My 1971 TR-6 is my daily driver and takes all the spare time I have for car work. My 16 year old is eyeing the '75 but realistically we don't have time to bring it back. The '75 car was my daily driver for a long time in the '80's &'90's until the gear box failed. I got another car and this one just sat covered up. I want to sell the whole car - not parts off of it. Looking for best realistic offer. I have not yet taken any photos.

Call:	GRANT	്	7WC	)RTH	l at 7	N4-F	560-	.0700	
Can.				/I	1 at 1	∪⊤⁻੮	JUU-	0100	

\*

#### **MEMBERSHIP**

Dues are \$18.00 per year with a discount for multiple years subscriptions. For membership information, contact: **GEORGE MONTGOMERY** at **480-290-1310** or email: **georgemonty32@gmail.com** 

**Application form on next page:** 

### DCTRA Membership Application



Please print and return completed form to: John Reynolds, Treasurer 806 E. Campus Tempe, AZ 85282

#### Member Info:

Name:						
Address:						
City:			State:	_ZIP:		
Phone:				Phone:		
email: (required	for newsletter	notificatio	n)			
Auto In	fo:					
Make:		Model:		Commission #:		
Make:		Model:		Commission #:	7	
Make:		Model:		Commission #:		
Length of	Membership					
	One Year \$18.00		I would like to	Receive the Newsle	etter via:	
1	Two Years \$34.00		Email US Ma	il		
	Three Years \$50.00		Comments/Su	ggestions;		

#### Websites

#### Desert Centre-Triumph Register of America www.dctra.org

Triumph Sports Car Club of San Diego Portland Triumph Owners Association

Tyee Triumph Club(Seattle)
British Columbia Triumph Registry
All British Field Meet (Portland)

Vintage Triumph Register

Triumph 2000/2500/2.5 Register

Rimmer Bros Stag Owners Club TR Sports 6 Club

British Auto Works (OR) British Wire Wheel Save Our Cars British Car Forum

Triumph Travelers Sports Car Club

Southern California Triumph Owners Assn

British Motor Heritage Group

6-Pack –USA Club for TR6/TR250 Owners

Okanagan British Car Club (B.C.)

Vintage Sports Car Club of Calgary (Alberta)

Moss Motors

Small auction and forum Classic Autosport Magazine International Spitfire Database British Motor Club of Utah

Columbia Gorge MGA Club (Classic Gorge Rally) www.columbiagorgemgaclub.com

Victoria British

Triumph Register of Southern California

Hill Country Triumph Club Tucson British Car Register Central Coast British Car Club

Texas Triumph Register
Delta Motorsports
C.A.R.S of Phoenix

http://clubs.hemmings.com/sandiegotriumph

www.portlandtriumph.org www.tyee.triumph.org

www.3.telus.net/bc\_triumph\_registry

www.abfm-pdx.com

www.vtr.org AND www.vtr2007.com

www.t2000register.org.uk www.rimmerbros.co.uk

www.stag.org.uk

www.tr-register.co.uk/news.htm www.britishautoworks.com www.britishwirewheel.com www.saveourcars.org www.britishcarforum.com www.triumphtravelers.org

www.sctoa.org

www.heritage-motor-centre.co.uk

www.6-pack.org www.obcc.ca www.vsccc.ca

www.mossmotors.com www.britishcarauction.com www.classicautosport.net www.members.cox.net/spitlist www.britishmotorclub.org

ally) www.columbiagorgemgaciub.com

www.victoriabritish.com www.socaltriumphs.org

www.hillcountrytriumphclub.org

www.tucsonbritish.com

www.centralcoastbritishcarclub.com

www.texastriumphregister.org www.deltamotorsports.com www.englishbawbsclassics.com



#### The International Club for TR7 and TR8 Owners

From showroom stock concours to ground pounding conversions, serving all Triumph Wedge Car owners.

4 color newsletters per year, plus national and regional gatherings at major shows. 25 year archive of technical information to help you keep your car on the road.

Dues: \$15 per year

Triumph Wedge Owners Assn. 1591 People's Creek Rd. Advance, NC 27006 (336) 998-6501

www.TriumphWedgeOwners.org info@TriumphWedgeOwners.org

Formerly the TR8 Car Club of America







# BRITISH MASTER MECHANIC & AUTO ELECTRICIAN



REBUILDING & TUNING, CARBURETORS, BRAKING, SUSPENSION, STEERING, INSTRUMENTS, DISTRIBUTORS, SWITCHES ETC!

AUTO ELECTRICAL REPAIR & FAULT FINDING!

FULLY CERTIFIED WITH OVER 30 YEARS EXPERIENCE!

Specialising in Austin Morris, MG, Triumph, Jaguar, Sunbeam, Lotus, TVR, Riley, Wolseley, Rolls Royce, Bentley, Land Rover, Alfa Romeo, Fiat, Lancia and more...

#### C.A.R.S of PHOENIX .LLC

2625A E. University Drive Phoenix, AZ 85034 (623) 824-3777

www.englishbawbsclassics.com

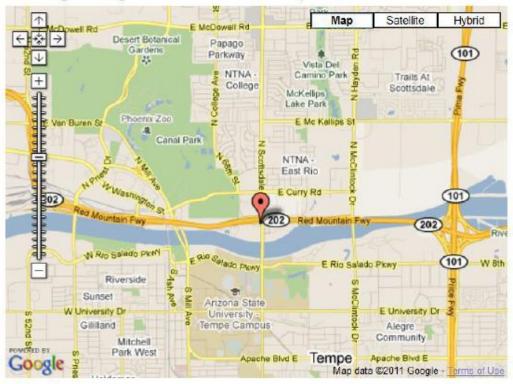
or

www.classicautorestorationphoenix.com email: bobbranton@hotmail.com

### **MERRY CHRISTMAS!**



Note that regular Meeting locations are on the second Tuesday of the Month:



Denny's Restaurant 650 N. Scottsdale Rd. Tempe, AZ 85281