

TRIUMPH CLUB OF NORTH FLORIDA

Volume 29 Issue 7

July 2017

Triumph Club



Of North Florida

1409 Forest Ave.

Neptune Beach, Fl. 32266

A GREAT TOUR OF POWDERTECH PLUS



Notify Norm Reimer of address changes at (904) 246-6044 or email to "suennorm@comcast.net"

All opinions expressed in the articles, columns and other material included in the newsletter are those of the author and do not necessarily reflect the position of the Triumph Club of North Florida, its officers or members. The Triumph Club of North Florida is not responsible for any technical advice which may appear in these pages.

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Member Help Groups

Wiring Problems

Charles Fenwick
Lance Brazil

Polishes, Waxes, Finishes

Lance Brazil

Vintage Triumph racing

Don Marshall
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If you would like to volunteer to help other members with problems on their cars, let us know and you can be listed here.

Coming Events

Aug. - 6th; Sunday @ Noon, Monthly meeting at Kingfish Grill, at Camachee Cove, 252 Yacht Club Dr., St Augustine, FL.

<http://www.kingfishgrill.com/>

Aug. 19th; Formal English Tea, 2:00 - 3:30 at Kings Head British Pub

Sept.- 23rd, Scenic drive to Daytona - details coming

Oct. - 7th; Saturday, British Swap Meet at Kings Head Pub. Bring a table and your unwanted or 'extra' British / car stuff to swap, donate or sell.

Oct. - 21st; Saturday, Annual British Car Show hosted by MG Classics of Jacksonville, at Rivertown Community Center, 90 Lanier St, St Johns, FL

http://docs.wixstatic.com/ugd/9ced75_5edfab153bd14415bd782cb5aeb2b517.pdf

OTHERS: Aug. 16-19th; VTR National Convention, Princeton, NJ. Promotional video - <http://vtr2017.org>

FCCC - <http://www.carcouncil.org/events/> ; for other local car events

President's Corner

For those of you who missed the visit to PowderTech Plus in orange Park you missed a very interesting event. Richard Pittman has been doing this for over thirty years and is very knowledgeable about the process and answered all of our questions. He has not had to advertise since 2011 and has all the work he can handle. See pictures and the article in this newsletter by Penny Levy.

Our next event is mostly social except for a short business meeting where we will resolve conflicts with two upcoming events. We need to select new dates for Swap Meet scheduled for October 7th and our November 4th event, a drive to Washington Oaks for a picnic.

Our next event is in St. Augustine at Kingfish Grill on Sunday, August 6th, at noon. Hope to see you there.

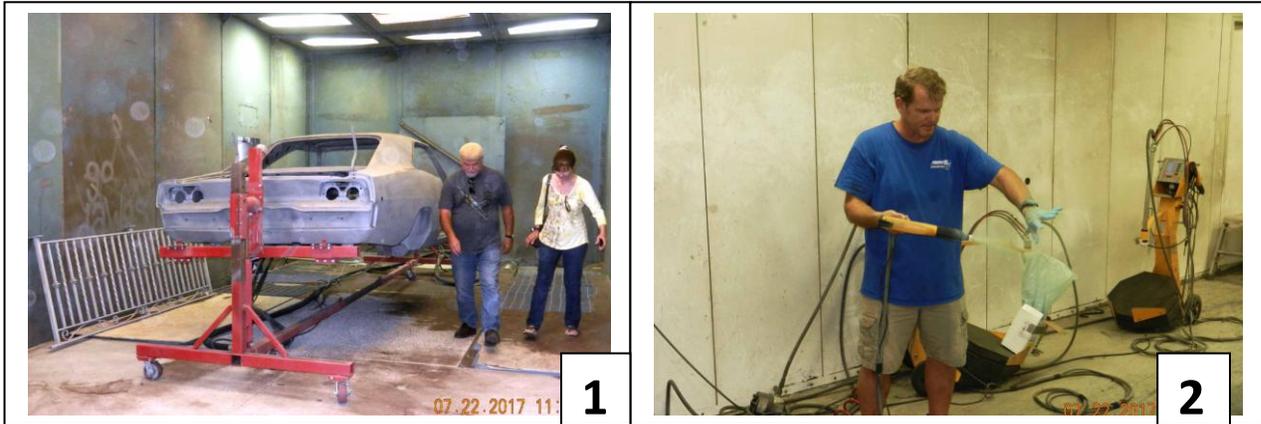
Lance Brazil

July Meeting at Kings Head Pub

Nineteen members attended the July Club meeting at the Pub. All enjoyed the friendship and food then had a short business meeting. While it was a very hot day, it started raining toward end of meeting, so all had to run to put up tops. So it was an exercise event too.



PowdertechPlus visit by TCNF and MG Classics of Jacksonville



If you visit Powdertech Plus's website (<http://powdertechplus.com/index.html>), you will find that it is very basic. Owner, Richard Pittman, says they haven't needed to market their services since 2011. If you visit the company at 98 Industrial Loop in Orange Park, you will discover the reason why no marketing is needed. Powdertech Plus is a well-run outfit that gets all the work it can handle through customer referrals.

Saturday, July 22, TCNF was invited to join the members of MG Classics of Jacksonville, for breakfast at the Cracker Barrel in Orange Park, then a short drive to Powdertech where Richard gave us a tour of the facility, and showed us the powder coating process on a bicycle frame that he coated a seafoam green.

By the number of questions, it was apparent that we all found the field trip very interesting. Before beginning the tour with the sand blasting shop, Richard gave us a bit of background on powder coating. The process made its debut in the 1950's; Ford Motor Company was powder coating its Pintos in the early '70's. Ford discontinued the process due to corrosion problems. It was found that the metal had not been properly prepared, and had not been adequately covered by the acrylic-based coating. During our tour, we learned that 1.5 mils (0.0015") is the minimum thickness for an adequate coating. Three to five mils is best. For quality control, a sonic caliper is used after heating in the oven to ensure that the coating is the correct thickness.

The applications for powder coating are nearly endless. Among the items in the fenced yard outside of Powdertech was outdoor furniture, antique milk cans, lawnmowers, decorative metal work, and a boat T-Top. Inside was a cast iron bathtub. Because the process involves heating the coated product to 400 degrees Fahrenheit, plastics and rubbers don't always survive the process. Bushings, Bondo, and wiring are among the things that should be removed prior to coating.

After the introduction, Richard lead us to the blasting shop. Inside was the body of a 1970 Dodge Charger on a rotisserie that had recently been blasted. Cars are often put on the rotisserie during a restoration process so that workers, whether painting or powder coating, can turn the car to get to all areas. In the case of the Charger, the owner wanted the body to only be blasted in preparation for paint.

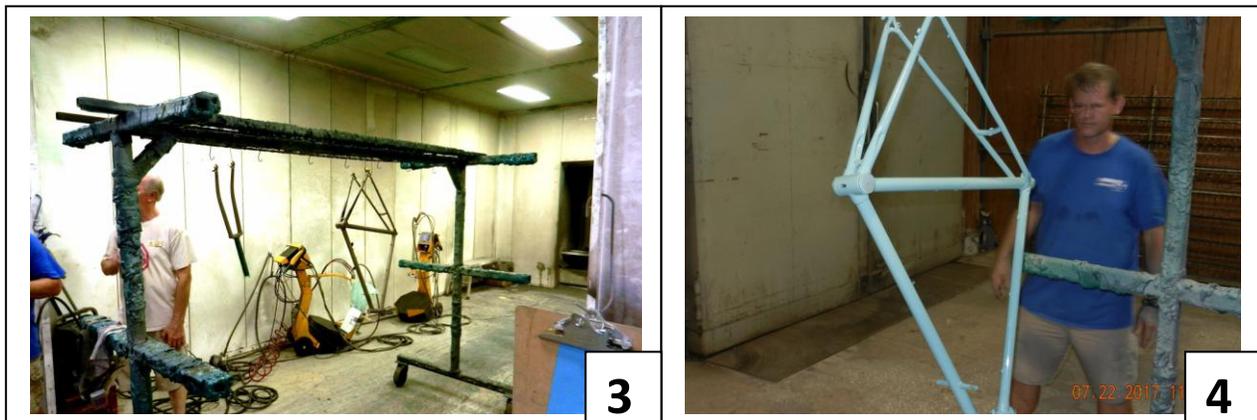
All parts to be coated must be cleaned down to the bare metal. Powdertech Plus uses three different materials, glass beads, sand, and soda, for blasting, depending on type and condition of metal. These materials are usually ordered in thousands of pound lots. Sand and soda are the materials most often used by the company. Sand is used for corroded and rusty metal. Sodium Bicarbonate (baking soda), with an anti-clumping compound, is used on delicate metal. Soda blasting was first used during the 1982 restoration of the Statue of Liberty to gently remove the buildup of six coats of paint and one coat of coal tar in preparation for Lady Liberty's centennial in 1986

Leaving the blasting shop, we moved into the main building which houses the work shop, and two propane heated ovens. The bicycle frame on which Richard demonstrated the process hung from a large rolling rack. Unlike paint, there are no Volatile Organic Constituents (VOCs) in powder coatings. The use of a respirator is not necessary. However, Richard commented that he usually uses a paper mask to prevent inhalation of the harmless, colorful powder.

In Photo No. 2, using an electrostatic spray gun, Richard sprays his hand with the powder as a demonstration. The powder is inactive at this point, and is quickly blown off with compressed air. An electrical charge is used to draw the coating to the metal and, unlike paint, spraying does not have to be precise since the positively charged coating is attracted to the grounded metal.

Picture No. 3 shows the bicycle frame ready for coating. Due to the high voltages – low amperage – used on the frame to attract the coating, everything in this room (including Richard) is grounded to prevent sparks. Richard says that if you were accidentally hit with the electricity it would be similar to being shocked by a spark plug wire.

In Picture No. 4 note the areas of the frame that are plugged or masked where parts will be bolted, or pressed, on. Because the coating will be .003-.005 inch thick, these areas must be left bare in order for the parts to fit when reassembled.



The final step was to roll the frame into the preheated oven where it baked for 30 minutes. The heat causes the powder to melt and flow, creating a chemical reaction that forms a polymer with a network-like structure that is as durable as an OEM surface. The oven used during our demonstration was the smaller of the two. The largest has room for two car bodies.

Powder coating can be mixed into over 46,000 colors, with dozens of textures. It can be used in conjunction with painted surfaces as a primer, or a clear coat. All BMW passenger cars come from the factory with a clear powder coating.

Powdertch Plus has worked on many of the MG club members' cars. They have also sand blasted the WWII jeeps of two TCNF members.

Richard said that turnaround time is currently two to three weeks. If your vehicle is a daily driver, you can make an appointment to hold your place in the queue. Richard's wife, Dawn, will call you when it's time to bring your piece(s) in. In most cases, a project can be ready for pick up the following day.

The charge for sand blasting is \$150/hr. The average car will take about three hours. A set of four wheels can be cleaned, prepped, and powder coated for around \$340 (\$85/wheel). The bicycle frame we watched Richard coat cost around \$100.

HOW TO USE A MULTI-METER, PART 1 - Introduction

by Rob Siegal (from Hagerty magazine)

Introduction to The Multimeter

The multimeter is the quintessential tool for dealing with electrical problems in a car. A few weeks back, in our introduction to electricity, we said that there were three main electrical parameters: Voltage, current, and resistance. A multimeter is the tool to measure these three parameters. In fact, it's actually three tools in one:

It's a **voltmeter** that measures voltage.

It's an **ohmmeter** that measures resistance and continuity.

It's an **ammeter** that measures current.

Originally, these actually *were* separate pieces of electrical equipment, but for nearly a hundred years they have been combined together into the multimeter. Multimeters used to be analog instruments with a big swinging needle, but digital multimeters supplanted analog ones many years ago. We will call them multimeters or simply "meters," but they are also called "digital multimeters" (DMM), "digital volt meters" (DVM), and "digital volt ohm meters," (DVOM, and no, it doesn't stand for "digital volt'o'meter," even though that's funnier).

What Kind of Multimeter Should You Buy?

Let me say this straight out: Most electrical troubleshooting consists of verifying the presence or absence of voltage, and the presence or absence of continuity (and we'll tell you how to do that in upcoming articles). Any multimeter will let you do these two things.

Now, you can go to Harbor Freight and pay \$5.99 for a perfectly functional multimeter—and I have several of these so I can leave them in the glove compartments of several cars and laugh if they get stolen—but really you should pay more like \$25 and get an *autoranging multimeter*. Here's why.

If you look at the photograph below of the \$5.99 Harbor Freight special compared to an old meter I have, you'll immediately see that the big dial in the middle of the \$5.99 meter has many more choices. This is because the \$5.99 meter does not have *autoranging*—that is, you have to manually set its range of values. If you are using a non-autoranging meter to measure voltage, you choose the range closest to the 12 volts in the car's electrical system, which is usually the 0 to 20 volt range. But, generally, rather than spend \$5.99 for a non-autoranging meter, it's better to spend perhaps \$25 for an autoranging one, so you can just turn the knob to voltage or resistance or current or whatever you're trying to measure and have the meter determine the proper range.

Another desirable feature is an audible beep to confirm continuity. Every meter except the least expensive ones will likely have it. That way, you don't need to look at the meter when you're tracing out a wire; you can just listen for the beep (we'll get to this in a later article).

The Harbor Freight \$5.99 multimeter (left) does not have autoranging, and consequently, its center selection dial is cluttered with options. In contrast, any autoranging multimeter (right) has a much simpler dial



. If your car has a conventional points-based ignition, a meter with a capacitance measurement is useful for checking if the ignition condenser is bad. If your car doesn't have points ignition, don't worry about it. Even if it does, there are other ways to test the condenser. It isn't that big of a deal.

A meter with min-max capability—the ability to log a certain amount of data and report the minimum and maximum values with the recorded segment—can be handy, but it's rare that I use it.

A word about Fluke multimeters. Fluke is like the—choose your favorite automotive superlative (Porsche, Cadillac, Ferrari, BMW, whatever)—of multimeters. They make a very high-quality, long-lasting, reliable product. I have several Flukes that I've inherited from my 30 years in engineering. But just like a do-it-yourselfer doesn't *need* Snap-On tools, a do-it-yourselfer doesn't *need* a Fluke meter. It's like anything else. Set yourself a budget, and buy an autoranging meter within that budget. Don't *not* buy a meter because it's Fluke or nothing. Buy a cheap meter, and if you also want a Fluke, buy one when you have the dough.

How Accurate does a Multimeter Need to Be?

If you are an electrical engineer or a technician who will also be using a multimeter to test and repair printed circuit boards or electronics, then you need an accurate meter. But, again, most of automotive electronic troubleshooting involves verifying the presence or absence of voltage and the presence or absence of continuity, and any multimeter is accurate enough to do this. It really doesn't matter if the meter reads 12.6 volts or 12.5; what matter is whether it reads 12.6 volts or zero.

What are “Automotive Meters?”

For basic automotive troubleshooting, you're simply trying to measure a static signal (that is, a signal that isn't changing). However, in the 1980s, cars began incorporating Variable Reluctance Transducer (VRT) sensors such as ABS wheel speed sensors and crankshaft position sensors that output a sinusoidal wave whose frequency varied with speed. In the 1990s, these sensors were largely replaced with Hall Effect sensors that output a square wave. To test these, you need a multimeter that is capable of detecting these sine wave and square wave signals and reporting their frequency (and, in the case of square waves, the pulse width and duty cycle). This is sometimes referred to as an “automotive meter,” but there is no standard definition of the term, so it is possible to buy something with the phrase “automotive meter” printed on it that doesn't do what you think it should. This is a complicated subject that is covered extensively in my book *The Hack Mechanic Guide to European Automotive Electrical Systems*. If you own a vintage car without ABS or fuel injection, don't worry about it.

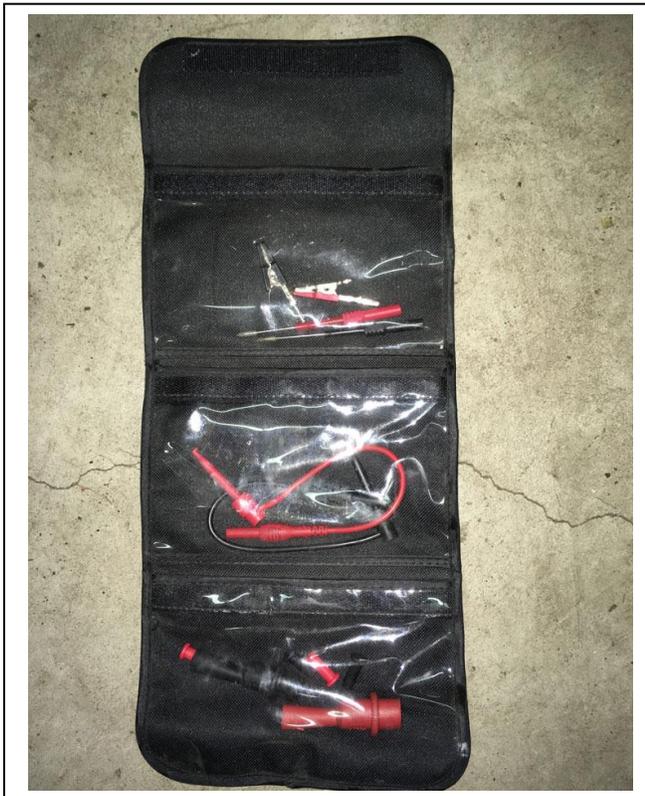
And “True RMS” Meters?

This is a term that has to do with how well a meter distinguishes between square waves, sine waves, and

other time-varying signals, and how well it reports parameters like amplitude and frequency. If you're troubleshooting sensors that output time-varying signals, or systems with household 120 volt alternating current (VAC), it can be very important, but for the static 12V DC environment of a car, don't worry about it.

Probe Lead Attachments

Any meter will come with a pair of red and black probe leads, but in addition, it is incredibly handy to have a set of attachments. For about fifteen bucks, you can buy a probe lead kit that has a number of attachments that plug into the ends of the probe leads. By far the most handy is a set of alligator clips that let you attach one of the probe leads to either the measurement point or to a ground location on the body of the car, allowing hands-free measurement. Also valuable is a set of thin pointy probe tips that allow you to back-probe connectors while they're still plugged in.



Above: *The two most useful probe lead attachments: Alligator clips and back-probe pins.*

Left: *An inexpensive set of probe lead attachments.*

The Anatomy of a Multimeter

Every multimeter has the following four main areas:

The display at the top of the meter showing you the measured value.

The option buttons just below the display.

The big rotary dial in the middle of the meter used to select the basic measurement.

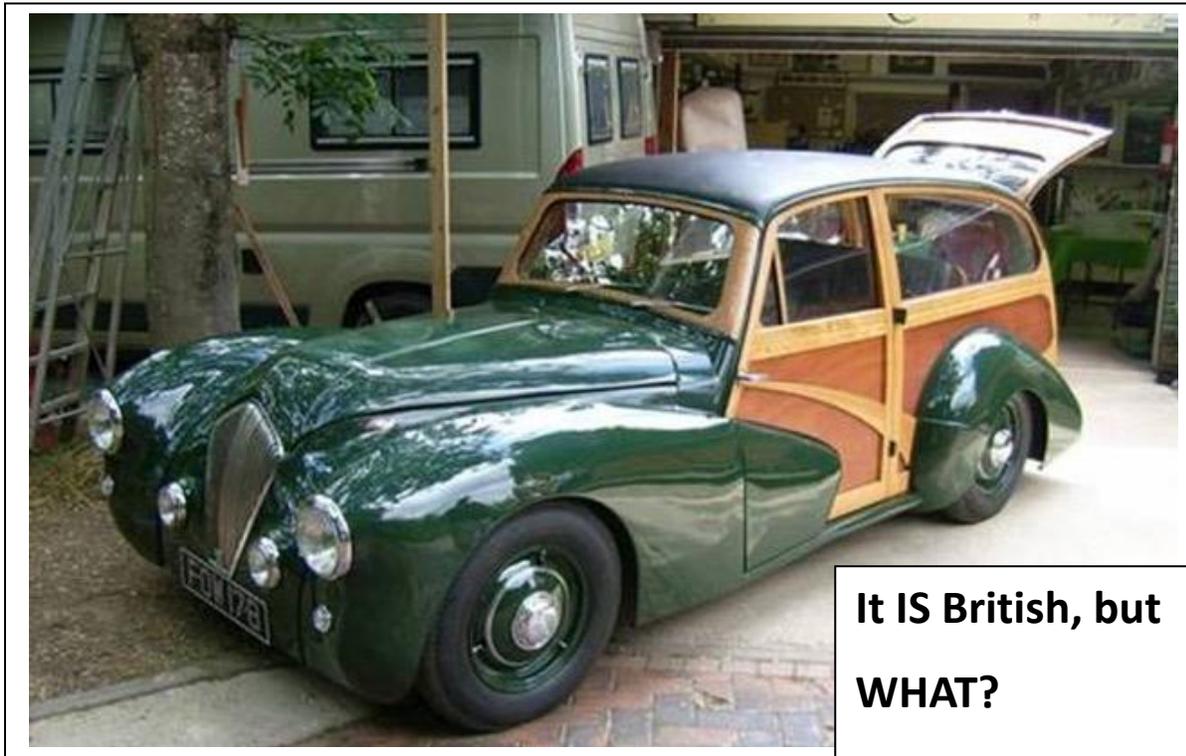
The sockets at the bottom used to plug the black and red test probes into.

The thing to remember is that, in order to take a measurement, you need to twist the dial to the correct setting *and* have the probe leads in the right socket *and* possibly hit one of the buttons. With this introduction out of the way, next week, we'll actually use a multimeter to take some measurements.

Check out new tech for Bike safety: http://electronics360.globalspec.com/article/8880/video-watch-how-bike-to-vehicle-tech-can-prevent-motorcycle-accidents?id=0&email=arringtonsp%40att%2Enet&md=170614&mh=1b9c8d&Vol=Vol10Issue8&Pub=70&LinkId=1868395&keyword=link_1868395&et_rid=1008387414&et_mid=83488488&frmtrk=newsletter&cid=nl



The familiar layout of a multimeter with display, option buttons, rotary dial, and plug sockets.



**It IS British, but
WHAT?**

I ate 4 cans of
alphabet soup,
and just took probably the
biggest vowel movement
ever



Jewelz Gemz

www.jewelsartcreation.com

Relationship Tip For Men: When a woman says, "Correct me if I'm wrong but..." DON'T DO IT!! IT'S A TRAP!! Do NOT, I repeat, do NOT correct that woman!!!



Relatable Post #1931

I have come to the conclusion that dryer lint is the cremated remains of all of my missing socks.

Once you lick the frosting off a *cupcake* it becomes a muffin.... and muffins are *healthy*.
You're welcome 😊

Did you know?



Line dancing was started by women waiting to use the bathroom.

www.facebook.com/ShutUpImStillTalking

Goth...

Hippie...



Join the Triumph Club of North Florida

If you're interested in Triumph cars, You should be a member of TCNF. The benefits are outstanding, a monthly newsletter that is entertaining as well as informative with free ads to members, monthly events, rallies, shows, picnics, tours and camaraderie with fellow enthusiasts...

Membership Application/ Renewal

----- (Please Print) -----

New _____ Renewal _____

Car Information

Year Model Comm #

Name _____

1. _____

Spouse _____

2. _____

Address _____

3. _____

4. _____

5. _____

Home Phone () _____

Please circle interest in:

Work Phone () _____

Tech Sessions

Email Address _____

Social Events

Autocross

Tours

Fun Rallyes

Car Show

T-S-D Rallyes Races

VTR Member? Yes _____ No _____

TRA Member? Yes _____ No _____

Make your \$25.00 check payable to:

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c/o Norm Reimer,
1409 Forest Ave.
Neptune Beach, Fl. 32266