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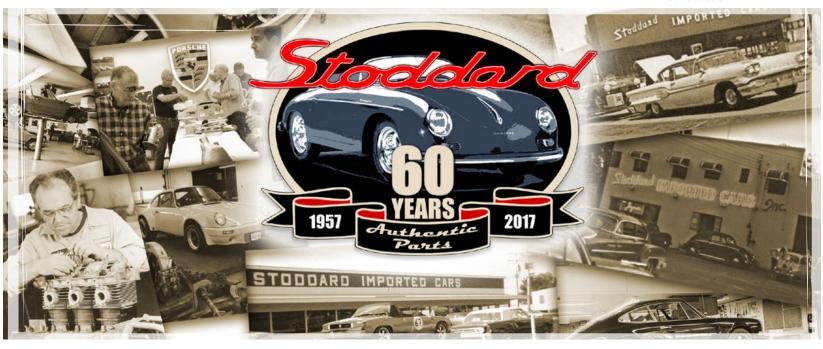
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### 912 Registry Magazine

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Don't look now, but the 912 Registry has gone social!



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**TBD** 

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#### **HOW TO REACH US:**

For editorial contributions, letters to the editor, advertising information or general magazine questions, please contact Mike Vriesenga: editor@912registry.org

#### **CONTRIBUTORS TO THE ISSUE:**

Jeff Trask, Richard Maxey, Margo Maxey, David Langston, Tom Roos, Georgia Langston, Mike Vriesenga, Bob Gillespie, Peter Graham, Claudia Graham, Harry Hoffman and Neil Farnsworth

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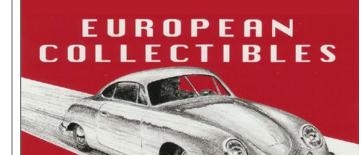
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### MESSAGE FROM THE PRESIDENT



In 1997, my neighbor came over and asked me about buying a Porsche. Being a lifelong car guy, I guess I was as good to ask as anyone. He knew my dad drove a Porsche 911, but at the time, my car habit was all about road racing a Mustang. Anyway, he said he was interested in a Porsche 912. I asked him why not a 911? He had the money to buy one, so why bother with a gutless old 912. In spite my resistance to his 912 talk, I agreed to look at one with him that afternoon.

It was a red 1965 Sunroof coupe with a black interior. It was a nice looking little car, and it sounded pretty good. (I had no idea how rare it was.) The owner asked if we'd like to drive it and she flipped us the keys. We headed down the street, but my buddy really sucked at driving a clutch and I asked if I could drive.

The little car had me at the first shift. How could it be? It had 100 horsepower. How could that be fun? My daily driver was a 5-liter Mustang Cobra. I have always driven powerful cars and the 912

was gutless! How could a car that had so little power be fun to drive? Well, you that are reading understand, but these cars are so much fun and I had to have one.

I found a '66 that cost \$4,500 in 1997. It was a complete pile. I made all the mistakes. It was rusty, had a weak motor and transmission and a salvaged title. I spent thousands of dollars making it right, and after two years I sold it for \$4,500. Bad plan, but I didn't have one. Along the way, I meet John Benton, Jones Low, Dave Hillman, Jeff Whitney, Rick Becker and others in the early days of 912 ownership.

After I sold my 66, I wanted to replace it with another 912. I did lots of research this time. I incorporated the knowledge gained on the first car and bought the best car I could find - a really nice and very original 1969 Targa in Bahama Yellow (personal favorite color). This car was a completely different experience. I really didn't need to do much to it, as it was so nice out of the box. It cost \$12,000, and most of my 912 buddies told me I got a good car, but overpaid (I chuckled when I wrote this).

I have been accused of having car ADHD. I kept the Targa for just 2 years and then I was on to a '69 Sunroof and 9 more 912's through today. Each 912 I owned benefited from my experience with the earlier cars. And each has been a better driving experience than the last. Today I

drive what could be the perfect 912. It's a 1967 factory sunroof car. It's gray, but was born Bahama Yellow. When I say, "It could be the perfect 912," I mean that it would really need to be Bahama Yellow to be perfect...someday.

I drive it every day. I drove it 14,000 miles in 2016 and already 6,000 miles in 2017. It is my daily driver. Charles Danek and I have a very similar love affair with our cars. They beg to be driven, and I can't wait to get in it and do just that. There have been several trips to the Texas Hill Country Rally. There's Monterey every year for car week, and of course those runs to the Ranch Market for a bottle of Zinfandel. I just love driving my 912. 4200 RPM all day on the open road, and boy does it get really fun if I'm driving with a bunch of old and new Porsche's and astonishing the other Porsche owners with just how well a 100-horse-power car can blow them into the weeds!

The 912 bit me hard. I was here from the beginning. There was a group of us who wanted more than Rick Becker's website was giving us, and we crafted this club. It started in John Benton's back yard. We made a plan that included events, a magazine and a way to get information about 912s and to interact as a community. In doing this, we also knew that it would eventually raise the values of our cars and that the 912, once disrespected by the Porsche community, would gain favor in time. One thing was clear. We all loved these cars, and we knew there were others that did too. What have we wrought in 16 years?

It isn't perfect? Not even close. Can we make it better? Of course, we can. Over the last several years the Registry has revamped the website. We have a great creative team taking over where Charles Danek and Carol Leflufy have brought us, and I believe it can only get better. Your board of directors will keep refining the website until it becomes the go-to place for 912 information. Our goal is to make the site useful for owners to maintain their memberships and to register their cars without the requirement of a webmaster. It will be the go-to place to register for future events (Rendezvous) and to buy 912 gear. We are an all-volunteer army, and we are always looking for people to help us out. Please contact me at NO911NV@aol.com if you have an idea, issue or a way to help us make our collective 912 experience better.

I was attracted to the 912 at first drive. It turned into a passion that has never waned. Since that first drive, I have not only had many 912's, but I have met many owners. That's the best part. You see we are the stewards of our cars, but it's the people we meet along the way that have made this journey fun. As much fun as I have driving my 912 around every day, it's more fun when I'm surrounded by other 912s and their owners! I'm looking forward to seeing you on the road...

Jeff Trask

#### For 30 years I didn't drive,

insure or license my 912. Only a Porsche person would keep a car 30 years and not use it. It was buried in our garage under boxes of stuff that never seem to leave garages. The reality is I never sold the 912 because it is the only new car I owned in my life. That and family memories.

Although I didn't drive the 912, I maintained it. I changed the oil when I first parked it and several more times. Porsche says always store a car with clean engine oil. I started the engine from time to time. This was a real head ache because I had to prime the carburetors and charge the battery. I gave up on this about 1983 when I drained the fuel tank and oiled the cylinders. The engine did not start from 1983 to 2007, although I turned the engine over by hand about 5 times during this period. Fortunately, our garage is dry with little temp change. When the tires looked low on air, I would remove the 5 tires and wheels, take them to a gas station, and inflate each to 32 lbs. When I mounted them back on the car I rotated each wheel 1\4 turn to prevent flat spotting. I didn't put the 912 on blocks because of

earthquakes. This was not worth the effort as I ended up purchasing new Michelin 165R15 tires when the car put back on the road.

My wife Margo and I spent 15 months making our 912 road-worthy after 30 years of storage. Here are most of the items we fixed before sending the car to shop(s) for work. We could have done the shop work ourselves but knew it would take us years. We wanted to drive the barn find in our garage.

The brake, gas, clutch pedals had to way too much play. I found little piles of white powder below each pedal where the original nylon bushings had disintegrated. We installed bronze bushings and a new clutch return spring, cleaned and painted the pedal cluster so the pedals all work like new again. We found similar problems with the shift mechanism and throttle linkage.

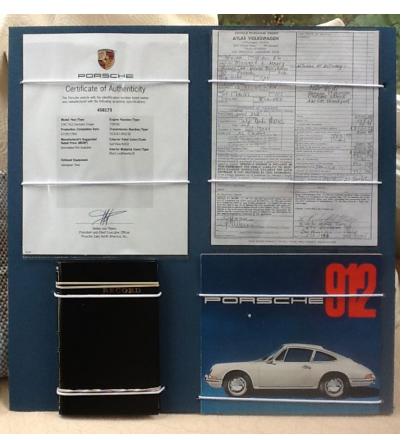
The rubber pieces survived no better than the plastic pieces. I replaced the rubber fuel lines from the tank to the carburetors with BMW 8x13 mm flexible rubber fuel lines using aircraft type clamps. This fuel line is compatible with

today's ethanol infused fuel. I replaced the brittle, leaking braided oil lines to the filter canister. The horn didn't work because the rubber horn insert under the butterfly horn lever was old and hard.

The brake pedal would not depress because all four brake hoses were totally blocked and would not let brake fluid flow.

We spent a lot of time on the brakes. The brake pads were dragging on the rotors so the wheels did not turn freely. I removed all four calipers, extracted, cleaned and polished the pistons and cylinders, then reassembled them with new O rings and dust cover boots. I was sure to rotate the pistons with a gauge to get proper piston angle to pad on contact with rotor. Although the master cylinder was working fine after 31 years, I replaced it to be safe. The parking brake also worked fine, but I cleaned and painted the drums, deglazed the shoes, repacked the bearings, and installed new seals and O rings. I painted the drums, calipers and backing plates, installed new brake pads and DOT 4 brake fluid so the brakes look and work perfectly.

Nothing made of petroleum aged







well. I replaced and repacked the front wheel bearings because the grease was hard and dry. I could see varnish in fuel tank when the fuel level sending unit was removed. I put one gallon of clean paint thinner in the tank, rocked the car many times over 2-3 days to slush thinner inside tank, drained the tank and repeated until it returned clear. I found Fram G-2 filters on sale and bought ten since I felt I would be changing filters often once we start driving the 912. This proved true. The 32-year old CV joint grease 32 was hard and dry, so I cleaned the joints, repacked them with

proper grease, and installed the drive shafts on opposite sides to apply forward drive pressure to unworn side of splines.

I disassembled the frozen Koni shocks and found the paraffin in the hydraulic fluid had separated, as in cream and milk, clogging the valves in the piston. I cleaned out the paraffin, added new Swepco 715 hydraulic fluid, then polished and waxed the shocks before reinstalling them. battery rubber hold down strap broken. The door latches and windows would not work because old dry grease acted like glue in both mechanisms.

Since the clutch would not disengage, my daughter sat in the driver's seat while I rocked the car until it released. I installed new clutch assembly and throw out bearing later to be safe.

All the removing tires and wheels, and the trips to gas station to inflate them during storage was for naught. I installed new Michelin tires with tubes on my original chrome, 5/66 sate-stamped wheels.

Try as I might, there were some jobs I couldn't do. The engine was smoking and low on power. This 616 engine had never been apart since it was assembled maybe 49/50 years ago. The shop installed



new JE dropped forged pistons with new cast iron barrels. The heads were sent out for a valve grind with four new exhaust valves and all new valve springs and valve guides. I also installed a new high-capacity aluminum internal oil cooler. I decided not to split the case because in the ten years a daily driver (88,860 miles) it received 57 oil and filter changes - one every 1500-1600 miles. I believe in clean oil for air-cooled engines.

The rear wheel camber was way beyond limits and the spring plate bushings were shot from age and sitting, so the shop installed 4 new Neatrix bushings. Although the generator was working fine, I sent it to an auto-electric shop for two new sealed bearings to be safe.

Much in the world had changed when I began to drive the 912 again. I did not have a certificate of non-operation as they were not required when we parked it, and I had to buy a trip permit to drive it to DMV for inspection. The inspector thought the engine would be up front and did not understand why the VIN only had 6 digits. I had to explain things were different before he was born. After several months and many forms, I was able to keep my black plates.

In 2008 the work was finished, and we were driving and enjoying the 912. In 2009, we started to enter local car shows when not taking the car on picnics in the wine country. At Porsche events people noticed the cars original condition.

For the 2014 Porsche Parade we packed the car to the hilt with everything needed for our first parade and concours. We displayed all the manuals,

maintenance, car, radio, original keys, sales contract, COA, period correct ad brochure, record log book on two blue matt boards. After judging we walked the field to see all the other great cars. Upon return our neighboring contestants rushed to congratulate us. We said great, but what for? They told us we placed first in class.

This car is not a trailer queen. We drive it to events loaded with table, chairs, umbrella, flowers (Margo), and luggage. We do all the maintenance and detailing ourselves, and we spent two months under the car detailing for the Porsche Parade.

Through 49 years of 912 ownership, with changing life styles, moves, career, family, and retirement, my commitment to the 912 has been the one constant in my life.¤







#### Picturesque Staunton Virginia,

(the locals pronounce it Stanton) sits in the Shenandoah Valley, between the Blue Ridge and Allegheny Mountains. We gathered there in September of 2016 for four days of fun and adventure. It was a great destination for the East Coast Rendezvous.

Some of us arrived as early as Wednesday and renewed old friendships and prepared for the fun and festivities. It was well attended and structured just enough by Harry Hoffman so we all had nice group activities and free time to explore. We had directions available for self-guided tours prior to Thursday's group rides. The roads through the mountains were spectacular offering great curves and nice elevation changes. (I found myself singing bits of Thunder Road even though we were a little north of where that movie was set.) During the group ride we broke for lunch at a beautiful mountain winery.

Tim Beradelli conducted a nice Tech Session. He's a wonderful resource to the 912 community and he shares his knowledge freely. Even I seemed to absorb some good information and I'm a tough target for technical understanding.

Saturday proved that a good thing can get even better as we led off the day with a car show/concours just a block down the street from the hotel. After seeing all the 912s together and picking our favorites we headed out for another fun drive with a nice touch of history included. We ended up at Monticello, the legendary mountain

top home of Thomas Jefferson. Monticello is a "World Heritage Site" known for its architecture and innovation. If you are anywhere in the vicinity make the time to make the visit.

The holiday culminated with a banquet and awards celebration. The array of door prized donated by valued 912 suppliers from across the country made it even better. A splendid time was had by all.

We've all heard the expression, it's not the cars, it's the people. I was tempted to say it's not the people, it's the roads, but that's wouldn't be fair to the people who were all terrific. My thanks and praise to Harry Hoffman and his lieutenants and 



















## A RUSTY RESURRECTION (PART 1)

by David Langston

#### After retiring in late 2011,

I was ready to dedicate more time to my passion of working with cars. I had always wanted to learn how to work with sheet metal. I have worked with heavier metal in the past, but nothing as thin as automotive panels. As it turned out I would get a lot of practice.

My wife and I were out cruising the countryside on a Sunday afternoon in late summer 2012. As we passed through a small coastal town of Oriental, North Carolina, I saw an early Porsche sitting on a trailer on the side of the road for sale. I was not familiar with the 912 story at the time, but knew the early 901 body style. The car was a 1967 and was originally Irish Green with a black interior. It had lived most of its life in Hawaii and was last on the road in the early nineties, so you can imagine the condition. The previous owner had collected panels (floor pan, front pan, rockers etc.) over the years along with stripping a donor 1965 car. Like many of us he had two hobbies, one was Porsches the other was vintage sailboats. He decided he only had time for one, so the car had to go. He had a couple of offers from guys

in the area, but he hadn't sold it because he knew they would never restore the car. We talked about Porsches for a while, swapping stories, and I eventually made an offer. He said the only way he would accept the offer is if I took everything (clean out the garage) and brought it back so he could see it when it was finished. With my trailer for the car and two pickup trucks full of pieces and parts we were off about an hour inland with my new purchase. By the way, the agreed upon price was \$2,800 for everything, which included some 928 stuff for good measure.

The 912 looked in pretty good shape at first glance, but looks are sometimes deceiving. The floor pans were coated with fiberglass which trapped the moisture, and the front pan had a piece of plate steel welded across the front suspension supports.

The rear window was another major rust area. As you can see in the picture, there had been several previous attempts at repair. Some were sheet metal, some galvanized, welded and brazed. I knew the rear window was leaking due to the rust around the edges, but got a few more surprises once I started removing







the interior. After more investigation, I discovered the driver's rear quarter panel had been replaced sometime in the past due to a rear collision, and quarter windows were leaking due to a less than stellar repair. The water ran down and actually rusted both the outer and the inner panels. The repairs had to be done in sections both in and out to maintain the structural integrity.

The water not only damaged the package shelf and the side panel, but it also went down into the rear seat area and through to the torsion bar area. Luckily, the torsion bar tube was solid and the only major issue was the lower section, both inner and outer sections. One of the worst areas was the rocker panels, particularly the driver's side. The outer rocker, inner rocker and even the heater tube were destroyed.

The front of the car was not much better. The driver's side cowl area was especially bad. The leak from the windshield caused major issues with the cowl and the dash structure as well. The inner structure in the wheel well also had major damage partly due to the windshield



leak and also due to water coming in through the gas filler lid. You start to see the weak points when you completely disassemble a car. If the boot that goes around the gas filler tube to the tank leaks it goes right into the inner structure under the luggage area liner (carpet).

In time I learned that doing sheet metal repairs in reasonably small sections is the best approach. In addition, having the right tools and a lot of patience are essential. The need to have a flange and the compound angles do not lend themselves to one piece repair panels.

The inner and outer rockers were easy as they were supplied by the previous owner. The heater tube was a totally different story. No one made a replacement tube when I was doing this work. Having no other option, I made a sheet metal tube on a sip roller, and a square sheet metal box to act as a connector to the inside heat vent. With all the inner layers in place the outer rocker went on without issue.

Doing the rear window was pretty stressful. I did not want to test fit the

glass after I finished all the work just to find out it was off. The beauty of doing the work yourself is that there is no greater sense of accomplishment when it goes right, but with that goes disappointment when it goes wrong. After much measuring and fitting, I finally got the main structure back in place.

The front fenders also took some time to repair. They had the normal issues with rust in the doglegs and the turn signal boxes, but the big issue was the attachment flange. I decided instead of getting more fenders I would take it as a challenge to repair these. By this time, I was feeling pretty good about my ability to do what was needed. Practice may not make perfect, but it at least instills confidence. I took a piece of sheet metal, made the recessed areas with a bead roller, and stretched the edge with a shrinker/stretcher to get the proper arch. The inner rolled edge I did manually with a hammer and dolly.

After just short of three years and several coats of undercoating (Lizard Skin) I was finished with the metal and bodywork. My friend that lives just up the road did the paint job for me. Another friend from elementary school has a plating shop, so all the chrome went to him as it was severely pitted due to age and Hawaiian salt water mist. While I was waiting to get the body back I media blasted all the small parts to prepare them for final assembly. I also had a constant stream of UPS, USPS and FedEx trucks coming to the house delivering parts.

In September of 2015 my wife and I attended the first annual East Coast Rendezvous. Obviously, I could not drive the 912 so I drove our Cayman. It was great to meet a lot of the folks on the 912BBS that had helped me though the project to this point. I made a commitment to the group that I would have the project completed by the East Coast Rendezvous in 2016. I have never been one to name my cars, but my wife wanted to name her, so I mentioned it on the 912BBS. One of the members, Jeff Hutchinson, who actually lives in North Carolina as well, said I should name her "Patches" due to number of metal repairs. When I told my wife we both agreed it was perfect. ¤









### **ROUNDUP IN ROUND TOP**

#### Each year the Lone Star 912

club gathers air-cooled Porsches from Houston, Austin and San Antonio gather for the annual Roundup. The destination for this year's Roundup was Round Top, at the northern edge of the heart of Texas antique culture centered around Warrenton - antique Porsches in antique towns.

Donovan and Rita Butter, David Rocha and I met the Austin contingent at the Buc-ee's in Bastrop. The road less traveled is usually the best road for an old Porsche,

so north of Smithville we detoured onto Highway 153. 153 roughly parallels the Colorado river, with wide sweeping turns through ranch country and little to no traffic. It is a pleasure after months of downtime to open up on a backroad with a convoy of multi-hued Porsches. While we slowed to a crawl through Winchester, the roads through Warda to Round Top were there for our pleasure alone.

Our destination was Royer's Round Top Café. Among the Porsches parked around the old square, Bill Beckenbaugh's pristine, if not completely original 912, caught many an eye. The walls of Royer's are covered with artifacts of decades in business and the wisdom of its founder, Bud. It's the kind of place where the waitresses call you "Honey" and it's not sexual harassment. God bless Texas. And the waitresses are only half as sweet as the wide variety of pies, served, of course, with vanilla ice cream. Be that as it may, few things are sweeter than friends and old Porsches on open back roads. Until next year.... ¤



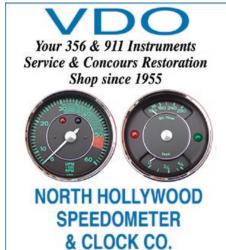












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### FOUR-CYLINDER PORSCHES DOMINATE AT THE **CIRCUIT OF THE AMERICAS (AGAIN)** by Bob Gillespie

It began with a suggestion

posted on the Lone Star section of our 912 Bulletin Board. Alan Domme noted that cheap tickets to the SVRA races scheduled at the Circuit of the Americas for the weekend of Nov. 5, 2016, could be obtained by registering for the Hagerty Auto Show scheduled for Saturday the 5th. The idea caught on because the price included two admission tickets, a show & shine display for your car, and (schedule

Ogle attended, but without his 912. Scott had set out in his beautiful Porsche, but his throttle jammed in the wide-open position. Before he could shut off the engine, the rpms had exceeded 7,000. Inspection of the engine compartment revealed that his add-oil cap had been blown off and his fan belt was shredded. Concerned about serious internal damage, Scott had the 912 carried to his mechanic and drove to COTA in his Jeep. Jim Bachman's starter had failed, so his

proselytize about the nimble cornering of a light weight car with a rear-mounted flat four. Late in the afternoon, Hagerty announced the prizes from the car show judging and sure enough, Mike Vriesenga's pristine 3-gauge 912 had won the Stock 60s & 70s class. Following his son Joey's soccer game, Alan Domme and Joey joined us. Alan had left his 912 at home due to rain in his neighborhood. His family car wouldn't be able to participate in the parade lap. Joey had been looking forward



permitting) a parade lap on the very surface where two months earlier, 919s had won another round on their way to the 2016 WEC championship.

One after another, owners in the Austin area signed up, including Jim Bachman from Houston and Mike Vriesenga from San Antonio. We learned where and when registration occurred and around 10 am on the 5th, 912s began to appear along with the customary Corvettes, Mustangs, muscle cars, hot rods, British sports cars, and classics dating back to the early years of the 20th century. Our 912s concentrated in a specific area with the cars of Morrie Larson, Mike Vriesenga, Stuart Blackwood, and Bob Gillespie. Scott

912 had to remain in its original parking place in the midst of a water-cooled Porsche and a group of British sports cars. Jim discovered his faulty starter when, enroute from Houston, he stopped for gas at a Bucee's. When the starter failed to crank, a robust rugby team gave him a cheerful push start. He made it through the events and back to Houston thanks to several more similar assists.

Rain threatened all day, but it remained dry and we were able to view vintage racing. In the afternoon, we rode a shuttle to the paddock area and could observe the race cars and the work in the pits. As we strolled about, we swapped tales amongst ourselves and with other car enthusiasts. Plenty of chances to

to that lap on COTA. His disappointment was cured because, as usual, Morrie Larson had the solution. He and Rony strapped Joey into the jump seats of their '68. All cars lined up behind an escort pickup and waited to be allowed onto the track. Miraculously, our fifty-year old cars moved up seven notches and became the modern 4 cylinder Porsche, the 919. Speed was limited by the escort truck and our need to retain our spacing intervals. Nonetheless, we had some flexibility to maintain speed in curves, demonstrating the 912's balance in cornering. We were routed off the track all too soon but we all headed for home inspired by the camaraderie 912ers enjoy and our chance to intro-





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### **BASIC POWDER COATING**

#### **Everyone in the 912 world**

gloats about powder-coated sheet metal: how good it looks, how well the finish holds up. On large jobs (like complete engine sheet metal), I tend to defer to the professionals. But, what if you have a few small pieces that you want to do yourself? Powder coating is as easy as hitting water falling out of a boat. Good results, however, are all in the preparation of the metal to receive the coating. If the powder coating gets screwed up prior to curing, it cleans up easily with compressed air. Post-cure repairs require using chemical stripper, media blasting, or etc. Interested?

The equipment needed is fairly inexpensive: a dry, clean compressed air source that will supply 5-7 psi at low volume, a powder coat gun, and a curing source. Since I have done and continue to do a lot of mechanical work, I am blessed to have a fairly large compressor and a cheap Harbor Freight blast cabinet with which to prep parts and provide

compressed air. The "clean, dry" 5-7 psi air is supplied through fairly cheap (Harbor Freight/Northern Tool) regulating, filtering and drying equipment, as show in the photo. I purchased additional cheap (Tractor Supply) couplers/line that are only used for powder-coating to minimize the chance of oil contamination.

The powder coating gun and supplies that I use are from Eastwood and run \$60 to \$130 depending on any discounts and the type of gun purchased. I have the more expensive dual-voltage model. I use the Eastwood semi-gloss black most of the time on 912 parts. For curing, I purchased a new 'builders model' household oven: I found it on Craigslist and paid \$100: it had been installed in a new home and the home purchaser desired a different oven. I use my 220V/50A stick welder outlet with an extension cord to power it. (Indeed, the extension cord cost me more to make than did the oven!). A toaster oven will work as well as a heat lamp but

temperature must be monitored. The curing source should never be used for cooking food (don't even think about using your wife's oven in the kitchen).

Powder coating uses an electrical charge to transfer and hold the powder to the part being coated. I inherited a wood bookshelf that my father made. I transformed (up-cycled) it into a powder coating station. Parts to be powder coated are hung from the copper wire that spans the top of the frame. It is connected to the positive (+) side on the powder coating charge. The gun contains the negative electrode used to impart charge the powder. The photo shows the parts hung from the wire, ready for powder coating.

For this article, the pieces that I will be powder coating are custom rear pan supports for OI' Smoky (custom because sometimes I am too cheap to buy the real parts). I formed them out of mild steel flat stock, bent them after heating cherryred, drilled required holes and MIG-









welded on captive nuts.

The preparation for powder coating included media blasting with aluminum oxide, an aerosol brake cleaner 'shower', and a drying compressed air blast. You may choose any variety of prep that exposes bare metal/removes contaminates: chemical stripper, wire brush, sandpaper, filing, etc. but whatever the prep process, the part(s) must be clean and dry.

The next step is to decide the best way to hang the part for coating. These brackets are easy because they have a threaded hole: I used a long M6 bolt with pieces of AWG 14ga bare copper (common household) wire. Using a threaded hole provides an additional bonus in that it protects the threads from the powder. A piece may be suspended by looping through a hole or making a sort of 'hair-clip'. It is important to understand how the hanger will affect the powder flow/coat and thus the finish. After installing the hanger, I clean each part one more time with aerosol brake cleaner wearing nitrile gloves, removing body oils that may have been deposited during handling. This is followed by another compressed air drying. I then heat the part to remove any volatiles: this can be done using the curing method (my oven is preheating to the required 450° F at this stage) or in this particular case, a heat gun (shown bottom right powder coating station photo). I mentioned preheating the oven: Eastwood powders that I've used require 450° F 'flow out' temperature for 5 minutes followed by a 20 minute 400° F bake. The powder you use require different settings/times and pre-heating the oven takes time at higher temperatures.

Now the part is ready for coating and is mounted such that it will be electrically charged when the gun is being used. I coat these parts outside the shop, (fresh air) with little wind (want powder on part). Depressing the charge button with one hand and squeezing the gun trigger, the powder is blown onto the part until coated to the thickness desired. Too much air pressure will blow powder off the part, too little will not generate any powder 'fog'. My station is built so that I can move to front/back/over/under as required to get a good coating on the

part. Not happy with coating attempt? A blast of compressed air removes all traces of powder.

Once I am satisfied with the coating, I move the parts into the shop with a pair of long needle-nose pliers gripping the hanger and moving it to a staging area, being very careful not to disturb the powdered part. Please note that at any time the powder-coated areas are bumped, the part will either need to be recoated or will have a blemish: care in handling is required just like wet paint!

Once all parts are staged, I use the same technique to hang them in the preheated oven (rack in top mount). Once inside, I close the oven door and set the timer to 5 minutes (as prescribed by the powder flow-out directions). Once the five-minute timer chimes, I reset the oven temperature to 400° F and set the cook time for 20 minutes (again according to powder directions). The oven/parts now require no further attention. (Oven turns off at timer expiration and parts start a slow cooling for optimum results.) When removing hot parts, I will hang them on the staging rack for quicker cooling. (I am, after all, impatient, and that's why I lovepowder coating - no paint recoat/dry times.)

The five minute 'flow' time is usually enough time to clean up the gun and station. On the gun cleanup, powder will adhere to every part of the gun inside the powder canister, in the nozzle and on the electrode. I unscrew the canister and use a hobby brush, trying to brush as much powder back into the canister as possible. Once done, the final cleanup are blasts of compressed air to remove all remaining traces of powder.

While the parts are curing, there is enough time to put up all the powder coat 'stuff' and tidy other shop messes up. When the curing time is done and the part has cooled, it can immediately be put into service.

A couple of additional notes:

 Some parts may require masking to prevent powder coat from getting on certain areas. There are special high-temperature masking tapes (usually fiberglass) that can be used and left on during curing. For large area coverage, I find aluminum foil to work quite well in combination with tape. There are also high temperature caps and plugs that

- can be used and can go directly into the oven, without need for removal. There are other masking methods that can be used during coating but are removed before curing (at the risk of disturbing the uncured powder).
- While I try to use copper wire for hanging (up to AWG 10ga), it is not always practical: stainless steel/ safety wire is sometimes needed for adequate support.
- Large parts may require two or more hangers which dramatically complicates success. I leave large parts/large quantities of parts up to the professionals.
- POWDER IS A BREATHING HAZARD AND CAN BE EXPLOSIVE if left 'hanging' in the air. Always powder coat in areas with adequate ventilation. Powder also expels small amounts of isocyanate as the powder flows out in the oven: another breathing hazard.
- DO NOT USE A GAS OVEN/ OPEN FLAME TO CURE POWDER COATING!! (see note above)
- There are products that can be used in conjunction with powder coating to fill or level surfaces.
- Non-metallic parts (electrically nonconductive like glass) can be coated through a process called "hot flocking" where the part is heated to a recommended temperature, sprayed with powder (which adheres and starts to flow) and then flowed/cured.
- Some powders require additional steps after curing, including coating with clear powders.
- There is a wide range of powder colors now available, including chrome (rusty tail light reflectors anyone?), neon, translucent, pearls and flakes in all manner of sheens from matte to super gloss.

Powder coating is a great alternative to traditional paint methods and there is little chance of runs unless excessive powder is applied. The process takes very little skill and hinges mostly on preparation and careful handling prior to curing. Hobby powder coating is very rewarding and a powder-coated part can be put in service in a very short time: "coat and cure" in under an hour. ¤









### IN THE NEXT ISSUE...

- 2017 Hill Country Rallye
- How to use a voltmeter on your 912
- Patches comes together







### **MARK YOUR CALENDARS**

EVENT	LOCATION	DATE
Oyster Run to Marshall	Marin County, CA	May 20, 2017
Steve McQueen Car Show	Chino, CA	June 3, 2017
Livermore Valley Back Roads Tour	Livermore, CA	June 17, 2017
PCA Porsche Parade	Spokane, WA	July 9-15, 2017
West Coast Rendezvous	Murphys, CA	October 19-22, 2017
East Coast Rendezvous	Fontana Village Resort, NC	October 11-15, 2017
Treffen Asheville	Ashville, NC	September 20-24, 2017
Hill Country Rallye	Texas	March 22-25, 2018



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