

# RESTORATION CLINIC

NOVEMBER 5, 2011

PRESENTERS: PAUL RISINGER AND TERRY FORLAND

Intro

I am Paul Risinger and I will open this session, then turn it over to Terry Forland of RACECRAFT, a restoration, maintenance, and repair shop of Vintage Racers as well as restoring Porsches from the early years. Ph: 206-963-2914. Although it sounds as Terry is primarily a race repair service, you find his shop with a couple of major National Concours level Porsche 356s undergoing development at present, and with considerable ratings in his recent restoration and award winning Porsche for Bob McDowell for 2009, at Parade.

Terry is going to talk on the mechanics of restoration from deciding what to do, dismantling, and reassembly including the various steps to deal with bodywork, parts restoration/replacement, drive train, suspension, storage, interior including instruments, upholstery and glass.

I am going to talk last about decisions on what level to restore a 356 by model type, the who/where/when due, etc., your contribution to the restoration besides money, paints/chemicals/ finishing touches, etc. to complete the restoration.

However, first we are both going to talk about what cars to restore, what not to restore or maybe help but only clean up, and some costs in doing it. We are going to touch on it here, then after the whole presentation if you want to be more specific in questions we will talk with you individually. Please only general questions here, not personal! We are short of time to cover this subject.

Show hands on who is interested in full concours level restoration. Show hands on driver level restoration. And last just touch up or probably paint.

## FULL RESTORATION: GENERAL DISCUSSION

*(General Questions requested. TERRY talks, PAUL kibitzes.)*

The first thing is the same on any restoration: MONEY, CONDITION affecting MONEY, and PLANNED USAGE.

Average type Costs for open and closed A, B, C, and excludes pre-A as its costs are astronomical and is a separate subject. This assumes that everything is basically there on the car and it is not a major accident or boxes case. Otherwise add much more money and time, and this is also not barn finds in distressed condition. Today, a 356 full restoration to national concours level approaches \$110K to \$125K plus the cost of the car, regardless of type of 356. A good driver will cost upwards of \$40K plus cost of the car. A quick paint job, rubber restoration, and minimal replacement and welding is around \$25K and most cars cannot meet that criterion.

Now what is your idea of costs. Incidentally, many parts are no longer available and you will have to hunt. Are you equipped to do this or depend only on your restorer? There are Big cost differences.

START with the USAGE and RESULTS that you want!!!

TERRY: I will first take you through the chain of events...

## DISASSEMBLY:

Do Full restoration of shell and rotisserie restoration. (or) Roller type restoration. Large difference is costs, results.

The order of disassembly is the same until the driveline. Do driveline after paint in rollers and when on rotisserie on Full.

If car runs, test it for problems. Then start your restoration.

Start with whole battery section. No need for shorts or lost electrics.

IF painting the dashboard, etc., start by pulling: (door jambs do not require interior gone)

Seats, carpet, steering before instruments, then dash instruments and switches, radio and antenna, relays, interior lights, glove box, windshield wiper system, glass, etc., unless replacing glass, dash board, insides of doors, and internal hardware, internal heater vents at bottom along with any gas heater controls, central cover on trans at back seat, etc. IF you are not fully familiar with DIN electrical markings, then mark the wires as to where they go.

Scrape off any undercoating/sealant in interior to expose rust after the carpet and quarter panels, etc. are pulled!! Ditto doors, when taken off. You are hunting for nasty surprises in the form of RUST! Porsche used soft steel on its bodywork at both Reutter and Karmann on 356s to the end. This allowed more stampings before wearing out dies for which they early on did not have the money to buy permanent tooling and harder steel. Hence RUST!

Pull off all exterior parts such as bumpers and the items on them, headlights, chrome pieces, all lights, reflectors, spears, plugs, manufacturer's decals, signage, antenna, etc.

Pull off doors, hood and engine compartment lid. DO NOT forget to mark where they fit!! It will be a very cold day when refitting IF you haven't done this. There is little leeway. MARK SETTINGS!

Use scribes, tape measurements and pin settings on hood as well as bolt positions on all. On doors, mark down the shims in the hinges exactly as to which shim goes where if they are there. On the chrome window frames fastened at the middle and especially the bottom, there are shims of different thicknesses to set the window frames for that particular door. PLEASE write it down and mark the shims by placement. It will save about four hours plus per door in reassembly on that item alone. Not doing the rest, maybe if you are lucky 40+ hours. I have seen over a 100.

Pull out gas tank and have it repaired and tested as they are always bad. Repaint exterior as it was done when you found it.

Also take out the brake fluid reservoir and fluid drain the system.

Take off floorboards, refinish or replace them. Then take out the brake/clutch pod and connections, clean the area and them. Repaint them and also use the same paint as you use on the storage and engine compartment to paint the total area. Sometimes there is rusting through here and replacement of the front wall is necessary and if not, then maybe the pan or front half of the pan. Water often collects in here.

Get bottom free and take off ALL undercoating. You will receive a surprise at the end of that tunnel of work. It may be a train coming! RUST! In this period also take off any fender brazing or leading. Around a half of all Paul has ever seen have old lead with lead oxidizing plus splitting, and shrinking in it which always continues to pull paint or leak out; and the brazing always has acid with it also. IF you want a good job that lasts many years, give yourself a chance and dramatically look this over and cut into it on fenders, etc. Paul has shown paint jobs over 19 years old that have won Group at Parade, as well as 9 and 6in classes. And has no need to redo. They were done right and at the beginning the cost is not that much. Reassemble a car, then 6-8 months later have bubbles and you will have real expense. That is common.

**EVALUATE BODY AND PARTS OFF THE CAR** - EXCEPT FOR DRIVE TRAIN WHICH GOES A DIFFERENT WAY BETWEEN ROLLER AND ROTISSERIE.

You will have a good look at the bodywork to do.

Plus, your parts can be divided to repair, restore, or replace BY AREA, not a laundry list AND YOU GET AN ESTIMATE OF COST.

YOU WILL GET YOUR FIRST GOOD LOOK AT ALL COSTS.

### **BODY WORK:**

Rule #1: Do Body work to 3mm gaps on all fitted parts. Paul uses a popsicle stick cut to 3mm, which was factory specification.

There are many ways to go here on the bodywork and many products to help. These are some suggestions.

Lead: Risinger only uses lead in weld areas and at bottoms of interfaces at the rear of the pan where it joints the longitudinals on open cars especially as these are flex points. Also on the back of A coupe sunroofs as this is a stress point not found on the B and C cars, and bondo products do not work long term. Always when leading, wait until the lead shines bright and is still not dull or problems will come. He also always looks long term as this is that way for him. It is more expensive, but no bubbles, rust, etc. in just a year as on many 356s. It is more expensive. The MOST IMPORTANT LESSON HERE IS TO NOT BE IN A HURRY. There are no valuable shortcuts in his mind. He will talk about his materials to do body work. I use these:

Fillers:

Lead? Soldering? TIG welding?

Epoxy or Regular Primers.

How to finish before paint.

BOTH OF OUR WAYS WORK.

THE MAJOR STEP BEFORE PAINTING IS FITTING:

FIT ALL doors, engine lid, hood, and light pods with their seals taped on before finishing. If you paint and it is not fitted, then you have a major repair job on your hands. There is very little space for variation on most items and none on some.

You will have rework to do, but not after painting and you will be without major problems afterward.

**PAINTING** Paul will discuss so as to not detract from getting done with the overall project:

### **PARTS**

Paul will discuss the finding of parts, including ones that are not longer available, and possible places to look. Scrounging can be fun.

My discussion is the fitting of parts and some of the better vendors for problem parts. This includes what to do with the general parts that are usually repaired or refinished.

Again, list your buy list by car area so that you do not duplicate.

Find your vendors for everything and have them ready before you start reassembly at all. Shortages of the right parts is often a real time loser (read MONEY!) in any area you are working. MAJOR POINT!

## ENGINE, TRANSAXLE AND SUSPENSION:

The driveline and suspension are done and reassembled after paint on a roller type restoration. If a rotisserie, then it is done during paint before reassembly.

If you are going to overhaul and cosmetic yourself, you already know what to do.

If you are going to hire it done, then selection of **who** and to **what** extent should be settled before the vendor starts as these are more easily costed out after a partial teardown than bodywork.

Common sense says to check around for guys who do several or more a year. Parts for the basic engines are available except on some of the very old Porsches and they can be substituted.

Repair and repaint the suspension and brake system. Do you need king pins, brakes, etc.? Do not forget alignment when completed car is done. DO NOT use VW parts in general as they are different. For example, the king pins from the VW fit the Porsche 356 as they originally came from them. However, the VW does not have a collar on them and they do not stay exactly as set, etc. Other parts are the same problem. That said, there are VW parts on the engine, etc. and throughout that can be used as they are the same. Know the difference before using.

## REASSEMBLY

Using all newly renewed fasteners for concours. You can use modern bolts for rollers or lesser restorations.

1. Underseal the whole car regardless of the type of restoration with a Schutz gun. On the roller, do the upper front in the suspension and brake area by brush or mask very well and Schultz gun it as well.
2. Paint the engine compartment. Paint the storage area with the same paint.
3. Install wiring and/or repair it before all the items get around it. Now is a good time when rewiring to do a clean up of the fuse box or replacement. In any case solder the various rivet joints on the back of the fuse panel, clean the wires and replace them exactly as they came off or redo with a new harness if needed and also new fuses, maybe fuse block and harness. Replace cover and internal decal showing where the fuses are used.
4. Fit the doors after assembling them and before the upholstery is put on, paint bolts on hinges, fasteners as required, and exposed faces internally. Also set and test the interior light switches and connect the antenna external as you fit the door.
5. Assemble hood and put on hardware, then fit and paint all the hinge pieces including the bolts. Leave engine lid until fitting is over for engine and transaxle, making it easier to work.
6. Install drive train reassembly and fittings for it. Then suspension. Before actual engine/transaxle install, put on rear reflectors, lights, and Porsche plus model identity parts.
7. Fit the engine lid.
8. Fit all the instruments and connect them. Then fit the steering wheel. Fit all the rest of the dashboard items including the glove box, radio, and antenna internal connection.
9. Put in interior headliner and connect interior lights, making sure that they work. Use a battery through the lead wire at the door switch going to them to check. Do the door switches and leads to the lights at the same time.
10. Fit the upholstery to the sidewalls and package shelf area, then the doors.

11. Install the carpet and rough in the rails. They will need adjustment when you put in the seats. Some do all the carpet, except the baggage shelf. It is easier if you work back and forth to fit them to each other. The carpet should have preference in many areas, but not where it meets the upholstery
12. Install glass front and back. Doors already have windows. Install the quarter panel windows and trim. Install rear vision mirror.
13. Install and adjust the seats on the big hex bolts at the bottom.
14. Put back in the items in the storage compartment and feed line, fluid level gauge, gas tank, fittings, brake reservoir, windshield wiper and squirts, and water drain on top of the compartment with the correct fittings. Also use the metal wrap under the fender well in putting in the gasoline feed on C cars. Replace the drain on the tank as well on A and B cars. The rubber carpet is usually not too good. Replace. Properly wrap the wiring for fog lights in the front compartment if you do not have them. Replace the entire battery system into the car.
15. Install bumpers with bolts painted and electrics for them.
16. Check all electricals before engine startup.
17. Start engine after fluids are in and electricals hooked up and see if it runs, or needs help.
18. Detail the car, including test the whole car's operation. however do not do paint until it has at least six weeks of warm weather or else warm garage time. All else can be done.

*(PAUL talks, Terry kibitzes.)*

I will talk about the other items not directly in line with the restoration, but are part of the restoration including paint, how to get parts, deciding how to do them or buy them, fasteners, decisions to make at outset not covered before, and lastly how to keep track of what you are doing.

You have now gone through the order of work to restore. I am going to discuss some of the major items around the restoration, from finishes, how to know what you are doing when disassembling, what parts are necessary according to your level of restoration, vendors and parts that are Porsche friendly, replacement of parts NLA such as 6 volt voltage regulators, windshield wiper blades, fur trim of windows, repair of regulators, etc. Lists of parts needed, when to get, and where to go to get them plated, etc. Also primer/paints/compounds, underseals, finishing glues, rubber parts, sources of carpets, seat parts, glass, and cleaning materials that do not ruin the finished product, repairs or replacement decisions such as glove boxes, locks, and especially fasteners.

#### **ORGANIZATION:**

You would not believe the times I have heard guys in the shop saying, "I put that here and it isn't, and where is it?", or "Where the hell did that go?" Answer, "What?"

I learned from a friend of mine who is my painter/body guy, and part of my reassembly team. He said he learned it the hard way. He bags everything. I added marking the location of where the bag goes on the car, what is out of it on a piece of paper stuffed in the bag for fasteners or parts to be replaced. When that paper disappears, we know we are finished with that Ziploc bag. Different size bags for what is needed. We do not do a whole side of a car in a bag. A door interior is put in one bag, the lock is in another. And so we go around the car, using freezer Ziplocs because they are set to mark upon!

We order parts the same way, by the bag or similar bags, ie, rt or lt. We also have bags in the each of the areas and order our parts the same way. We do this down to the last washer, bolt, and nut, after checking the factory parts manual for finish, etc. and length and/or size of bolt and nut. We like to order from NLA on some of these parts

because they are bagged with the correct number. However, they need to be verified as to finish age ready, which we will cover later.

We have our vendors in line, parts ordered, received, bagged, and vendor restored parts out and back in, before a single bolt is put on the car for the area we are working. You do not lose parts this way, you have efficient assembly, and lastly you don't get as grouchy because idiot over there didn't do his job and you are stuck. I once witnessed a physical fight between cousins over wrong washers available from their stock. They had been working about 18 hours at the time and it was the middle of the night. Imagine that! Incidentally, they were respected Ferrari restorers.

## **PARTS**

### **1. BOLTS:**

You concours types: You should have no bolts, nuts, or other fasteners marked 8.8 on them! This is the German specifications on hardness and tensile strength from the DIN specs. These are modern and belong to the seventies onward and reflected a stronger material than before with the same spec for automobile and other uses. Everything should be listed as 8G or 10G on all these parts. A few had no marking, but very few and they were smaller bolts with 10mm heads. That and they were either black (Underside) or usually Cad 1, white zinc, or chrome on topside. They had 14mm heads on 8mm bolts/nuts, 9mm heads on 5mm bolts/nuts, and 17mm heads had different thread sizes. Also, early 10mm bolts had a different thread. There were no gold zinc fasteners in 8G until around 1966 in Porsche and that on 911, not 912, as 912s were made on the 356 line, and the last 8G modification that added many fasteners occurred about then including better steel and different head sizes, etc., and lasted until the early seventies when we started seeing DIN 8.8s.

All others use what you can get, and 8.8s are perfectly OK. Probably use black below and white zinc or stainless above.

2. Rechrome or replace those parts that are chrome. They cannot be good, unless this is a second restoration. And make sure they are triple plated.
3. Replace Al spear kits and any other aluminum product. They should be badly pitted or bent.
4. ALL rubber is to be replaced, especially window and exterior rubber. Go to International Mercantile and have Terry set you up.
5. Make your lists early of parts you need and get them ordered. It is surprising how some parts are always out of stock, maybe because they no longer have a source and are looking themselves on 356s. Examples are 6V voltage regulators, fur stripping on windows, windshield wiper blades and arms as examples.
6. Obtain chemicals and lesser paints for various parts of the restoration.

## **PARTS (Parts, Repair, and Specialists Vendors)**

There are several good parts vendors and there are too many to list here, however we will give you some so you can do some dog robbing yourselves.

You should never start a restoration without belonging to the club that is closest to your car. They have vendors that are specialists in your car. 356 Registry and a local 356GroupNW are almost required here. There are specialty groups for almost every model of Porsche, especially the older ones. Without them, it is like making love standing in a canoe.

NLA is a 356 supplier and is owned by Stoddard: 800-438-8119, all 356 parts that are not sold through Porsche any longer. They have made up parts that are not available at all. Always a good check out first. Ripley is the Most inventive parts supplier manufacturer in country on 356 Brad Ripley is renowned

Stoddard: Porsche Dealer that carries 356 factory made parts: 800-342-1414

Parts Obsolete: Emory: Junk yard, new parts supplier especially for 356 and now other models, and a strong 356 friend in Oregon: 503-835-2300

Major Porsche Dismantler and Parts: EASY: 510-653-EASY

Engines: Chris's German Auto: engines and general drive train: 425-462-9296, all models including racing engines and maintenance problem solver.

Metric Motors: Clark Anderson, racing/driving 356 engines, 209-588-8345

General engine/drive train & advice: DennyAkers or their shop. Mike Akers: 206-329-5253

Locks/ignition switches: Tony Euganeo: 610-461-0519, maybe best in country.

Bodywork/Restorer: Magic Customs; Marv Engstrom, 425-672-9307

Bodywork/Restorer: Eurotech: Mark Israel, 425-823-4282

Restorer: general engines, etc., Ted Blake: 916-455-5010

Talbot Mirrors: Aardvark Int'l: 562-699-8887

356 Electric: Joe Leoni: 303-431-5764, updating electrics on 356s.

356 Hardware: 301-253-5392, nuts and bolts

Alignment: Omni Brake and Alignment: 425-823-1511

Steering Wheels: Jack Arct: 503-775-5208

Look Alike 356 Tool Kits for drivers: Pete McNulty, 949-487-2492 and is on net

Upholstery Manufacturer: Auto's Int'l, 760-737-3565

Upholstery Manufacturer: Heritage Upholstery and Trim in British Columbia/Washington: 360-332-3022

Instruments: Palo Alto Speedometer: 650-961-5444

Carbs: 356 Carb Rescue: 928-204-0507

Wiring Harnesses: YnZ's, 356 specials: 909-798-1498

Rubber Parts: Bolts: International Mercantile: 800-356-0012, supplies most 356 vendors including dealers and factory at times.

Chrome: Christiansens: 213-585-8730

Electro Plating: Perez, 415-786-1060

Plating: Queen City, 425-315-1992, good, expensive and keep looking

Transaxles: Bob Garretson, 209-533-3566

Gas Tank Plating/Repair: 206-768-1168

Electrical Repair: generators, starters, etc. Porsche, 206-486-5400

Parts: Interamerican Mtr Corp: 818-775-5000 (wholesale)

Shocks: Koni Repair, 859-586-4100

356 Restoration Parts: Victor Miles, 805-641-1412, radios, mirrors, reflectors, fog light parts, etc.

Porsche Parts: Performance Products: 800-423-3173

Radio Repairs: West Hollywood Speedometer—in most Porsche magazines

Engine Internal Parts: Shasta Design, 530-238-2198

356 Parts, Wheels, etc., The Parts Shop, 714-894-3112

Distributor rebuilds: Ed Fall, 801-944-9777 now that Don Marks has passed

All forms of restoration parts/chemicals/paints/and tools: Eastwood: 800-345-1178

All manufacturing parts/chemicals/paints/glues/cleaners/etc. used by the Porsche Factory then and now.

Wurth: See your Porsche repair shop for contact in your area. Some shops sell directly to you from their rep.

Tires: Coker Tires: Sell the old original sizes of Vredestein and Michellin, 800-251-6336 are available and were used by Porsche.

Wheels redone: Harvey Weidman, best around and not overpriced as many are in this industry, 530-534-7903

356 Parts: Zim's, does some unusual parts, good supplier, 800-356-2964, and they also substitute parts when NLA as help.

Electro Plating Fasteners/bolts, etc: Commercial Electroplating, 559-442-0790

These are a few vendors to get you going. It is a representative sample and I have used them all, but also a lot more.

YnZ's electrical harnesses specializing in 356 and now many others :909-798-1498

There are some excellent articles on restoring glove boxes in the 356 Registry as well as other items along that line. You can also find them in the PCA articles and Up Fixin' der Porsche which is on line today also. Join!

## **CHEMICALS**

Eastwood is one of the best of the restoration product companies. I use Chassis Black paint, Underhood black, spray glue for upholstery and carpet, sanding materials, shaker table for getting rust, etc. off of fasteners and small parts, plating setups, all sorts of small tools to make the job easier as just a small sample.

The next place is Wurth. They are the supplier of many of the side items used at Porsche from long ago to today. Their schutz colors, gun, upholstery glue, underseals, undercoatings! for texture, and then tools also are really needed in a restoration that is authentic. See your independent Porsche shop.

Glassurit (Glasso) during the early days of Porsche with the Parrot on the can is the paint that the factory has used forever. My cars are all Glassurit if they are German. We use their epoxy primers, paint, reducers, hardeners, polyesters, and tools for putting them on as well. Today's paint is the 22 line, the first line of water based paints. They do not match by lazer, however master painters in Glassurit do some unbelievable matches. The main reason is that their tints are exact, unlike many of the other manufacturers. So, you can duplicate if your store is accurate.

Bolt platings I do in Fresno at a small place that will wire my components so they do not get lost in the bath as I have had done before. They believe you when you say that they are expensive and rare.

## **OTHER AREAS**

**Glass:** Always replace all seals



Get German glass and watch out for overly thick windshields for 356s as they exist. Pilkington bought Siglia in the 90s and did not understand the specialty market and quit making old windshields for all German cars. They have recovered somewhat but it allowed in others that do not always follow the spec.

Side glass not available and can be made as long as it is clear and not catacolor as was available on C cars.

Bugs, company markings on the windows: They do it for concours, but it is ridiculous and expensive. Forget for normal concours even, except for Parade.

Check drains and clear them before reassembly of windshield, quarter panels, and rear. Put a sealer on the inside bottom of doors and also if you can on the drains so that they are not above the level of the ledges. That traps water and rusts out the window frames. Wurth makes excellent sealers in small guns.

**Engines:** Pull and do cosmetics then, including shroud painting, etc. Replace rubber parts. If you overhaul it is a better time and efficient to do cosmetics then.

**Transaxle:** If you overhaul, then cosmetic and remember to replace the plastic parts in the shifter and the later transaxles the plastic shift parts on it. If not overhauling, then clean it up and use aluminum brighteners in the cleaning materials and replace the plastic parts.

**Suspension:** Take apart and overhaul king pins, brakes, clean out the torque tubing of grease so it does not continue to leak old grease pushed to the center. Paint the backing plate with Chassis Black or powder paint it satin. The suspension parts can be painted with Chassis Black also. I even use it on the gas tank of Bs.

Remember to underseal up under the front chassis if a roller. Reset and then align.

## PAINT

The painting I am going to describe as a part of the restoration, rather than just what to use:

The bodywork should have been sanded down with a 1500 grit and then a 2500 grit before this next move. There should be no visible scratches!

After bodywork, then you have a choice of two coats of epoxy primer or to then add something new with Glassurit polyester which helps blocking (sanding finish), which is being used today at the factory. It takes some time to dry! The epoxy is quick.

Starting with bare metal, checked brazings and lead for leakages of acid mostly and having redone them, having fitted the seals all over for dimensions, and starting to prep for paint, the things to do are:

1. Metal etch IF the product calls for it or allows it. Glassurit does not.
2. You have two directions. First is:
  - a. Put in fillers. Lead flex points and on A's any sunroof at the back. Nowhere else. Take old lead down before all of this for acid and break up from prior application. 1/2 are bad and need to be out.  
  
Apply All Metal Brand aluminum filler in lieu of bondo, and finish the creaming if you do it, or the lighter areas with Ever Coat "Quantum" for finish work.
  - b. two coats of epoxy primer without sanding or scrubbing in a short period of time for second coat while first is still wet. Splash on black to see where sanding is done on the primer.
  - c. Dry and then use scuff coat with a brown 3M pad
3. Second and a better way to not have to do so much sanding early and helps dramatically with blocking uses polyester.
  - a. After putting on the lead and filler, then epoxy primer in 2a/b/c, then:

- b. Apply 4-5 coats of Glassurit Polyester up to a thickness of at least .008 inches or a little more. Follow timing directions.
  - c. The polyester will expand and over a time will then shrink again and you can work it. Cannot be done in heat! Takes time to dry!
4. Either way let the system dry for at least a month in sun, or in warm room.
  5. Using first 80 grit, then 180, then either 320 or 400(I prefer), OR use the newer air sanders, starting with 180 grit. If you do not go through the polyester and epoxy, then it is time to wet sand. If gone through, then do again. Polyester cannot be used directly on bare metal, as it does not adhere.
  6. IF metallic, wet sand starting with 800 grit. If not, then 600 grit is start. There should be no scratches left after this sanding. You end with 2500 grit, or 3000 grit if you are anal and will not get too upset to find your finish isn't any better.

Paint Glassurit 22 line base coat: NEVER RUSH PAINT DRYING!!!!!! Great jobs take almost six months. Macco takes four to six hours. It's your choice.

1. Paint base coat. FOLLOW TECH SHEET EXACTLY.
2. Because of the water in paint today, you have to flash off until the paint goes dull! Cannot rush, or a milky job. On final coat of paint, then you can paint on Glassurit Clear after about 20-40 minutes depending on dryness of air. Use a little extra thinner and it does dry slightly faster.
3. Clear has to be flashed off on each coat. Do not rush drying times!
4. Let sit for 3 weeks minimum before wet sanding down.

We buy 2 gallons of paint color for 356s, planning on having at least a quart plus for future where we paint all the car areas on coupes. You need less on cabriolets, however we buy the same anyway. And we buy a 5 liter can of clear. We tint our epoxy half way plus to color, especially on dark paints.

On metallics, round flake is used in slight excess of specs.

QUESTIONS?