

# Performance *Corvair* Group Newsletter

Third Quarter 2007

Volume 1 Issue 1

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## PCG Approved by CORSA

The Corvair Society (CORSA) board of directors has approved unanimously the formation of the Performance Corvair Group as a special interest chapter by vote. The officers are President is Jim Dallas, Vice President is Michael LeVeque and the Secretary/Newsletter Editor is Ned Madsen. This is the very first newsletter for the PCG. The purpose of this chapter is to collect and distribute any information on performance oriented modifications to the Chevrolet Corvair. These modifications can involve just about any aspect of the car. We will also include general performance car stories in our newsletter. The PCG will also support other CORSA chapter's events. This newsletter will be published at least four times a year. It will be sent to members electronically and posted on the PCG web site.

The editor encourages all members to submit articles. This will be a great way to share information with other members on what is going on with both our cars and our members. These articles don't need to be about Corvairs, but should be based on something that our performance minded members will find interesting.

## Special Vehicle Lists

One of the documentation efforts of the PCG is going to be assisting and maintaining a registry of special modified Corvairs. The most famous modified Corvair is the Yenko Stinger. CORSA already maintains a list of Stingers under the Competition chairman. The PCG will help to collect information on the Stingers and their owners. Bob Donuhue is heading our efforts with the Stingers.

Another modified Corvair is the Fitch Sprint. Rick Loving has been keeping a list of Sprints and their owners for a few years. Rick has been doing this on his own to attempt to keep track of fellow Sprint owners. Rick has volunteered to maintain his list under the PCG banner. Rick's email is: [ral1963@comcast.net](mailto:ral1963@comcast.net)

If you have one of these special Corvairs, make sure you get on the list. It will help you and others with those special questions and maybe even some hard to find parts.

### Performance Corvair Group Officers

**Pres:** Jim Dallas - [BEC176@msn.com](mailto:BEC176@msn.com)

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**Corvairs in Action  
Waterford Hills, MI**

NECC held it's preconvention track day at the Waterford Hills track. Pictures from Terry Kalp.



Rick Loving tasting the track in his Sprint



The Le Veque have some great father and son fun



The first Corvair race car, "The Roe Car"



Brian O'Neil's Hot Rod



PGC President Jim Dallas 1964 coupe



Scott Trunkhill in the "Beef Car"



Hometown favorites, Ken and Chris Hand



Rick Norris' beautiful "Tribute Car"



Traffic Jam on the front straight



Allen Bristow's Stinger



Looks like fun!



FTD Bruce Carlton getting it done



## **How I spent a Few Days in May** **By Rob Fike**

This past May (2007) I got the chance to fulfill a life long dream. I was invited to be a mechanic on an Indy car team for the Indy 500. Politics aside, where anyone stands on the split has no bearing on the fact that Indy is Indy. It just does not change the history of this place. I have been a fan since I was a small kid. My dad would bring me to the track for practice and qualifying. With my racing I thought I knew what dedication was. As it turns out, I did not. These guys showed me what dedication to a goal is all about. It is total, no matter what financial level.



### **Have's and Have-not's**

In the world of Indy, you can divide the teams into the "Have's" and "have-not's." Penske, Andretti-Green, and Ganassi are the "Have's." Pretty much everyone else (with varying degree) are the "have-not's." I worked for PDM Racing. One car, one engine, one chance. We are at the lower level of "have-not." Paul Diatlovich the team owner, and Jimmy Kite the driver. Paul mortgaged his house to fund the effort with what looked like a good sponsor just over the horizon. He has been a mechanic, Chief mechanic, and Team owner for many years, so he knows the risk and reward.

It looked like Z-Line Designs would be coming on as a full sponsor, but contracts and paperwork took right up to the last minute.

### **Dollars and Cents**

The cost of Indy car racing is staggering. A 3 year old car... \$300,000. Tires...\$16,000. Engine lease...\$200,000 for the month or \$100,000 for half the month. From there it just goes on and on. This is one reason we had to be a second weekend qualifier. By our lease, we could not be on the track until after the first weekend was over.

### **The Indy Car Kit**

Monday, May the 7th was the day I got the call. My buddy Paul Ross called to see if I wanted to help with what he calls "the death march." (Much to Paul Diatlovich's chagrin) He told me where the race shop was located, and I drove out. The shop is located just west of Indianapolis, in Clermont. This is not just your average race shop, this is the old shop of A.J. Watson. Many Indy 500 winners have come out of this shop. On my way out I am thinking about what they might have me do on the team. Get lunch, keep the fridge stocked, sweep, wax the car. These jobs come to mind. When I get there I meet the guys, and see the car for the first time. The car is just the tub. The guys are Paul my friend, big Paul the owner, Rob the Chief mechanic, Randy, and Stewart. Big Paul is busy on the phone trying to secure the money. Stewart is the transporter driver, and go-fer extraordinaire. Randy is actually a world class artist, and the one who has seen some of the car taken apart. That mostly leaves Rob, Paul Ross, and myself to put this car together. The car had been crashed the previous year, and taken apart. Our first job was to figure out how to put it all back

together. To make it a little more difficult, changes had been made to the radiator and oil cooler ducts and none of them fit. Were do all these wires go? Since Randy had seen some of it coming apart he was of great help. (Since everything that goes wrong on the team is Randy's fault, I became used to hearing "dammit Randy" about every 30 minutes)

Tuesday goes well with our puzzle.

Wednesday morning we get our engine, and by the end of the day the thing is starting to look like a race car. That evening Jimmy comes in and Glen the seat guy comes over to start making the molded seat. A lot better than our two part deals in the trash bags.

Thursday we spend the day working on a lot of little things. Body panels refit, pedal stops made, etc. Many of the black boxes have been redesigned since last year, so their carbon fiber mounts no longer fit.

Friday the 11th is "Fast Friday." I had promised my wife Judy that we would go, so I took the day off to go to the track. While we were having fun, the guys loaded the car and all the stuff and made the move from the shop to the garage at the Speedway.

### **Saturday and Sunday**

I'm really there. Saturday is Pole Day. What a rush. Today is the first day that I need my credentials. I drive in the Crew gate and drive to the "Team" parking area. The gate to the garages does not open until 8:00 am, so all the mechanics wait outside the gate in their groups. We all have on our team colors. The Firestone guys have coffee for us, the world renowned Gordon Pipers are marching around playing their bag-pipes and drums. Wow, breathe in, breathe out. Saturday and Sunday are spent working on electronics problems, and the many, many little things that must be right. The Honda guys come over to get our engine started

and running properly. The start sequence is computer controlled. A laptop must be plugged in to make it go. All the garages have the live IRL TV feed on the TV. That way we can see what the fast guys are doing. The entire time I am working on this car, I am going as fast as I can without making mistakes. The whole time trying to also soak it all in.



### **Monday and Tuesday**

Monday and Tuesday of the second week there is no practice. These days are much less hectic just from the standpoint of fewer people in the garage area. We spend our time setting the chassis up on the pad. Initially just getting all 4 tires to touch at the same time. We also work at getting the car to make it through tech. The number of checks on each area of the car is incredible. Our rear wing is our biggest pain. We spend hours trying to get it to meet all the requirements. We take it through many times.

Finally, Practice day is here

### **Wednesday**

Wednesday starts out great. This will be our first day out on the track. We start early to be the first car through tech, and maximize our track time. We also get our cool new shirts with all the embroidered logos! It's time to tow out to our pit stall. I'm the only one that can fit in the car with the seat in it.

So my new job is to be in the car while we tow. What a deal, towing from the garage through "Gasoline Alley" and out to our pit. Now this is cool. As more of our crew guys arrive, my jobs evolve as well. I am the "cockpit" guy. I am also the body work guy. I am the one that will be strapping Jimmy in and hooking him up every session. Our first time out Jimmy makes a couple of laps and brings the car in so we can check it all over. He stays in, while I pull the engine cover, and the other guys look the car over. It all looks good so out he goes. There is a jumbotron just across the track from us. This is great. We can watch Jimmy on the track. About the fifth lap, we unfortunately get to watch him spin and hit the outside wall in turn one. It knocks off both left side corners, the left front wing, and the rear wing. Crap! Now we just pack everything up and head for the garage. Jimmy gets back to the garage just a little later than us. He is OK, just bummed over wrecking the car. We can see what happened pretty quickly when the car is delivered. The left side of the gear case failed.



The whole side just gave way. Not only did this screw-up the left rear alignment, but it also dumped 3 1/2 quarts of Mobil 1 gear oil on the rear. After about 30 minutes of us being in shock and thinking we are done,

big Paul tells us to get the thing stripped. He may have an idea. By the time we leave the garage that night, the car is back to being just a stripped tub.

#### **Thursday**

Thursday starts early. As I found out, when you crash, the guards let you stay as late and arrive as early as you need. Somehow big Paul has worked out some deal to use what we need from a "part's car"? Honda has also been over to tell us that our engine has to come off due to spinning backwards. At 9:00 am they come back over with a crated replacement engine. Manna from heaven. We hang the new engine, and then start stripping the part's car. By 5:00 pm we are going back together with our car. At 10:00 pm we have a car setting on the set-up rack ready to go through tech.

#### **Friday**

Friday starts early. We are the first car through tech. At least the rear wing from the part's car fits spec better. All afternoon we tow out, practice, tow back in, make changes, repeat, repeat. The work is at a frantic pace to maximize track time. This is "behind the 8-ball" time. We are slow but making progress. The big guys are not worried, the speed will come. This evening everything on the car is taken apart again and checked. Then all back together. Tomorrow is big.

#### **Second weekend of Qualifying**

Saturday, this is the day we will qualify. From the time we open the garage door, the garage is full of people. What a buzz. There are other owners, drivers, mechanics, radio guys, TV guys live, photographers, friends. All there to wish us well. This is pretty cool stuff. A lot like Midwestern Council but at some astronomical level. We are again the first car through tech. This is Qual tech now. This is even more stringent than tech for



practice. We have been running in the area of 212 to 213 mph. The big guys figure we need 219 to 220 mph to have a shot. They seem to think the car will do it, we just need to get it set-up right. Saturday is a lot like Friday. Tow out, run, tow back, adjust, repeat, repeat, repeat. There are gear changes, wing changes, ride height changes, alignment changes, corner weight changes, tire pressure changes. I'm beginning to think that production car racing is really easy. The car just does not seem to want to go over 214 mph, and it's 5:30 pm. The big guys decide to make some rather large changes, put on a new set of stickers, and go make a qualification attempt. The weather people are calling for a chance of rain on Sunday, so we need to at least have a time even if it's slow. We push the car down the Qualification line and through final mini-tech. It's now 5:55 pm. At the end of the qual line all the TV cameras are there. The big boom camera is roaming around above us. As I strap Jimmy in, and hook him up, I am struck with the thought that the whole world is watching me do my job so Jimmy can go out and do his. He gets his final instructions from Brian Barnhart of the IRL, and off he goes at 5:57 pm. The gun goes off at 6:00, but we are on the track, so it will count. We have all run up to the start/finish line to watch.

As Jimmy exits turn 4, the flagman waves the green flag. What a sound it makes. The flags are starched cotton, and make a crisp snap as they are waved. "He's on it." As we are watching, I remember Jimmy telling me that on a qualification run he takes his left foot and places it on top of his right. This is to make sure that if the right foot gets scared and wants to lift, the left foot will not let it. Large appendages, as David Hobbs would say. I hear the snapping of the white

flag, then the checkered flag. WE ARE IN! We are slow with a 214 and change but maybe it will rain all day Sunday. Now we go through the official qualification photo session. Different hats, different people, less people, more people. Where did they all come from?

Now we go through post qualification tech. There is an IRL guy that walks with us. He keeps reminding us that we can't touch any of the wings. These cars are hard to push without touching the rear wing. First stop is fuel. They take a sample, then suck the tank dry. Next is weight, then our friends at the tech pad. Everything checks good and they give us some high five's. They are fans too. Wow, we are really in the 500!

The plan for Sunday is hope for rain. If that does not work, then we will have to find that 5 mph the guys think we still have.



### **Bump Day**

Sunday is Bump Day. The last day of the last weekend of qualifications. Some of us are not going to make it in the show. We are in 32nd position, and there is one open place behind us. The remainder of the cars have been going about the same speed as we have. There are 5 cars trying to get that spot and ours. The 31st place car is at a 219 something, so he is safe.

No rain.

We spend the day just like Friday and Saturday. In, out, in, out, run, adjust, run, adjust. As the afternoon starts to head into evening, one car goes out and does a 220 average. Now we are on the bubble. Another car goes out and does a 218 or 219 average, now we are out, and it's getting late. Now it is really getting to a frantic pace. The decision is made to do a gear change on pit road, there is no time to get back to the garage. Off goes the back end, and out go the gears. We also take all the wing out of the car. Jimmy will have absolute minimum down force, and drag. It's again 5:30 pm. We are waiting for the gear stack to come back, everything else is ready to go. The other teams are watching to see what we will do. Everything is put back together as we are pushing towards the qual line. Time is running out, this is the last shot.

Just like the day before it is 5:57 and I am strapping Jimmy in. Can't screw up, can't screw up. Final instructions, and off he goes. Just in time, the gun sounds. Go Jimmy Go!

We take the green, but after the first lap we know the speed just is not there. Big Paul waves off the run on the second lap. Crap, it's over, I can't believe it.

After all the stuff is back to the garage, big Paul has us close the doors. Team only. He thanks all of us for our effort and hard work. There is a reason the fast guys are not running the G-Force cars any more. So, he says "lets get this stuff put away and go to the suite." As the guys are heading to the suite, I run home to get Judy. We spend the evening drowning our sorrows. It's a wonder that we didn't all drown. So, once again I watch the race from my normal seat. Front row, apex of turn 4, with Judy, my mom, and

our friends. Watching from the pit wall would have really been something. Maybe next year.



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### **Tech Tips**

#### **Wheel Studs and Wheel Spacers**

From Seth Emerson

Many times Corvair owners choose to install different wheels on their cars, usually to support the use of better, or at least, stickier tires. It may also be to change to larger diameter wheels. Many stock GM wheels will interchange onto the stock Corvair wheel Studs – Stock being 7/16" x 20 RH threads. Even most aftermarket wheels will bolt right on, at least with the correct style (for the wheel) lug nuts, and provide sufficient thread engagement. Almost all aftermarket wheels have thicker centers than the original steel wheels. The so called "shank" or "shoulder" type lug nuts can correct for this problem by penetrating down the outside diameter of the wheel's mounting holes, thus providing enough thread engagement, but sometimes the combination of tapered seat lug nuts, and thick wheel centers can limit the number of threads engaged – at least on the stock wheel studs. Also guilty in this instance are wheel spacers, which, in essence, thicken



the wheel centers, effectively shortening the lugs. The Corvairs used wheel studs that were common to other GM cars of the era, and pretty short. But, good news, the thread and the hole in the hub flange were common to many other GM cars. Look for the smaller Knurl size, about 0.480 inch. For many years, we installed the "Corvette" studs from Chevy which are (were?) 1.75" long, giving us another half inch of threads to work with. Since then, several other sources of distribution have turned up, among them NAPA stores and Dorman brands. Swapping the original studs out to the longer length is easy and can be done on the car. Drums must be removed, but a heavy hammer will pop most of the studs easily. All manufacturers recommend pressing the new studs in on a hydraulic press – easy to do if you are building the car from scratch – but hard to do on the car!! I have "pulled" in many studs with a bit of extra hardware, several sacrificial 7/16 x 20 nuts, some spray lube and a stack of washers. Although the studs can be pulled in by hand, and the final "snugging up" should, indeed, be by hand, an impact wrench and a good impact socket can be used for most of the pull. Beyond the Corvette studs, however, many manufacturers have produced longer studs. Moroso has 2 7/8" long studs, (their P/N 46150 for five – you need four sets for the Corvair \$10.95/set at Summitracing.com) or ARP studs which are slightly longer. (Their P/N 100-7701 \$9.95/set, also at Summitracing.com) both manufacturers provide a slight unthreaded shoulder at the tip to assist/center the approach of the lug nut as it goes on. The Moroso studs are the ones I currently have on my track car. They were an easy install, and not very expensive. If you do install longer studs, you

should at least pick up a cordless drill and equip it with the correct socket to match your lug nuts. Using an X wrench or a ratchet to screw a lug nut down two inches of open threads will get old quickly. One of the 24V cordless impacts is even better. Although I still check the torque my wheels with a torque wrench before going out onto the track. One further note. If, perhaps, you have all later model cars around the garage, you should know that GM switched to metric lug nuts in the 80s. They now use a 12mm x 1.5 thread on the newer cars. If you wanted to join the high-tech world, there are sets of long Metric studs which can be installed into the Corvair hubs, after opening up the flange holes slightly. If you have drum brakes, you would likely have to open up the holes in the drums as well. At least, then, all of your lug nuts would match.

### **Tech Tips (continued)** **Hollow Versus Solid Anti-Roll Bars** From Mark Ortiz

For the same outside diameter, a hollow bar is softer than a solid one. A hollow bar can provide the same stiffness as a solid one, with less weight, but the outside diameter has to be bigger.

Other things being equal, a hollow bar has higher stresses than a solid bar. If the bar is short, or the arms are short, in some cases the bar needs to be solid to avoid stress levels that would cause the bar to take a permanent set or fatigue prematurely. Short of this point, there is some reduction of longevity with a hollow bar. The bars on a Trans Am go all the way across the car, and have long arms, so hollow bars should work fine.

To give you some idea of what diameter you'd need with a hollow bar to equal a solid bar, if you had a factory rear bar 5/8" in

diameter, a 3/4" O.D., 0.060" wall hollow bar would be about the same stiffness. A 3/4" O.D., 0.090" wall bar would be about 30% stiffer.

If you have a 1 1/8" solid front bar, then a 1 1/4" O.D., 0.156" wall hollow bar, or a 1 5/16" O.D., 0.120" wall hollow bar, would be about the same stiffness. A 1 3/8" O.D., 0.120" wall bar would be about 20% stiffer.

If you buy bars by an advertised rate in lb/in at the arm end, be aware that there are two ways of expressing this rate, and not all manufacturers use the same convention.

The more common method is to rate the bar like a ride torsion bar. That is, one end is moved a known linear amount and the force per inch is computed. This gives you rate in pounds per inch per end pair: the force when each end moves half an inch, meaning there's an inch difference between the two ends. Some manufacturers prefer to double this figure to get the cataloged value. This method gives you the rate in pounds per inch per end: the force when each end moves an inch, meaning there is 2" difference. This method has the advantage of being easier to equate to a change in ride spring rate. Neither method is more correct than the other, but you do need to know which method a manufacturer uses, if you want to make comparisons based on rate.

Send your Tech Tips to [aeroned@aol.com](mailto:aeroned@aol.com). Please give proper credit to the original author, if it's no you.



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### **Upcoming Events**

**NECC at Lime Rock Raceway – August 26-27** - We'll be having time trials, a car show, and a fancy barbeque/banquet. The car show and barbeque will be held on Sunday, August 26th and the time trials will be held the very next day, on Monday, August 27. Find more info at:

<http://www.corvair.org/chapters/necc/page2.html>

**Fire and ICE Autocross IX - Saturday, 1 –**

Tons of fun at the Iowa Int'l Raceway in Marshalltown, Iowa. This is not a traditional autocross. It is a short, half mile, mini road course. Find more info at:

<http://www.corvair.org/chapters/chapter526/>

Having a Corvair Event? Send info to [aeroned@aol.com](mailto:aeroned@aol.com)

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### **Editor's Note**

We need newsletter contributions from our members. Articles about member's cars, modifications, restorations and what you do with your car would be great. I'd really like to have a featured car in each issue. I know you guys aren't shy, so just type it up and include pictures.

- Ned