



Quick Facts

NEXT MEETING: September 22, 2021. 6:00 p.m. Denny's Restaurant. Meeting starts 7:00 p.m. 8841 Greenback Lane, Orangevale, CA 95662 (Corner of Greenback & Hazel) If you have a Corvair, come on out to the meeting!

Membership Dues: Please pay your membership dues! \$20.00 for the year. Please send checks or cash to Wes Nicholas. Checks made out to: "CCRC." For PayPal options, contact Wes Nicholas, CCRC Treasurer.

Features

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Firing Order

President	John Heiser
Vice President	Carl Funk
Activities	Position Open
Secretary	Erin Sicard
Membership	Joseph Howard
Treasurer	Wes Nicholas
Editor	Ken Edwards
Historian	Christy Barden

Finding Us

Website; www.northern-california-covairs.com
Facebook; [Classic Corvairs of River City](#)

Corvair Chatter

Message From the President:

Hello fellow Club Members: Happy September! Just a quick August recap, the Club's Spyder project car on Bring a Trailer.

Auction Result:

Winning Bid \$12,500 by Ezmoni from the Los Angeles area. Auction ended Monday, August 30 at 2:34pm Bids 20, 7,454 views, 655 watchers. That, I will say, indicates lots of interested parties viewing Corvairs on Bring A Trailer. Besides the comments posted and Club members responding and answering inquires, from prospective bidders, I will have to say, Job well done!

Congratulations everyone from the donations, volunteering to get the Corvair back on the road, facilitating getting the Corvair to the paint shop, to facilitating and listing the Corvair on Bring A Trailer!

Without club member support, this project car would not have happened. A major thank you to everyone! So, time to celebrate! lets start planning another club social!

Congratulations to both Erin Sicard and Ken Edwards taking on new Club Officer roles! Erin has accepted to be the Clubs Secretary and Ken Edwards has accepted to become the Newsletter editor. A huge thank you!

Ironstone Concours d'Elegance, September 25th. Contact Wes Nicholas if interested in entering your Corvair. We have met the group entry to park together. Email: nicholas.tds@gmail.com or cell# (916) 202-8762.

October 22-24, 2021: The Great Western Fan Belt Toss and Swap Meet -. Sunrise Park, Palm Springs. For more information: simcrestorations@sbcglobal.net

Welcome new club members: Carl and Michelle Meyer, in the process of acquiring a very nice 1965 Monza Convertible and Jon and Julie Von Kahle with a 1966 4-door with a 140 PG.

At our last Club meeting, I brought up the Club should start thinking about hosting another Spring Fling Corvair show. With some interest and suggestions including forming a Spring Fling Committee, I'll bring this up at our next Club meeting to see who would like to volunteer to be on this Committee.



Latest CCRC News

Ongoing Events:

Sacramento Hollywood Park Auto Club -Classic Cars: Meets every 3rd Sunday 10:00a.m. Meet at Leonardo DaVinci School. CCRC Club Member has started this little gathering. Lets meet up and join this event.

Carmichael Bel Air Sunday Cars and Coffee. 4005 Manzanita Avenue at the intersection of Fair Oaks Blvd and Manzanita Avenue near the corner of Cypress. Time: 7:30 a.m. to 10:00 a.m.

Folsom Cars and Coffee: 1st & 2nd Saturdays -Town Center, El Dorado Hills, 3rd & 4th and occasional 5th Saturdays, 430 Palladio Parkway in Folsom at the Palladio. 7:00 am – 9:30 am.

Car Shows:

Ironstone Concourse d'Elegance: September 25th. We are meeting up in Jackson around 6:30 a.m. Parking lot just past the Chevron Station, Hwy. 49/88 at the intersection of Main street. We need to be parked on the Ironstone field around 8:30 a.m. Plan on leaving Jackson around 7:00 am. Email reminders will be sent out a week in advance. Hope others from the Club can attend.

September 18, 2021: "2019 Placerville CHP Cops & Rodders Show & Shine Fly-In" Pre-registered \$30. At Gate: \$40. Register at: www.placervillechpfund.org. For further information check the website or call (530) 748-2450, ext: 2481

October 2, 2021: California Automobile Museum 19th Annual Cruise Fest on Fulton Ave. 3pm to 7pm. Arrive early! Register at: www.calautomuseum.org. CCRC is a Museum Member, So, registration is \$40.00. T-shirts are optional. I have already registered. Fun event!

October 2, 2021: Free Admission, Old Hangtown "Sierra Riders" Motorcycle & Car Show. Awards, all categories. \$20 entry fee car/bike. Registration 9-10 am. Show 10-3. Harley Davidson, 115 Woodmere Rd. Folsom, CA.

October 10, 2021: Sutter Creek's Annual Chili Cook-Off and Car Show. For more information contact: Christi Hahn (209) 304-6426. Hahn.christi@yahoo.com or visit www.suttercreek.org

Meeting Minutes

By Erin Sicard

August 25, 2021 – Club Meeting Minutes:

Meeting at 7:00 p.m. Adjourned 8:05 p.m.

Meeting called to order at 7:00 pm by the president. 16 members were present. New member Mike Slusher with a 63' Spyder convertible was welcomed and introductions of all present were given. Upcoming events were listed and discussed including the Ironstone Car Show on 9/25, Great Western Fan Belt Toss in Palm Springs 10/24 weekend, Cars & Caffeine Hagerty event at the CA Auto Museum in Sacramento on 9/11 and CA Auto Museum Fulton Avenue Cruise Fest car show on 10/2. Discussion about the Ironstone event participation was held and if at least seven members enter their cars, the club will reimburse them \$50 of the entry fee. Eight members present committed and president will send out an email later this evening or tomorrow to solicit more participation from members. Treasurer's report noted \$18,106.83 in the bank; \$435 in deposits made in August and paid out in August was \$2,32.91 in parking fees from the club BBQ event, work/parts/supplies on the Spyder club car project and the total for this has been \$6,920.78. Discussion about the listing of the Spyder on Bring a Trailer and how to access the site. Wes has been managing the listing and provided video of the demonstration of the turbo charged engine. The auction concludes on Monday 8/30. \$1,130 in dues were collected. Discussion about the entire Spyder project and the success of the club BBQ event. Brief mention of a holiday party to be discussed at a future meeting. It was announced that Ken Edwards has agreed to be the newsletter editor. Discussion was held about planning a Spring Fling event and different venues were discussed with the preference being the Old Town Sacramento Railroad museum, perhaps in April 2022. Committee formation for this event was postponed until the next club meeting. Next meeting Wed 9/22 at 7pm at Orangevale Denny's.

Corvair Resources (Online)

Q&A - www.corvaircenter.com
www.corvairforum.com
Parts - www.corvair.com (Clark's)
www.californiacorvairparts.com
www.mikescorvairparts.com
www.rockauto.com
Sale - www.jaxed.com
www.corvairtrader.com (Parts & Sales)
Resources –
<https://www.corvair.org/chapters/corvanatics>
Car Building – <http://autoexer.skiblack.com>
Fun - www.youtube.com/user/davemotohead1
www.deansgarage.com



Birthdays

September 6: Deric Treon
September 7: Brenda Tate
September 9: Maria Castellanos
September 10: David Graham
September 12: Michael Slusher
September 13: Tyler Davin-Moore
September 20: Deb Oyler
September 20: Lorraine Josol
September 21: Howard Pilon
September 23: Neal DeNatale
September 24: Robert James
September 25: Alan Galbraith
September 27: Dan Kramer

Recent Awards



Congratulations Wes Nicholas!
Wes's 1961 Lakewood Wagon received
the Auburn Cruise Nite Best Stock Award.

CCRC Club Member Assistance:

CLASSIC CORVAIRS of RIVER CITY CLUB MEMBERS

In the last year, our club has lost at least six members with cars that participated in club outings. It is getting more difficult to get a respectable number of cars at club-sanctioned events. Car shows, concourses, the Autorama and State Fair participation require strong showings. We may not be invited back to the State Fair this year due to our poor showing last year.

In order to get more cars on the road, the club leadership is offering assistance to members that have Corvairs that need help to get them running. This help will be in the form of technical expertise, mechanic labor and financial assistance.

If you have a Corvair that is in need of work, contact John Heiser and give him the details on what you require in the way of help. A committee will review the requests and select those we think are the best candidates. Remember the goal is to get more Corvairs at our club events. Those chosen will be expected to participate and help the club increase the number of cars that we put on display.

Your Comments

CORVAIR CHATTER Newsletter - Let us know if there is something that you'd like to see in our monthly newsletter. Email your thoughts to John, Johnh1@thegrid.net

Club Activities - You may have some great ideas for club activities. We want to hear them! Better yet, we'd like you to participate in the planning of your activity idea. Email your ideas to Carl Funk at: edieboopboop@yahoo.com

Classified Section



Mike's Corvair Parts



Clark's Corvair Parts®

Our catalog lists over 15,000 parts for your Corvair. We carry engine parts, body panels, upholstery and much more! There are 1,000's of reproduced items available, pages of technical information and lots of other helpful hints.



Check us out at www.corvair.com or call today to order a copy of our printed catalog. You will quickly see why we are the world's largest supplier of parts and all your other Corvair needs. Clark's - More than Parts!

Clark's Corvair Parts® 400 Mohawk Trail, Shelburne Falls, MA, 01370
(413)625-9776 www.corvair.com email: clarks@corvair.com

1961 Corvair 95 Rampside pickup for sale. \$15,000 (916) 644-1965
Runs Great. New Clutch Differential, Pressure plate, flywheel, Disc, throw out bearings, and fork. New gas tank, New 2 tone vinyl and cloth seat with thick foam. New Alternator and battery. New automatic dual chokes. New tires. The owner has receipts for all of this and more over the last 6 months. I have put on about 300 miles since the above work was completed. It cruises at 70 MPH with no problem. Surface rust in spots one dent driver side. Body and "frame" are straight. It does need body work an a great paint job.



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Jim Messick in Stockton has a '64 Spyder convertible for sale. May need engine parts, has a ding near left tail light, and upholstery needs replacement. Asking \$1500. Contact Jim at 209-969-2069.

For Sale: Rampside, Greenbrier, corvair engines, transaxles, parts etc. Contact Larry Forman at (916) 216-9801

For Sale: 1964 Corvair Convertible located in Elk Grove. Contact. James Koch: edselhusband@aol.com

If you would like to submit a Corvair or Corvair's including related items to the classified section of the newsletter. Please send me electronic pictures of the item, pictures of the Corvair(s), including engine, interior, description, such as the year, mileage, manual or automatic transmission, if possible, asking price and contact information. If you are placing a classified regarding "In Search Of" related to Corvairs, please email the information to me. Please provide these items prior to the next months publication. Which is about the first week of the month. If the car or item has sold, please let me know. My email:

Johnh1@thegrid.net. Thank you.

CCRC 1963 Corvair Spyder Convertible - Highlights

1963 Monza Spyder Convertible a late 1963
06C June third week 1963

Style 63-0967 Body WR 36377, 1963 Monza 2 Dr Convertible
WR = Willow Run Michigan Plant, 36377 Monza Convertible built
Trim 1-732 1=White top 732= metallic blue imitation leather interior

Paint 912-2 Silver Blue exterior Blue interior
ACC F2C3C F= Tinted Windshield 2C Padded dash 3C Spyder Turbo
VIN 30967W282769 3= 1963 0967=Monza Convertible
W = Willow Run assembly plant 282769= 182769 car built
Engine T1209RL 65-66 180 hp. 164 cu.in. manual Corsa only
Heads 3856762 65-66 180 hp.
Differential 64 HJ 3.55 Posi traction



Part III: A Speech by Robert P. Benzinger at the Corsa National Convention Seattle, Washington, July 26, 1975

Robert P. Benzinger is a Professor of Industrial Design at Arizona State University. He was Senior Project Engineer at Chevrolet during the development of the Corvair engine, Design Engineer for the Corvair Engine between 1959 and 1962, and later Staff Engineer and Chief Engineer at Chevrolet until 1970 when he became associated with Arizona State University. The following is the speech he made at the CORSA National Convention in Seattle in 1975 which held us all spellbound until late that night.

We are indebted to Bob Helt for the transcript of this speech.

We had two way radios in the cars and traffic all the way. "Smell anything yet?" "Gotten anything yet?" And the strangest theories. We even imagined that there was static electricity being built up on the blower like a Van de Graff generator. Well we finally found it. This was in the winter. Was cold weather. Full heater. And of course the engine compartment with the turbocharger gets pretty warm. And he had a vehicle with a slightly over high limit charging rate on the generator. So the heat of the battery together with the overcharging rate, the battery was putting out microscopic droplets of sulfuric acid. And sulfuric acid and Delrin degenerate into a gas we know as formaldehyde. If you've ever smelled formaldehyde, and I gather some of you have, this very rapidly explains the choking, coughing and the eyes watering. Well there was nothing to do but kill it. We caught it, let's say, in the nick of time. I shudder to this day what might have happened had we not put that one blower on one guy's car and driven it from Detroit to Cleveland. I'm going to quit thinking about that! So we did then settle for die cast aluminum and the die cast aluminum blower is just about - almost precisely - the same architecture and the same design that was done in Delrin. It was rather easy at that point to convert over to die cast aluminum.

In belt development along with the blower we were trying to get the absolute highest speed we could and keep the belt on the pulleys. We developed tests in the dynamometer room. We simply put the engine on a pallet on the floor, hooked up fuel and ignition to it and just ran it by jazzing the throttle with a rod. This was pretty effective. We had a particularly fine technician who had set up and learned this particular test. He could tell by eye, in fact he had only one eye, but he could tell with the good eye just when the belt was ready to flip.

I remember one particular time again when I wish I had a record of looks on faces. One of the belt vendors had constructed a belt that they were particularly proud of. They had done quite a bit of work on it in their own engineering organization and were sure that it was the answer to all the problems. We had been going thru all kinds of materials for cords, for cord lathe, for belt construction, wrapped and not wrapped, cut sides, notched and various rubber compounds. You name it. They were so proud of this belt that they brought their General Manager, Chief Engineer and Sales Manager along with the engineers. It was quite a group. So we went out in the lab and I had the technician set this up on the engine. It was standard procedure to warm it up, let it run for a while, recheck the tension and be sure everything was seated in and the rough spots rubbed off. Then he would run his eyeball test to flip it off.

Well these fellows were watching the warm up and the technician had it right to the edge of coming off. He knew just when to back off. These fellows were pretty proud of themselves. They were all set to "pop the champagne" when the technician looked at me and said, "Should I flip it off?" So I looked at the fellows from the belt vendor and said, "Are you ready?" A few of the looks started to pale. I gave him the nod and just like that the belt went off. And these fellows, well you can imagine ... dragging their tails behind them. I'm often asked why we didn't try a steel cord belt. Steel ought to be a good material. Strong! And it is. Steel isn't a bad material for making the cord in belts. But if you ever saw one come off or one break, you know this is the way to destroy the whole rear end of the vehicle. They really do make a mess when they come off.

We wanted rather desperately to match up a turbocharger with an automatic transmission. It has some pretty attractive aspects about it. But we just could never make it go. The thing that you run into - and maybe some of you have even experimented yourself with this combination - is that when you wind up the engine in low gear, get the turbine wound up to full boost and then make the upshift, it suddenly pulls the engine RPM down with the boost still up where it belongs for a couple of thousand RPM higher. With the low engine speed and the blower still wound up, it gets into combustion difficulties that makes wild detonation look pale. There was just nothing we could do to get the engine thru this rough spot. Once the malcombustion starts, you can't just shut it off again. Perhaps the availability of a three speed automatic or maybe a four speed would have done it by getting the gear steps tighter. But with Powerglide being a two speed set up we could never find anyway around it.

I do have some pleasant recollections of some of the early testing and early driving of the turbocharged vehicles. You know on the roads around the proving grounds it looked just like any other Corvair. But some of the astonishing things it would do to people who didn't know what was in the back end. On the same 16% hill I was talking about before with the carburetor fire, I pulled up to the hill one day with one of the early turbocharged jobs. There was a Cadillac right ahead of me with two engineers in it. They kicked off up the hill with a great commotion and a great whoosh. I let them get a little ways and then kicked off with the turbocharger. It seemed like it was about three car lengths and I passed that Cadillac like it was chained to the road. Going up that 16% grade, that must have been totally absolutely incomprehensible to these Cadillac engineers. They just wouldn't believe what was happening to them.

I see time is getting on here. This is kind of a hard one to summarize and conclude. I guess the record is clear for GM. As far as GM is concerned, the Corvair went down the tubes. And amid some circumstances that were plainly embarrassing to General Motors. You won't find anybody on the payroll there that wants to repeat the experience. And as surprising as this sounds, there was rather little opportunity on the part of General Motors to do any rebuttal. I don't know whether any of you are familiar with Don Campbell. He's a syndicated financial columnist. I have here his column from 26 July 1972. I think he summarized it in words that I'd like to share with you now. He goes thru a fictional scenario of product difficulties. I'll pick it up midpoint here, quoting Don Campbell.

And the outcome is as predictable as the choreography in a New Guinea fertility dance. The public accepts the crusader's charge as gospel. And if further evidence indicates that his arguments have more holes in them than a pair of nineteen cent socks the damage is irreparable to the company's reputation. If this smacks of exaggeration, please bear in mind the lion's share of crusader Ralph Nader's present fame is firmly rooted in front page controversy that surrounded the 1965 publication of his book "Unsafe At Any Speed." And the major component of the book was Nader's argument that General Motor's rear engine Corvair could be tipped over by a playful kitten. And any driver was a fool to take it around corners even at very low speeds.

I'll skip a bit here and quote again.

But the smirch of Corvair's reputation was indelible despite GM's frantic efforts to disprove Nader's charge. And ultimately the car was dropped from production. Heady with his own power however, Nader continued to blast away at the Corvair. And in 1970 at his insistence, the Transportation Department agreed to investigate the car. The National Highway Traffic Safety Agency contracted with the Texas Institute of Transportation of Texas A&M for a series of exhaustive tests comparing the Corvair's handling and stability characteristics with other compact cars. Last week the results of the two year study were released. That's right. It turned out that there was nothing wrong with the Corvair's stability. And there never had been. Or as the panel evaluating the test said of the Corvair "... did not have a safety defect, and is not more unstable or more likely to roll over than contemporary automobiles." Nader predictably has labeled the study that he himself insisted on, as a "whitewash." Which if true, considering the number of governmental agencies, impartial testing groups and educational institutions engaged in it, would have to involve a conspiracy, that in scope, would make the Tea Pot Dome Scandal look like shake down on the school playground.

The significance of it is a little numbing. The Corvair affair not only catapulted Nader from obscurity into his present roll of one of the country's best known men, but it launched the whole consumer action movement that almost daily makes headlines in every newspaper in the country. And the seed of it all was a charge that present evidence indicates wasn't even true.

think perhaps the best overall appraisal of the decline and fall of the Corvair from production was printed in a British magazine, Autocar, in their issue of 10 July 1969. It was rather impartial and taken from an objective point of view. It was about a four page article as I recall. I commend it to your reading if you've not had the opportunity. The best overall vindication of the Corvair, I think, is in the undocumented, but indisputable, fact that among GM people - employees, executives, engineers - the Corvair was probably the most popular personal and family car that GM ever built.

For my part, I find a lot of things I can be proud of. I had a lot of fun doing it. I certainly don't want to say that there aren't some things I wish I had the chance to do over again. But I'm very much pleased looking back on it and I'm pleased to have shared some of the experiences with you this evening. I certainly want to wish all the luck and success in the world to this fine organization (CORSA). I see that it is well led and enthusiastically followed. My best of luck to all of you in this fine organization.

If there are any questions and if your time schedule permits now, I'll be pleased to answer those that I'm able.

Q. Have you ever considered writing your Corvair memoirs into a book?

A. That sounds an awful lot like work! No I haven't. I don't know who said it. Somebody of the cut of Edison or Steinmetz. He said that most things that are worthwhile degenerate into hard work.

Q. In your discussion of the flywheel you covered rather thoroughly the spring plate of the flywheel, but you didn't say anything about what the third plate is for on the outside of the riveted assembly.

A. That's to get more weight, more mass into it. You know the smoothness of the engine is in some measure dependent upon the weight - at least a threshold, a minimum amount - you can put into the flywheel. And without that extra weight on the outer ring, we didn't think we had enough.

Q. A question was asked about a maximum turbocharger RPM.

A. I'm scared to throw out a number. It's a far different day than when you could say, "Well it died." "Send somebody over to pick it up and bring me another car." I'm afraid of a number now as dear as parts are to all of you. Lots of luck with whatever you can get out of it. I'd rather not get into that one.

Q. I was wondering. You covered the story of the rivets in the flywheel. One of the more popular fixes for the shoddy rivets is to weld the darn thing. Why didn't Chevrolet do that in the first place? It would have been much cheaper.

A. I can say on that, I honestly don't remember. I suspect as you stated, and as the snickers here indicated, that's a fairly obvious approach. Certainly between the flexplate and the weight there is no great difficulty, but welding it to the cast iron would present a problem. We might have gotten away from it, but I honestly don't remember if that was considered. And if so, how seriously.

Q. A question was asked about a more efficient intake manifold in getting the engine to breathe.

A. You remember what the '60 looked like. With a cover plate over the top. One of the reasons we wanted to get rid of that loose cover plate is again, that it was a barrier to controlling the temperature of the carburetor flange. It was another gasket and another barrier in there and we regarded it as a piece of progress that we were able to make the manifold integral. We got rid of a piece which was economy and also got one more tool to control the temperature of the throttle body and the temperature of the carburetor. There are a fair number of conversions that just mill off various amounts of the manifold and then build back something that may be regarded as more desirable. I think Bill Thomas on the West Coast was doing quite a bit of that.

Q. A question was asked regarding the direction of rotation of the Corvair engine.

A. When you figure out the direction of wheel rotation back thru the hypoid and gear train this is the way it comes out. I guess I don't like the snickers that went with it because that answer was not a put-down. It was that obvious to me. In running the power clear thru with this long quill shaft is where you get the reversal.

Q. Isn't it true though if the ring gear were on the other side of the pinion, the engine could run in the opposite direction? And if you wanted to go mid-engine you could turn the differential upside down and your direction is still correct. You could turn the whole engine assembly around and put it in front of the axle.

A. As soon as you get the engine in front of the axle you are back to conventional rotation. Is that what you mean?

Q. No. What I'm saying is you take a conventional Corvair transaxle, cut the bell housing in half. Turn the differential over. Weld it back together and install it with the engine in front of the axle and you go the right way, with the Corvair engine turning the standard direction. Another way of saying it in a general sense is if the ring gear had been originally designed for the differential on the opposite side of the pinion, as what exists now, then the engine could have turned in the conventional direction.

A. The only thing I can say is that it's late and I'm a bit far gone. I wish I could pursue it with you but it's beyond me tonight. Sorry.

Q. Did Bill Thomas have an influence on the design of the 4X1 heads?

A. We were aware of what Bill was doing, and Bill was a frequent visitor at the Engineering Center. We liked Bill because he was easy to get along with and we could speak each other's language. This wasn't the case with many people who were in that sort of a business. Bill was a frequent visitor and well liked at Chevrolet. He did nothing you could put your finger on but people are always influenced by the other people they come in contact with and the things that they are doing. I think we can say this honestly without saying we leaned on Bill for what to do, or so on. It certainly was an influence.

This brings up a kind of a sore point with me. I'll share it with you. I think Chevrolet's top management made an error in judgment on many of the things that happened in the high performance image of the Corvair. We spent an awful lot of time chasing fuel injection, chasing all those things that would relate to the enthusiast's impression of high performance. And we spent an inordinate amount of time, resources and valuable engineering talent in chasing a piece of the market that was really rather fickle. That jumped from Corvair to Mustang to Corvette to ... you know. Fickle is the right word. In the mean time I think we neglected some of the things in the Corvair that would have appealed to a more stable portion of the market; to wives, the families who were looking for the handling and reliability in terms of wet and sloppy weather. It was one of the things I was a bit peeved with. By mentioning it tonight you see, I'm still a bit peeved. I think we spent too much time, too much effort. Squandered too much in terms of resources chasing a performance image that just plain wasn't in the cards. The horses weren't there to begin with in this concept of a vehicle.

Q. Does that also explain why a solution was never found for the seals on the pushrod tubes? Somewhere else I had noticed that you had made the statement that you didn't realize that it was a problem. I don't profess to know that much about the Corvair but I would have felt that the problem would have come up at Milford, in all those miles that must have gone on at that track. Those things must have started leaking somewhere there.

A. I guess I can repeat it. That it does kind of mystify me to this day. We didn't have that much difficulty with the pushrod tube seals. Inorganic parts, rubber parts, these are real touchy. You're at the mercy, as we were, of the honesty of the parts supplier. There are an innumerable - literally an infinite - number of rubber compounds possible.

Some of which do the job, and most of which do not. It's one of those things we had to watch very carefully in terms of quality in terms of integrity really of the guy who made it. There are an awful lot of people who are selling after market parts. You have to make your own judgment on their individual integrity. I still feel that carefully handled the problem is minimal. Now there is no getting away from it. O-rings are touchy! The bore that receives the things has to be clean. No nicks. No burrs. It only takes a very slight scratch in the surface of the O-ring to spoil the seal. They are also sensitive to being properly lubricated when they are installed, If the things roll or rotate any in the groove, the ball game's over, It's going to leak. But with the right material and reasonably careful lubrication and installation, there should be no problem. We had darn little problem with them.

Q. What did you use to lubricate them with when you installed them?

A. Lubriplate. Engine oil is pretty good. But Lubriplate is what we used at Tonawanda.

Q. Due to the similarity of the Pontiac Tempest transaxle and the great deal of similarities in that particular drive train, was it developed to coincide with the Corvair at the same time? And will the ring and pinion fit the different models?

A. I don't know if the ring and pinion will fit. And as far as things went, at least in those years, General Motors ran its affairs so that the producing divisions were totally independent of each other. They carried on their own engineering at different locations. A totally different group of people. Different leadership. Different policies at the top. That doesn't say that we were forbidden to speak to each other. But whatever Pontiac did, they did because they wished it that way. They weren't lead into it by the availability of parts from another division. So you'll have to ask Pontiac about that one.

Q. A question was asked about why the original turbocharger intake manifold with the six legs was not put into production.

A. You mean with six legs out of a plenum chamber? (Yes) In the development, we had an unbelievable number of manifolding combinations. We had one person in the organization, who I won't name, but who believed that plenum chambers were right! That the discharge from the compressor should go into a plenum; and then off the plenum, take various combinations to preserve mixture and so on. The plenum chamber just turned out to be a disaster. It was too much surface to begin with. Most of the plenums had some kind of a sump in the bottom. And what happened is that the sump just filled up to the spill over point with liquid. Even on a dynamometer it was unpredictable which way it was going to slosh. It would just destroy any maintenance of uniform mixture. So we fairly rapidly determined that the way to preserve some kind of mixture distribution was that from the blower outlet, from there on, everything had better be down hill. Nothing to pocket, catch or puddle. So it was its own disaster and died for that reason.

Q. One problem that a lot of Corvair owners have had is the problem with valve seats. You have the problem mostly with 140 HP heads.

A. You mean with the seats coming out? (Yes) This of course can happen for such a variety of reasons that it really isn't reasonable to answer "blanket." One of the ways it can happen, and can happen with say the best of hardware, dimensionally, mechanically and metallurgically is after a hard run when everything is good and hot, like mountain driving, you come to a long downgrade which quenches and cools down the valve seat while the cylinder head is still hot. We have seen some cases where the valve seat will play "Ring Around The Rosy" on the valve stem, simply because of that temperature differential that quenches the seat while the head is hot. The rest of them from there - with everything right, dimensionally, metallurgically, and properly installed - should hang in there pretty tight. That's saying a lot I know, to say if everything is right. We put the seats in as tight as they would go. What happens if you try to put them in tighter is that the aluminum or valve seat, or both, will be overstressed and it will relieve back to the interference fits that were specified in the first place. So putting them in overtight really doesn't do anything. Material yields to get it down to that limit anyway.

Thank you very much.