

Group Corvair Comments



GROUP CORVAIR'S NEWSLETTER FOR THE NATIONAL CAPITAL AREA

VOLUME LIII, No. 11

November 2025



Corvairs on Display Rockville Antique and Classic Car Show, 2025 CALENDAR OF COMING EVENTS

November

- 14 Smitty Smith funeral and celebration of life, 1 p.m., Hollomon Brown Lynnhaven Chapel, 3600 Virginia Beach Blvd., Virginia Beach, VA 23452
- **18 -- Group Corvair On-Line Meeting. 7:30 p.m.** Details for the Zoom link will be emailed to club members on or about 16 November.
- **20 Group Corvair Social Meeting.** 1 p.m., Nonna Angela's Italian Restaurant, 2225 Defense Hwy A, Crofton, MD 21114 (This is the intersection of MD Rt-3 and Rt-450.) Keep an eye out for a confirmation email.

December

16 -- Group Corvair On-Line Meeting. 7:30 p.m.

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From the Oval Garage

Indian Summer has continued into November enabling me, and others, to get more work done on our cars. One of my most frustrating challenges has been to remove a trim screw on a side door of my Greenbrier. In the past a sheet metal screw had been installed and jammed in the machine screw threaded weld nut and refused to back out. On a beautiful autumn day after many attempts to unscrew it in the past without drilling it out I finally got lucky. I was able to remove it by jamming a small piece of aluminum foil in the worn Philips screw head while using a new #2 Philips head bit in my impact drill. Things do come apart more easily in 70-degree weather.

At our October business meeting I shared photos of the Wyndham Hotel's back parking lot to be used by Group

Corvair for the Cruise In/People's Choice event at the 2026 CORSA convention in Gettysburg. Titus Stewart and I walked the area to get a sense of how to handle vehicle access and judging while not interfering with hotel employee parking and deliveries. Titus then showed me the areas of the hotel that will be set aside for CORSA reception, hospitality, the valve cover race, etc. After reviewing the photos at our business meeting, we had a lively discussion of how to best handle Group Corvair's convention responsibilities in sunny or rainy weather. Signage, traffic cones and barriers, tables, chairs, refreshments, protection from the sun are all still to be determined.

Titus also said the hotel management was open to displaying a Corvair in the reception area where all guests would be able to see it as they checked in. Maybe Jim and Marolyn's '66 Turbo Corsa could be displayed on Sunday, Jerry and Diana's '66 Yenko tribute, on Monday and Mark and Dorothy's '66 Corsa 140 on Tuesday....

Our social meetings on weekdays seem to be consistently well attended—especially because so many of our active members are retired—so our next one will be on November 20th at Nonna Angela's. Their manager has said that—like the Green Turtle—we will be able to use a private room at no charge (unless another paying group reserves it first) for our November meeting. Look for a separate email to confirm our meeting details a week in advance and please RSVP me by the 19th



to be sure we have enough seating. If any GC members would prefer a future social meeting on a weekend, please let us know.

In closing, remember that Group Corvair has an extensive inventory of Corvair specific tools and years of shared experience if you need help with any projects.

Minutes of the October Virtual Meeting

Marolyn Simpson

Group Corvair held its Zoom business meeting on Tuesday, October 21. While members were logging in, there was a discussion on building model cars, especially the type of paint, which is now mostly acrylic.

There was a total of 13 members logged into the meeting (not all of them at the same time). Bob Hall called the meeting to order at 7:42 pm. The minutes were approved as they appeared in the newsletter. Jim Simpson gave the treasurer's report. There were no changes during the last month.

Bob H. brought us up to date on the convention news. He had attended the planning meeting in Gettysburg the previous Friday.

The next order of business was a discussion on club apparel. We will need to digitize our logo. The place that did the previous shirts has the logo in hand. Mark Shiffler suggested that instead of white shirts, like we currently have, we could order gray ones; Jim then suggested light blue as another alternative. The turnaround time at the place Mark has been working with is 6 to 8 weeks. Members would send the number of shirts and sizes to Mark. A vote to get an embroidered sample of the logo passed.

Jim showed pictures from the Rockville Antique and Classic Car Show which was on October 18. The pictures were of the four Corvairs on the field and several other interesting cars.

The October 28 social meeting will once again be held at the Green Turtle restaurant in Burtonsville at 1:00 pm. [Note: The social meeting took place as planned.] We may meet at Nonna Angela's again soon to move the venue to the east side of town.

The discussion turned back to the 2026 convention. Since Group Corvair is in charge of the car show, which will be on the first day of the convention, our club members will probably need to be at the hotel on Sunday (the convention starts on Monday) to help direct traffic and get the car show lot ready. Jim brought up the map of the hotel and surrounding area. Bob showed pictures of the hotel interior and parking areas. We also saw pictures of the autocross lot. Ron Fedorczak will take pictures of the car show.

The meeting was adjourned at 9:05 pm.

Rockville Antique and Classic Car Show 2025

It was another great show and a fitting finale to the 2025 car show season. The Rockville show has long been our favorite regional car show, and we've written about it several times in the club newsletter. But for anyone who is coming in late, this is an event that has been organized by the City of Rockville for well over 50 years and is currently sponsored by 33 regional car clubs, including our own Group Corvair. Entries are limited to antiques and classics and they are expected to be "of the highest standard of preservation and restoration". The show is held at the Rockville Civic Center, the former Glenview Mansion. One of the features of the venue is the large grassy valley, the "Glen" that gives the mansion its name. We fill that with cars (and food vendors)!

The event has grown over the years to the point where the organizers have decided to limit it to 630 entries that all must be pre-registered. This year they reached that limit weeks before the actual event. Of course, not all cars that were pre-registered made it to the show; this year was typical with 540 making it to the field. But more important than the number of cars are the spectators, with about 12,000 coming in recent years according to the Rockville staff. Between the venue, the great fall weather, and the spectators, it is a marvelous show.

This year there were eight Corvairs registered, but only four managed to make it. All the no-shows did have valid excuses, but it would be nice to have a larger turnout. Never-the-less, Corvairs have maintained a hold on one of the best places on the show field. As you can see in the newsletter cover picture, we're right up next to all the food vendors so just about everyone on the field comes past us at one time or another.

The range of cars at this show is changing as time goes by. There are fewer of the "brass era" cars and more what I would call contemporary such as this Japanese "Kei" car. (Kei cars are Japanese compact cars, significantly smaller than the Japanese cars we normally see in the US. Here's a link if you are interested:

https://en.wikipedia.org/wiki/Kei_car. Under current US regulations, you can import them if they are 25 years old, but you do need to check state laws regarding registration.) And from Europe we have the VWs.



Honda "Beat". Compare its size to the Miata on the right.



And as you can see from these pictures, the weather was about perfect as well

VW's Were Well Represented!

Lunch at the Green Turtle

Corvair owners like talking about their cars and enjoying good food. On October 28 we combined those two things at the Green Turtle restaurant in Burtonsville for lunch. We had been there a couple of times before and were impressed with the private room (we could chat in a normal voice, and everyone could hear) as well as the menu items. Apparently, a number of other activities were going on that day, so the turnout was a bit lower than usual: just six members were there as well as one Corvair. Several members arrived early and gathered around Ron's Corvair in the parking lot before proceeding into the restaurant. The smaller number of attendees didn't seem to slow down the conversation though, which included topics from Corvairs (of course), to the weather (there was a possibility of rain), to overseas trips (Wales was mentioned), and many other topics in between.

Discussion of the upcoming convention in Gettysburg was the one business item. We laid out several maps of the Gettysburg area and the hotel and the surrounding parking lots. The two events Group Corvair is involved with are the car show on the first day of the convention, and the model car display that Phil Richardson is working on.

We left the restaurant in time to get home and start preparing dinner.

You **Do** Want Some Group Corvair Apparel!

Group Corvair is going to purchase another batch of club logo apparel. We're evaluating a couple sources, one local and the other a mail-order company where we purchased our last ones some 15 years ago. We can't match exactly the ones we got back then since they are no longer made, but we will look for good quality materials that stand up to wear and are easy to clean.

We're discussing the default color, but we want our logo to stand out and that the shirts can be worn in the sun without overheating. We also plan to get ballcaps. Apparently, the logo will have to be simplified to fit on a hat, but it still should be recognizable as Group Corvair's. We're not entirely sure about pricing – best guess right now is in the \$30 range for a polo shirt and \$15 - \$20 for ballcaps.

alleans

Right now, we need a count of how many people want them and a general idea of quantities. Don't forget, Group Corvair is a sponsor of the week-long CORSA Convention in Gettysburg next year and you might want a change of clothes. And of course, your significant other will want some matching apparel as well!

So send a note to Mark Shiffler (<u>mshiphty@gmail.com</u>), Bob Hall (<u>HallGrenn@aol.com</u>), and me, Jim Simpson (<u>simpsonj@verizon.net</u>) so we can start putting an order together. We will get back to everyone to get final numbers, sizes, and colors as well as the prices before we put in any orders.

Tech Topics

Jim Simpson

Notes on Rebuilding a 180 Turbocharger: Most of the time, the Chevrolet Corvair Shop Manual is the "go-to" source for details on how to do work on your Corvair. However, when the Corvair Spyder with its 150 HP engine was superseded by the Corsa and its 180 HP engine, Chevrolet never bothered to update the '65 shop manual (or '66 supplement) with some of the changes in the turbocharger's design. And there were some details that they left out, either through oversight or – more likely – because the turbochargers were delivered to Chevrolet as complete units by the manufacturer, TRW, so the Chevy engineers just didn't know about them. So, when I built a new turbo for my Corsa, I learned a few new lessons and had to come up with some workarounds in the process. I thought I'd document them here as notes or additions to the shop manual. So, the best way to make sense of what's below is to get out your 1965 Corvair shop manual and follow along in section "Engine Fuel 6M" starting on page 6N-19: I'll be referring to paragraphs by their numbers.

First, though, let's take a look at the special tools you might need. As you go through the shop manual directions, you'll see a press, two sizes of snap-ring pliers, a dial indicator, feeler gage, a pair of "c-clamps", an inch-pound

torque wrench, and a "holding fixture" – one of the special "J" tools along with some standard hand tools.

There's nothing special about the press; just about any small hydraulic press will work. There are likely workarounds but a press makes it simpler.

I can't emphasize enough about getting decent snap ring pliers. Cheap ones will likely cause damage! And you will want two sizes. I'm using these: The small ones



Snap Ring Pliers

are KD 2011 and the larger ones are GearWrench 31520. I'm sure there are others out there that will do the job, but these are well made with a variety of tips and will lock in place once the snap ring is compressed, making the rings much easier to remove and install.

Dial indicator – you will need one to check clearances. If you are wealthy, by all means invest in a Starret or Mitutoyo dial indicator. But for rebuilding a turbo, a \$18 one from Harbor Freight is adequate. You will need a base to position and hold it; that's another \$13 from Harbor Freight.

Most Corvair owners have a feeler gage to check ignition points gap. If you don't already have a feeler gage, be sure the one you buy (or borrow) has feelers in the 0.002 - 0.012 inch range. Most sets have them.

C-clamps are used to hold the shield plate down during assembly. I like to use woodworking bar clamps with their padded jaws. They won't damage the aluminum surfaces.

Not too many people have an inch-pound torque wrench. You need a torque wrench to tighten one nut correctly; the compressor nut is supposed to be torqued to 80 in-lbs. That's just under 7 ft-lbs so perhaps you have a 3/8" beam-type torque wrench that reads that low and will work.

Holding fixture. The shop manual shows the "J-21004" holding fixture. As best as I can determine, that's just a simple pipe, 4 1/2" inside diameter, about 3" long. If you want to make your own, you could use about any material including heavy gage plastic. But you might want to consider the fixture in this picture as well. It's a piece of aluminum stock that has been machined out and drilled to accept the exhaust turbine blades. I bought this from one of the Corvair suppliers at a CORSA convention several years ago. It works a lot better than the hand-held rag that the shop manual says to use and will protect the exhaust turbine blades. (They are rather brittle.) But given the expense, if you are only going to rebuild one or two turbos in your lifetime, see if you can borrow one.



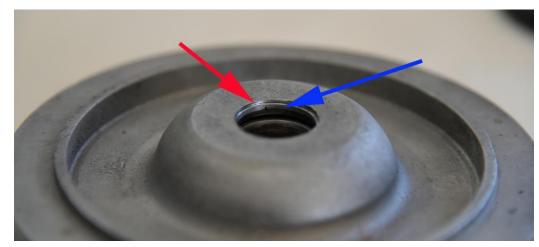
Now let's get into the notes starting on page 6M-19, under "Disassembly".

Para 2. This is where the holding fixture pictured above would be useful. The turbine blades fit into the holes in this fixture and distribute the load as you unscrew the compressor nut.

Para 3, 4, and 5. The 180 hp turbo impeller (compressor wheel) is a sliding fit on the turbine shaft unlike the press fit on the 150 hp turbo so you shouldn't need a press at this point. Usually, you can just lift the impeller off although sometimes it's a bit tight and may require a little persuasion by twisting it back and forth with a drop of oil on the shaft. But in either case, make sure the turbine wheel is supported so it doesn't accidentally drop out.

(Page 6M-20, "Cleaning and Inspection" Para 6. Look carefully at the bore on the turbine side of the bearing housing. I've found that the outermost section is frequently damaged. Here's a photo of one example: The blue arrow points at the surface the Turbine Shaft Oil Seal Ring is supposed to rest upon. The red arrow

shows a step that has been gouged in that surface due to improper assembly sometime in the past. That step will make it impossible to assemble the new turbo properly.



Here's a photo of a good bearing housing with the seal ring in place: (Normally that seal is a slot in the

turbine shaft and invisible once installed. This photo is just to show you where it fits.) The blue arrow is pointing at the dark seal ring. The surface it rests on needs to be clean and smooth to limit oil leakage into the exhaust side. I have several bearing housings with damage in this area and I'm looking at methods of repairing them. Note that the seal isn't a perfect seal, there will always be some leakage. More on this later.



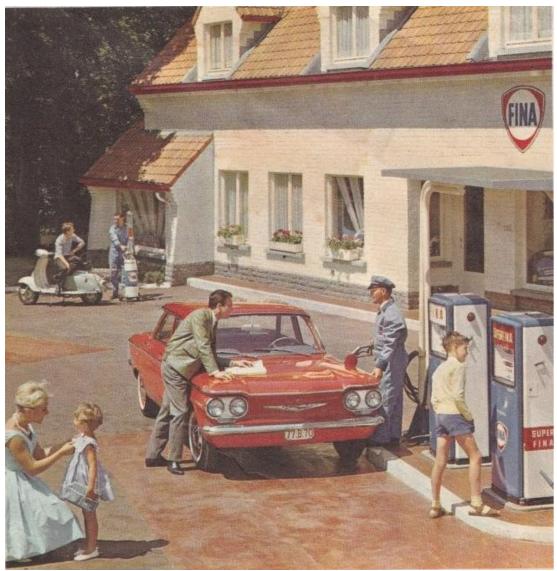
Page 6M-21 "Assembly", Para 4. There's a note under subparagraph "d" regarding available shim thicknesses.

I've found that the available shims vary somewhat in thickness, so it pays to use a micrometer and measure them and then select the best fit.

- Page 6M-22, Para 7 & 8. This is a bit tricky. The large "O" ring on the Oil Seal Assembly frequently gets caught on the snap ring groove in the Bearing Housing. Use plenty of silicone grease on both the "O" ring and the Bearing Housing and when you do push the Oil Seal Assembly make sure it is going in as straight as possible. Use your fingers and palms to gradually press it down. You might want to have one or two spare "O" rings on hand. At least once or twice I've been suspicious of how the assembly went into place and after taking it out again, found that pieces of the "O" ring had been sheared off by the edge of the snap ring groove.
- Para 9 c. & d. Again, this is a place where the 150 and 180 turbos differ. Since the impeller is a slip fit on the 180 turbo, you cannot count on it being held in place by the turbine shaft. There are a couple of workarounds you might consider. One way is to try something like a single layer of Teflon pipe thread tape on the turbine shaft to try to get the impeller to be held in place. If this works, the measurement procedure in para 9 d will work. The alternate method, the one I used, is to just let the impeller slide on the turbine shaft. Then instead of moving the turbine shaft up and down to make the measurement, I installed the dial indicator so it was going down the throat of the compressor housing and resting on the impeller. Using a pair of needle nose pliers, I was able to lift and drop the impeller several times to check the clearance between the impeller and the compressor housing. Check several times to be sure of the measurement.
- Page 6M-23, Para 9 f. You should try to minimize the impeller to compressor housing clearance so when you select the shim either the 0.015" or 0.020" pick the thickest that will still allow adequate clearance. Again, I've found that not all shims are the same. The last turbo I assembled called for using the 0.015" shim but I measured the ones I had on hand and found I had a 0.016" thick one available.
- Para 12 13. Make a pencil mark on the Bearing Housing to indicate the top of the housing as it will be when installed in the car. (The oil drain points straight down.) Note where the gap in the Turbine Shaft Oil Seal Ring is after you've installed it on the turbine shaft. Make sure you don't accidentally rotate it during the assembly in para 12 it does spin rather freely. As you slide the turbine shaft into the bearing, make sure the gap in the seal ring is UP. (That's what the pencil mark is for.) The oil seal ring does not close completely so some oil will seep through, but by putting the gap at the top, it should minimize that seepage.
 - N.B. As the turbine shaft is installed, the plastic ring that holds the oil seal tight on the shaft slides off as it hits the bearing housing and the oil seal snaps into place on the bearing housing bore surface. Once in place, the oil seal doesn't move; it acts like a dam with the turbine shaft spinning inside it. If the plastic ring comes off prematurely, the turbo will still "assemble" but the seal won't work and will most likely damage the bearing housing. It will gouge its way into the housing as the earlier picture of a damaged housing showed.
- Para 14 17. Again, there is a significant difference between the 150 and 180 turbos. Since the 180 turbo impeller is a slide fit, ignore all the reference to heating and/or using a press. Make sure the turbine does NOT slide out if it does, the oil seal will be dislodged, and you need to go back to para 12 and start again. Just slide the impeller into place and snug up the LEFT-HANDED nut. Once that nut is in place, the turbine shaft cannot slide out.
- Para 18. Don't install the top two bolts that hold the bearing and compressor housing yet. You'll install them later when you put the heat shield on.

Page 6M-24, "Installation", Para 1. Here's another difference between the 150 and 180 turbos. The "V" clamp that holds the bearing housing and turbine housing together was redesigned. On a 180 turbo, the clamp nut and bolt will NOT fit under the heat shield, so the clamp needs to be rotated so the nut and bolt are at the "front" of the turbo near the oil inlet.

Finally, there's no mention of the heat shield in the shop manual. Install it using the top two bolts that hold the bearing and compressor housings together and retorque those bolts to the specified 80 in-lbs. Don't forget to clamp the flange on the right-hand end of the heat shield to the exhaust pipe. I use a stainless-steel hose clamp and retighten it after a couple of heat cycles to keep the heat shield from rattling.



Vair Vendor

For Sale: Early and Late Parts:

'64 3.27 differential, \$40; '64 3.27 4-speed transaxle, \$100; '64 Sypder engine lid, \$120;

'64 Convertible top frame, \$65; '64 4-door NOS left quarter panel (GM # 6279405), \$200

'64 2 each front cross members, complete with brakes, shocks, springs. Very good condition: one from a Sypder, \$175, other \$150; '62 – '64 Convertible rear quarter window glass, left and right, \$30

'65 – '69 underbody plastic heater duct, \$30; '65 – '69 Convertible corner weight, \$15

? year – Engine cover with fan bearing, \$20; 3 standard transmission bell housings, \$30 each.

Free – CORSA Communique from 2016 through 2023. Pickup or mail (\$14.38 for USPS).





The 2026 CORSA Convention is being presented by four clubs:

- Mid-Maryland Corvair Club
- Central Pennsylvania Corvair Club
- Group Corvair
- Northern Virginia Corvairs

We hope that you will join us for what is gearing up to be the biggest and best convention to be held on the East Coast! Come join in the fun and the history of Gettysburg- tour the battlefields, take a ghost tour, and dine at historic restaurants!

You can even visit wineries, tour car museums, and even spend time at the world-famous Hershey chocolate factory and the fun-filled HersheyPark.

Like the country life? Gettysburg is a short hour drive from the heart of the Amish communities in Lancaster PA where you'll find fantastic dining and shopping.



PSA Chapter



- Monday, June 22nd: Welcome Party
- Tuesday, June 23rd: Concourse
- Wednesday, June 24th: Road Rally
- Thursday, June 25th: Autocross
- Friday, June 26th: Econo-Run
- Friday, June 26th: Banquet and Awards



Tours, technical sessions, and other fun and exciting activities and events are in the works!

Mark your calendars and start planning to

"See You There in Your 'Vair!"





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