

NVCC, CORSA Chapter 220

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Chapter Chatter By Rory Clark

This has been a busy month but not in a good way. My day job has kept me way too busy after hours and on the weekends. I'm hoping things will settle down soon, whatever that means.

On the plus side, we have been able to get out in the Corsa a few times to take advantage of the great weather. After these drives we are a lot more relaxed after the stress of the day. Sitting on the deck with a GnT helps a bit too.

I have also been able to work on Rampy. I ordered a few items from Clark's after the last tech session at the RnR garage, like the correct throttle return spring, PG pan gasket, main wiring harness grommet, etc. Most of these items have been installed so I hope to get the windshield installed soon with the help of a few club members. It's all prepped and ready to go.

#### **Doug's Garage**

On Doug's new to him, 1965 Corsa convertible, Doug and Bryan got the 140HP engine to show signs of wanting to fire up and that is what he wanted to know about the engine. He will be replacing the single 4 barrel intake with 4 stock singles.

Mark stated that he liked the Vintage Car Values magazine that was found in the trunk. It explains the first price the seller put on the car for Doug. It seems the previous owner added one too many zero's on the original asking price. ©

The car needs some work but Doug always wanted a late model vert so he will be motovated to get this one in operating condition soon.

In no particular order, pictures of the tech session follow.

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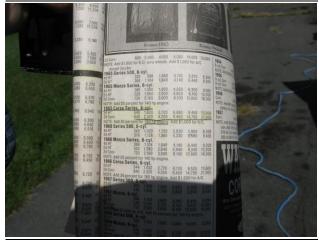




























### **Bob's Garage**

Third Installment of 456 (It Runs!)

Now the scariest part of the process begins. Engine assembly. Having only assembled one Corvair engine in my life 30 years ago, I pulled a 110 apart in a carport and put it back together again with just new gaskets to see if I could do it, this can be a bit of a nerve-racking process. Granted the supplies, materials and tools are way better and you have the internet and forums for unlimited support but there are still so many things that can go awry.

Rule one, clean everything and then clean it again. I took my block to a machine shop that has the correct tank for aluminum and the block came out looking beautiful.

Cost \$80 and was well worth it. Now once it was back home, I filled a utility sink with hot water simple green extreme cleaner which is designed for aircraft cleaning. It really brightened up the block and cleaned out any residual stuff left over. Remove the main oil galley plugs for this. I was pretty amazed at the dark color of the water after a long soak and rinse.

Time to measure stuff! Checking the main bearing clearance is fairly easy. Lay the block on a board with holes drilled for the studs to go through, place the DRY main bearings in, gently lower the clean crank into place, place a strip of green plastigauge across the main journal, lower the other half of the block into place and torque the block bolts. Remove the block half and using the gauge on the plastigauge wrapper measure. If your machine shop did their part, you should it should look like the photo. At no time during this process should you turn the crank.

Once the mains are checked time to check the rod bearings. This is not so simple. I have seen different ways to do this but the easiest way I found was with a black and decker workmate bench. Adjust the opening so that the crankshaft can nestle in the opening with a rod bearing clear enough to allow room for the piston rod assembly to be installed and the rod cap bolts torqued to specifications. Put a strip of the plastigauge on the crank rod journal and torque. You have to do this 6 times so plan on spending an hour on this.

Once bearing clearance checks out the assembly process is fairly straight forward. Get some good assembly lube and coat all bearing surfaces, cam lobes and gears. Place the crank in one block half while aligning the cam mark with the mark on the crank. Install the other side and torque the block bolts in the correct sequence using

the proper torque increments. Between each torque sequence use a rubber or dead blow hammer to whack the block case in four places to keep it square. Once finished the crank should turn by hand and not bind at any point in the rotation. Beginning at either end start installing the cylinder/piston/rod assemblies. This is a little trickier as you have to position the crank in such a way that you can push the cylinder into the block opening while holding the rod bolts away from the crank bearing surface. I just turned the crank until the piston assembly can slide straight in then rotate the crank until the end of the rod is turned up enough to slide on the rod cap and nuts. Torque to specifications. Band-Aids for the cuts you will have on your hands.

The rest of the engine assembly is pretty straight forward. Heads are next. Don't forget the air baffles under the cylinders. Top cover, oil pickup, oil pan and bell housing with new seal. As the installed parts mount keep in mind the engine weight increases. I put the short block on the final cart and then installed the heads and other parts.

Straight forward with one exception. I have a bad habit of taking phone calls while working in the garage. One evening while working on the engine I did just that and continued to work. Installing the flywheel should be pretty straight forward except when you are distracted with a phone conversation. This blunder turned out to be an expensive one. I installed the flywheel, put sealant on the crank bolts and proceeded to thread and torque them to the factory specification. The problem was I neglected to also install the flywheel retainer ring before the bolts. The end result of this stupid move is the bolts are long enough without the retainer to contact the steel cam gear on the crank and distort the teeth. I found this out after I realized my

mistake and when rotating the crank could feel the interference. My punishment was I had to take the engine apart, remove the crank, buy a new gear and have a machine shop remove the damaged one and install the new one. About a \$200 mistake and a time setback of two weeks.

The second reassembly of the engine went without another event (phone left inside the house) and with the shrouds and accessories installed it was time for the firing of the engine. Another nail-biting event. For those of you who watch Davin from Hagerty on their Redline Rebuild series of videos he says that for any engine builder the initial firing of a new engine is one of the most nerve-racking parts of the rebuild. Even the most experienced builders feel the knot in the pit of their stomach. Maybe that's why when the engine fired off (after I correctly wired the coil) the elation is amazing.

On the day of the startup, I had Darrin and Fred assisting and as witnesses to either my skills or blunders. The sound of a freshly rebuilt engine coming to life after what seemed like forever is truly music. Without a muffler on the turbo engine, it is not as loud as other engines. Several of my neighbors were pretty amazed at how good it sounded. But a muffler was in order just to keep the peace in the court.

I was even amazed that I had the distributor in correctly and the cold valve adjustment was correct.

Once the engine was run for 20 minutes for break in it was shut off and we stood and marveled at what had just happened.

The next week was spent reinstalling the power pack into the car. Clean bolts and threads make this part a lot easier. Lots of Anti-Seize on fasteners. Back on all fours and on the road again.

I now have about 600 miles on the new engine, and it continues to amaze me how fast it revs with the new balanced components. Definitely worth the extra cost of balancing.

There are a few small issues like a leaking shift shaft seal and alignment of the rear suspension, but we will always be working on these cars for one reason or another. And of course, the 4 speed will have to be replace with a rebuilt one but that is for another day.

The time and cost of this rebuild is outweighed by how well the engine is running and the self-pride that I was able to do this. It seemed a little daunting at times but in the end, it was well worth it.

I was not without help. Many evening calls to members of NVCC for advice and moral support. The gift of the forums for additional answers to questions based on knowledge and experience of others. I gained a ton of experience on this project and will gladly help anyone else who needs help with their engine project. One thing I did learn is that no matter how much you read the books and guides you never stop learning from practical experience and the experience of others who have been down the same road.









#### **This Month's Featured Corvair**

Corvy is in the featured Corvair spot this month. I had just washed and waxed it prior to a drive. Isn't your Corvair begging to be featured? Don't be shy, send me a picture of yours in action or just sitting in the driveway looking good.



Local Car shows throughout the DMV for 2021 Spring, Summer & Fall

Working with several members, we are in the initial planning stages of some fun cruises, meet ups at local wineries and breweries. etc. The abal is to aet some enthusiasm back into the club as well as bring exposure to the club and to Corvair's in general. It's hard keeping a marque alive when we don't do anything to promote said marque. The meet ups will be sponsored and paid for by the stockpile of club money.

NVCC Hot Air Mail 7 October 2021

#### **Corvair Vendors and Services**

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#### Corvair Ranch, Inc.

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Email: findit@theranch.today

## 2021 Meeting Schedule

Due to the never ending pandemic\Delta variant in our area, in order to keep everyone safe and healthy please wear a mask, vaccinated or not, and especially if you are inside an enclosed area.

# October 16<sup>th</sup> TBD TASK AT HAND - TBD

## <u>Treasurer's Report</u>

Balance 8/31/21 \$4,128.80 Balance 9/30/21 \$4,128.80

## For More Pictures of everything Corvair related click here NVCC Facebook

Website: <a href="http://www.corvair.org/chapters/chapter220/">http://www.corvair.org/chapters/chapter220/</a>

Instagram: https://www.instagram.com/northernvirginiacorvairs/ [instagram.com]

Remember, we have been given a special Corvair power. With that power comes responsibility. That responsibility is keeping this marque alive and viable for future generations. We still have the most affordable classic 60's cars in existence but we, as a club, need to be a part of promoting the Corvair as a really unique and cool collectable car. Let's keep on driving them, fixing them and promoting them everywhere we go.

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