



Newsletter of the Performance Corvair Group (PCG)

# CORVAIR RACER UPDATE

DECEMBER 5, 2016

[HTTP://WWW.CORVAIR.ORG/CHAPTERS/PCG](http://www.corvair.org/chapters/pcg)

ESTABLISHED 2007

---

CORVAIR ALLEY NEWS, by Rick Norris



Another Monday and another Racer Update. Actually 56 updates! Time flies when I'm having fun. Never thought I'd be doing this as long as I have. You might notice I am playing around with the masthead and margins.

I am about to finish the installation of a Painless wiring harness in my Corvair powered dune buggy the Dunevair, aka Jar-Jar which is from a Star Wars character called Jar-Jar Binks and which Mark Coffin was the first to call it that. I liked it so that's its name for now. It is for sale.



It's 1967 Desert Fox Spoiler, 110 Corvair engine with early model rear suspension

---

## Something to consider for your race schedule

I have never run the Pittsburgh Vintage Race in Pittsburgh's Schenley Park but others have. I'm not sure if any Corvairs have participated. It was in a post on Face Book Racers page by Russ Rosenberg who has run the park that got me to thinking about it and I was curious as to where they would put us. Several of us have run the companion event, the PVGP Historics held at the Pitt Race track (aka Beaverun) outside Pittsburgh proper. As I've stated before the old Beaverun track is where I first received any instruction for performance driving so it holds a special place. That was before it changed hands and name plus they made the track longer which was in the original plans but the original owners never had the funds to implement.

This is from the Pittsburgh Vintage Grand Prix web site in their rules and classification section. They do not any longer use the VRG to help put on their event at Pitt Race aka Beaverun and I'm not sure they used them to stage the downtown Schenley Park race. This is where they classify the Corvair, in Group 5.

### **Group 5: Sports Cars Over 2.0 Litres**

Recognized production sports cars and sedans over 2.5 liters displacement in production prior to 1973. Certain later models may be accepted on application.

Sports Cars (2.0 L – 3.0L) D-Modified

Sports Cars (1.5L – 2.0L) E-Modified

Ambro-Triumph

Aston Martin DBR (3.0L)

Ferrari 250TR, GT, etc.

Maserati 200S, 300S. Tipo-60 & 61

Maserati A6GCS

Porsche RS60, RS61 Spyder (1.6L)

Porsche 356 Carrera 2000GS

Tojeiro-Ace

Austin Healey 3000 (2912) [triple Weber]

Daimler SP-250 (2548) [twin SU]

**Yenko Stinger (2687)**

---

This year's PVGP Historics will be July 7-9, 2017.

The Schenley park event will be a week before on July 16-17, 2017

---

From Classic Motorsport magazine:

**Words to live by: Jason Wenig's The Creative Workshop tips**

Never underestimate the importance of the proper **tool** for the job.

Cars have **souls**. They give out what you put in.

When everything is seemingly going wrong, **don't panic**. Panicking usually doesn't help the situation.

Sell (or donate) good used parts back to the community. Help someone else save a classic that might not have the resources that you do.

Stay on top of keeping your shop/area/project clean and organized. There is a mess **tipping point** that is tough to get back from once crossed.

Take **pictures** of everything you take apart. Especially digital cameras where there's no excuse not to have tons of pictures from every angle.

Remember the **gremlins** are always watching- living in the rafters. They can and will mess with you whenever they get the chance. Work hard at not giving them a chance.

And last but not least, Ethanol gas **sucks!**

Go here to see this 10,000 foot old wooden floored shop:

<https://www.facebook.com/TheCreativeWorkshop/?fref=ts>



Anhydrous Race Team owned by Spence Shepard

---

## **Plateau Honing 101 – The role of Flex-Hones and Ultra Finish Hones**

By Jim Tapp, Goodson Tech Services Manager, retired

Questions about Flex-Hones and Ultra Finish Hones: What's the difference? Can I use Ultra Finish Hones to deglaze a cylinder? Are they interchangeable?

Good questions all around. And that's what we're going to talk about this month. But before we do I need to go through a little history.

Back in the old days (maybe 20 years or more) cylinder honing was done almost exclusively with rigid hones and honing stones which led to some problems such as rough cylinder surfaces. It used to be that the rings scrubbed or shaved off the peaks of rough material left by the rigid stones over time. You may have heard of breaking-in a cylinder. That's what this is. This process works but it has a couple of down sides. First, the rings and cylinders wear much faster and second, all the debris being shaved off of the cylinder surface ends up in your oil which can cause engine component wear. Understanding the evolution of piston rings is important too. Early thought was wide rings with high tension. The wide rings were tough enough to handle the rough surfaces (to a point) but they also resulted in higher emissions. So as emission requirements evolved, piston rings did too. Today's rings are narrower with low tension so they result in lower emissions and longer ring life. But they come from the factory pre-lapped so they can't take the abrading that the older style rings could handle. So as

---

the rings evolved, the honing processes had to as well. The evolution of the rings gave birth to a finish that's called a plateau finish. As the name implies, instead of the peaks and valleys created by the hard abrasive, a plateau is created by knocking down the peaks on the cylinder walls. This is where Flex-Hones® and Ultra Finish Hones come into the picture.

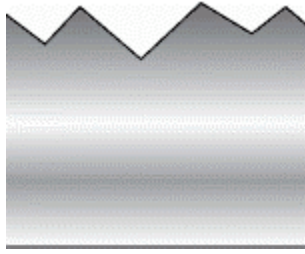
**Achieving a plateaued cylinder bore is a multi-step process:** Hone to size with coarse grit stones – between 150 and 220 grit using a portable hone or a honing cabinet with rigid stones and wipers. Remove the peaks using a fine (280 or finer) grit flex-hone depending on the ring face material. Remove the material that has become embedded in the crosshatch with an Ultra Finish Hone. Keep in mind that this isn't written in stone (no pun intended). You don't have to do all of the steps above, but you'll get a better cylinder surface if you do. You'll notice that these steps are a bit vague. I haven't given you any guidelines for how much to remove with each pass of the hone and that's deliberate. That's up to you. You've developed your own technique based on experience, just like I have, so listen to yourself.

Let's take a closer look at Flex-Hones and Ultra Finish Hones to give you more understanding of their roles in creating a plateau finish. Flex-Hones®. Ball-Hones. Dingleberry Hones. These are three of the most common names for this honing alternative. By definition, the flex-hone® is a resilient, flexible, honing tool with a soft cutting action. Flex-Hones are made with a heavy-duty twisted wire shaft that holds flexible nylon strands coated with abrasive globules. These



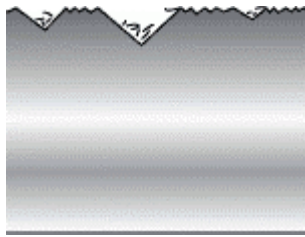
globules conform to the shape of the surface and “float” over the surface you're honing to create a consistent crosshatch finish to enable better oil retention in the cylinder bore. Remember, because the flex-hone follows the shape of the cylinder, you should never use it to do the initial honing. All this will do is perpetuate any flaws that already exist in the bore and that's what you're trying to eliminate by honing. Flex-Hones are available in several abrasives – silicon carbide,

aluminum oxide, boron carbide, tungsten carbide, and alumina zirconia with grits from 20 to 800. There is a wide range of sizes from 4mm in diameter all the way up to 24-1/2 inches covering an extensive list of applications. Here's where two of the biggest differences between Flex-Hones and Ultra Finish Hones can be found. Flex-Hones allow you to deglaze a bore and will remove material from the bore, though not as much as a rigid honing stone.



Take a look at the illustration at left. You'll see an overly simplified rendering of what a bored cylinder looks like after the first honing step. There are sharp peaks that will abrade the rings if you install the pistons and rings now. Back in the day, this was the breaking-in step. But as we've already discussed, those days are gone. The newer rings can't take the abrasion so you'll need to round over these sharp

peaks and that's where the flex-hones come in.

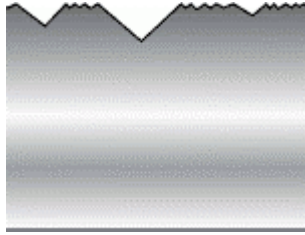


The image at left illustrates the result of a pass with a flex-hone. You'll note that the peaks are rounded over and the valleys have been filled slightly with debris from the flex-hone pass. In correcting one problem we've kind of created another. It used to be that we'd recommend you clean the cylinder at this point with soapy water and a nylon brush to remove the last of the debris from the crosshatch. It helped. But

a few years back an enterprising person had the idea of adding an abrasive right to the nylon in the brush. It yields and penetrates the crosshatch depth to eliminate debris. So was born the Ultra Finish Hone.



The ultra-finish hone is made up of a mono-filament nylon strand that is impregnated with fine abrasive material that breaks down as the strands brush across the bore surface. According to one manufacturer, "These tools are specifically designed for mechanical finishing tasks such as: deburring, sharp edge removal, radiusing, edge contouring, de-fuzzing, surface refinement and conditioning, plateau finishing, blending imperfections, reduction of surface stresses and micro crack propagation, cleaning, polishing and surface wiping prior to inspection gauging." Whew, what a mouthful. Ultra-Finish hones, aka plateau hones, soft hones, whisker hones or brush hones, will NOT enlarge or deglaze the bore under normal use, unlike Flex-Hones. They are basically deburring tools that remove the folded materials partially filling the crosshatch depth – or as I call them, "the uglies."



Back to the illustrations. Fig. 3 shows the results of the Ultra Finish Hone. You'll see that the debris that was left has now been removed, leaving a plateaued cylinder that's already broken in. So we've seen that Flex-Hones and Ultra Finish hones perform similar, but not identical, procedures. They are NOT interchangeable in engine cylinder applications.

And there's one other difference. Ultra-Finish Hones are available in 120 and 320 grit in either silicon carbide or aluminum oxide abrasives. There are a couple of cautions when using Ultra Finish hones. Too much plateau honing will make the cylinder too smooth and you won't have adequate oil retention. And on the flip side, too little will leave the surface too rough and will cause ring and cylinder wear. I recommend somewhere between 12 and 20 strokes per cylinder to achieve a properly deburring. Again, I'm leaving the exact application up to you and your feel for what you're doing. This gives you a quick tour of Flex-Hones and Ultra Finish Hones, their differences and their similarities. To find out more about Flex-Hones, visit the Brush Research website and for more on Ultra Finish hones, check out Osborn International's site. You can also Google plateau hone, flex-hone and ultra-finish hone for additional Internet articles and site.



---

Corvair Racer Update is published by the Performance Corvair Group (PCG). We accept articles of interest to Corvair owners who are interested in extracting high performance from their classic Corvair cars and trucks. Classified advertising is available free of charge to all persons. Commercial advertising is also available on a fee basis. For details, email our club President. Email address shown in the Officers section on the back page of this newsletter.

---

PCG is one of the many regional chapters of the Corvair Society of America (CORSA), a non-profit organization that was incorporated to satisfy the common needs of individuals interested in the preservation, restoration, and operation of the Chevrolet Corvair. Membership is free of charge. To join, please use the handy form on our website: [www.corvair.org/chapters/pcg](http://www.corvair.org/chapters/pcg).

### ***PCG Club Officers:***

President: Tracy Leveque Email: [libgan2004@yahoo.com](mailto:libgan2004@yahoo.com)  
Vice Pres: Ned Madsen Email: [aeroned@aol.com](mailto:aeroned@aol.com)  
Webmaster: Allan Lacki Email: [redbat01@verizon.net](mailto:redbat01@verizon.net)  
Newsletter Author: Rick Norris Email: [rickenorris@suddenlink.net](mailto:rickenorris@suddenlink.net)  
Newsletter Layout: Allan Lacki Email: [redbat01@verizon.net](mailto:redbat01@verizon.net)

