



CORVAIR RACER UPDATE

CORVAIR ALLEY NEWS, by Rick Norris



Not much is happening in the Corvair Alley shop except dune buggy wiring and removal of the engine to cure some issues that have plagued me! However a couple of our fellow racers Mike Levine and Spence Shepard had some fun this past week end down South at Roebing Road Raceway in Bloomingdale GA. Wished I could have been there but it was not to be. Also Jon Whitley has a report on finding a pesky oil leak on his race car. However, what he found is not new as Norm Latulippe chased a similar leak and found the same thing as Jon. Enjoy!

Jon Whiteley sez:

Oil leak update: If you recall my report 2 weeks ago, I'd taken my race car out to High Plains Raceway, UV dye in the crankcase oil, with hopes of identifying the source of oil leaks on both sides of the engine that had remained heretofore unresolved. The track test showed the oil was from coming near the head end of #2 and #5 drain tubes and quickly spreading out from there. Going back over the obvious spots - tube and rocker stud O-rings - revealed no evidence of failed seals or damaged sealing surfaces.

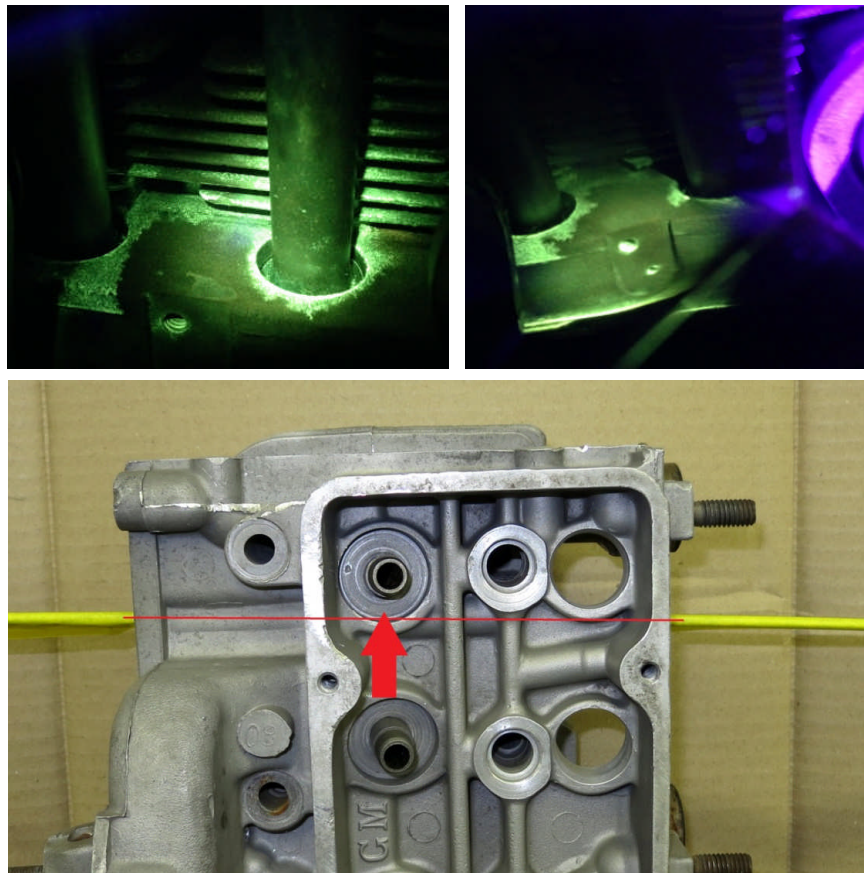
Back at home, I once again cleaned off the oil using the UV light and magic glasses. After idling the engine for 15-20 minutes the oil leak pattern was again visible but this time it hadn't yet spread out as far. Each head displayed the same leak pattern at the same location!

The oil was running down the choke rod channel which along its courses comes very, very close to the spring seat of the #2/#5 exhaust valve of each head. It was proposed that at some point the spring seats were machined deep and/or enlarged enough to break through into the choke rod holes on these two cylinders.

Since there were no chokes on the engine anyway, the next diagnostic step/ fix was to seal these unused channels and see if the leaks stopped. Four- inch long plugs were made from 5/16" aluminum rod and sealed in the channels with a bit of JB Weld. A 15-minute run in the garage has so far been most encouraging. The true test will be on track once the weather moderates.

Thanks (and a deluxe cheeseburger) are owed to Eric Schakel who made the connection after seeing the UV photos I sent him.

Note: Bare head in photo is for illustrative purposes only and not one of those in question.



Yellow line represents passage for carb thermostat choke rod. Red line is where it passes through head. Arrow represents area under valve spring where a breakthrough can occur especially if valve pockets have been machined deeper to accommodate a longer spring.

Our Annual Pig Pickin' and Oyster Roast



Dec. 9 – 11

Roebing Road Raceway, Bloomingdale GA



Spence Shepard's racer & Spence Shepard

Spence Shepard sez:

Thanks to Mike Levine for posting about this weekend. We tried to get more attendees from our ranks and they are missing a great event. As we explained, this is very low key event in a great location with a lot of track time on a very nice track for a very reasonable fee. On top of that there is an amazing array of very interesting cars and very friendly participants and the weather is almost perfect for our air-cooled cars. Of course they operate much better with fan belts, even at 50 degrees or lower. On top of that the hospitality is great with a

free wine, beer and cheese party last night and a free oyster roast and pig picking tonight. I'm embarrassed to admit that I quit eating oysters tonight before they were all gone.

My car has been running OK but not great but I am having a blast trying to get in good laps at the simple looking but quite technically challenging track. There is one turn that is particularly tough because it leads onto the main straight and rewards carrying as much speed as possible. It has a very tight and unforgiving entrance and everyone knows that getting too wide often results in over correcting and snapping back across the track into a cement wall as happened to a couple of cars today. I haven't gotten up enough nerve to go through the preceding curve at full throttle even at the relatively low speeds I am traveling.

I don't think I damaged the engine when the belt came off today. My big red light came on when the pressure in the turkey roaster went away and I drove slowly to pit road and let it cool a little before driving it back to paddock. I'll check it out tomorrow and drive it in my 2 PM race if it is OK. I'm going to skip the 8 AM warmup session (at about 30 degrees) and go to the 8th Air Force museum in Pooler. My father was a member when he was in the Army Air Force in England in WW2 as a mechanic on P51

Mike Levine sez:

This was a fun weekend. We tested out the War Wagon (old Winnebago Warrior) we got last summer and it worked out great 7 MPG!!! But no hotel and staying at the Track was fun.

As always it took me till the Feature race on Sat to get up to speed, 1.25s Friday and Sat morning but got into the Mid 1.23s for the Race, Same times I turned in 2009 so the upgrades to the car have kept up with my old age. Same 383 as 09 though!!

Had a great time with Spence and many others with the wine and cheese party Friday night and the Oysters and Pig Roast was really fun Saturday.

The funniest thing was a Racer wanted to race but didn't want to have to buy DOT tires so they told him if he painted his slicks pink he could race, he did and he got the Pink Tire award Sat Night!!!! VDCA did a great Job hosting this event

and they have warmed up to my V8 racer among the exotic small European cars that attend this event. I highly recommend this one. Next stop? The Mitty!



Mike and MaryAnn Levine shuckin some oysters!



Mike Levine's V8 track Corvair.



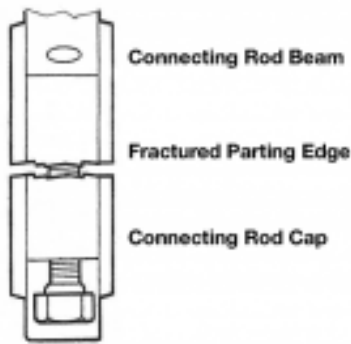
Drifter, the racin dog!

Connecting Rod Basics

NOVEMBER 30, 2016 BY GOODSON

Reprinted with permission from Sunnen Products Company.

Most passenger cars used forged iron or steel connecting rods. They are rigid, light and relatively inexpensive. Rod length, piston diameters and crank pin diameters vary with the application and expected power output. Connecting rods are made in two pieces — a cap and beam section, held together with nuts and bolts. Cast semi-steel connecting rods are making a return in production engines thanks to their comparatively low cost and ease of manufacture. Their main drawback is their weight, typically some 100 grams heavier than their forged counterparts.



A fractured parting edge ensures that each cap will align exactly upon reassembly. Each rod is unique to itself because the cap and rod will not fit any others.

Some manufacturers are now producing a one-piece rod made from compressed and sintered powdered metal (P-M technology). The cap is either cut away from the beam section (as would be the case with all other rods), or broken away and

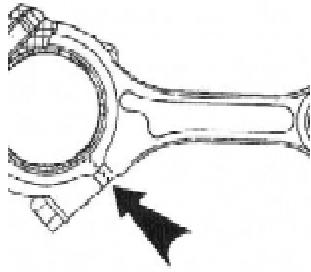
bolted back into place using the fracture line as the parting edge. Forged steel rods are essential in high-output spark-ignition (SI) and compression-ignition (CI) engines. They provide the extra strength needed for performance under heavy load conditions.

Forged rods get their strength from the forging process, which gives them a definite grain structure. Cast rods, on the other hand, have no grain structure; cast-iron nodules appear randomly distributed, forming no pattern. Steel rods can be made from the steel alloy best suited for a particular application.

Forged-billet steel connecting rods are found in high-output and endurance racing engines. They are machined from a solid forging of SAE-4130 or SAE-4340 alloy steel. They take advantage of the hammered-in grain structure established at the steel mill.

Drag racing engines use forged aluminum rods. They are light and allow rapid acceleration of RPMs. Aluminum rods are also common in small air-cooled engines and air compressors. To allow for installation and service, connecting rods are made in two pieces; a cap and a beam section. In some cases, the parting edge (where the cap and beam mate) is serrated or made with tangs. This decreases the chance of the cap becoming loose and moving out of position.

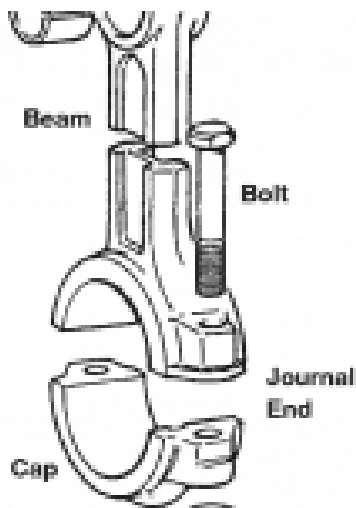
Occasionally, straight-cut rods will include hollow or solid dowel pins between the beam and cap. Both measures prevent cap walk — the shifting around of the cap on the beam while the engine is running. Loose caps can cause fretting, a condition marked by small dents on the cap and rod parting edge.



This rod has both a serrated parting edge and an angled cap (courtesy Fiat).

Some rods are made with an off-set or angled cap as the parting edge. This allows the use of smaller diameter pistons while retaining a sufficient diameter for the rod bearing. This type of rod may use any of the parting edges discussed above.

When engine must fit a tight space, the designer may need to use small bore diameters and a long stroke crankshaft (under-square engine). This combination can require off-set beam rods. Such rods are common to some import and industrial engines, but are also used in many V-type engines too. With the beam off-set to one side of the bearing housing, the crankshaft can be made stronger and accommodate wider rod or main bearings.



This drawing illustrates the terminology used to describe an I-Beam connecting rod

The beam is that part of the rod between the piston and the bearing. The most common is the I-Beam, which when cut in half, resembles the letter "I". The I-Beam construction allows the connecting rod to be substantially stronger and lighter than solid metal would.

Many performance engine connecting rods use an H-Beam. The beam, when cut in half, resembles an "H". The H-Beam offers even greater strength-to-weight ratios. Round beams were once common in performance connecting rods, but their use has faded.

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.

PCG Club Officers:

President: Tracy Leveque Email: libgan2004@yahoo.com

Vice Pres: Ned Madsen Email: aeroned@aol.com

Webmaster: Allan Lacki Email: redbat01@verizon.net

Newsletter Author: Rick Norris Email: ricknorris@suddenlink.net

Newsletter Layout: Allan Lacki Email: redbat01@verizon.net

