

August 2014

# the *Fanbelt*

new jersey association of CORVAIR enthusiasts

## Meeting This Month...



**No, it's not like that!** Our business meeting will be conducted during our regular monthly breakfast on August 2nd, and will likely take only 15-20 minutes.

Per our by-laws business meetings are required to be held four times each year, and this is one of those times. Come on out and enjoy breakfast with your fellow Corvair owners. No boredom allowed!

**Breakfast at the Empire Diner on Route 46 in Parsippany this Saturday, 9 AM.**



## August is Picnic Month

**Our 44th annual summer picnic takes place on Saturday, August 23. See all the details in this issue!**

**Greasy Tech Session on August 2 – see inside**

## Got Gear Lube?

**NJACE Tech Session  
on August 2**



When was the last time you checked the oil in your Corvair's differential? If you are like many of us, the answer is umm, err, aah...

Unless you are the owner of a 1964 or 1965 Corvair, the neglect is understandable. Only those two model years had a factory dipstick for checking the level of the oil in the differential. For all other years, the only way to check the differential oil level was to get under the car and remove a fill/check plug on the side of the differential.

But even for owners of 1964 and 1965 Corvairs, if any oil needs to be added, you still need to get under the car and remove that same fill/check plug.

Access to that plug is compromised by its location and shape, and adding oil is further compromised by its location. But at our tech session this month we will show you how to do it on all Corvair models. 1960-63, 1964-65, 1966-69, cars and trucks, manual and automatic. You'll learn what you need to know to help maintain *your* Corvair.

And there's more! Most Corvairs should *not* use the gear oil that is commonly sold today. We'll show you which products are the right ones to use, and where to buy them.

For this tech session we will once again gather at Ashley's Auto Body on Hillside Avenue in Flanders, immediately following our breakfast at the Empire Diner in Parsippany. Plan on it!

## Club Picnic

We call it a Picnic,  
but maybe it's a Barbeque.  
Or a Pool Party.  
But it's a club tradition  
and it's on August 23



It's an annual tradition: Every summer NJACE has a picnic. And we mean every summer – this will be the 44th annual picnic!

For this year's picnic we will return to the spacious back yard and the refreshing pool at the home of Larry & Donna Ashley, just around the corner from the body shop but technically in the next town, Succasunna.

Club Picnic, continued

The picnic will begin officially at 12 Noon and we'll start grilling around 1:00 PM. The club will provide hot dogs and buns, burgers and rolls, soft drinks, water and fixins. You are welcome to bring other items for the grill if you wish, and you are invited to bring a side dish, munchie, or dessert.

**Please RSVP to Donna to tell her that you are coming, how many of you are coming, and what comestibles you may be bringing.** Contact Donna by e-mail at dashley726@optonline.net or by telephone at 862-251-4163.

All club members, families and friends are welcomed! The yard is spacious, the pool is clear and cool, and we will have canopies for shade. There is plenty of off-street parking.

**What:** NJACE Summer Picnic

**When:** Saturday, August 17, rain or shine

**Where:** 3 Radcliffe Drive, in Succasunna.  
If you have been to Ashley's Auto Body in the past for one of our tech sessions or auctions, this is just one block away from the body shop. If you need directions (today, with online maps and in-car GSP, it seems that few people need directions) just send an e-mail message to Donna before the day of the picnic.

**Time:** 12 Noon, but come when you can, this is a laid-back event

***Don't forget to RSVP to Donna***

You don't have to drive your Corvair to the picnic, but why would you want to drive anything else?

**NJACE Classified Ads**

**For Sale:** 1964 Monza convertible, red, black interior, Powerglide, AM/FM cassette radio, good top and tires. Asking \$4500 obo. Contact Tony G, phone (732) 548-5590, email corvairnut@aol.com.



**For Sale:** I have been rummaging through the barn, and I have found complete air cleaners assemblies for the following: 1965-69 140-hp, the four-leg intake, the bowl, the chrome top, even the support bracket and stud, \$35. 1964-69 110-hp, the two-leg intake, the bowl, the black top, and the support bracket and stud, \$10. 1961-63 cars, 1961-65 FCs, and 1961-65 air-conditioned cars, the two bowls and tops, the cross tube, and the two brackets that support the bowls, this is the version intended for vehicles with PCV, \$10. All are "driver quality," not show quality. Bob Marlow, phone 201-444-1859, email vairtec@comcast.net.



This month we welcome new member **Ginger Sharp**. Ginger has been very patient, she mailed her membership dues in March but the Post Office lost it, so it took until now for us to learn that she wanted to join!

---

## How Do Carburetors Work?

by *Ken Schiffner, NJACE VP*

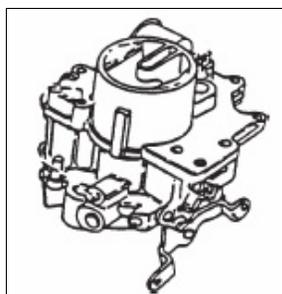
The purpose of a carburetor is to atomize liquid fuel into vapors and tiny droplets that will efficiently combust. Large fuel droplets combust poorly thus the fuel must be size-reduced. The carburetor meters and mixes fuel with air to obtain a properly combustible air/fuel ratio (about 14 parts air to one part fuel).

The fuel is pushed into the carburetor primarily using atmospheric pressure which is higher than the negative pressure created as the engine's piston descends. A low pressure zone is created in the narrow area of the carburetor (called the "venturi") wherein the incoming air must accelerate. Fast moving air exhibits a lower pressure than static air pressure. Combining the atmospheric push with the venturi suction moves the fuel into the carburetor.

Most carburetors have three distinct circuits. One is the idle circuit, the second is the running circuit and the third is the power circuit. At low engine speeds, the idle circuit is in use. The float height in the carburetor inlet bowl sets the level from which the fuel may be feed into the carburetor. If the float level is too high, just a slight pressure is required to push the fuel into the carburetor and excessive fuel delivery (and resulting flooding or poor combustion) may occur). Too low of a fuel level and a lean (deficient fuel amount) may result. To regulate the amount of fuel that can be feed into the carburetor at idle speeds, a needle valve is used. Since the needles and related needle seats vary, when setting the idle mixture, one turns the

needle in until the engine speed drops (too lean) then the needle is turned slowly out until the highest steady idle speed is obtained.

The running circuit is also metered but instead the main metering jet is used. The main jet is not used during idle. The main metering jet is precision drilled to allow the passage of enough fuel during the design operating speed of the engine. In reality, the fuel delivery is only correct at a small rpm range of the engine. All other mixtures are compromises, thus carbureted engines typically lack the precise fuel/air metering of fuel injected, feedback controlled engines.



The power circuit may include an additional fuel path equipped with its own metering orifice. The fuel path becomes active when the intake manifold pressure reaches a design point that is set during the engine design. The power circuit may be enhanced by the use of an accelerator pump that squirts additional fuel when the accelerator pedal is pushed rapidly. In the Corvair, too much "squirt" can result in fuel puddling in the intake manifold resulting in backfiring and fuel waste. Too little "squirt" can result in the engine running momentarily too lean causing stumbling.

What about the air? The gross volume of air is controlled by the butterfly valve throttle plate that is actuated by the accelerator pressure. The venturi diameter sets the level of suction that can be produced by the piston as it descends. The velocity that is produced provides the energy which is used to break up the fuel liquid into tiny droplets and vapor. If the venturi is too large, insufficient velocity is provided and the fuel might not atomize properly resulting in unburned fuel. At high engine speeds, the throat restriction may be too small thus reducing the engine's ability to ingest air and thereby limiting high speed power. At low engine speeds, an oversized carburetor can result in poor low speed performance. Thus as with the 140 hp engines, a secondary carburetor is used.

*continued*

Carburetors, continued

To distribute the fuel, a small cluster of tubes are used positioned at a low pressure area of the venturi throat. To better mix air and fuel at the cluster, another small metering orifice (this one for air) is used. The air and fuel pre-mixes in this cluster. If you look down into the carburetor you can clearly see this cluster. The cluster also is equipped with a small vent hole that enhances the ability of the fuel to rise up and mix in the cluster. The hole also helps to equalize pressure so that after acceleration the fuel level will stabilize.

You may be able to see why that carburetors are often called "instruments"... given the precision required to perform their intended function.



This ugly fate – or one like it – could await the differential gears in your Corvair if you do not check and maintain the gear lube in your transaxle. Come learn all about it at our tech session on August 2<sup>nd</sup>.

What to check. How to check. What lubricants to use. The differences between products for manual and automatic transmissions transaxles. And – surprise! – leaks.

It happens at Ashley's Auto Body this Saturday.

**Mark Your Calendars**Saturday, August 2

**Breakfast at the Empire Diner  
followed by Transaxle Tech Session  
at Ashley's Auto Body**

Saturday, August 23

**Annual Summer Picnic at the home of  
Donna and Larry Ashley**

Saturday, September 6

**Breakfast at the Empire Diner**

Weekend, September 5-6-7

**Corvair Campin' at the Pioneer  
Campground**

Monday, September 8

**NECC Track Day at NJ Motorsports  
Park**

Sunday, September 21

**All Air-Cooled Show at the  
Swim & Sport Club of Flanders**

**NJACE Breakfast  
at the Empire Diner  
Route 46 East, Parsippany  
This Saturday, August 2**

The Empire Diner is located at **1315 U.S. 46, Parsippany, NJ 07054**. This is on the eastbound side, a short distance east of I-287, and easy to get to from I-80 or I-287.

**This-n-That:** It is reported that last month's visit to the Longo Planetarium was well-attended and well-received, with the planetarium staff coming up with a distinctive automotive-themed celestial presentation.

Condolences this month to members Larry Ashley and Bob Marlow, each of whom lost their mothers last month. Both moms were 90 years old.