

*HAPPY FOURTH OF JULY !!!!*



**JULY 2012**



*VISION*

**VEGAS VAIRS, CHAPTER 891 OF CORSA, MEETS AT 7:00 P.M.**

**THE 2ND WEDNESDAY OF EVERY MONTH AT:**

**DENNY'S RESTAURANT**

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**VISITORS ARE ALWAYS WELCOME!!!!**

**COME EARLY TO MEET AND GREET !!**

**ANNUAL MEMBERSHIP DUES ARE**

**\$10 FOR CORSA MEMBERS**

**AND \$13 FOR NON-CORSA MEMBERS**

**DUE BY FEBRUARY 1ST OF EACH YEAR.THEY MAY BE PAID AT THE MONTHLY MEETING OR MAILED TO:**

**VEGAS VAIRS**

**P.O. BOX 62925**

**LAS VEGAS, NV. 89162-1925**

**OFFICERS:**

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**If you wish to submit articles, ads, photos, etc. email the editor at :**

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# Vegas Vairs Meeting

## Minutes June 13,2012

Present: Paul & Vicki Bernardo, John Charaska, Paul Green, Chuck Hanson  
Bob Helt, Vic Howard, Melvin Jackson, Marty Katz, Bill Lager, Ernie Mckinney, Jack O'Shea,  
Arlon & Suzan Sibert.

Treasurer's Report. Vic reported our new balance \$711.70.

Upcoming car events:

June 15<sup>th</sup> 6 – 9 p.m. a show at Shari's diner located on N. Buffalo just south of W. Lake Mead.

June 16<sup>th</sup> a car show at the Findlay dealer at 215 & Rainbow starting at 10 a.m.

The Grand opening of 1-2-3- Auto on Saturday at 704 E. Sunset at Gibson.

Cars & Coffee that met at Serene & Eastern is now meeting in the parking area across from the runway airport parking to watch the airplanes land and take off., In the parking lot of Machine Gun Kelly's from 7 a.m. – 9 a.m.

The Sunday a.m. Santa Fe Mining Company (Rainbow & Rancho) car show/ swap meet is going strong each Sunday morning usually before 7 a.m..

Corsa report: :Paul Green shared an article about the 16 Corvair race cars at Atlanta. He also shared the story of the book "Life Mobile" a great read. A story about a father, handicapped son and their Corvair.

May 15<sup>th</sup> Breakfast and car show at the Bonanza Lounge: Paul Green reported Ernie treated everyone to breakfast. The food wasn't that great and the noise was too much to every hold a meeting there due to the high ceiling. Those attending, Ernie, Bill, Paul Green, Steve and Sally.

Name Badges: Chuck Hanson reported he has name badges for Dan Ward and Dan Yarger.

Newsletter: Vic reported some members had problems opening the emailed newsletter he plans to change the format. Bill Lager no longer has email.

New Book for sale: Bob Helt has his new book for sale after the meeting Corvair Secrets at a cost of \$30.00. Bob has published another great book.

For Sale:

Paul Bernardo has his Hot Rod Cyclone pick-up truck for sale.

Marty Katz has car parts for sale, 1965 Corsa Coupe \$2500, 1963 8 door Greenbrier...no engine, extra doors and parts \$1500. Marty also does Corvair repairs at his home shop as well. Give Marty a call at 702-303-7829.

Chuck Hanson says Ultra Van for sale in Portland, Oregon. It has 38,000 miles and has been in a garage for 30 years. The ad is on Ebay.

Meeting adjourned at 7:40 p.m.

**Acting Secretaries, Suzan & Mel**

# HORSEPOWER RATINGS

By Bob Helt

The engine horsepower rating of your car tells you a lot about its performance capability. The more horsepower you have, the faster your car will go and the quicker it will be in acceleration. It is the single most important factor in choosing a performance vehicle (although price, handling, fuel economy, and reliability are important too).

So it behooves the automobile manufacturers to boast of the highest horsepower they can reasonably obtain from their engines. And here is how they achieved that during the 1960s era.

It is well known that atmospheric factors affect the power output of internal combustion engines, especially the normally aspirated (N/A) engines (non-turbocharged). Air density is one of these factors. The greater the air pressure the greater the engine horsepower. Thus the higher the altitude the engine is operated at, the less the horsepower produced. Similarly, the lower the ambient temperature, the greater the amount of oxygen inhaled and thus the greater the engine horsepower produced.

So it can be seen that the actual horsepower produced varies depending on the ambient temperature, actual elevation and relative humidity of the air.

The manufacturers ran a series of tests on their early production engines to determine and measure the horsepower produced (along with several other factors). But then the ability to control these atmospheric factors entered the picture. What if the engine dyno room was hot due to summer conditions? What if the dyno room was located in, say, Denver at 5000 feet elevation? Resulting horsepower measurements would be at the low end compared to tests run in the winter at sea level.

To be able to equalize engine test measurements so that comparisons can be made engine-to-engine and test-to-test, the Society of Automotive Engineers (SAE) set some standards to allow a correction factor to be applied to adjust all measurements to a set of standard conditions. Thus, the SAE released their industry specification J607 that allowed all test measurements to be corrected to the following standard conditions: 60 degrees F, atmospheric pressure of 29.92 in-hg (sea level), and a zero percent relative humidity.

This now allowed any engine horsepower measurements made on any N/A engine anywhere in the US to be corrected to these standard conditions and allow a direct comparison to be made to other engines and tests, with a high degree of confidence.

But it didn't end there. There were two types of engine tests defined. These were for Gross and Net horsepower. Gross hp indicated the maximum horsepower the engine was capable of and was used to set the then common Advertised Horsepower. Net hp represented the *actual* flywheel horsepower the engine developed. Both of these horsepower ratings (Gross and Net) were corrected to the standard conditions, thus making them as large as allowed.

This is how Chevrolet was able to state that the advertised horsepower of the 1960-63 base engine was 80 hp, while the net hp was 65 horsepower. Both of these ratings were using the J607 standard conditions. But to complicate the situation, Chevrolet realized that normal operating conditions were at temperatures far above the 60 degrees of the SAE spec. So to get a more realistic operational rating for their own internal use, Chevrolet corrected their internal engine test Net measurements to 100 degrees F. and called these "As Installed Net horsepower."

Now the confusion by Chevrolet outsiders occurs. With an advertised 80 hp and a net hp of 65, the As Installed Net is reported as 59.2 horsepower by a correction to 100 degrees F. Or maybe more correctly stated, the measured As Installed hp rating (59.2) is corrected to the SAE Net value (65).

So one must be careful as to which horsepower measurement technique or correction is being used to state a particular Corvair hp rating.

Because the SAE standard of 60 degrees tends to overstate the actual horsepower, and because the Gross hp does the same, the SAE in the early 1970s released a new specification (J1349) that calculates the Net hp at an ambient of 77 degrees F. and a pressure of 29.234 in-hg (100 Kpa) as a correction factor for determining Advertised Horsepower. (Gross hp is no longer reported) This rating now replaces the previous advertised horsepower.

## JUST RELEASED

Hot off the press is the updated and revised edition of my book, CORVAIR SECRETS. It has had some 70 pages of new material (a lot of which has been published in our Vegas Vairs Newsletter, but now is available in book form).

CORVAIR SECRETS contains facts, stories, and data about little known aspects of the Corvair's design, operation and maintenance.

CORVAIR SECRETS is now available from me, the author, for \$30 plus \$8 S&H if ordered by mail. But I will have them available at the next meeting (June) for no S&H charges if you prefer to wait.

Thank You,

Bob Helt

3016 Pearl Harbor Dr.

Las Vegas, NV 89117

702-256-2008

### BOOKS NOW AVAILABLE

#### --THE CLASSIC CORVAIR.

A technical maintenance and upgrade manual. 330 pages. \$35+\$8 S&H.

#### --CORVAIR SECRETS.

Major revision adding 70 pages. Things you probably don't know about the design and operation of the Corvair automobile. 250 pages. \$30+\$7 S&H.

#### --HOW TO IDENTIFY AND REBUILD CORVAIR ROCHESTER CARBURETORS.

Comprehensive non-turbo carburetor rebuild information. 110 pages. \$20+\$5 S&H.

#### --HOW TO IDENTIFY AND REBUILD CORVAIR CARTER YH CARBURETORS.

Comprehensive turbo carburetor rebuild information. 90 pages. \$25+\$5 S&H.

If interested in purchasing any of these books, please call me, Bob Helt, at 256-2008 or email me at [Bobhelt@aol.com](mailto:Bobhelt@aol.com) for delivery to one of the Vegas Vairs club meetings for no S&H charges.

Check or money order (sorry no Paypal) to:

Bob Helt

3016 Pearl Harbor Dr.

Las Vegas, NV 89117

256-2008

[Bobhelt@aol.com](mailto:Bobhelt@aol.com)

# CLUB MEMBER ACTIVITIES

**Friday Nite Cruz 06-15-12 at Shari's Diner:**



## What's being done to this Corvair cylinder head?

See those holes drilled and tapped right next to the intake valve seat?



Set screws with high temp adhesive have been tightened into those holes.



A Dremel tool was used to cut off the set screws. A washer protected the valve seat during cutting. Set screws next to the exhaust valve seat were cut off too.



After the set screws have been cut off they are ground flush with the cylinder head. If done carefully the valve seat surface will not be disturbed.

Why do that to your intake and exhaust valve seats? Twelve valves times two set screws each. That's a lot of work, but not nearly as much work as repairing what happens when a valve seat falls out and gets crushed into small pieces which find their way all through the engine doing extensive damage.

As Corvair engines get older the chances of valve seats coming loose may be increasing. The valve seats are steel and are press fitted into the aluminum head. Aluminum and steel do not expand and contract the same when they get hot and cool off. The newest Corvair on the road is now more than forty years old. How many thousands of times have your valve seats heated up and cooled off?

A competent Corvair machine shop can install "deep" valve seats which will not fall out, but the price is very high. Anyone with average skills can set screw their own valve seats. Here's a picture showing what you need to do the job.



Bob Helt talks about valve seat set screws in his Classic Corvair book and Steve Goodman who owns the well known Corvair repair business in Golden, Colorado installs valve seat set screws for customers. More details are available on [corvaircenter.com](http://corvaircenter.com) in a thread with the subject "Valve seat set screw mod" dated 6/20/12. Username "jjohnsonjo" on the Corvair Center website gets credit for the pictures used here.



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DAN WARD HAS A NUMBER OF GAS BARBEQUES FOR SALE OF VARIOUS SIZES AND PRICES. CONTACT HIM AT 702-457-8274 OR EMAIL HIM AT [drawmad@embarqmail.com](mailto:drawmad@embarqmail.com)

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I am parting out the 65 convertible I purchased. Of course I have taken a few parts off of it to put on the 65 coupe I purchased for my grandson. If you are looking for body, steering, suspension and other small parts, give me a call. I also have a 65 evaporator, compressor and brackets and the copper tubing for the 65 A/C system I removed from the coupe. Call me at 928-201-8631 or email me at: [vichoward@frontiernet.net](mailto:vichoward@frontiernet.net).

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## **BIRTHDAYS IN JULY**

STEVE WENTWORTH, PAUL GREEN AND PAUL BERNARDO

***HAPPY BIRTHDAY FELLAS!!!***