



www.corvairs.org

Corvairsation

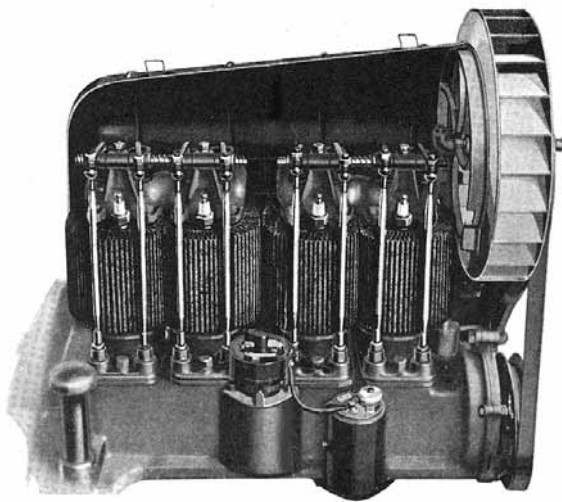
Letting the Good Times Roll since 1975

August 2007

Volume 32, Number 3

for Economical Transportation

CHEVROLET



The Copper-Cooled Motor

Chevrolet Motor Company Announces

AN important development in economical transportation, consisting of a motor embodying new application of established principles governing the efficient control of motor temperatures under all weather conditions.

Instead of the usual regulation of motor temperature by water jacket and cellular radiator, heat radiation is controlled through copper fins permanently united to each cylinder by a patented metallurgical discovery.

Chevrolet cars, equipped with these new motors, are now being marketed in limited quantities.

Understanding fully the requirements of the motoring

public, and that individual opinions govern the use of automobiles of various types of construction, the Chevrolet Motor Company is offering this development to the public along with its present successful line of New Superior Models. The same high standards of efficiency and quality will be maintained in the copper-cooled line.

The Cooling System

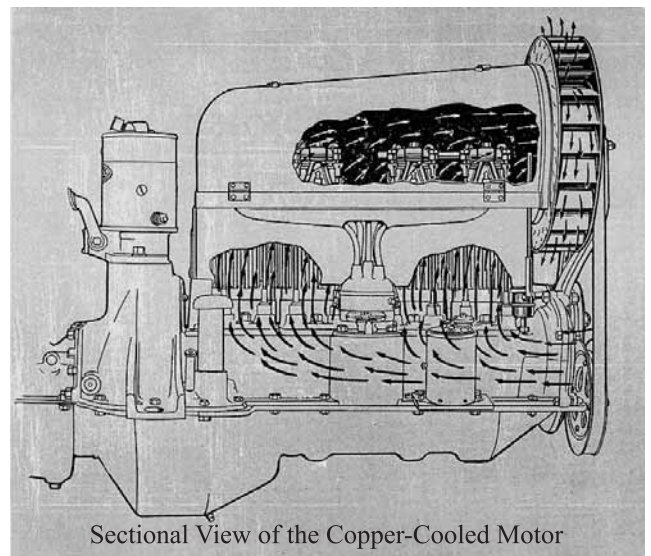
THE cooling system of the Chevrolet copper-cooled motor embodies the use of copper fins directly united with the iron cylinder walls for the purpose of conveying the excess engine heat to the air.

The high efficiency of copper for heat transmission is well known, but hitherto it has not been feasible to attach it directly to the cylinder walls, because no method was known of permanently uniting copper with cast iron.

It is therefore customary to use water to convey the heat to the radiator-made usually of copper-where it is absorbed by the air drawn through the radiator.

Through the discovery by the General Motors Research Laboratories of a new metallurgical process, which has been patented, it is now feasible permanently to unite copper with iron. We have, in effect, removed the radiator from the front of the hood and wrapped it around the cylinders, thus eliminating the water and water jacket.

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This drawing indicates the circulation of air up through the copper fins, then through the draft tube to the suction fan, which discharges it into the hood, from which it exits through the hood louvres.

Tucson Corvair Association



Established 1975

Corvairsation is a monthly publication of the Tucson Corvair Association, which is dedicated to the preservation of the Corvair model of the Chevrolet Motor Division of General Motors. The Tucson Corvair Association is a chartered member of the Corvair Society of America (COSA) chapter 857.

Monthly Meetings are held on the fourth Wednesday of each month, except November and December. One technical/social event is planned for each month, except July and August.

Membership Dues are \$15 for individuals and \$18 for families. Initial dues are \$19 for individuals and \$22 for families (includes name tags). Make checks payable to Tucson Corvair Association.

Change of Address: Report any changes of address or phone number to the Membership Chairperson. Do not report such changes to the Corvairsation Editor.

COSA Membership Dues are \$38 per year (\$76 for 26 months) and include subscription to the COSA Communique, a monthly publication. COSA membership is not required for membership in the TCA, but is highly recommended. See any TCA officer for more information.

Classified Ads are free to members and \$3 per 4-line ad to non-members. Deadline for materials submitted for publication in the Corvairsation is the 10th of the month.

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TCA 2007 Events at a Glance

AUGUST

22 WED *Regular Monthly Meeting* Micha's North, 1220 East Prince Road, 6pm. Optional dinner at 6:20, meeting starts at 7pm.

25 SAT *Corvair Cruise Night* — 6:30pm-8:30pm. We're meeting at the PEP Boys on the NE corner of Kolb and 22nd St and then making our way up to the Sonic Drive-In near Pantano and Wrightstown.

SEPTEMBER

5 WED *TCA Board Meeting* 6:30pm. Location TBA.

26 WED *Regular Monthly Meeting* Micha's North, 1220 East Prince Road, 6pm. Optional dinner at 6:20, meeting starts at 7pm.

29 SAT *Corvair Cruise Night* — 6:30pm-8:30pm.

OCTOBER

3 WED *TCA Board Meeting* 6:30pm. Location TBA.

24 WED *Regular Monthly Meeting* Micha's North, 1220 East Prince Road, 6pm. Optional dinner at 6:20, meeting starts at 7pm.

27 SAT *Corvair Cruise Night* — 6:30pm-8:30pm.

NOVEMBER

7 WED *TCA Board Meeting* 6:30pm. Location TBA.

CAR SHOWS

AUG -OCT *Little Anthony's Car Show Nights* 7pm-10pm 7010 E. Bdwy.; 9/1; 9/15; 10/6; 10/20; 10/27; 11/3.

SEPT 30 *Classics for a Cure* - Sun. Ariz Cancer Ctr. UMC North. Info: 520-419-0585.

OCT 7 *Oldsmobile Car Show* Emich Subaru, 6020 E Speedway, 10am-2pm Info: 520-297-5130.

OCT 13 20th Annual *Cars in the Park* Siera Vista, AZ. Info: 520-234-8081.

OCT 27-28 *30th Annual SACHVA Old Car & Parts Swap Meet & Car Show* Sat: 7am-5pm/Sun: 7-3pm Show at 10am

OCT 27 *Tucson Classics 1st Annual Car Show* St. Gregory College 3231 N. Craycroft Rd. 10am-5pm INFO: 400-9670. <http://www.tucsonclassicscarshow.com/>

NOV 3 *2nd Annual ALL European/British Car Show* American Legion Post 102 5900 W. Western Way



General Motors Building, Detroit, in which are located Executive Offices of the Chevrolet Motor Company

The copper fins are made out of a continuous strip of thin sheet copper, so crimped that when wrapped around the cylinder walls the bases of the crimps are in contact one with another, thus completely surrounding the iron walls with copper. The length of the fins is graduated to leave space for the valve push rods and to permit close coupling of the cylinders.

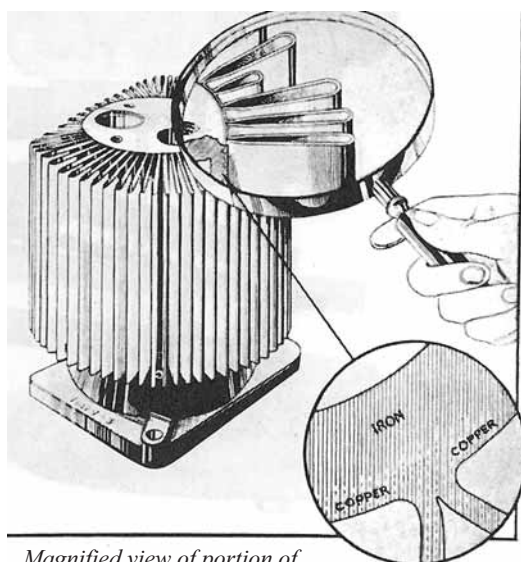
The entire motor is enclosed in a stamped metal draft tube, open at the bottom, and having a powerful suction fan at the front.

This fan, driven from a crank-shaft by a specially constructed V-shaped belt, draws a large volume of air at atmospheric temperature up through the copper fins and discharges the heated air through the hood louvres.

Engine lubrication is by splash system with a positive flow to all main bearings.

Power transmission is by means of a multiple disc clutch, through standard transmission having three speeds forward and a reverse.

The service brake is external contracting on the rear wheel



Magnified view of portion of Cylinder Block showing shape of copper fins, and complete union of the copper and iron.

brake drums. The hand brake is external contracting mounted on a drum attached to the rear end of the transmission main shaft.

Throttle control is mounted on the instrument board and there is also a foot accelerator.

Remy ignition is used and the spark control is automatic, hence there is no spider quadrant on the steering column.

Fuel system consists of a vacuum feed with 10-gallon tank at rear of the car. A Carter carburetor is used.

As shown by the specifications on the inside back cover, the chassis in general is similar to that of the water-jacketed Chevrolet, but embodies some improvements in design and construction details, as noted in the specifications.

Engineering Specifications

Motor — Four-cylinder, copper-cooled. $3\frac{1}{2}$ " bore, $3\frac{1}{2}$ " stroke.

Cylinders — Cast separately; copper fins are united with the cylinders by patented process.

Valves — Overhead, $1\frac{7}{16}$ " diameter, operating in special graphobronze bushings, self-lubricating.

Connecting Rod Bearings — $1\frac{1}{2}$ " diameter, $1\frac{1}{2}$ " long.

Crank Shaft Bearings — Die cast; front $1\frac{7}{16}$ " x $1\frac{5}{8}$ ", center $1\frac{1}{2}$ " x $2\frac{1}{4}$ ", rear $1\frac{11}{16}$ " x $1\frac{3}{16}$ ".

Cam Shaft Bearings — Front $1\frac{1}{2}$ " x $1\frac{7}{16}$ ", center $1\frac{13}{32}$ " x $1\frac{7}{8}$ ", rear $1\frac{1}{8}$ " x $1\frac{3}{16}$ ".

Oiling System — Splash system with positive flow to all main bearings.

Carburetor — Carter.

Fuel System — Vacuum feed, 10-gallon tank in rear.

Electrical System — Remy ignition, automatically controlled with Remy generator and starting motor.

Clutch — Multiple disc.

Transmission — Selective type, sliding gear, three speeds forward and reverse. Standard shift.

Cooling — Copper-cooled, positive air draft by specially designed suction fan.

Front Axle — Drop-forged I-Beam, New Departure wheel bearings.

Rear Axle — Semi-floating type, differential mounted on large ball bearings. Spiral cut bevel ring and pinion gears, with pinion gear integral with pinion shaft.

Brakes — Emergency, external contracting mounted on drum at rear end of transmission. Service, external contracting on rear wheels. Wheel drums 11 " x $1\frac{1}{2}$ ".

Wheels — Wood, artillery type, demountable rims, large hub flanges.

Tires — 30 x $3\frac{1}{2}$ " clincher, non-skid front and rear. Cord tires on all closed models.

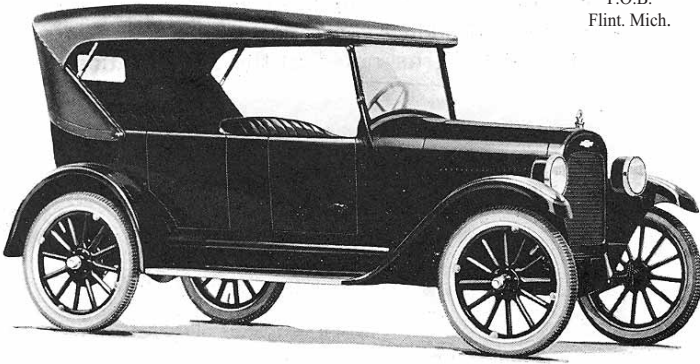
Drive — Left side, center control, automatic spark. Throttle and carburetor choke rod on instrument board.

Steering Gear — Screw and split nut.

Springs — Quarter-elliptic type, front and rear.

FROM A REPRINT OF AN ORIGINAL 1923 CHEVROLET SALES BROCHURE PUBLISHED BY JOEL BRAVERMAN, WANTACH, NEW YORK

\$710
F.O.B.
Flint, Mich.



STYLE, BEAUTY, COMFORT AND CONVENIENCE

Every Superior Model Chevrolet is a handsome car with striking stream lines suggest smooth speed, a high hood consistent with its powerful motor, latest drum-type head lamps with legal lenses, and a fine, durable finish.

All closed bodies are by Fisher Body Company, whose product is found on the highest grade cars made. In style, upholstery, and appointments they are of a high standard of quality.

All windows are plate glass and have Ternstedt regulators, affording quick, reliable adjustment to suit the weather and temperature.

Every Chevrolet has sufficient room for the comfort of the number of passengers which it is rated.

Its spring suspension provides exceptional riding comfort.

Curtains open with doors of all open models, which also have one-man tops and gypsy curtains at rear side to cut off back draft. The rear curtain window is oblong plate glass.

Closed models have adjustable curtains on rear window and dash lights. All doors but one have inside bolts, and that one locks outside with a key. Soft tops eliminate the drumming sound noticeable in metal top cars.

Windshield wiper on closed cars enables driver to keep the glass free of rain or snow.

Corvair not GM's First

by Chris Cunningham

As early as 1918 Charles Kettering, the head of Dayton Engineering Laboratories Company (Delco), GM's research division in Dayton, Ohio, was looking into developing an air-cooled engine. Air-cooled aircraft engines were associated with low weight and simplicity. John Wilkinson, the creator of the air-cooled Franklin engine was successful with his automobile engine developed in 1902.

Chevrolet's new car would be a low-priced model to compete with Ford's Model T. Everyone at GM was behind the idea except Alfred P. Sloan, head of GM's Advisory Staff, who had reservations. The Oakland Division (progenitor of the Pontiac) received the first test car in 1921 and determined it unacceptable. Kettering was not deterred by the lackluster performance and questionable reliability resulting from the tests in the Oakland. He somehow managed to convince the corporation to go ahead anyway, this time, in the Chevrolet lineup. He convinced them that air-cooling was the ticket if they wanted to beat back Ford.

Introduced in 1923 at the New York Auto Show to an accepting

public, the Chevrolet Superior's future looked promising.

GM called for 1000 units by February, but engine assembly was slow and only 759 Copper-Cooled Chevrolets had been built by May. About a third of these had to be scraped. GM figures reveal that approximately 500 made it to sales organizations and 300 to dealers, selling 100 to the retail public.

As soon as the car made it to the sales organizations and the public, trouble began. The engines pre-ignited terribly and lost power when hot. The copper-cooled Chevrolet was a complete failure. Problems were so extensive that the only viable option was to discontinue production immediately and recall them all and destroy them. In June of 1923 all Superiors were recalled and Kettering was so humiliated he wanted to leave GM.

GM waited almost 30 years to revisit the air-cooled issue. Ed Cole, chief engineer at Chevy at the time and former president of GM is considered to be the father of the Corvair, produced from 1960-'69.

The story of Chevrolet's copper-cooled car also gives credence to the idea that bad cars don't make it to production or, if for some reason they do, the ones that are sold are recalled and crushed.

These air-cooled cars are extremely rare today. A few copper-cooled Superiors survived; one is on display at the Henry Ford Museum in Dearborn, Michigan.

What is an Antique Car?

—from www.dmv.org: *The Unofficial Online Guide to the DMV*

While you may not be able to earn a spot on Jay Leno's television show, you can still share a hobby with this passionate antique car collector. While collecting antique cars used to be a pastime for the rich and famous, this activity is now more accessible than ever.

Generally speaking, antique cars are those that are at least 25 years of age. However, some states set different definitions for the purpose of antique vehicle registration.

Antique cars are typically not used as regular forms of transportation. Because of their advanced age, the cars are often too expensive to operate more than a few times per month.

Antique cars are shown in parades, road rallies, and other special events. For thousands of people across the world, collecting antique cars is an exciting hobby that provides an opportunity to connect with other auto enthusiasts.

Classic Cars and Vintage Cars

Antique cars are sometimes called classic cars or vintage cars. However, these terms are not necessarily interchangeable.

A classic car is a distinctive automobile produced between 1925 and 1948. Many classic cars are American-made, but a classic car can also be a foreign-built automobile. The most valuable classic cars tend to be those that were expensive at the time of release and manufactured in limited quantities.

A vintage car is usually described a car built between 1919 and 1930, although there is some debate about the ending date for this term. In the automotive industry, the period after World War I was a time of great change. Cars manufactured during this time became more practical, convenient, and comfortable than previous models.

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Buying on a Budget

The value of antique cars is based on supply and demand. Cars that are popular among collectors are extremely expensive. However, cars that haven't attracted much attention can be purchased quite cheaply.

If you're looking to buy antique cars without spending a ton of money, the best thing to do is look for cars that are about 20 years old with no broken glass and relatively low mileage. The stage just before a car goes from being "old" to "antique" is the ideal time to find a real bargain.

In many cases, you can purchase the car for less than \$500. Of course, this strategy is only feasible if you have the time and the skills necessary to restore the car to its original condition.

Investing in Antique Cars

While some people purchase antique cars primarily for their investment value, this shouldn't be the main reason for your purchase. Collecting antique cars in the hopes of striking it rich is simply too much like gambling to be a wise financial strategy.

In many ways, collecting antique cars is like collecting art. Since it's impossible to predict how a particular purchase will maintain its value, experts recommend you make your decisions based on your own feelings. If you love a particular car, buy it for your own personal enjoyment. If the car later increases in value, consider that an added perk.

2007 CORSA International Convention Photo Highlights



Above: Nice clean 1960 setup. Below: Corvair powered Amante GT.



photos by RodandPiston.com



Above: LMs prepped for show. Below: Rampside towtruck with 140hp.



Above: 1962 Lakewood Station Wagon. Below: Corvair Rod.



Tucson Corvair Association Regular Membership Meeting Minutes

July 25, 2007

Members Present: Dave Lynch, Barry Cunningham, Ed Segerstrom, Van Pershing, Dave Baker, Jackie Hilkemeyer, Bill L., Marcy T., Chris Cunningham, Mike Strong. President Dave Lynch called the meeting to order at 7:20pm.

Approval of the Minutes for June: Motion to approve by Chris Cunningham, seconded by Van Pershing and approved as written.

President's Report: Bill Maynard is attending the National Convention in Detroit and not present tonight. Little Anthony's will host the Corvair Club in October, more info to follow. Very light turn out for the meeting tonight, not unexpected for July. There will be a charity car show in September, Dave will bring the information to the August meeting.

Activities Report: Vice President John Frugoli was not present.

Mutual thanks were given to Chris Cunningham for a continuing great job on the Corvairsation. Four Corvairs were driven to the meeting.

Treasurer's Report: Barry Cunningham reported a \$3517.72 beginning balance, \$3482.67 ending balance.

Website: Van Pershing encouraged everyone to check out the website. Van brought another potential artwork/design for the club T-Shirts. Any feedback, suggestions or contributions, please email Van.

Merchandise: Don Robinson was not present.

Library: No discussion.

Raffle Tonight: No raffle was held.

Tech Talk: None held.

Mid-Month Event: No Mid-month activity in August; possible Cruise Night to be announced.

Adjourn: Dave Lynch offered a motion to adjourn at 8pm. It was seconded by Bill L. Motion passed.

Respectfully submitted,

Marcy T.

Recording Secretary

CLASSIFIEDS *Vairs and Spares*

FOR SALE: 1966 Monza Coupe, 95hp engine, powerglide, runs, drives, located in Tucson. \$700
Contact Ty Roybal at (520) 296-4344.

FOR SALE: '64-'69 Stock crankshaft gear, new - never installed, Clark's # C786x, Clarks price -\$89.65
My price- \$75. Dave - lynchmob@theriver.com or 325-0750.

President's Report

Greetings, Corvair enthusiasts. Well, another sweltering month is almost gone and I'm ready for some cooler upper 90's weather. Tinkering on the car in the carport isn't so bad after 10PM when it's a little cooler, but the neighbors probably don't appreciate it much. As such, I haven't done much to the car if it takes more than 15 minutes or so.

The club is usually in sleep mode for July and August because of the heat (I'm guessing that's the reason, though it's never been fully explained to me.). The July cruise night never happened due to apparent lack of interest. We'll try again this month.

Corvair Cruise Night

Saturday, August 25 — 6:30pm.

We're meeting at the PEP Boys on the NE corner of Kolb and 22nd St and then making our way up to the Sonic Drive-In near Pantano and Wrightstown.

I'm hoping for a good turnout from the club. We're always open to suggestions on future activities. There are a few car shows coming up in town that some club members may want to participate in. Details will be at the meeting and on the website.

Bill and Lynn made it back from the convention. Besides salivating over all the Lakewoods there and winning yet another trophy, I'm sure they'll have some great stories and pictures for us at this month's meeting. And Bill, I'm pretty sure nobody broke anything while you were gone or they were just waiting for you to come back to say they did.

All correspondence is welcome in the club newsletter. I'm sure some of you have some stories we would find interesting. Write them down and send them in. I know Chris would agree that the newsletter doesn't fill up with articles all by itself. It can sometimes be like a full-time job finding things to write about. Volunteering an article or suggesting something to print would be more than welcome. Contact Chris at arizaim@hotmail.com with any stories new and old, just to float an idea, or to whine and moan about something.

Happy Motoring,

Dave Lynch





Above: LM with midship V8.

Below: '61 Lakewood



Above: 1964 car with supplemental air cleaner Below: Corv-8.



Above: Rampside with turbo. Below: EM with 102HP engine and plate.



Above: One carb into four ports. Below: Four carbs into one air cleaner.



photos by RodandPiston.com





Monthly Newsletter August 2007 Vol. 32 No. 3 Corvair Society of America Chapter 857

Regular Monthly Meetings are held on the fourth Wednesday of the month. November meeting is on the third Wednesday. The December meeting is an annual Holiday Party.



Meeting Place: Micha's North, 1220 East Prince Road,
Parking Lot Bull Session: 6pm. Optional dinner at 6:20, meeting starts at 7pm.

Upcoming Events:

August 25, Saturday

Corvair Cruise Night - 6:30-8pm Meet at the PEP Boys on the NE corner of Kolb and 22nd St. Then we make our way up to the Sonic Drive-In near Pantano and Wrightstown.

September 26, Wednesday

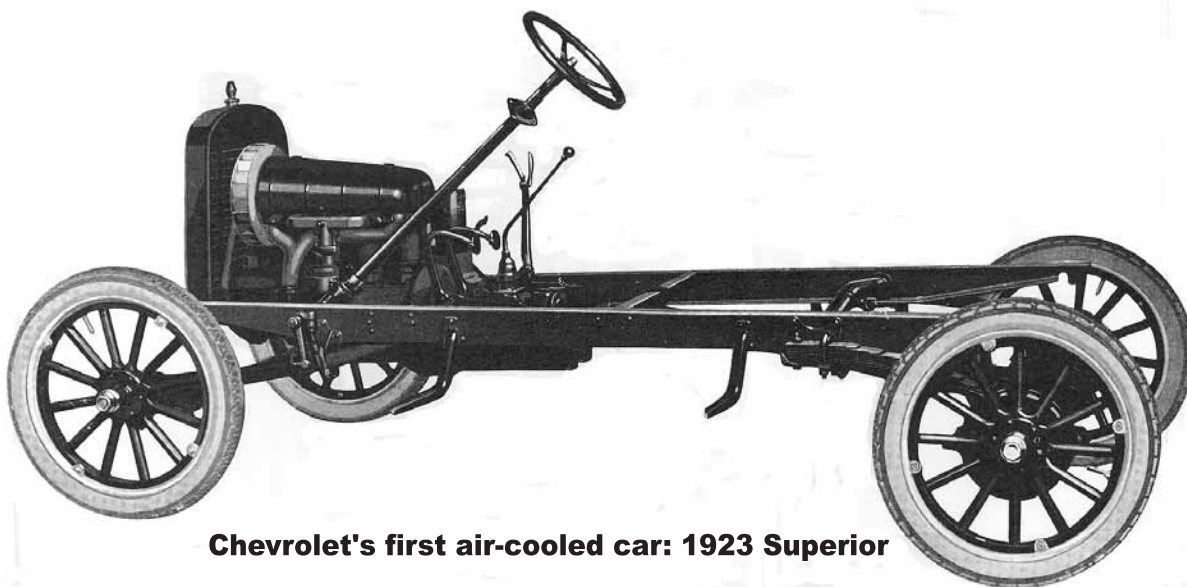
Regular Membership Meeting and Dinner - Micha's North, 1220 East Prince Road, **6pm -6:20pm, dinner optional. Meeting at 7pm.**



Tucson Corvair Association
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Tucson, AZ 85701-3010

August 2007

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Chevrolet's first air-cooled car: 1923 Superior