TUCSON Corvair ASSOCIATION
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Corvairsation

Letting the Good Times Roll Since 1975

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How I Acquired My 1966 Corvair Monza

By Lance Gillingham

The vehicle has 35,000 original one-family-owner miles. The vehicle is in running condition with a 110HP engine and tight automatic transmission. It has a black convertible top in original condition. The interior is black with black bucket seats. The exterior is Milano Maroon and also original.

My father purchased the car new from Jim White Chevrolet in Ann Arbor, Michigan, (approximately 30 miles from the Ypsilanti Willow Run General Motors assembly plant).

The car's owner's manual has the original Idento-Tag in my dad's name. He planned to give the car to me upon my U.S. Navy discharge in 1967 so I would have transportation while attending Eastern Michigan University in Ypsilanti, Michigan (approximately 15 miles from the GM plant).

I put very few miles on the car because I also had a 1967 Triumph Bonneville motorcycle. I only used the Monza during inclement weather and dates. The only damage to the car, barely visible today, came from small spots of road salt.

After college, I moved to Iowa City, Iowa using the Corvair to haul the motorcycle and my stuff in a small U-Haul trailer. I eventually gave the car back to my father in Ann Arbor. He stored it in a pole barn, under a car cover to protect the convertible top and rear plastic window. The windshield and side glass stayed in great condition too. When he drove the car around town, he had many offers from interested people who wanted to buy the Corvair. I told him 'please don't sell it — it gets good gas mileage and will appreciate in value.'

As fate would have it, my father passed away in February of 2000. I had just moved to Tucson, Arizona when my step-mother called and asked if I still wanted the Corvair. If not, she was going to sell it in Ann Arbor. I immediately flew to Michigan and put the car on a trailer and drove to Tucson.

I washed and waxed the original finish and applied some convertible top reconditioner. I had a body shop do minor touch up on the small exterior blemishes. I mounted a new set of radials, tuned up the engine, and stored it in my garage.

I still have the owner's manual with my dad's name on the GM Idento-Tag.

The '66 Monza convertible was shown in a few local car since arriving in Tucson. I am now disabled and wheelchair-bound. I am still able to drive the car with its automatic transmission. I hope to soon put it back in excellent condition and take it to a few more car shows.

When I pass away, I will have the car donated to the Corvair Museum in Ypsilanti, Michigan — back to the place where it was created.

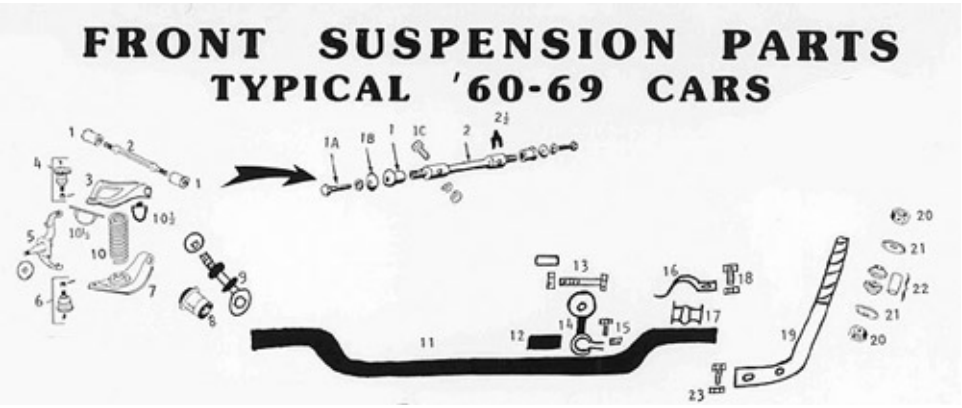
Lance's car on the rack in former member John Torpey's garage. Ed Segerstrom, Paul Dunn, Lance, and Chris Campton are also in the picture.

Corvair Front Wheel-Bearing Replacement Exercise

by Dave Cox

I recently had the pleasure of replacing the front wheel bearings on my '68 Monza. What should have been quick and simple turned into quite an adventure.

After removing the passenger wheel and brake drum, I found the outer wheel bearing had seized to the spindle; the spindle nut and washer were fused together due to high heat. The best explanation given by other CORSA members was that the notch on the washer gave out, the washer began spinning causing a heat build-up, welding the nut to the washer and causing the bearing to heat up and swell onto the spindle. There was very little grease on this bearing, but I could not tell if this was due to high heat or not. The driver's-side bearing was well-lubricated and working. A 5-lb. sledge hammer, welding torch, and hub puller could not loosen the bearing from the spindle; the spindle, backing plate, and hub all had to be replaced. Larry's Corvair had a used spindle, backing plate, hub, nut, and washer. Marco delivered them to me at my home. ("How's that for service?!") Cost: under $50.



(Diagram courtesy of Clark's Corvair Parts Catalog)

The rest was easy. After removing the brake drum, I loosened the hub nut and washer (1). I moved the nuts securing the back of the spindle to the ball joints (6), separated the ball joints with a pickle fork tool, removed the hub and spindle (5) after loosening the backing plate, and removed the brake shoes and hardware. The backing plate (not shown) was removed after loosening the wheel cylinder and while using a back-up wrench on the brake line. I simply twisted the brake cylinder off. The procedure was reversed for installation of the new parts.

Before installing the new bearings, I packed them with new grease (high-temp, all-purpose) by placing a large glob of grease in my left hand while using my right to press the bearings against the grease (forcing the grease into the bearing). The old bearing race was then removed from the hub. (The used hub had the old race still installed.) I did this by looking through the hub center hole and locating the two notches on the sides of the existing bearing race. A large screwdriver was used to tap the old races out. I then flipped the hub over, centered the new race, placed the old race over the new one, and drove the new race into the hub using a hammer. Then I flipped the hub over again and gently tapped out the old race.

DO NOT HIT THE NEW RACE WITH A HAMMER.

The race should be very snug after installing. To install the new grease seal, I installed the new inside race and bearing, centered the new seal on the hub, placed a 1x1 piece of wood on top of the seal, and used a hammer to gently tap the seal into place.

DON'T HIT THE SEAL WITH A HAMMER.

The driver's side was a little easier. After removing the brake drum, I just took the nut and washer off the spindle, and the hub practically fell off. A trick-ofothe-trade for removing inside bearings and seal: I removed the outside bearing and then reinstalled the hub on the spindle. I installed the nut without washer about 3 or 4 threads on to the spindle and then pulled the hub off with a downward jerking motion. The inside bearing and seal pop right out! Then I removed the nut again and followed the same proce dures as for the passenger side.

Since I had the front-end raised, I checked the bushing, ball joints, etc. and found they were not looking very good - but I'll save that for a future tech session. After hub, bearings etc. were installed, I installed the spindle washer and nut, then tightened until very snug, then backed off the nut by about ¼ turn. I installed the cotter pin through the hole in the spindle, packed the bearing dust cap with a little extra grease, and installed the cap.

I tested the hub by installing the wheel, then gave it a spin. (Should spin freely and come to a slow stop after several turns with no wobble.) Job well done!

from Westwind June 2008 —Corsa West of Los Angeles

July Mid-Month

The Tucson Corvair Association will host the evening show at Little Anthony's Diner on Saturday, July 26. Host Clubs are requested to be at Little Anthony's, under the canopy, by 5pm. Come enjoy the summer night with members and promote the Club. We will have a table and chairs, our banner, and Club information and membership forms on hand.

NOTICE:

New Meeting Place
Mimi's Cafe, 120 S. Wilmot

For the third time in a year we have been forced to find another meeting place. Bad luck or the recent bad economy have hit us hard – where we feel it the most: our stomachs. You will notice that our new meeting place, Mimi's Cafe on Wilmot has a long standing track record for good service and great food.

We hope to see you at our next meeting in the new location on Wednesday, June 25 at 6pm.

You may also notice that there are no Minutes from the May meeting. Our secretary was stranded out in the boonies and could not make it in time for the meeting. The members that met at El Cachanilla for the May meeting only to find a locked door reconvened at Charlies Bar and Grill for an evening meal among friends without a regular meeting.

Tucson Miniature Auto Club

Do you collect old cars or trucks made of cast iron, tin, rubber, wood, or other materials?

The TMAC is devoted to the hobby of toy car collecting. Since 1976 it has been our goal to promote the joy of toy car collecting through meetings of like minded collectors; to have an opportunity to talk, sell, and trade toys!

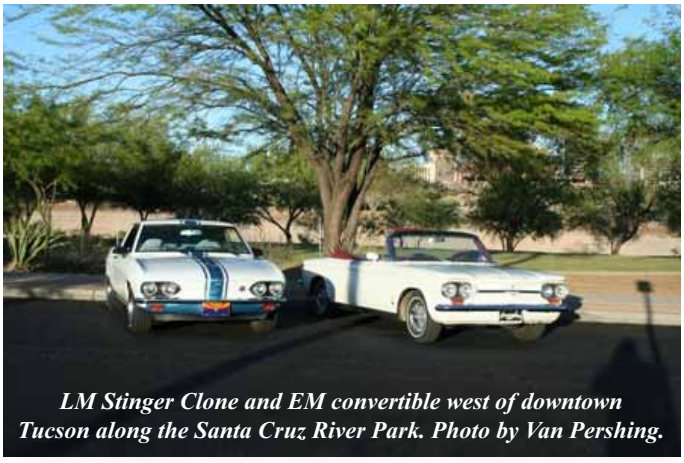
Currently TMAC has almost 100 members from all over the United States. We are an adult club dedicated to the restoring, building, and collecting of miniature autos, trucks, buses, and etc. Our activities include displays at various locations, presentations to civic and youth groups, and a yearly toy show and sale (one of the largest in the southwest!). Many of our members also collect full size special interest vehicles.

Member Benefits include receiving the Club newsletter, the ***Mini Auto Gazette*** mailed to you each month. The Mini Auto Gazette contains informative articles, FREE classified ads, a list of coming events, and more! Monthly Meetings bring friends together in discussion of auto memorabilia; buy, sell, and trade with other members, and see what others members have brought to show the club!

How to Join the TMAC

If you would like literature mailed to you. Send a self addressed stamped long envelope to:

Tucson Miniature Auto Club
1111 E. Limberlost Drive #164
Tucson, Arizona 85719-1062



LM Stinger Clone and EM convertible west of downtown Tucson along the Santa Cruz River Park. Photo by Van Pershing.

Photo Highlights

from May tour to Madera Canyon in the Santa Rita Mts. ***Top Left:*** *John Frugoli's LM coupe.* ***Mid left:*** *a view from the top –Bill Maynard's '63 convt, Barry Cunningham's '66 140HP coupe, Dave Lynch's '67, and John Frugoli's '66 coupe.* ***Left:*** *Lisa, Lynn, and Amy gearing up for a picnic.*

A blast from the past —
Above: *current TCA president, Mr. Leslie, pre chin wiskers circa late 1980s presiding at a TCA holiday party.*
Below: *Van Pershing with wife Vickie circa late 1980s.*

TCA editor perched on top of backyard wall at Kansas City home, March 1963. Later that year, his first car (1964 Corvair) rolled off the GM assembly line. It will be eleven years before he gets behind the wheel of the sporty convertible.

Tucson Classics Car Show
Registration Application

October 18th, 2008 10 am to 5 pm
Registration Deadline: October 10th, 2008 Rain Date: October 19th, 2008
At St. Gregory College Preparatory High School 3231N. Craycroft Rd. Tucson, Az.
Pre-registration–Show will be limited to only 500 cars. Sign up early to ensure your space.

- **Please complete and sign form.** Additional registration forms are available online at www.tucsonclassicscarshow.com.
- **Mail forms to:** Tucson Classics Car Show, c/o Rotary Club of Tucson, 3900 E. Timrod, Suite 4, Tucson, Az. 85711.
- **For more information** Contact Arnie @ (520) 320-3689 or email info@tucsonclassicscarshow.com

1. Pre 1950 Cars, Original
   - 1a - Pre 1916
   - 1b - Model T 1909 -1927
   - 1c - Model A 1928-1931
   - 1d - Ford 1932-1953 (flathead)
   - 1e - Nickel Era 1916 - 1927
   - 1f - Classic 1925-1948
2. Pre 1950 cars, Modified / Custom
3. 1950's Cars, Stock / Original
4. 1950's cars, Modified / Custom
5. Chevys, '55 – '56 – '57
6. 1960's Cars, Stock / Original
7. 1960's Cars, Modified / Custom
8. 1970's Cars, Stock / Original
9. 1970's Cars, Modified / Custom
10. Pre 1950's Trucks, Stock / Original
11. Pre 1950's Trucks, Modified / Custom
12. 1950 – 1979 Trucks, Stock / Original
13. 1950 – 1979 Trucks, Modified / Custom
14. Pre 1950 Foreign / Sports / Import
15. 1950 – 1979 Foreign / Sports / Import
16. Foreign / Sports / Import after 1979
17. Corvettes to 1979
18. American Sports Cars from 1970
19. Street Rod, Open
20. Street Rod, Closed
21. 1955 – 1972 T-Birds
22. Mustangs to 1972
23. Cobras
24. Avantis
25. Special Interest, Modified / Original

NOTE: All category one participants will compete together.

For official use
#_____
#_____
#_____

Entry Fee: $25/Vehicle (NOTE: $35.00 after Oct 10th if space available.)

Car #1 Make_____ Model_____ Year_____ Class#_____
Car #2 Make_____ Model_____ Year_____ Class#_____
Car #3 Make_____ Model_____ Year_____ Class#_____

IS THIS AN OVER SIZED VEHICLE? Yes__ No__
Will you be trailering your vehicle? Yes___ No___

Amount Enclosed:
1st vehicle $25.00 (includes entrance, goodie bag, 1 raffle ticket for car raffle drawn at Show, Sat. morning coffee and Dash Plaque) $25.00
__Additional vehicles x $15.00 = _____
__Additional raffle tickets x $5.00 = _____
__ Event T-shirts x $10.00 = _____
(they will be $15.00 at the Show)
Quanity: _ sm _med _ lg _ xlg _ xxlg
__Event caps x $10.00 = _____
__Event visor x $10.00 = _____
__Tickets to Friday night social and BBQ x $10.00 per person = _____
__Cars for Car Corral@ $15.00 each _____
TOTAL $ _____

Please make checks out to: Rotary Club of Tucson Foundation and send to: 3900 E. Timrod St. Suite 4 Tucson, AZ 85711

Name: _____
(As you wish it to appear on the window plaque)
Spouse/Guest: _____
Address: _____
City:_____ State_____ Zip_____
Phone:_____ Email:_____
Club Affiliation: _____

THIS IS A RELEASE. By signing this document I agree: This is not a bailment of my vehicle(s). I acknowledge there is inherent risk of damage to my vehicle(s) from being displayed in an event open to the public. In consideration for permitting me to display my vehicle(s), I agree the Rotary Club of Tucson, St. Gregory College Preparatory School, and their respective affiliates, officers, directors, members, employees, agents and representatives are not liable for any damage, theft, personal injury, losses, or other claims whatsoever, whether known or unknown, in any way related to the Tucson Classics Car Show, which may be suffered by me, by minor children with me, or by my vehicle(s).

I am at least 18 years of age, am not under any disability and have not had a guardian or other legal representative appointed for me; I speak and read English and have read this entire Registration Application, including the RELEASE, and understand that I have released the Rotary Club of Tucson, St. Gregory College Preparatory School, and their respective affiliates, officers, directors, members, employees, agents and representatives from liability. NO dogs, alcohol/drugs, or music may be brought on to Show grounds.

Signature:_____ Date:_____

ALL PROCEEDS GO TO SUPPORT THE READING SEED PROGRAM
To learn more about the Reading Seed Program go to www.readingseed.org

Tucson Classics Car Show

A Rotary Club of Tucson Charity Event

2nd ANNUAL

It's the best time you and your car will have outside of the garage!

Located on the lawn at St. Gregory College Preparatory School -
Saturday October 18th from 10 am - 5 pm.
3231 N. Craycroft Rd - Be there... or be square.

Lots of grass surrounded by trees - A Car Show You'll Love!!!

Coming **October 18th 2008**

Participant Info:

- Car classes listed on registration form will be "Participant Judged".
- 1st Place in each class receives a $100 award. 1st, 2nd, 3rd place trophies will be awarded.
- Presenting Sponsors will award $500 and trophy for "Sponsors Favorite Show Car".
- Supporting Sponsors will award $200 and trophy for "Sponsors Favorite in Show".
- Rotary Club of Tucson will award $1,000 and trophy for "The Club Best in Show Pick".
- With registration you get a chance to win a car or $10,000 in cash raffled off during the show.
- Morning coffee and VIP area to kick back away from the crowds.
- Friday night BBQ get-together with entertainment.
- Entertainment all day long at the show.
- Host hotel with show rates.
- "Give a hand up" to local kids and have a great time too!
- See registration form on the back of this flyer!!!!!!!!!!

We sold out last year so sign up early for 2008

www.tucsonclassicscarshow.com 520-320-3689

The 2nd annual **Tucson Classics Car Show** coming up in October promises to be even better than last year. Fifteen to twenty thousand people went through the gates at St. Gregory school last year. Our Club will support this event again this year as our mid-month activity for October. We will provide details, such as where to meet before arriving at the show, at a later date, but wanted to make sure that you get your registration form (on reverse side) sent in now. The organizers reported last week

"... registrations are coming in very well at this stage of our promotion. We fully expect to be sold out by the end of July - early August."

500 cars is the maximum number this year, down from 560 last year. Don't delay. Send in your registration now! Support a good cause with the Club and have fun at the same time. See you there October 18th!

offensive and to operate an alcohol engine less skill is required than in the case of a gasoline or kerosene engine, because an alcohol engine will run well under widely varying conditions of fuel mixture. That is, with a gasoline engine the proportion of gasoline vapor to air must be about one to fifteen in order to obtain the best economy and power, while with an alcohol engine any mixture of alcohol vapor and air over a very wide range will permit the engine to operate satisfactorily, although, of course, if the mixture is over-rich fuel-waste will result—but the power of the engine will not be seriously affected.

Furthermore, the deposit of carbon in an alcohol engine, if the proper grade of lubricating oil be used, is impossible, while gasoline and kerosene engines cannot be operated without having the interior parts become "sooty," with a resultant loss of power.

Another factor which counts in favor of the alcohol engine is the fact that its exhaust is not as hot as that from a gasoline or kerosene engine, thus minimizing the danger from ignition and the possibility of burning the lubricating oil, the latter being a decided disadvantage of gasoline and kerosene engines.

In conclusion, it will be interesting to note that the subject of alcohol as a fuel is now receiving primary consideration by some of the world's leading engineering organizations. In England the Imperial Motor Transport Council has formed an Alcohol Motor Fuel Committee, composed of internationally famous scientists, and in France the Automobile Club of France, in collaboration with the Society of Automobile Engineers in this country, has undertaken the scientific development of an engine for conducting experiments to determine the best features of construction and factors regulating an engine to operate to the greatest advantage on alcohol.

Therefore, in contemplating the fuel problem, "look not mournfully into the past—it comes not back again; wisely improve the present—it is thine."

The article Alcohol as Fuel *could have been written ten years ago, but it wasn't. It was written nearly 100 years ago. What happened ? What have we learned in that time?*

Why haven't we improved on this fuel problem?

The "present" is not thine, it's their's [the oil-o-crats]...has been for a long time. When are we going to get it back? —Ed.

From the TCA Archives... Bryan Lynch's 1969 Coupe on the left with several EM cars about to embark on a Mid-Month Tour. Fuel prices indicate late '70s, possibly early '80s.

Alcohol the Future Fuel

(*Continued from page 4*)

Denatured Alcohol

All of the important countries of the world place a heavy governmental tax upon and supervise the manufacture of ethyl alcohol. This tax and supervision, while affording a great revenue and protection to the state, acts as a curb on illicit distillation, intoxication and other phases of civic harm which would result were the people free to make, use and deal in their own alcoholic concoctions. As any housewife can testify, fruits, berries and vegetables easily lend themselves to the production of alcoholic drinks, and without governmental regulation of production, quality and distribution, each individual would soon become his own distiller or brewer with what effect upon the health and virtue of the community it is not difficult to conjecture.

In order to further the use of industrial alcohol—that is, alcohol for manufacturing purposes and as a fuel for heat, light and power many governments have removed the tax on alcohol provided it is denatured—that is, when there has been something added which precludes its use for human consumption. The United States adopted such a law on June 7th, 1906, and, while many formulæ have been authorized under it, the denatured alcohol formula used for ordinary purposes, such as fuel for heaters, stoves, lamps, tools, etc., cleansing material, non-freezing agent for water-cooled motors, carbon remover for automobile, marine and stationary engines, etc., and which has also been prescribed for motor power is as follows: "To 100 gallons of ethyl alcohol is added 10 gallons of wood alcohol and one-half gallon of benzine."

The product of this formula is known as completely denatured alcohol and is sold as freely as gasoline, kerosene, naphtha or any other liquid fuel. In 1907 the average market quotation for this grade of denatured alcohol in barrel quantities was 45 cents per gallon. Its present price, notwithstanding the increase in the cost of raw materials, generally ranges from 30 cents per gallon in tank car lots to 33 cents per gallon in a single barrel. The factors in this decrease have been the utilization of new basic material, enhanced demand and economy in distribution; and, of course, the tremendous output incidental to its adoption as motor fuel will contribute materially to the establishment of a lower basis.

United States Publications on Alcohol

The United States laws governing the manufacture, sale and distribution of denatured alcohol can be obtained from the U. S. Government Printing Office at Washington, which also publishes a number of other pamphlets relative to denatured alcohol. Among these are the following:

Comparative Fuel Values of Gasoline and Denatured Alcohol in Internal Combustion engines.

The Use of Alcohol and Gasoline in Farm Engines.
By Charles Edward Lucke, M. S., Ph. D. (1907)

Industrial Alcohol: Sources of Manufacture.
By H W. Wiley, Chief, Bureau of Chemistry.
Revised by H. E. Sawyer, Fermentation Chemist. (1911)

Manufacture of Denatured Alcohol, Based on the Operations of an Experimental Still at Washington, D. C., and a Course of Lectures Delivered in Connection Therewith.
By H. W. Wiley, Chief, Bureau of Chemistry. (1910)

Production and Use of Denatured Alcohol in Principal Countries.
By Charles A. Crampton. (1914) Regulations Relating to the Manufacture, Sale and Use of Denatured Alcohol. (1911)
By Commissioner of Internal Revenue (1911).

Advantages of Alcohol as Fuel

Experiments conducted by the United States government, as well as foreign governments and independent laboratories, are conclusive in establishing the fact that any gasoline or kerosene engine on the American market can operate with alcohol as a fuel without any structural change whatsoever. But, since alcohol contains approximately .6 of the heating value of gasoline by weight, an engine adapted for the use of gasoline or kerosene requires about 1.8 times as much alcohol as gasoline per horsepower hour. This consumption, however, can be reduced by so altering the construction of the motor as to materially increase the compression, and by using a carburetor which will thoroughly vaporize the alcohol. An engine designed for gasoline or kerosene will give about 10% more power when operated on alcohol, provided the necessary modifications are made. An engine specially built for alcohol will give from 20% to 30% more power than is obtainable from a regular gasoline engine of the same size. Because of the increased efficiency obtainable from a standard size engine using alcohol, the cost of production per horse-power will be less than that of gasoline or kerosene engines of the same class.

Another important factor relative to the use of alcohol as a fuel is the decreased fire danger of storage, as compared to gasoline (alcohol is miscible with water in all proportions and its flame can be extinguished by water, while water but spreads a gasoline blaze), as well as its greater cleanliness and more pleasant odor. The exhaust from an alcohol engine is not

continued on next page

Substitutes for Gasoline

Various hydro-carbon substitutes for gasoline have been suggested, because, as stated above, the refiner finds it impossible to meet the demand even of the motor industry alone, although resorting to all possible means to increase his output of the requisite fuel.

Among the substitutes proposed is kerosene. It is my opinion that kerosene will never take the place of gasoline because of the impossibility of starting on kerosene; the lack of flexibility—that is, the inability to throttle the motor or to accelerate it rapidly; the smoky exhaust; the great amount of carbon deposited in the cylinders; the ready accumulation of dirt where kerosene is spilt, and the odor which pervades the car. Even if kerosene could be used successfully in motors of the automobile type (especially the pleasure vehicle, which demands a "sweet" fuel), the limitations of supply applicable to gasoline would soon apply to kerosene.

Benzol has also been suggested as a substitute for gasoline. Benzol is obtained in the making of coke from coal, and to produce one gallon of benzol 16¼ tons of coal must be treated. It is thus manifest that the production of benzol is so limited, and its present chemical utilization so varied, that it may be dismissed from consideration as a possible every-day fuel.

Ether has also been suggested as a substitute for gasoline, but its high cost of production prevents such commercial adaptation.

In Europe naphthalene, which is a coal tar product and known to most of us in the form of moth balls, has been used to some extent. To use naphthalene it is necessary to start the engine on gasoline and to melt the naphthalene in a hot carburetor before it can be used. The unsatisfactory performance of a motor running on naphthalene, the high cost of production, and the restricted supply, prohibit the consideration of naphthalene as a practical substitute.

Creosote has also been suggested as an available fuel It is likewise a coal tar product and contains about 40% of naphthalene, and the objections to the latter apply to creosote.

While the above are the more important materials proposed, there are a number of other manufactured fuels which, however, are unworthy of consideration because, even if produced at a price approximating that of present day gasoline, the commercial supply would be negligible, especially as they comprise one or more of the materials already named. Therefore, in the search for a fuel for small engines, such as are required for automobiles, motor boats, aeroplanes, etc., it is necessary to consider the limitations of nature and rely upon materials which can be produced economically in unlimited quantities.

Alcohol as a Fuel

"Alcohol" is associated in the public mind with either "wood" (non-potable) or "ethyl" (potable) spirits. In this lecture we will treat only of the latter commodity. The word "alcohol" is of Arabic origin, and the invention of the art of alcohol distillation is accredited to the Arabs.

Ethyl alcohol was originally—about the eighth century—obtained by the distillation of wine and was used principally as a medicine—in fact, as a certain panacea for all human ills. Raymond Lullius, the explorer, who commanded several African expeditions, acquired a knowledge of the process of its making and doubtless was the first to introduce alcohol into Europe. The alchemists of the thirteenth to the fifteenth centuries extended the use of alcohol, and produced what is known as "brandy." In the latter form it was heralded as a preventive of the recurring epidemics such as the pest or plague. The distillation of alcohol from grain became known in the sixteenth century, and that its volume reached formidable proportions may be assumed from the fact that the authorities issued interdictions against it upon the theory that too much grain would be withdrawn from other channels of trade and that in case of a crop failure a dearth of bread corn might result.

Ethyl alcohol is now manufactured from various materials containing sugar or starch, the principal substances being Indian corn, maize, rye, wheat, barley, rice, potatoes, beets, fruits, molasses and other direct or indirect products of the soil. It is manifest, therefore, that the sources of alcohol are inexhaustible, or, as it has been otherwise expressed, "alcohol can be produced as long as the sun shines and the rain falls."

Without encumbering your minds with a technical description of the process of ethyl alcohol distillation, it can be stated to be quite simple, requiring apparatus that is readily obtainable in practically all commercial markets of the world. The cost of a plant is dependent upon the desired capacity thereof, and, of course, the larger the plant, the more economical the operation.

Aside from its world-wide utilization in the field of beverages, ethyl alcohol is considered to be one of the most valuable—if not indispensable solvents and extractors known to the arts and industries. It is the base of all perfumery and is used in enormous quantities in the manufacture of pharmaceuticals, chemicals, vinegar, confectionery, smokeless powder, jewelry, mirrors, picture frames, mouldings, pianos, soap, polishes, celluloid, tobacco, imitation leather, artificial silk, preserving fluids, etc. In fact, there is scarcely an article of trade in the production or perfection of which alcohol is not an important factor.

continued on next page

Alcohol, the Future Motor Fuel

SCARCITY OF GASOLINE AND KEROSENE WILL RESULT IN USE OF COMMONEST COMBUSTIBLE FLUID

By Joseph A. Anglada*

THE subject of motor car fuels has of late been receiving a great deal of attention on the part of the engineering profession and, to some extent, by the public. In fact the unsatisfactory quality of "gas" now available has become a topic of almost every-day discussion. It can be fairly stated that this lowering of grade has been due to and necessitated by the enormous increase in the number of gasoline engines installed in automobiles and motor boats and those used for industrial purposes, practically without any increase in the world's supply of the crude oil from which gasoline is obtained. That there exists, therefore, a serious shortage in suitable petroleum-fuel production no one can deny. What does the future hold forth? .

Professor Magruder, of the Ohio State University, stated a few months ago that if all the gasoline engines in the country now in use were to run at their rated horse-power for ten hours a day, the known gasoline supply would last about thirty days. In other words, if the gasoline engines in use were run at their maximum horse-power, the amount of gasoline available would be sufficient only to run them one hour a day for about a year.

This puts to rest the popular impression that the high price and low grade of present day gasoline is due, mainly, to trade combinations and artificial restriction of output. At various meetings of engineering societies held during the past few years, at which representatives of fuel producers were present, it was authoritatively demonstrated that the grade of fuel obtainable from crude petroleum must necessarily decrease in quality and increase in price—due to the restricted amount of available crude oil suitable for the production of gasoline. It must also be considered that the increase in the number of engines using gasoline means an increase in the quantity of *lubricating* oil necessary for the operation not only of these engines, but other machines, contrivances and devices used for industrial and household purposes. Differently expressed, the production of lubricating oil from crude oil has also served to reduce the quantity of crude material available for the manufacture of *gasoline*.

*Chairman, Metropolitan Section, Society of Automobile Engineers, in lecture before automobile classes of Y. M. C. A., at West Side Branch, New York, May 21

RESULTS of LOW GRADE GASOLINE

In the old days only the more volatile vapors obtained in the distillation of petroleum oils were known as gasoline and used as fuel, but necessity has compelled the refiners to gradually include with this more volatile product the less volatile materials in the crude oil—approaching kerosene—with the result that today the fuel obtained is more like kerosene than what a few years ago we generally knew by the name of gasoline causing troubles familiar to all motorists, among which may be mentioned the difficulty in starting and the necessity of "nursing" the motor until it and the carbureting system have reached a sufficiently high temperature to vaporize the fuel.

The colder the weather or the more economical the carburetor adjustment, the longer it will take to "warm up." It is a safe assertion that a carburetor system of conventional type cannot be made to operate flexibly and economically without adding considerable heat to vaporize the fuel. The low grade of fuel is also responsible for the increase in the amount of carbon deposited in engine cylinders.

METHOD OF OBTAINING GASOLINE

A brief reference to the methods of producing gasoline from petroleum will not be amiss. There are several kinds of petroleum from which gasoline can be secured, the Pennsylvania oils being the richest in gasoline of the American product and producing about 4 % of the total supply of the United States. It has not been many years since it produced 50% of the total supply. The Ohio, Indiana and Illinois fields are decreasing (they never did collectively produce as much gasoline as those of Pennsylvania), while the California and Mexico oils contain such a small quantity of gasoline constituents that it is impracticable to refine them commercially.

The process of obtaining gasoline from crude oil consists of heating the crude oil, retaining the resultant vapors and condensing them. The vapors given off at the lower temperatures are called gasoline. The vapors obtained at a slightly higher temperature are called benzine, and at a still higher temperature, kerosene.

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 (CORSA) chapter 857.

Monthly Meetings are held on the fourth Wednesday of each month, except November and December. One technical/social events 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.

CORSA Membership Dues are $38 per year ($76 for 26 months) and include subscription to the CORSA Communique, a monthly publication. CORSA 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.

Business Mail Address: 1026 South 7th Avenue, Tucson, AZ, 85701-3010. Web Site Address: www.corvairs.org

TCA 2008 Events at a Glance

JUNE

23-27 MON-FRI	***CORSA International Convention*** **in Ventura CA** Hosted by CORSA West of Los Angeles.
25 WED	***TCA General Membership Meeting*** Mimi's Cafe, 120 S.Wilmot, Tucson, AZ Parking Lot Bull Session: 6pm. Optional dinner at 6:20pm, meeting starts at 7pm.

JULY

2 WED	***TCA Board Mtg. Rocco's Little Chicago***, 2707 E. Broadway, 6:30pm. All comers are welcome.
23 WED	***TCA General Membership Meeting*** Mimi's Cafe, 120 S.Wilmot, Tucson, AZ Parking Lot Bull Session: 6pm. Optional dinner at 6:20pm, meeting starts at 7pm.
26 SAT	***Little Anthony's Car Show*** TCA hosts this popular summer event. Corvairs must be at Little Anthony's by 5pm.

AUG

6 WED	***TCA Board Mtg.*** Location TBA, 6:30pm. All comers are welcome.
27 WED	***TCA General Membership Meeting*** Mimi's Cafe, 120 S.Wilmot, Tucson, AZ Parking Lot Bull Session: 6pm. Optional dinner at 6:20pm, meeting starts at 7pm.

CAR SHOWS

JUNE-NOV SATURDAY	***Little Anthony's Car Show Dates: -*** 7010 E. Bdwy. 7pm-10pm: 6/14; 6/28; 7/12; 7/26; 8/9; 8/23; 9/27; 10/11; 10/25; 11/8.
JUNE 23-27	***CORSA International Convention*** **in Ventura CA** Hosted by CORSA West of Los Angeles.
SEPT 20	***Classic Car, BBQ & Blues Show*** – Oro Valley Arts Council - 7am -5pm, Steampump Village Info: 520-797-3959.
SEPT 26-28	***25th Annual Run to the Pines Car Show—*** Pinetop, AZ Info: Bob -928-368-5325 or Ted–928-368-5332.
OCT 18	***Tucson Classics Car Show*** – St. Gregory School Info:520-320-3689.

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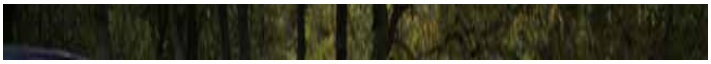

REGULAR MONTHLY MEETINGS are held on the fourth Wednesday of the month. November meeting is on the third Wednesday. The December meeting is our annual Holiday party.

NEW LOCATION:

MEETING PLACE FOR JUNE 2008:
Mimi's Cafe 120 S. Wilmot, Tucson, AZ
A parking lot bull-session starts at 6pm. Optional dinner startat 6:20pm.
Meeting starts at 7pm. Guests are welcome.

JUNE RAFFLE PRIZES

Raffle Prizes for the June meeting will be furnished by:
Lance and Sherry Gillingham, Chris and Barry Cunningham, and Ryan Green.

Tucson Corvair Association
1026 South 7th Avenue
Tucson, AZ 85701-3010

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