

# *Corvairisation*

TUCSON CORVAIR ASSOCIATION

TUCSON, ARIZONA

Volume 17 Number 6

September 1991

## **CAR SHOW 1991** **CASA**



**GRAND DOOR PRIZE**  
**1967 Pontiac Firebird Convertible**

**October 19, 1991**

**Reid Park**

# TUCSON CORVAIR ASSOCIATION

**CORVAIRSATION** is a monthly publication of the **TUCSON CORVAIR ASSOCIATION**, which is dedicated to the preservation of the Corvaire model of the Chevrolet Motor Division. The Tucson Corvaire Association is a chartered member of the **CORVAIR SOCIETY OF AMERICA (COSA)**.

**MONTHLY MEETINGS** are held on the fourth Wednesday of each month except December. One technical/social event is planned for every month except July and August.

**MEMBERSHIP DUES** are \$10 per year and are payable to the **TUCSON CORVAIR ASSOCIATION** through the Membership Chairman.

**CHANGE OF ADDRESS:** Send any change of address or phone number to the Membership Chairman. Don not send changes to the Editor.

**COSA MEMBERSHIP DUES** are \$25 per year and include a subscription to the *COSA Communique*, a monthly publication. See a TCA Officer for a membership application.

**CLASSIFIED ADS are FREE** to a TCA Members and \$1.00 per line to all others. The deadline for materials submitted for publication is the 10th of the month for that month's issue. Mail or deliver all materials to the Corvaire Editor. Articles are welcome for publication.

**BUSINESS MAILING ADDRESS:** P.O. Box 50401, Tucson, Arizona 85703.

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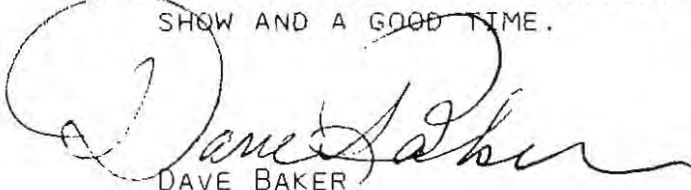
Current TCA Officer  
Corvaire Editor  
Ron Allen  
Dave Baker (2 votes!)

FROM THE PRESIDENT

WELL, DIDN'T WE HAVE A GRAND TIME AT THE AUGUST MEETING? I COUNTED 47 PEOPLE, THAT HAS TO BE A RECORD FOR ANY EVER GENERAL MEMBERSHIP MEETING. THANKS GOES TO ALL THE GOOD REPORTS FROM THE COMMITTEE CHAIRMEN AND TO GORDON CAUBLE FOR HIS EXCELLENT REPORT ON THE NATIONAL 1991 CONVENTION IN WASHINGTON D. C.

I COULDN'T BELIEVE IT WHEN I RECEIVED MY CORSA COMMUNIQUE FOR SEPTEMBER. THERE WAS RALPH NADER, HIMSELF, BIG AS PIE, SITTING IN AN EARLY MODEL SPYDER CONVERTIBLE ON THE FRONT COVER. HE WAS EVEN A SPEAKER AT THE CONVENTION, SPEAKING FOR ONE HALF HOUR AND THEN FIELDING QUESTIONS FOR OVER AN HOUR. HE ENDED UP SIGNING COPIES OF HIS BOOK "UNSAFE AT ANY SPEED" FOR THE PARTICIPANTS. SUCH A DEAL! IT WAS SUCH AN EVENT THE MEDIA WAS THERE. THERE WERE SEVERAL LOCAL TV STATIONS, THE UPI, C-SPAN AND INSIDE EDITION.

WE'RE APPROACHING THE FALL AND WINTER SEASON WHEN A LARGE NUMBER OF THE CAR SHOWS AND OTHER EVENTS HAPPEN, INCLUDING AUCTIONS AND SWAP MEETS. I AM SENDING TWO ANNOUNCEMENTS TO VAN IN CASE HE CAN PUBLISH THEM IN THE CORVAIRSATION. OF COURSE, THE CASA DEL LOS NINOS IS THE BIG ONE FOR US. ALL MEMBERS WHO PLAN TO HAVE A CAR IN THE SHOW BE READY, AT THE SEPTEMBER MEETING TO COORDINATE WITH VERNON GRIFFITH IN THE DETAILS AND PROCEEDURE. I KNOW WE'LL HAVE A GOOD SHOW AND A GOOD TIME.



DAVE BAKER

TUCSON CORVAIR ASSOCIATION

The regular monthly meeting of the Tucson Corvair Association was called to order at 7:40 p.m. by President DAVID BAKER at the Picadilly Cafeteria Wednesday, August 28, 1991.

A motion was made to accept the minutes of the July meeting as published in the CORVAIRSATION.

VERN GRIFFITH introduced JIM WILSON, a representative speaking for the Casas de los Ninos Car Show and benefit, to be held the third weekend in October--October 19th. He brought along registration forms and tickets for the club to sell: \$2 ea, 3 for \$5, 7 for \$10. All Corvair entries use the Country Club entrance.

DON ROBINSON, can collection chairman, announced that members should continue to save and bring in cans.

BARRY CUNNINGHAM encouraged everyone to participate in the mid-month activity, an outing September 14th at Rose Canyon, Mt. Lemon.

GORDON CAUBLE reported that a new item available to repair late model Monza and Corsa horn buttons is available at Clark's Corvair Parts. The kit includes the bit and necessary screws. Price, \$1.80.

BILL LESLIE announced that the Christmas Party would be held on December 14th at Webb's Steak House.

THE ZERKLES handed out flyers for the big celebration in Bowie on September 14th, to include a parade and cookout, and urged all interested members to drive down.

THE WININGS' Greenbriar was judged Best in Show at the Flagstaff Mini Convention "Corvair in the Pines". Since they left before the award, MAC POST brought it down and presented it to them.

GORDON CAUBLE reported on their trip to Washington and the National Corvair Convention for 1991 in New Carrollton, Maryland. Gordon showed colored slides of most of the entries, to include the Best of Show--a '64 red Spyder Convertible--A REAL KNOCKOUT!!

License plate winner in the drawing was AL CRISPIN. Other winners were:

JOHN HEISCH  
RICHARD BECHDOL

MRS. WININGS (2)  
BILL LESLIE

NAOMI GRIFFITH

THOSE WHO PROMISED PRIZES for the October meeting:

BILL LESLIE  
VERN GRIFFITH

ALLAN ELVICK  
MARTY KULUSKI

GORDON CAUBLE

Meeting adjourned at 9:00 p.m.

RESPECTFULLY SUBMITTED:



VERNE CAUBLE, Sec'y.

16 Corvairs

46 members present

# THE 1991 CASA CAR SHOW

October 19, 1991  
Reid Park, Tucson, AZ

## RELEASE AND AGREEMENT NOT TO SUE

1. The undersigned, being eighteen (18) years of age or older, is/are the owner(s) of a motor vehicle which will be displayed in connection with the 1991 Casa de los Ninos Car Show (the "Show") to be held at Reid Park on October 19, 1991.
2. I agree, on behalf of my self, my spouse, agents, assigns and successors in interest, to release, waive and forever discharge the CITY OF TUCSON, AND THE BRICK STORTS FOUNDATION FOR CASA DE LOS NINOS, a non-profit organization as well as their employees, officers, directors, agents and volunteers from, and further agree not to sue the foregoing in connection with any claims, demands, damages or actions for or arising out of damage or injury to property or persons which I may now or hereafter have, or that anyone may hereafter claim because of a relationship with me, arising in any way out of my voluntary display of my motor vehicle at the Show.
3. I further agree to abide by all the rules and regulations set down by the Casa Car Show Committee as shown on the reverse side of this document and will accept the Car Club Coordinator's decision(s) as final on all issues.
4. I UNDERSTAND THAT THIS IS A LEGAL DOCUMENT; I HAVE READ AND UNDERSTAND EVERYTHING WRITTEN ABOVE; I AGREE TO ALL THE TERMS OF THIS AGREEMENT; I HAVE RECEIVED A COPY OF IT.

The Casa thanks you for your participation and agrees, in return, to provide publicity for the Show, and the opportunity for you to display your vehicle before a large number of people and advertise the activities of your vehicle club or organization.

**SHOW VEHICLES WILL NOT BE PERMITTED TO LEAVE THE  
DISPLAY AREA FOR ANY REASON BETWEEN 10:00 A.M. AND 5:00 P.M.!**

Car Make: \_\_\_\_\_ Model: \_\_\_\_\_ Year: \_\_\_\_\_

Club or Organization: \_\_\_\_\_

Name: \_\_\_\_\_

Street: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Signature: \_\_\_\_\_



GRAND DOOR PRIZE  
1967 Pontiac Firebird Convertible



## Rules and Regulations for the Casa Car Show

1. All show vehicle owners must sign the front side of this release form before being permitted to display their vehicle.
2. All show vehicles must be parked within the display area by 10:00 a.m. and must remain in the display area until 5:00 p.m. The parking gates will be locked during this time and if an emergency occurs which requires an entrant to leave, a taxi will be called at the owners expense.
3. Loud radio noise will not be tolerated except in designated areas. The Casa Car Club Coordinator will establish and regulate those areas.
4. Vehicles may display "For Sale" signs if done in a discrete manner. If in question, the Casa Car Club Coordinator will determine what is an acceptable display.
5. Disorderly conduct including offensive language will not be permitted.

Any individual or group of individuals who violates the above rules after being given adequate warning will be asked to lock or secure their vehicle and leave the display area. Their vehicle must still remain on display until 5:00 p.m.

These rules are for the benefit of all participants as well as those viewing the car show. Thank you for your cooperation and enjoy the show!

<p><b>SHOW VEHICLES WILL NOT BE PERMITTED TO LEAVE THE DISPLAY AREA FOR ANY REASON BETWEEN 10:00 A.M. AND 5:00 P.M.!</b></p>
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## TCA MEMBERS

We will meet at the El Con Mall southeast parking lot at 7:00am the day of the show. We will leave promptly at 7:05am and go to Reid Park.

Release forms will be available at the September meeting (or use the form on the reverse side of this page) and MUST be filled out and turned in at the entrance the day of the show.

Let's have a nice showing for our club!

Verne Griffith  
Chairman  
883-6490

LIBRARY INVENTORY  
TUCSON CORVAIR ASSOCIATION

1960 Corvair Shop Manual  
1961 Corvair Shop Manual  
1962-63 Corvair Shop Manual  
1965 Corvair Shop Manual  
1966 Corvair Shop Manual  
1967 Shop Manual Supplement  
1968 Shop Manual Supplement  
1969 Shop Manual Supplement  
The Auto Body Repair Book  
The Auto Repair Book  
How to Keep Your Corvair Alive  
Chassis and Body Parts Catalog, 1960-1969  
Servicing the Corvair - Powerglide Transmissions  
Corvair Reference Guide  
American Corvair Parts Catalog - 1978  
Clark's Corvair Parts Catalog & 1988 Supplement  
Cottrifeld Corvair Parts Catalog and Accessories  
Corvair Underground  
Car Collector Magazine - 1977  
Corvair Decade  
Corsa Membership Roster - 1980  
Windmill - 3-1-71 to 10-1-72  
Corsa Communique, 1972 through 1982  
Corsa Quarterly, 1971 to Summer Issue 1978  
Corvair Affair  
Corvairsation from 1978 to present issue  
How to Hotrod Corvair Engines  
Chilton's Repair and Tune-up Guide for the Corvair  
The Corvair Book - Wall's Corvair Underground  
Price Sheets - Corvair Underground

TOOLS AVAILABLE

Corvair Tow Bar  
Steering Bolt Bushing Replacement Tool  
Blowere Bearing Greaser

VCR CASSETE TAPES

Engine Tune-up  
Corvair Movies by GM  
This Old "Vair" Volume 1 - Engine Reseasing, Valve Adjustments  
and Associated Items

Anyone desirous of checking out any of the above items, please call Dave or Beverly Baker at 296-1392 and we will make the arrangements to see that you may have it.

# GM experimental corvair engine

by Ronald W. Nordquist

In the early 1960's, Chevrolet developed experimental engines for the Corvair. Last year I acquired one of these engines and numerous spare parts, and although I do not know the details of development of the engine, I would like to pass along to Corsa members what information I have.

Apparently, the development project for this particular engine began about 1961, as dates cast into its various parts range from late 1961 to 1963. At least four engines were built, as I have three spare crankcases, many spare cylinders, etc., besides the one complete and running engine. Development must have been at a very advanced stage by 1965. Evidence for this conclusion is that details such as automatic choke, thermostatic cooling, cast intake and exhaust manifolds, etc., are complete. In other words, most of the pieces necessary to install the engine on a production basis in the late model Corvair are present. I also have the shrouding for installation in early models. I understand GM's plans were to provide a maximum performance option for the '65 Corvair as a possible answer to the Mustang.

Perhaps a word of why I got the engines is in order. By the fall of 1975, my faithful '65 Corsa coupe was but

a few miles short of 100,000. The 140 was still running strong but using a quart of oil every 200 miles — enough to foul the plugs frequently. I had heard of the experimental engines, that one was still running, and that it, with all remaining spare parts, was for sale. I decided to buy the experimental engine and parts rather than rebuild my 140. One day in November of 1975, the previous owner and I swapped the engine out of his Corsa and into mine, with my odometer showing 99,988 miles. The experimental engine had about 12,000 miles on it at that time.

The concept and mechanical details of the engine are fascinating. Apparently the design concept was to provide a basis for more power and eliminate some of the chronic Corvair engine problems while retaining the basic air-cooled, flat opposed six layout. (In the discussion that follows, "standard" is used for comparison purposes to refer to the Corvair engines you are all familiar with — 164 cu. in. 140's, 110's, etc.) The first step toward more power in the experimental engine is a displacement increase to 176 cu. in., using a standard crank with 3 9/16" cylinder bore. The problems of the standard engine which are reduced can be put in two groups: flow efficiency and leaks.

Fig. 1. Cylinder unit, intake side.



Fig. 2. Cylinder unit, exhaust side.

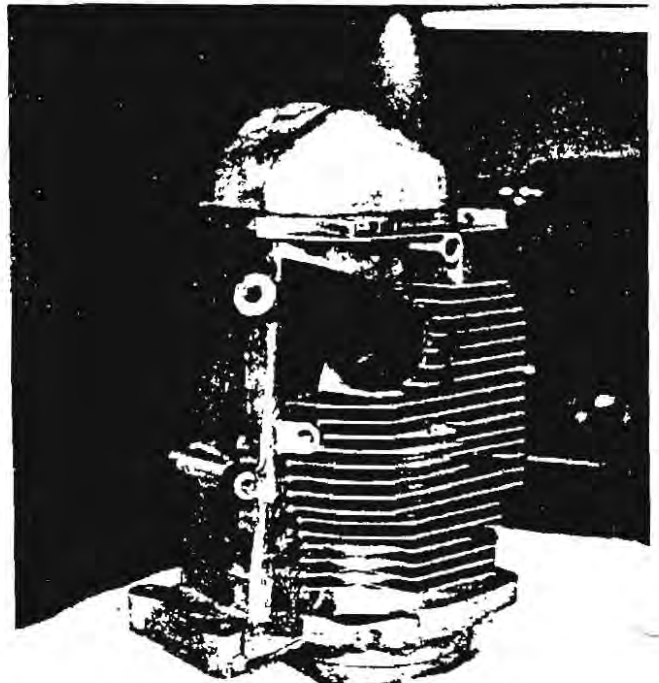






Fig. 3. Cylinder unit, view from crankcase end. Standard 180 HP exhaust valve, left, experimental exhaust and intake valves, center and right.

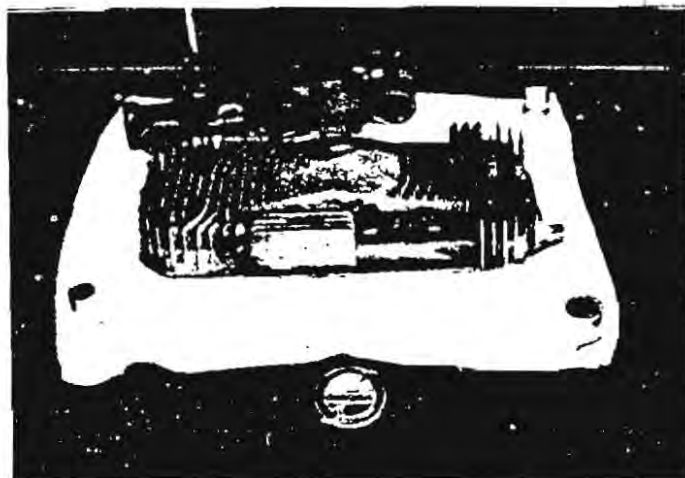


Fig. 5. Specially finned crankcase cover, foreground, log-type intake manifold, background.

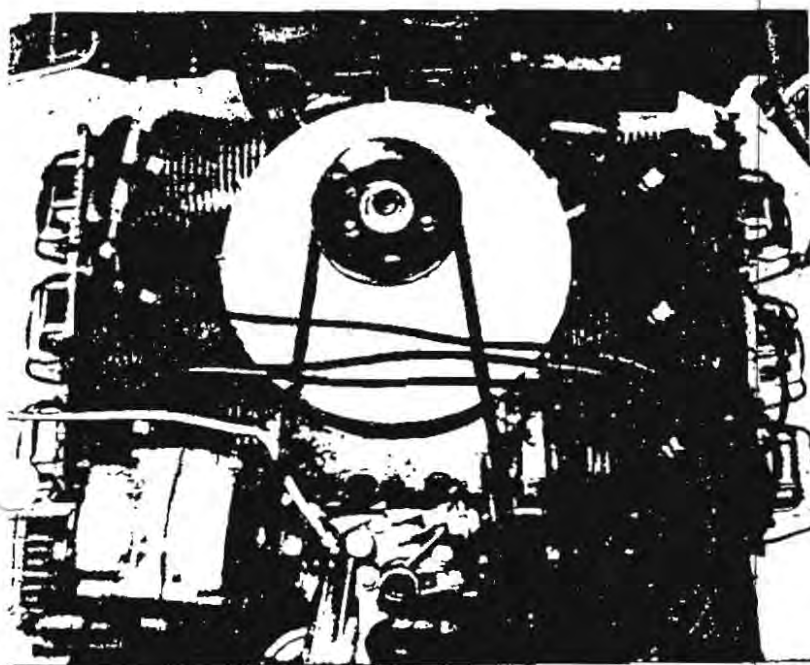


Fig. 6. Top view of installed engine, shrouding and intake system removed.

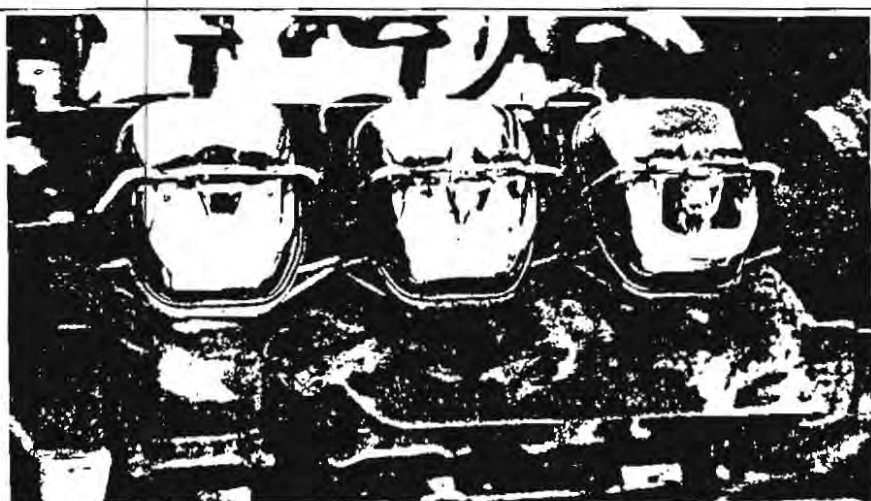


Fig. 4. Lower right side view of installed engine, shrouding and intake system removed.

Intake and exhaust gas flow efficiency in the standard engine is far from ideal for a number of reasons. I am not an engine theory expert, but it seems obvious that efficiency is improved when restrictions are eliminated and when the flow path is straightened. The standard engine has smallish intake ports, right angle turns from intake to chamber and from chamber to exhaust, and a crimp in the exhaust stack to clear the pushrod tube. The experimental engine has very large intake ports which are angled toward the chamber center (see Fig. 1). The exhaust stacks are also angled this way (Fig. 2) to provide a direct flow path while using a conventional valve layout. Note that the valve axes are parallel to one another and to the cylinder bore axis, and the valves are arranged in a straight line parallel to the crankshaft axis. This is in contrast to the standard valve layout which is slightly "porcupine." The valves are big, even bigger than 140 valves (Fig. 3), taking full advantage of the bore increase. The exhaust stacks are not crimped and are also larger than those of a 140, and the manifolds are large and smoothly contoured (Fig. 4).

Leaks in the standard engine are particularly annoying, and the experimental engine seems to have the worst ones cured. For example, there will never be a blown head gasket, because there are no head gaskets — each cylinder and head is cast as a unit from aluminum alloy, with a steel cylinder liner. Because the cylinder units are separate from one another, individual cylinders can be removed from the engine for servicing of valves, etc., without disturbing any other cylinders. The individual cylinder units are also capable of dissipating heat more evenly since there is no bulky head casting, and they are not susceptible to the differential expansion rates of aluminum head vs. steel cylinders, as in the standard engine. The heads are not used to clamp the cylinders in place using long studs; rather, the cylinder units are simply bolted to the crankcase by means of flanges at their base.

Another leak which will never occur is around the pushrod tube seals, because there are no pushrod tubes. Rather, the pushrods pass through a chamber which is part of the cylinder casting (see photos). This chamber also acts as a stiffening member for the cylinder.

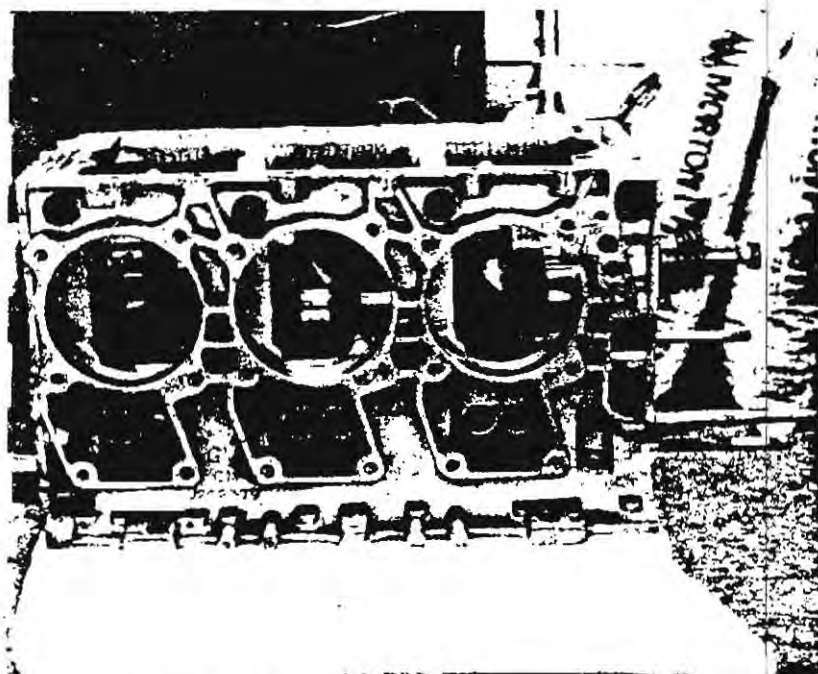


Fig. 7. Assembled crankcase with crankshaft and cam installed, left side view.

Valve cover leaks are also reduced by the use of rigid, cup-shaped individual covers which are held in place by spring clips. Getting at the rocker arms for adjustment is just as easy as checking your brake fluid level — simply pop the clip with a screwdriver (see Fig. 4).

A relatively minor advantage of the experimental engine is a reduction of weight. I would estimate it weighs 25 to 30 pounds less than standard. Most of the saving is in the cylinder and head units. As a matter of interest, the fan is plastic. It is an exact duplicate of the magnesium fan but about 10% lighter in weight — 475 grams vs. 530 grams for the magnesium fan.

The carburetion I am using is ordinary. The manifolds are a "log" type (see Fig. 5) which seal against the ports using large "O" rings. I have four manifolds, all of which are designed for only one carb each, unfortunately. I am using a pair of standard carbs, the air cleaner from my old 140, and the runner tube from a 110. At one time the engine had headers and a pair of 3 bbl Weber-type carbs on it. It was rated at 200 horsepower.

For the record, I will list the parts that are the same as or can be used on the standard engine: crankshaft, rods, bearings, cam lifters, pushrods, oil pump, oil pan, fuel pump, carbs, oil filter and stand, alternator, distributor, bellhousing, clutch, flywheel, crankcase cover (a specially finned one was designed also, see Fig. 5), fan and bearing, belt idler, rear pulley, and miscellaneous. Using the standard crank obviously dictates the same bore spacing and general layout as standard. The rear engine housing has the oil filler and dipstick angled rearward so the engine will fit vans, wagons, or cars.

Driving my Corsa with the new engine in it is a real treat. I have put over 4000 miles on it, including long trips. The car runs flawlessly. The only mechanical problems occurred within the first 200 miles. I burned a valve because I accidentally left a vacuum port open, and

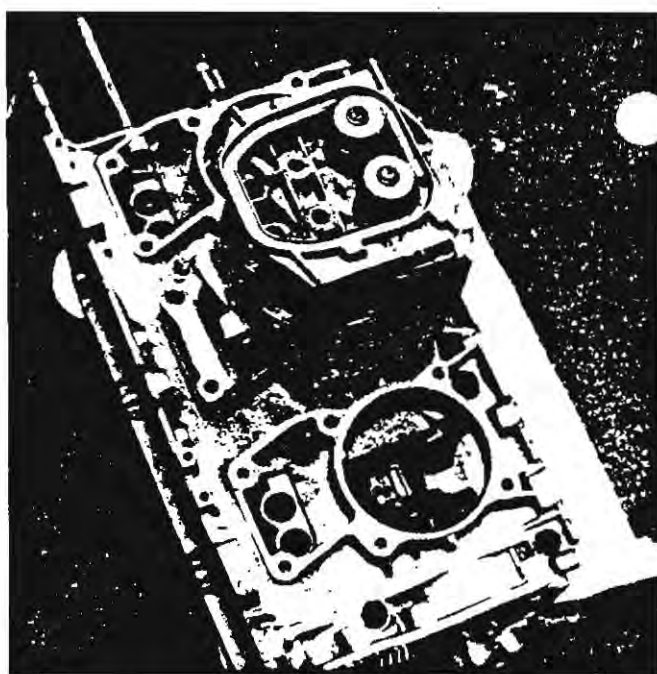


Fig. 8. Right side of assembled crankcase with cylinder unit set in place.

I also had to replace a defective hydraulic lifter. I discovered the engine wants about 20° of initial spark advance to be responsive. It runs fine on regular gas. The most noticeable difference from the old 140 is that the experimental engine is **very** torquey. It will run smoothly and strongly in any gear from 1000 to 5 rpm. The car has tall ER70-14 tires with the standard 3.55:1 rear end. Even so, starting in second gear seems quite natural. Throttle response and torque are excellent, partly because of the small carburetors. For this same reason, peak power is not spectacular. With new 140 mufflers installed the mechanical and exhaust sounds are similar to the old engine, but the exhaust note is deeper. I haven't run the car for top speed or acceleration times, but I believe it would take a very fast 140 to beat it. The extra strong low end torque has made it an excellent autocrosser. Gas mileage is 15-18 mpg for tearing around, 22-26 on the highway.

My plans call for building a higher horsepower version of the experimental engine. The one that is in the Corsa now is probably the lowest performance version that would have gone into production. It has flat top pistons for moderate compression, two standard carbs, cast exhaust manifolds with stock 140 mufflers, and a standard cam. Among the spare parts, though, are a set of high compression Forgetrue pistons, a high performance cam, exhaust headers with special mufflers, and a special set of cylinder units with over-size intake valves and exhaust ports. When I build up an engine using these parts, I hope to fabricate an intake manifold for a centrally located four barrel carb which would have an individual runner tube for each cylinder.

Having the experimental engine has been a very interesting experience for me. If any Corsa members have additional information on experimental Corvair engines, I would like to hear from them. ⊕

Ron Nordquist  
Aurora, Colorado



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## Service Rating the Compacts

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By Paul Weissler

**M**ANY WEEKEND MECHANICS packed away their wrenches back in the mid-1950's when most cars' engine compartments became crowded with big V-8 engines and power accessories.

But with the opening of the 1960's, the compacts arrived. They're substantially lighter, and so have smaller engines, usually sixes, and few if any power accessories. They looked serviceable, and CAR & MOTOR decided to check them out.

If you're a temporarily retired weekend mechanic looking for a new car and a chance to spin wrenches again, buying the right kind of compact can give you that opportunity.

Just anything called a "compact," however, may not be the answer. With the original compacts "grown up," small V-8s available, so-called "intermediate" compacts, deciding what is a compact isn't all that

simple. We had plenty to choose from.

In our decision to check various compacts for backyard serviceability, we settled on the Corvair, Falcon, Valiant, Rambler Classic, Studebaker Lark and Pontiac Tempest. The Tempest, at a hair under 17 feet long, may not fit your conception of a compact, but we thought it would be representative of a class of cars that have been called "super-compact."

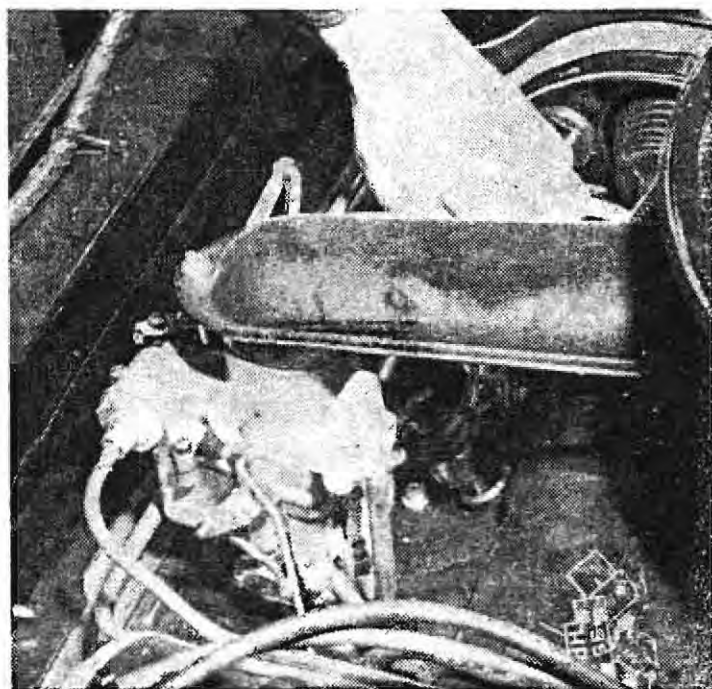
All models service-tested were sixes. We felt that the high-performance V-8 models are not bread-and-butter transportation, which supposedly was the idea of the compact in the first place.

The items selected for the service check were those a weekend mechanic could easily handle; tuneup, starting and charging systems, drive belts, fuel pump, brake master cylinder, cooling system and oil filter. There were several "weekend mechanic" service





**TAKING OUT STARTER** from Falcon is easy. Top inner bolt is accessible by using a  $\frac{3}{8}$ -in. ratchet with a 6-in. extension attached to it.



**REMOVING** the air cleaner won't help to get at the left side center spark plug in Corvair. Socket and  $\frac{3}{8}$ -in. drive socket just fit in.

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Maintenance can be costly when it requires special tools to do it yourself, or when you get the labor bill from your dealer

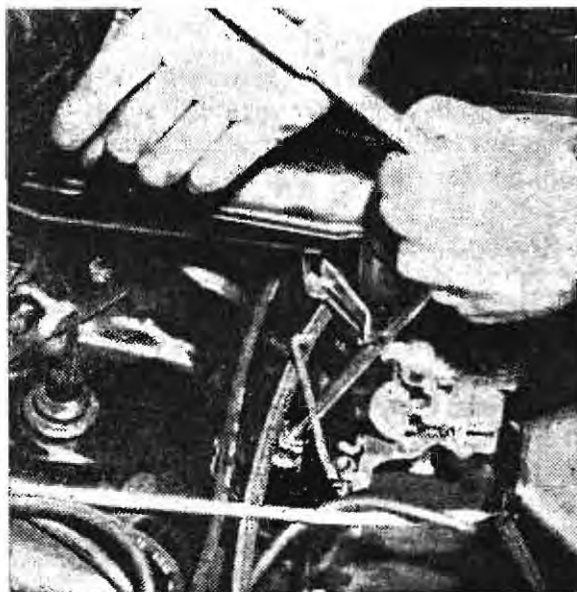
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items not included on our list, such as air and fuel filters, but the exclusions were items easily serviceable on any car, including the big V-8s.

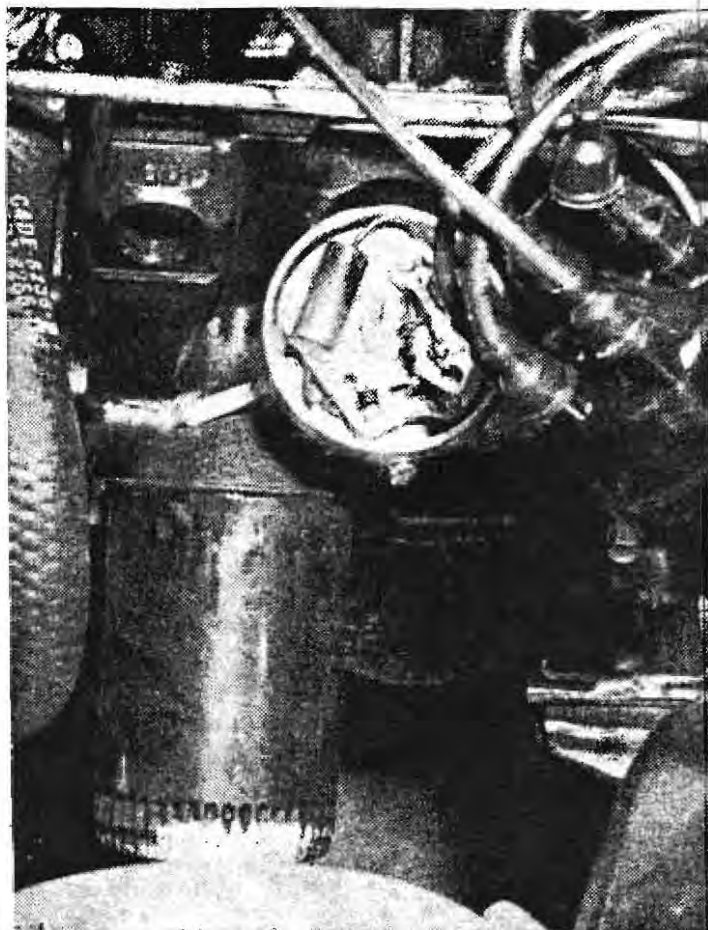
**Our rating system** for a particular item is either good or not applicable, fair or poor. Our rationale for the ratings was, to some degree, personal. The decisions—and the comparative point ratings for each car—were arrived at in this manner:

**Good** (3 points): The part to be removed or serviced was directly accessible without the removal of nearby parts, and without the necessity of placing the car on a lift.

**Not Applicable** (3 points): The service item is "engineered out." Examples: intake manifold integral with the cylinder head, eliminated the necessity of periodic torquing of intake manifold bolts; hoses, radiator and water thermostat eliminated by air-cooling design, as on Corvair.



**THROTTLE LINK** is disconnected on Corvair so  $\frac{3}{8}$ -in. socket extension can be inserted for removing center plug on right side of engine.



**TWO COMPONENTS** on this Falcon engine that are especially easy to get to are the spin-on oil filter and all the parts in the distributor.

*Fair* (2 points): The part is accessible with some inconvenience, such as by bending a line, a simple disconnection or by easy removal of a nearby part, but still without the need of raising the car.

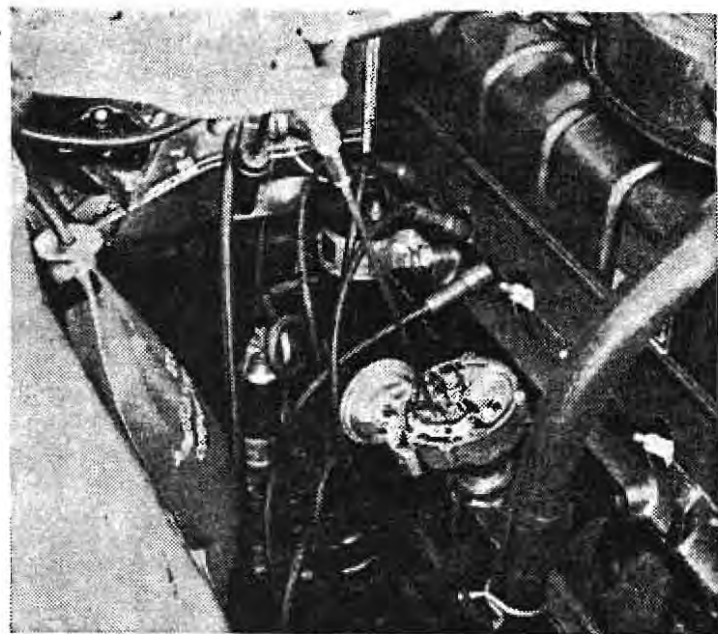
*Poor* (zero points): The part is inaccessible by conventional means without extensive inconvenience, such as: super strength required, car must be raised; or unreasonable or difficult removal of nearby parts is necessary—or a combination of two of these reasons, or all three.

**Sixteen items** are on the service list, so a perfect score would be 48 points.

**Tools used for our service checks** were standard tools a weekend mechanic can be expected to have—an assortment of box and open-end wrenches, and sets of  $\frac{3}{8}$  and  $\frac{1}{2}$ -inch drive sockets with short and long extensions, conventional ratchets and a torque wrench.

The only exception to our special tool rule was an oil filter wrench. Reason: all filter

Ease of servicing differs from make to make, with each having certain problems



**NO NEED** to drape yourself over the hood to change points and condenser on this Rambler Classic. You can do the job in a white shirt.

manufacturers design the spin-on filters for removal with these tools in service stations. A filter wrench is a \$2 to \$3 item, depending on exact type.

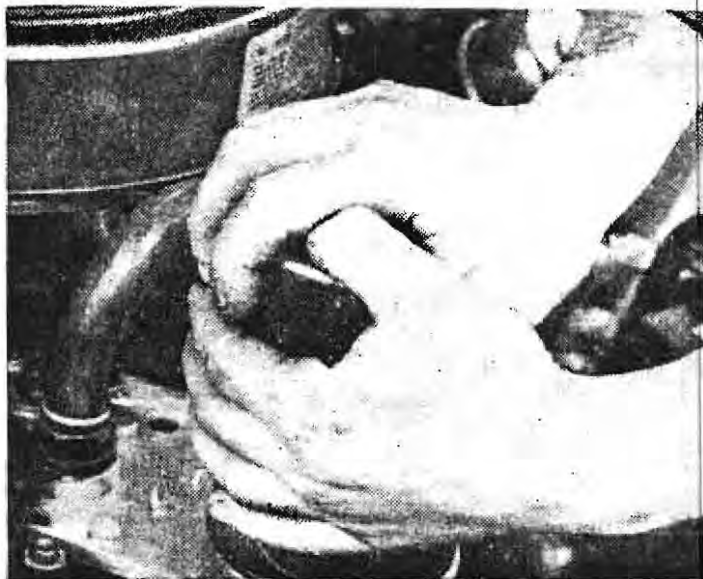
Spin-on oil filters can be removed without the special wrenches—by hand if accessible and not too tight, or by driving a long screwdriver through the can and using the screwdriver as a lever. Neither technique is recommended for consistent success.

Specifically excluded from the tool list were universal-joint ratchets or sockets, special torque wrench adapters, and other special wrenches for starters, distributor locks, etc.

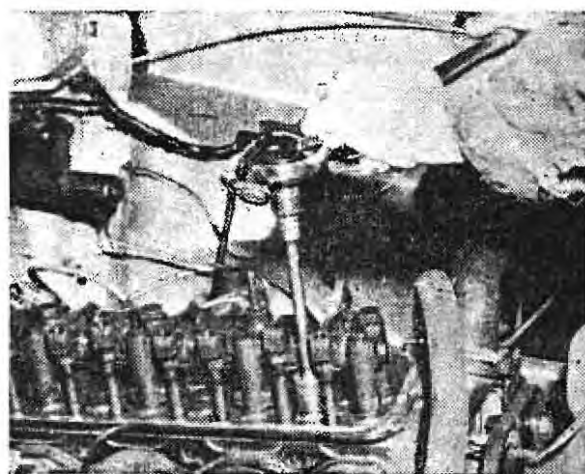
Because most of us don't have a lift or hydraulic jack and horses, we set the criterion that everything had to be accessible from under the hood.

As a result, some of the items that are rated fair or poor for the weekend mechanic may be a snap for a professional in a reasonably-equipped shop. The ratings, therefore,

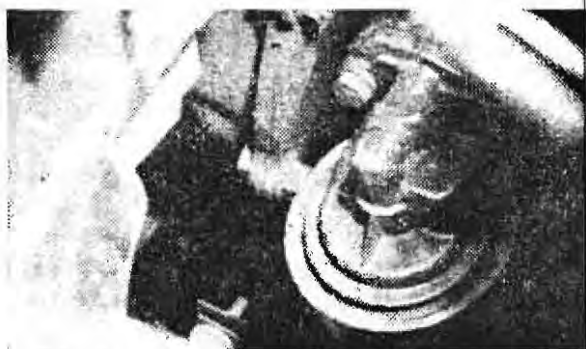




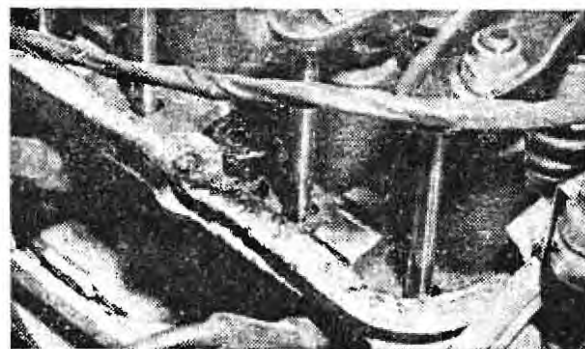
**THIS RAMBLER** oil filter just cries for owner replacement. If it is not on overly tight, it's a simple matter to undo it with your hands.



**TORQUING** Studebaker cylinder without removing the rocker shaft is done with a  $\frac{3}{8}$ -in. drive socket and a  $\frac{1}{2}$ -in. drive adapter.



**CARTRIDGE-TYPE** oil filter on this Studebaker is located at the right rear of engine and can only be replaced from underneath the car.



**PONTIAC TEMPEST** head bolt is just behind heater hose, concealed by fuel and vacuum lines. These lines must be removed completely.

are for the Saturday-Sunday wrench twirler only.

### **CORVAIR**

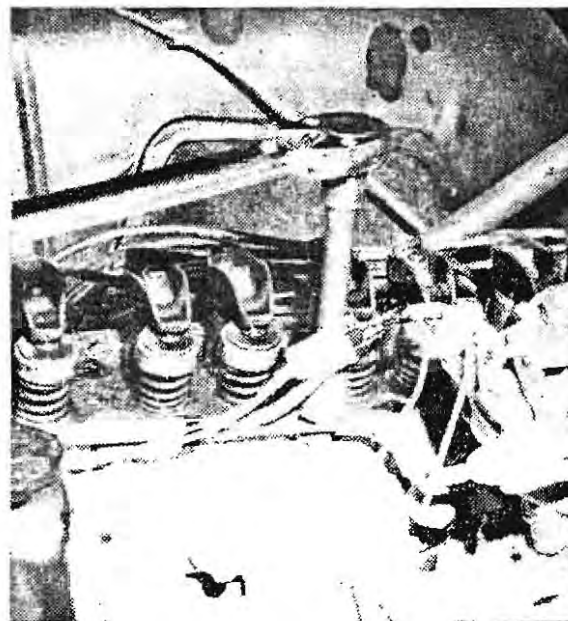
Let's start with this model which we found to be the most difficult of the compacts to work on. This was to be expected, because of the "pancake" engine layout and the sheet metal shrouding and blower assembly of the air-cooling system.

The starting motor (and the battery cable, therefore) can be replaced only if the car is up on a lift. Even with the car on a lift, changing the starter is a tough job. Chevrolet rates the job as a 35-minute affair, but many dealership mechanics claim they can't approach that figure.

Removing the generator looks easy, but one bolt is totally inaccessible without first removing the generator pulley. And the generator pulley can't be removed without disconnecting the fuel line in front of it.

There are three spark plugs, in line, on

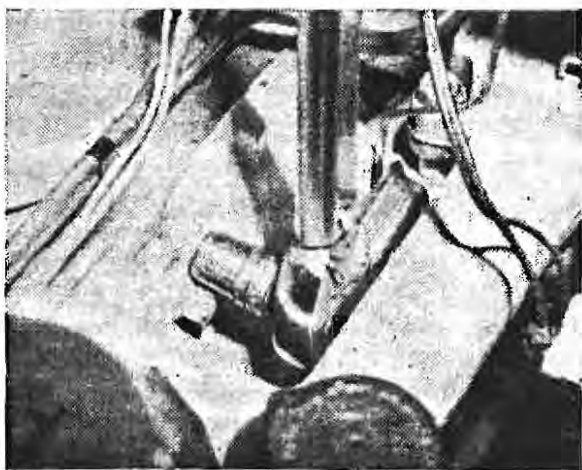
*(Continued on page 122)*



**FUEL** and vacuum lines on Tempest run parallel to rocker cover, preventing the torque wrench from setting squarely on all the bolts.

## Service Rating the Compacts

(Continued from page 33)



**THERE'S NO PRACTICAL WAY** to torque the intake manifold bolts on a Tempest. There isn't enough room to fit socket and wrench.

each side of the engine, and the center plug on each side is not overly easy to get at with a conventional ratchet. Professional mechanics use a universal-joint socket or ratchet, which makes the job easy. A standard ratchet can be used, in the manners shown in the photographs.

The Corvair was given a 35-point rating, and although it was the toughest American compact to work on, it was a lot easier than some popular European air-cooled engine cars in this department.

### FALCON

Over-all, this Ford product is a relatively serviceable car, and our complaints were minor.

The head bolts could not be torqued without removing the rocker shaft, which adds a bit of time to the job. Nothing serious, admittedly, but it was one of the 16 points we were checking.

Another minor problem was the mounting of the generator, which also affected drive belt serviceability. Two generator bolts cannot be reached from under the hood, however, they are readily accessible from underneath, without having to jack up the car.

We therefore rated generator removal and drive belt service as fair. Had it been necessary to raise the car, we would have rated both service items as poor.

Our only other complaint was the accessibility of the lower radiator bolts, which we rated as fair. The lower bolts are accessible, but they could be easier to get at. Several

sharp sheet metal edges make caution the watchword if cut hands are to be avoided.

Among the items that were beautifully serviceable, and deserving of commendation, were the starter and the oil filter.

The Falcon racked up a heavy 42 point rating.

### RAMBLER

We couldn't ask for a much more serviceable car than the Rambler Classic with the overhead-valve six. There wasn't an item that could be rated poor, and only two that we rated fair. Everything else on our checklist was good, and the Rambler total was 46 points.

Our minor beefs concerned the head bolts and the starter.

All head bolts were perfectly accessible except one, which required disconnection of the fuel line to get at squarely with a 1/2-inch drive socket. The bolt was squarely accessible with a 3/8-inch drive socket, but this would require a 3/8 to 1/2-inch adapter for the torque wrench.

Both starter bolts were accessible for just about any kind of wrench, however, on our test model, the upper of the two bolts was so tight we just couldn't loosen it without using a universal joint. The u-joint permitted swinging a ratchet into a position that allowed us to exert maximum leverage. Had the starter bolt been torqued normally, it



**VALIANT** has deep power steering pump bracket into which ground strap goes, to be bolted to engine. It can't be hand rethreaded.

wouldn't have presented any problem.

Any other comments about serviceability have to be praises. The distributor and the oil filter location, as examples, are outstanding.

### STUDEBAKER

Studebaker is now a Canadian car manufacturer exclusively, so if you're looking for a serviceable "imported" car, the Stude may be your cup of tea. We had only two service complaints, neither particularly serious, and

rated the car at 44 points.

Complaint No. 1 was the location of the oil filter—positioned so it had to be reached from underneath. The location poses no problems to the service station, which puts the car on the lift, but it failed our insistence



**ALL COMPACTS** tested had readily accessible distributor lock bolts. No need for using any of special wrenches designed for V-8s.

that the filter be reached from under the hood.

Complaint No. 2 was that the head bolts could not be torqued with a 1/2-inch drive socket and extension without removing the rocker shaft. We were, however, able to torque the bolts under the rockers, without removing the shaft, with a 3/8-inch drive socket and extension, and a 3/8 to 1/2-inch adapter for the torque wrench. We therefore rated this item as fair.

#### **PONTIAC TEMPEST**

All but three of our 16 items were rated good on the Tempest. However, the three exceptions all were rated poor, giving the Tempest a total of 39 points.

First of all, the cylinder head cannot be torqued without completely removing the fuel line from the pump to the carburetor, and the vacuum line from the distributor to the carburetor, and disconnecting the automatic transmission throttle vacuum line.

Next, the intake manifold bolts cannot be tightened with a torque wrench. There just isn't enough room for the socket and wrench. Special adapters might permit the job, but it is not expected that a weekend mechanic would have them. In fact, we can't recall seeing them in any of the independent shops or dealerships we've visited lately.

Last, removing the starter requires disconnecting two bolts from underneath. These bolts are readily accessible with the car on a lift, but this was one of the specific exclusions we made.

#### **VALIANT**

This car could have been rated as the most

serviceable car of the bunch, with 47 points out of a possible 48. Our official rating, however is 44 points, and here's the reason why:

Our test car was equipped with power steering, and the power steering pump bracket blocks easy access to the ground strap retaining bolt.

You can get a socket on the bolt and remove it without too much difficulty, but you can't get your fingers in to restart the bolt back in by hand. On Valiants without power steering there's no problem, but since this power option is a popular item, we rated the car accordingly.

There are other places under the hood to which a ground strap could be connected, and if the strap were to be replaced, we would think that a replacement strap of appropriate length for a new connection could be found.

The poor rating for this item cuts three points from the Valiant rating.

The only other item deserving adverse comment is the oil filter. It usually can be removed with the special tool that fits over



**BRAKE MASTER CYLINDERS** on all compacts were at top of the firewall, making them a cinch to work on and replace when necessary.

the end of the filter housing. However, if the filter is on pretty tight, and all too many of them are, this tool will just "bugger up" the housing without undoing it. And there isn't sufficient room around the filter near the base for easy use of the screwdriver removal method or special filter tools.

**Summarizing**, we note that all the cars drew perfect ratings on seven of the 16 items on our list. They are: replacing points in the car without draping oneself over the engine, reaching the distributor lock bolt without a special wrench, replacing the generator, radiator hoses, water thermostat, master cylinder and fuel pump.

As our comments indicate, the compact sixes are a pretty serviceable group of cars. If you're trading in your old king-size land cruiser for a compact six, you can dust the cobwebs off your tools at the same time. ■



# 14th ANNUAL C.H.V.A. SWAP MEET & CAR SHOW

October 26 & 27 1991  
Saturday & Sunday

**Pima College West Campus Speedway & Greasewood**

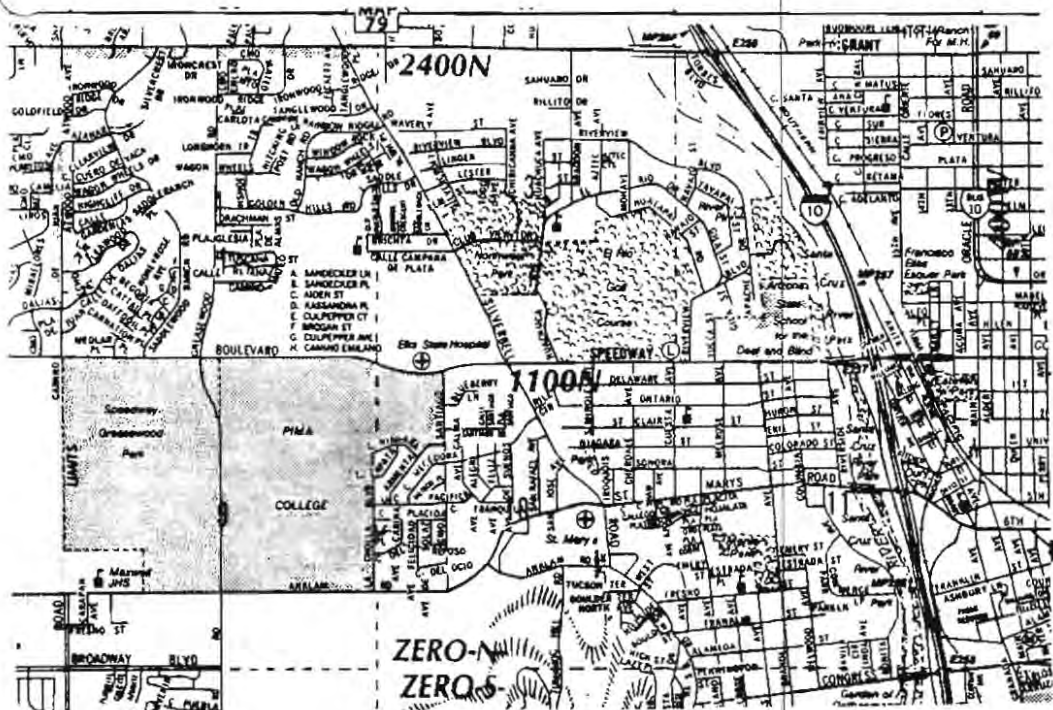
20x20 Swap Space  
\$15 for 1 day, \$25 for 2 days

Cars for Sale  
\$5 for 1 day  
\$8 for 2 days

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1969 & Older Vehicles



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# TCA'S ANNUAL CHRISTMAS DINNER PARTY

Now is the time to get your reservations to Bill Leslie at the address below.  
Come on out, it promises to be a very enjoyable evening! Sing-a-long with  
Esther Alex!

The meal will be delicious and nobody should leave hungry!!!

WHEN: Saturday, DECEMBER 14, 1991

WHERE: Webb's Old Spanish Trail Steak House, 5400 South Old Spanish Trail  
(just keep going past Saguaro Corners and you won't miss it, about 10  
miles east of Kolb Road).

\*\*\*\*\*

Social Hour

5:00 P.M. No Host Bar

Dinner served

6:00 to 7:30 P.M.

\*\*\*\*\*

Please cut along (lower \*) line above and return lower portion. Keep upper portion for future reference.

Appetizer Tray (hors-d'oeuvres) available during social hour.

<u>Home Style Menu</u>	<u>Cost</u>	<u>Quantity</u>	<u>Price</u>
Filet Mignon, 6 - 8 oz.			
Barbecued Pork Ribs			
Barbecued Chicken	15.00		
		<u>TOTAL</u>	<u>\$</u>

Included with dinner is Salad Bar (serve yourself), Ranch Beans, Bread and  
Butter or Rolls, Dessert (Peach Cobbler), and choice of Coffee, Iced tea, or  
Decaffeinated Coffee.

Baked Potato a la carte: \$1.50 each      Quantity \_\_\_\_\_ TOTAL \_\_\_\_\_

GRAND TOTAL \$ \_\_\_\_\_

Your Tucson Corvair Association will pay for your dessert.

Mark quantity, price, and add total cost and send, with check (made payable to  
T.C.A.) to:

Bill Leslie  
P.O. Box 18503  
Tucson, AZ 85731

PRINT Names of members and guests:

1 _____	2 _____
3 _____	4 _____

ALL ORDERS MUST BE RECEIVED BY BILL LESLIE NO LATER THAN 29 NOVEMBER 1991.  
MAKE CHECKS PAYABLE TO: T.C.A.



## TCA MEMBERSHIP ROSTER

18Sep91

Cecil & Esther Alex  
775 W. Roger Rd. #73  
Tucson AZ 85705  
293-4156 Feb92

Ron & Ann Allen  
8339 E. Marlena Cir North  
Tucson AZ 85715  
721-0551 Sep92

Sam & Harriet Angus  
Rt. 2 Box 1460  
Atlanta MI 49709  
517-786-2889 Jul92

Dave & Beverly Baker  
7041 Arrowhead Dr.  
Tucson AZ 85715  
296-1392 Nov91

Richard L. Bechdol  
8060 E. Tulip Tree  
Tucson AZ 85730-4622  
886-4983 Jul92

Michael & Kathy Begala  
3638 E. Blacklidge #1  
Tucson AZ 85716  
795-1657 Sep92

Raymond Britton  
1031 Desert Hills Dr.  
Green Valley AZ 85614  
1-625-3031 Mar92

Dick Cannon  
5598 Via Girasol  
Tucson AZ 85715  
299-4723 Feb92

Gordon & Verne Cauble  
5950 N. Camino Arizpe  
Tucson AZ 85718  
299-1122 Feb92

Don & Betty Chastain  
7041 E. Crestline Dr.  
Tucson AZ 85715  
886-1076 Feb92

Ted Christianson  
511 E. Mohave  
Tucson AZ 85705  
887-9449 Feb92

Albert E. Crispin  
6850 E. Edgemont Pl.  
Tucson AZ 85710  
722-9445 Mar92

Barry Cunningham  
3725 E 32nd St  
Tucson AZ 85713  
602-747-9028 Jun92

Larry Dandridge  
1710 S. Jefferson #10  
Tucson AZ 85711  
n/a Aug92

Don Davis  
6426 E. Santa Aurelia  
Tucson AZ 85715  
296-9811 Jul91

Joshua DeWitt  
6766 S. 12th Ave.  
Tucson AZ 85706  
294-4340 Oct91

Bob & Barb Eggers  
9410 E. Lurlene Dr.  
Tucson AZ 85730  
885-4779 Sep91

Allen Elvick  
4210 S. Preston  
Tucson AZ 85746  
883-4337 Sep91

Jack R Evans  
819 W. Kelso  
Tucson AZ 85705  
602-623-3118 Jan92

Milt & Diane Evans  
6727 N. Pomelo Dr.  
Tucson Az 85704  
602-297-7566

Steven Estabrook  
10000 S. Nogales Hwy #13  
Tucson AZ 85706  
292-9280 Aug91

Howard & Karen Fisher  
6256 N. Camino Miraval  
Tucson AZ 85718  
299-3629 Sep91

Brian Goodman  
2910 E. Malvern  
Tucson AZ 85716  
881-1783 Sep91

Alan & Gloria Gray  
4471 E. 7th St.  
Tucson AZ 85711  
795-2639 Oct91

Vernon & Naomi Griffith  
5725 W. Bopp Rd  
Tucson AZ 85746  
883-6490 Feb92

Kenny Heacox  
10160 E. Karen  
Tucson AZ 85748  
722-8587 May91

John Heisch  
200 S. Pantano Apt 114  
Tucson AZ 85710  
750-8623 Oct91

Jerry Hendrickson  
18234 91/2 Mile Rd  
Battle Creek MI 49017  
616-963-3559 Mar92

Victor Howard  
3335 E. Desert Flower Ln  
Phoenix AZ 85044  
759-7143 Jul92

Paul & Evelyn Kennedy  
1412 Camino Caldron  
Green Valley AZ 85614  
602-648-0970 Sep91

Ken & Marty Kuluski  
2311 N. Tucson Blvd  
Tucson AZ 85716  
326-5770 Nov91

Natalia Lederer  
423 N. Caribe  
Tucson AZ 85710  
886-8703 Dec91

Bill Leslie  
P O Box 18503  
Tucson AZ 85731  
298-4221 Sep91

Gerald Lewis  
10750 Rockford Rd #116  
Plymouth MN 55442-2875  
N/A Nov91

Delbert Light  
5412 W. Circle Z  
Tucson AZ 85713  
883-6794 Feb92

Benny Maudlin  
4260 E. Illinios  
Tucson AZ 85714  
748-1444 Nov92

Frank McKenna  
1848 S. Regina Cleri  
Tucson AZ 85710  
885-8571 LIFE

Van Pershing  
4842 W. Paseo De Los Colinas  
Tucson AZ 85745  
743-9185 Jan92

Chuck Pettis  
6411 E. Miramar Dr.  
Tucson AZ 85715  
298-5854 Oct92

Mack Post  
114 N. Avenida Carolina  
Tucson AZ 85711  
326-3351 Apr92

Robert & Nadine Rentschler  
5910 N. Camino Escalante  
Tucson AZ 85718  
299-3974 Mar92

Herb Rielly  
1441 S. Alvernon  
Tucson AZ 85711  
750-1515 Jul91

Don Robinson  
2044 W. Shalimar Way  
Tucson AZ 85704  
297-1356 Sep91

John Sams  
3951 W. Valencia  
Tucson AZ 85746  
883-4129 Jul91

Ed & Carole Sanford  
1710 S. Ceylon Pl.  
Tucson AZ 85748  
885-9214 Mar92

Kieth Edward Sangrey  
3150 E. Behan St. #5  
Tucson AZ 85706  
573-1525 Jun92

Bob Schowengerdt  
4439 E. Cooper Cir.  
Tucson AZ 85711  
327-2156 Apr91

Dave & Joy Stafford  
6314 Paseo San Andras  
Tucson AZ 85710  
298-0388 Feb92

Bill Stratton  
2525 E. Glenn St.  
Tucson AZ 85716  
795-8902 Dec91

Kelly Valachovic  
600 N Pantano # 1107  
Tucson AZ 85710  
602-296-6346 Aug92

Bill Vaughan  
1921 N. Camino Pio Decimo  
Tucson AZ 857n  
296-92276 Mar92

Donnie Williamson  
7302 E. 20th St.  
Tucson AZ 85710  
885-6548 Sep91

Sterling Winings  
2841 W. Mossman  
Tucson AZ 85746  
883-8647 Jul92

Jim Wright  
640 Linda Vista Dr.  
Tucson AZ 85737  
297-2914 Aug92

Jack Zerkle  
217 N Cleveland  
Bowie AZ 85605  
N/A Mar92

Fred Zimmermann  
542 E. Bromley St.  
Tucson AZ 85704  
887-6805 Sep92

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**FOR SALE: 1988 CORVAIR 500** coupe. 110hp/4-speed, strong engine, cloth upholstered bucket seats, 4 new 185R13 whitewall tires, full wheel covers, dual glass-packed mufflers, new windshield, plus misc. parts. Make offer. Call Ron Allen 721-0551 anytime. 9/91

**FOR SALE: '83 SPYDER** Coupe. New paint and interior. Beautiful car. Drive it directly to the Casa Show! \$2350 OBO. Call Don Robinson 297-1356. 9/91

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**FOR SALE: CORVAIR PARTS.** Large outdoor yard full of great Corvaire parts. Call Barry Cunningham for information at (602)747-9028. 2/91

**FOR SALE: '83 GREENBRIER**, automatic, freshly sealed engine, new brakes, new battery, carbs rebuilt, good mechanically. Asking \$1500. Call Lewis Bailey (602)744-9307. 1/91

**FOR SALE: '84 MONZA**, 2-door, automatic, not running but complete. \$350. Call Del Light (602)883-5902 12/90

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## Membership Report

The following dues are due:

### September

Bob & Barb Eggers

### October

Joshua DeWitt  
Alan & Gloria Gray  
John Hiesh

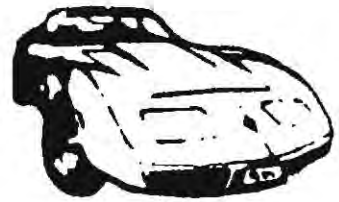
Please bare with us on the dues statment. We are still working on the glitches in program on the computer.

Marty Kuluski  
Membership Chairman

---

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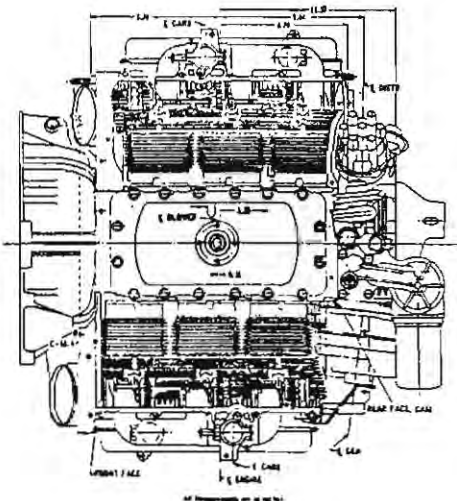
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Repair

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Michael Riley-Owner

Larry Dandridge-Manager



## Treasurer's Report

Balance August 8, 1991.....\$1,000.02

### Income

Raffle .....38.00

Dues .....50.00

Merchandise sales..... 9.92

Christmas party.....30.00

Total Income 127.92

### Expenses

Postage & supplies.....20.00

Total Expenses 20.00

Balance August 8, 1991.....\$1,107.94

Marty Kuluski

Domestic & Imports

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8:00 am to 6:00 pm

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Ted Christianson Mary Ann Chapman 887-9449



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TUCSON CORVAIR ASSOCIATION REGULAR MONTHLY MEETINGS  
FOURTH WEDNESDAY of each month (except December)

Piccadilly Cafeteria, 6767 E. Broadway, Tucson

6:30 pm: Parking Lot Bull Session

7:00 pm: Dinner (optional)

7:40 pm: Meeting starts

COMING EVENTS

October 19, 1991: Casa de los Niños Car Show (details inside)

October 26 & 27, 1991: 14 Annual C.H.V.A. Swap Meet & Car Show  
(details inside)

November 1-3, 1991: Great Western Fanbelt Toss & Swap Meet  
Indio, California (details in August issue)

December 14, 1991: TCA Annual Christmas Party - registration inside

Regular Monthly Meeting: Wednesday, August 28, 1991

TCA Board Meeting: Wednesday, Sept 4, 1991 at JB's Swan & Speedway

Tucson Corvair Association  
P.O. Box 50401  
Tucson, Arizona 85703



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