

# Corvairisation

TUCSON CORVAIR ASSOCIATION

TUCSON, ARIZONA

VOLUME 12 NUMBER 9

DECEMBER 1986



1965

***Superb at any speed.***



## TUCSON CORVAIR ASSOCIATION

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

**MONTHLY MEETINGS** are held on the 4th Wednesday of each month except December. One technical/social event is planned for each month except July and August.

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

**CORSA MEMBERSHIP DUES** are \$22 per year and include a subscription to the CORSA Communiqué, a monthly publication. See a TCA Officer for a membership application.

**CLASSIFIED ADS** are FREE to all TCA members and are \$1.00 per line to 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 Corvairsation Editor.

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

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#### **NON-MEMBERS:**

We would like to invite you to join the Tucson Corvair Association. We will send you three complimentary issues of the Corvairsation and welcome you to attend all of our activities. This is a great chance to get to know us. No matter what your Corvair interests are, you'll find a lot of good folks with similar interests in the Tucson Corvair Association. If you decide to join us, the dues are only \$10 per year.

## from the President

1986 is almost gone! I hope you enjoyed the Christmas dinner/party. I am happy that Marilyn Lynch could be there to present the Brian Lynch Award. This year's recipient was Alan Atwood. Thanks again, Alan, for all that time and effort and a job well done.

January 18th is our rally date! Hope you are getting in the mood for this event. Don't be timid - the rally will not be difficult and should be a lot of fun. The end point is at a restaurant with a moderately-priced and varied menu from which you can order your dinner. By the time you have eaten, the results will have been calculated and the winners announced. Good luck!

On February 15th, our mid-month activity will take us to Picacho Peak for a pot-luck with our friends of Cactus Corvair from Phoenix.

At the November meeting, we received a \$200 check from the Cactus Corvair Club for our support of their mini-convention, "Phoenix Returns". Thank you again for your efforts and thanks, Cactus, for your generosity.

I liked the tech session at the last meeting. Larry Dandridge came up with a logical solution to a continuing problem in which several cars periodically stop running. He found that the car had a clogged filter screen at the gas tank. Larry made a fix with an American Motors screen. In reading some of the other chapters' news letters, I found the same problem and solution written up in the North Texas chapter publication and, if my memory serves me correctly, it originally came from the San Diego chapter pub.

Best wishes for a Happy Holiday and here's to Corvairing in '87!!

Don Robinson

**TUCSON CORVAIR ASSOCIATION  
OLD PUEBLO WINTER RALLY  
JANUARY 18, 1987**

Starting Location: SW Corner of El Con Mall  
Registration Opens: 1:30 PM Jan 18th  
First Car Off at: 2:01 PM  
Finish:.....? Dinner Place:.....?  
Bring: 1) A clipboard  
2) Pencil or Pen  
3) Small calculator

Any Questions call 297-1356  
Fee: \$2.00 per car

## Rallying

Rallying is an auto sport which ranges from a gimmick tour to staged racing over improved roads or no roads at all. Normally the vehicle is manned by a driver and a navigator. The navigator reads the route instructions, preps the driver on route changes and reads upcoming clues.

Maybe you have experienced a gimmick rally in which you are on a treasure hunt or a riddle-solving tour that will take you over a psuedo-route. This is a fun rally with a lot of tricks.

The other end of the rally spectrum is typified by the pro series such as the Acropolis or the Baja 1000, which are run in stages over several hundred miles each day. Various classes of cars are run in stages. The fastest cars are extremely powerful, often four-wheel drive, and driven by skilled professionals.

Club rallying, the type that car clubs are involved in, falls somewhere in between these two limits. Normally the route instructions are not difficult, but they do require careful reading. There is no need to guess or interpret the instruction to stay on course, even tho this is the number one objective. This rally is generally referred to as a TSD rally, meaning Time, Speed, and Distance.

A rally usually starts with an odometer leg, which is run for about ten miles to obtain a correction factor for later calculations of mileage and speed. Then with preliminaries out of the way, we get into the rally with instructions to maintain a specified average speed to a specific marker. Instructions will require changing speeds several times, all within the legal limit. Then, too, there may be a checkpoint at any location along the route. You must stop at a checkpoint where your time of arrival will be recorded. An exit time will then be given to you for continuation of the rally. Expect three or four checkpoints on a rally.

Sounds easy!! Yes, and it's fun exercising your mind. What stories you will have to tell after the rally! Good luck!

Don Robinson

# CORVAIR FOREVER !

This month, Corvairsation is spotlighting the 1965 Corvaire.

**1965 PRODUCTION: 237,056 units**

Coupe: 145,992  
 500: 36,747  
 Monza: 88,954  
 Corsa: 20,291

Sedan: 54,717  
 500: 17,560  
 Monza: 37,157

R-95: 15,199  
 Greenbrier: 1,526

Convertible: 34,819  
 Monza: 26,466  
 Spyder: 8,353

## TUNE-UP SPECS

Distributor: dwell: 31-34 deg  
 gap: .016"(used) .019"(new)  
 breaker arm tension: 19-23 oz.

Timing: 95 HP-Manual (Dist P/N: 1110310): 4 degrees BTDC  
 95 HP-Automatic (Dist P/N 1110311): 13 degrees BTDC  
 110 HP-All (Dist P/N 1110319): 13 degrees BTDC  
 140 HP (Dist P/N 1110330): 18 degrees BTDC  
 180 HP Turbo (Dist P/N 1110329): 24 degrees BTDC

Spark Plugs: Standard: AC 46FF (95 HP); 44FF (110, 140 & 180 HP)  
 Colder: AC 44FF  
 Very Severe Service on 140 HP & 180 HP: AC 42FF  
 Tightening Torque: 20-25 Ft-Lb

## ALL CORVAIR ENGINES:

Firing Order: 1-4-5-2-3-6 (Front to Rear; Right Bank = 1-3-5, Left Bank = 2-4-6)

Compression @ cranking speed with throttle valves wide-open: 130 psi  
 Maximum Variation between cylinders: 20 psi

Blower Belt Tension: 55 lb. ± 5 lb.(used); 75 lb. ± 5 lb. (new)

## REAR AXLE IDENTIFICATION

CORVAIR (3.27 ratio) . . . . .	AA
CORVAIR (3.55 ratio) . . . . .	AB
CORVAIR Positraction (3.27 ratio) . . . . .	AC
CORVAIR Positraction (3.55 ratio) . . . . .	AD
CORVAIR Powerglide (3.27 ratio) . . . . .	AE
CORVAIR Powerglide (3.55 ratio) . . . . .	AF
CORVAIR Positraction w/Powerglide (3.27 ratio) . . . . .	AG
CORVAIR Positraction w/Powerglide (3.55 ratio) . . . . .	AH
R10 . . . (3.55 ratio) . . . . .	AV
R10 . . . Positraction (3.55 ratio) . . . . .	AW
R10 . . . Powerglide (3.55 ratio) . . . . .	AX
R10 . . . Positraction w/Powerglide (3.55 ratio) . . . . .	AY

## MANUFACTURER'S SUGGESTED RETAIL PRICES

**1965**

500 hardtop 2-dr. . . . .	2,022
500 hardtop 4-dr. . . . .	2,096
Monza hardtop 2-dr . . . . .	2,297
Monza hardtop 4-dr . . . . .	2,370
Monza convertible . . . . .	2,440
Corsa hardtop 2-dr . . . . .	2,485
Corsa convertible . . . . .	2,608

## SPECIFICATIONS

**1965**

Overall length . . . . .	183.3 in.
Height . . . . . sedan, 51.2; coupe, 51.3; convertible, 51.5 in.	
Width . . . . .	69.7 in.
Wheelbase . . . . .	108.0 in.
Displacement . . . . .	184 cu. in.
Bore x Stroke . . . . .	3.437 x 2.94 in.
Horsepower/Torque:	
Turbo-Air . . . . . 98 @ 3600/154 @ 2400;	
110 @ 4400/160 @ 2800;	
140 @ 5200/180 @ 3600	
Turbocharged . 180 @ 4000/265 @ 3200	
Compression Ratio:	
Turbo-Air.. 8.25:1 (110 and 140, 9.00:1)	
Turbocharged . . . . .	8.00:1
Transmission Ratios:	
3-speed . . . . .	3.22, 1.84, 1.00:1
4-speed . . . . .	3.20, 2.18, 1.44, 1.00:1
Automatic . . . . .	1.82, 1.0:1
Rear Axle Ratios:	
Standard . . . . .	3.27:1
Optional . . . 3.55:1 (Standard with certain engine/transmission combinations)	

## ENGINE NUMBER SUFFIX CHART

Manual Trans. . . . .	RA	Powerglide and Spec. High Performance . . . . .	RN
Manual Trans. . . . .	RB	Turbocharger . . . . .	RL
High Performance . . . . .	RD	Manual Trans. . . . .	RS
Manual Trans. and Air Cond. . . . .	RE	Manual trans. and High Performance . . . . .	RU
High Performance and Air Cond. . . . .	RF	Powerglide . . . . .	RV
Powerglide . . . . .	RG	Powerglide and High Performance . . . . .	RX
Powerglide and High Performance . . . . .	RH	Manual Trans. R-10, F.C. . . . .	RS
Powerglide and Air Cond. . . . .	RJ	Manual Trans. and High Performance R-10, F.C. . . . .	RU
Powerglide, High Performance and Air Cond. . . . .	RK	Powerglide R-10, F.C. . . . .	RV
Manual Trans. and Spec. High Performance . . . . .	RM	Powerglide and High Performance R-10, F.C. . . . .	RX



# CORVAIR ENGINEERING FOR 1965

by Jim Wright, *Technical Editor*

**T**HAT OLD ADAGE about beauty being only skin deep can't be applied to the 1965 Corvair. Lurking under those clean, functional, beautiful lines are a few fine engineering innovations. From the auto enthusiast's view, these too can be considered beautiful.

Starting with the basic chassis, we note that the Corvair still uses unitized construction. But this new chassis has been stiffened quite a bit, a fact shown by the choice of models available this year: hardtops and convertibles only. You'll remember that earlier coupes and sedans had pillared roofs. These were thin, but they made a stronger body/-

chassis unit. Without the extra stiffness given by the roof structure, the chassis platform *has* to be stronger. And they've done it without adding a lot of extra weight. The 1965s are about 50 pounds heavier (at most) than earlier Corvairs, and all this weight isn't in the chassis.

We took the picture on page 50 back at the GM Proving Grounds when we drove the '65s for the first time. It shows the Corvair in a wide, sweeping turn with the rear end hung out slightly and the right front wheel off the ground. This Corvair was traveling 75 mph in this corner when we purposely tweaked it sideways to test the new suspension's recoverability and controllability. As a kind of added bonus, we also found out that the new chassis has a high degree

of torsional stiffness—as attested by the floating wheel.

The front suspension follows the same general design of earlier models. Spring rates have been softened, but not for the usual reason—not to get a softer ride. In this case, it was necessary to tune the characteristics of the front to a point where they'd be more compatible with the changed characteristics of the new rear suspension. The diameter of the front anti-roll bar (.810 inch) remains the same, and the car shows good roll stiffness.

Big changes at the front are reduced steering-wheel turns between locks for more precise control, and a reduction in the car's turning diameter. Both these changes came through modifications to

the steering arms and steering geometry. Rallyists will welcome the new speedometer drive—off the left front wheel. This eliminates any false reading that could result from rear-wheel slippage at high speeds with the old drive. It also eliminates the need to change speedometer drive gears if rear-axle gears are changed.

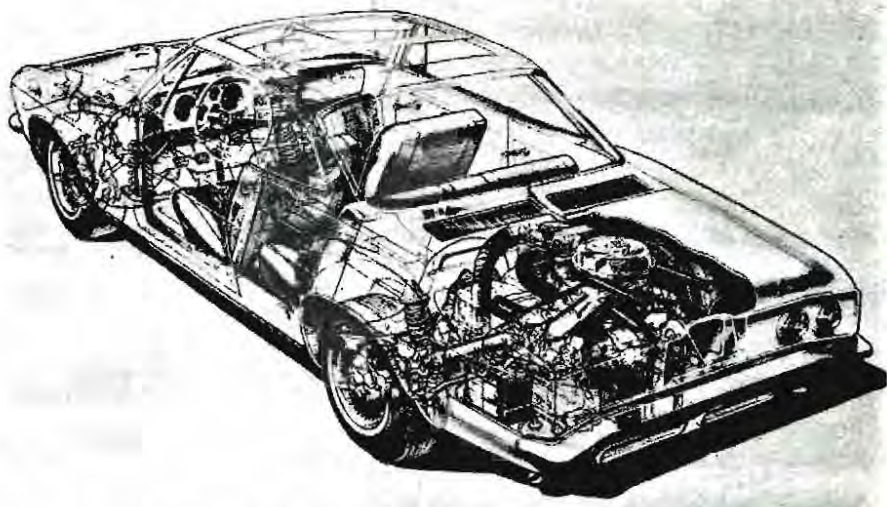
The most outstanding change is, of course, the new rear suspension. In 1960, Corvair was the first mass-produced American passenger car to offer a swing-axle, independent rear suspension. Now, five years later, it becomes the first mass-produced American passenger car to offer *full* independent rear suspension. In stating this, we're considering the Corvair a limited-production, specialized vehicle.

The new suspension is very much like the Sting Ray Corvette's—and it should be, because they both had the same grandfather, the old CERV 1. This, you'll remember, was an experimental rear-engined race car that was developed as an engineering project by Zora Arkus-Duntov and his group at the Chevrolet Engineering Development Labs.

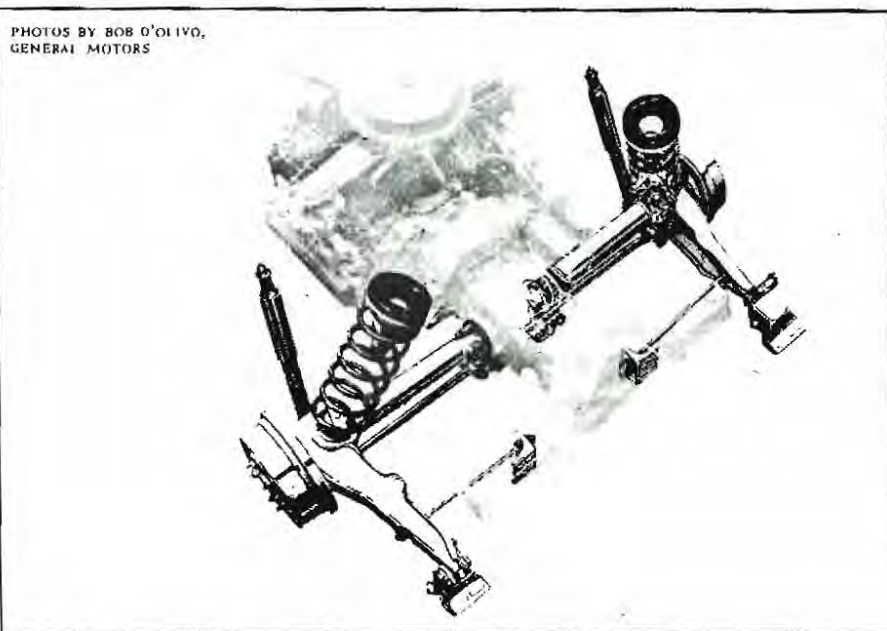
There's really only one major difference between the two suspensions: Corvette uses a transverse leaf spring, while the Corvair uses coils at each wheel. Both have the axle half-shafts as upper control arms and combine them with unequal-length, non-parallel, single lower control arms. These four arms completely control all lateral wheel motion. Driving and braking forces are taken through single trailing control arms—one on each side. The Corvair also uses small, rubber-mounted truss rods extending in from each trailing arm to the main rear crossmember. These were necessary to dampen out any lateral movement that might occur at the trailing arm pivot points (which have softer rubber bushings than those used in the Corvette to cut down road noise and vibration).

The new Corvair suspension is easily and readily adjustable. The lower control arms have an eccentric at each outer pivot point that controls camber. Toe-in is adjusted by slotted provisions at the front mounting points of the trailing arms. Static camber setting is one degree negative. Under deflection, as in a hard corner, the camber of the outside wheel stays negative (as does the inside wheel), which produces more cornering force.

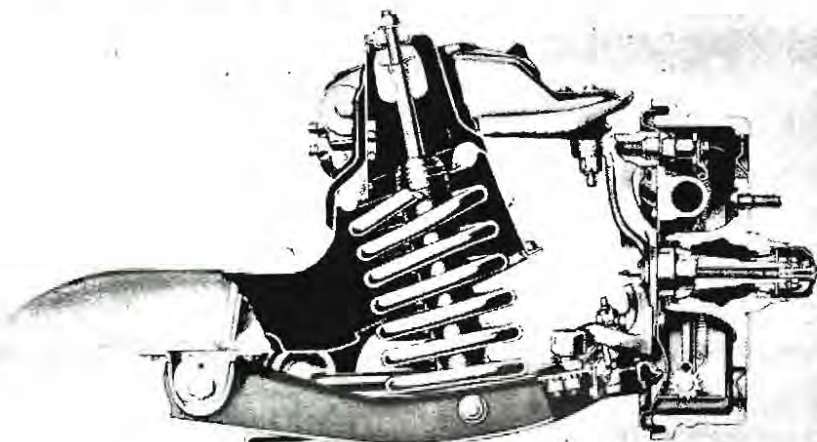
As we mentioned, we checked the Corvair out under some pretty extreme handling conditions. In the test drive we mentioned, it took only a slight flick of the steering wheel to get everything straightened out. The car's handling is completely predictable and very stable at all speeds. Not counting the Corvette, Corvair has the closest thing to performance handling characteristics you'll



*Detailed phantom drawing shows extent of overall changes in Corvair chassis and body structure. Overall dimensions have been changed slightly; front and rear tread are wider.*



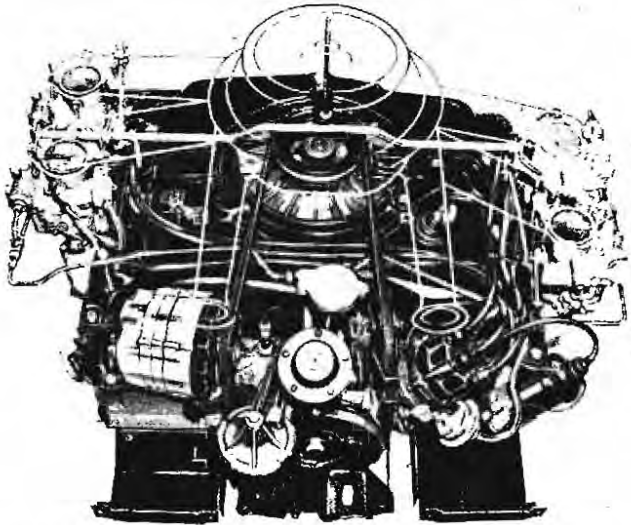
*Details of upper and lower control arms and trailing control arms are evident here. Geometry of new suspension is adjustable without going to bother of changing springs.*



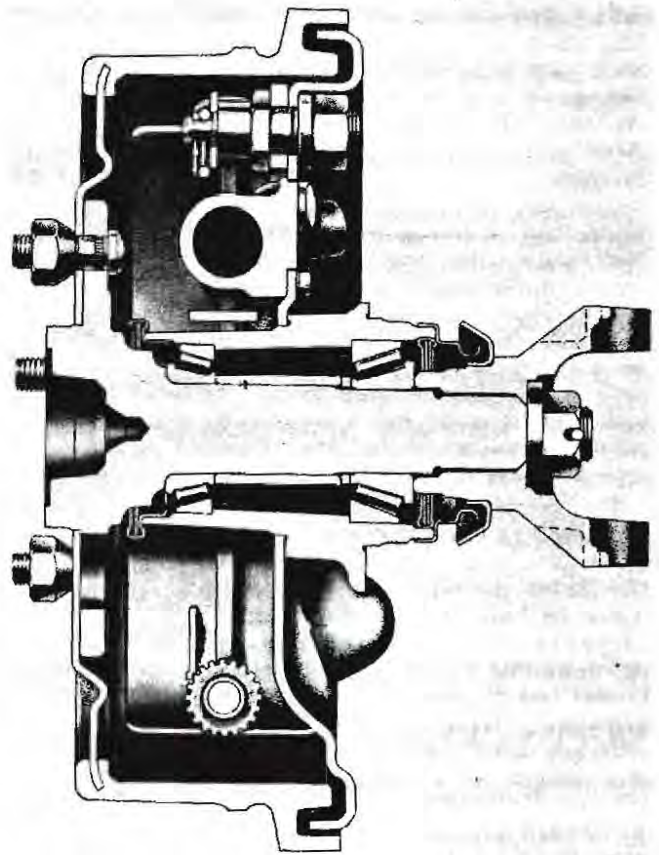
*Cutaway shows front suspension details as well as mechanics of new speedometer drive. Front hub bearings' size and capacity are increased for added reliability and strength.*



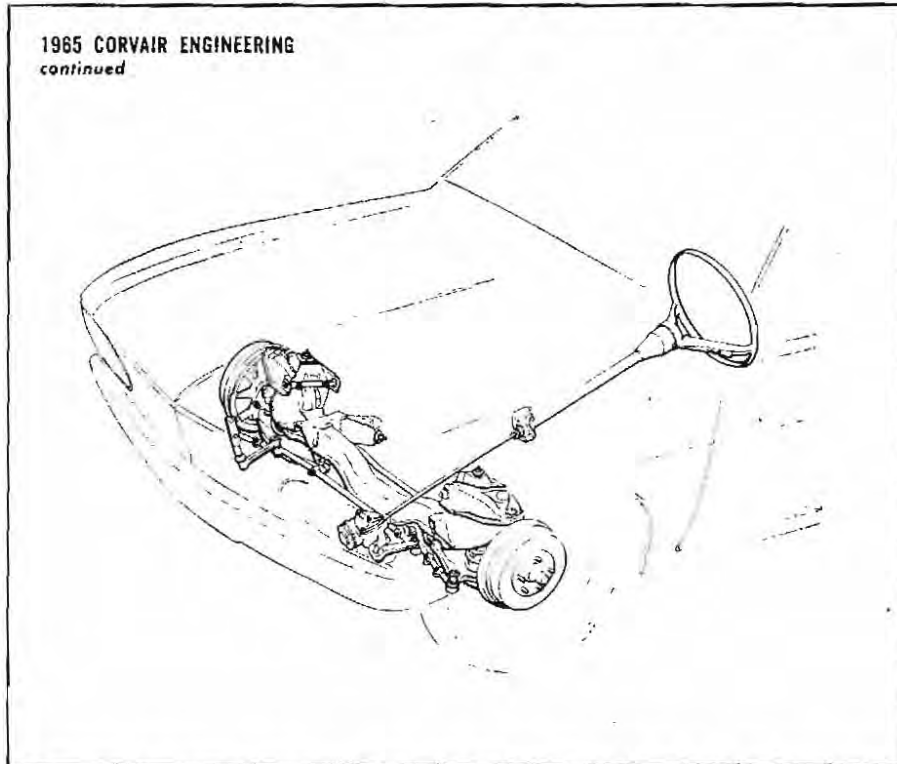
*Good torsional stiffness of new chassis is apparent as right front wheel comes off the ground during hard cornering maneuver.*



*Corvair's new engine sports four carburetors, all single-throat. Specifications show larger valves are used to bring power to 140.*



*Rear wheel cutaway shows the details of stub axle and bearings. Two tapered roller bearings add stiffness, strength, reliability.*



**1965 CORVAIR ENGINEERING**  
*continued*

*Modifications to steering arms reduce lock-to-lock turns of steering wheel, reduce turning diameter. Optional telescoping steering column lets any driver find good fit.*

find on this side of the ocean, with no sacrifice in ride qualities. And they plan on adding a handling package!

One new engine's been added—the same 164 cubic inches, but it breathes through four carbs. This is another first on the American scene. Changes in valving help give it 140 horses. The output of the turbocharged engine is up to 180 hp. As nearly as we could tell (nobody at the factory would or could say, and the specifications don't show any change from last year), the rise comes from more turbocharger boost pressure. The three-speed manual, the four-speed manual, and the two-speed automatic remain the same.

All Corvairs now use the larger, 9½-inch-diameter brake drums from the B-O-P intermediates. These raise the effective lining area by 42.8 square inches for more stopping power and the swept drum area by 70.7 square inches for improved cooling.

When we went back to Detroit for our first look at this one, we were hopefully expecting something a little more racy (maybe like the Mustang). After checking the Corvair out, we weren't a bit disappointed, and we think most Corvair fans will agree with us. /MT



# Vairo 'n Spares

**FOR SALE: TUNE-UP PARTS** for 1960 and early 1961. See the Merchandise Chairperson, Pete Moga at the next meeting.

**FOR SALE: ESPECIALLY** for the do - it - yourselfers: tune-up kits, distributor caps, wrapped fan belts, air filters, & oil filters; also viton O-rings, trunk and engine lid weather strips; plus many other Corvair parts. Call Gordon Cauble @ 299-1122.

**FOR SALE: '61 LAKEWOOD**, 110HP/Automatic, alternator, Was 4-speed-have most of the parts to change it back. Call Van @ 743-9185 (home) or 799-4012 (office).

**FOR SALE: '64 MONZA 2-door**, automatic, needs work but sound body, engine & air conditioning. Call Del Light 883-6794.

**FOR SALE: '65 MONZA 2-door**, reconditioned engine installed, running, needs body and interior work. 3-speed manual transmission. Call Del Light 883-6794.

## Towing the 1965 Corvair

The 1965 Corvair can be towed safely at speeds up to 55 mph with a tow bar, using the sling principle as illustrated in figures 6 and 7.

However, severe damage to the body rear sheet metal, the engine exhaust system, and the engine cooling air exhaust duct work may result if care is not exercised while placing the tow bar or towing the vehicle with a tow bar not incorporating the sling and cross bar features.

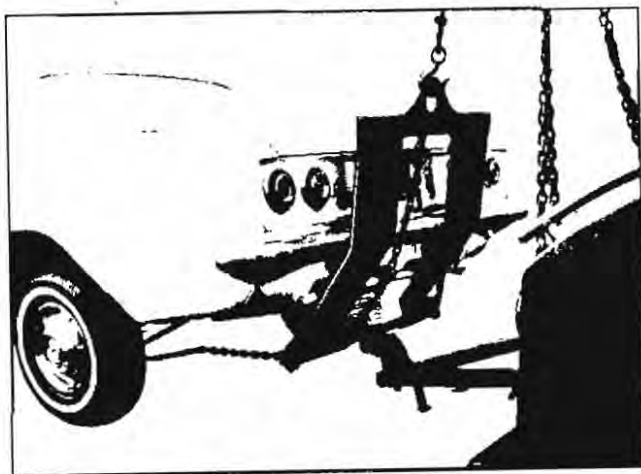


Fig. 6—Towing Sling Attachment

**FOR SALE:** Good parts at a reasonable prices: '63 black steering column w/wheel; vent window assys for early convertible; Corsa air cleaner asm; '65 Corsa wheel covers; '66 Corsa wheel covers; early & late model clutch cables; '63-64 rear axle & bearing; like new carburetor cross shaft; new blower bearings for early & late; '65 Corsa wiring harness (all); '65 tail & backup light asm; new '66-'69 wheel well moldings, and more. Call Gordon Cauble, 602-299-1122.

**FOR SALE: '61 MONZA Coupe**, 30K original miles, still has original exterior paint & interior. Perhaps the last of the little old ladies' cars! Located in Highland Falls, NY & has been garaged every winter. Car is driveable but is not currently licensed. Asking \$1000 but negotiable to put this baby in a good home. Call Gordon Cauble. 602-299-1122.

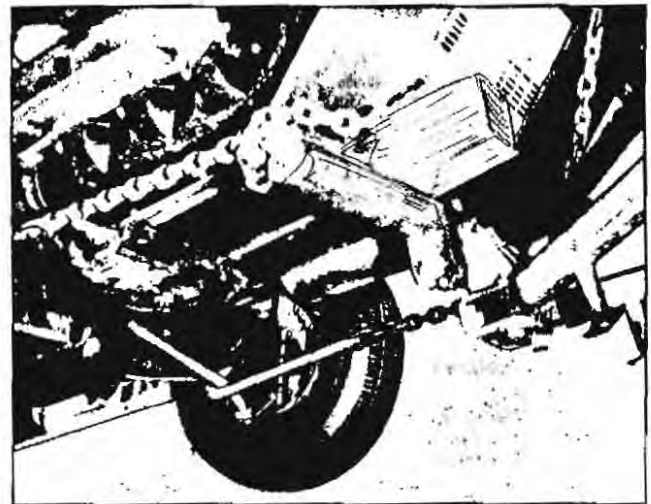


Fig. 7—Towing Sling Hook Attachment

The rear of the vehicle can be raised without damaging the suspension components or the body using the following procedure:

1. Use a lifting sling employing the principle of the sling shown.
2. Attach the tow hooks of the lifting sling to the outer ends of the rear strut rods. If the strut rods cannot be used because of damage or failure, the tow hooks or chains can be attached through the bracket which attaches the forward end of the torque control arms to the body.
3. It is extremely important to position a short piece of 4"x4" between the crossarm of the lifting sling and the engine skid plate, so that it lifts at the center of the engine below the skid plate. This is necessary to prevent above mentioned damage.

TREASURER'S REPORT

Balance November 1, 1986.....\$1079.03

Income

Dues.....	40.00
Corvairsation ads.....	22.50
Raffle tickets sales.....	42.00
Merchandise sales.....	38.00
Phoenix Convention.....	200.00
<b>Total Income.....</b>	<b>\$342.50</b>

Expenses

Corvairsation.....	42.78
Merchandise & raffle.....	24.77
Christmas Party.....	100.00
Miscellaneous.....	8.69
<b>Total Expenses.....</b>	<b>\$175.74</b>

Balance December 1, 1986.....\$1245.79

Alan Atwood



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• '65-'69 Trans main shaft	• Reconditioned connecting rods
• '61-'65 Counter shafts	• Corv 8 mid engine kits

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AUFMUTH  
PROPRIETORS

TUCSON CORVAIR ASSOCIATION REGULAR MONTHLY MEETING

NO REGULAR MEETING HELD IN DECEMBER

THE CHRISTMAS PARTY TOOK ITS PLACE

COMING EVENTS

Jan 18: Tucson Corvair Association Old Pueblo Winter Rally  
Registration at 1:30 PM, First car off at 2:10 PM  
See details inside!

Feb 15: Picacho Peak Pot-Luck. We'll meet with the Cactus Corvair Club  
from Phoenix. Stay tuned for details.

TUCSON CORVAIR ASSOCIATION  
P.O. Box 50401  
Tucson, Arizona 85703



FIRST CLASS MAIL

