

# Corvairation

TUCSON CORVAIR ASSOCIATION

TUCSON, ARIZONA

VOLUME 12 NUMBER 4

JULY 1986



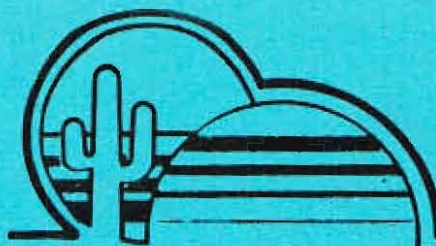
1960

The Corvair coupe was the car that caught the fancy of the public. It was sporty and, well, cute. When Chevrolet decided to give it the Monza treatment, the golden days of Corvair sales began. This is a 1960 model 700.



The basic Corvair sedan was a masterpiece in efficient, and attractive, packaging: small size, handsome styling, room for six and a wealth of technological firsts.





## TUCSON CORVAIR ASSOCIATION

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

**MONTHLY MEETING** 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.

**COSA MEMBERSHIP DUES** are \$22 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 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 Corvaision Editor.

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

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#### **BOARD OF DIRECTORS**

Current TCA Officer,  
Mark McKenna, Bob Gay,  
Carole Sanford, and the  
Corvaision Editor.



From the President...

I enjoyed our club events during June. The potluck and swim was a lot of fun and the video programs were interesting. Thank you, Mark McKenna, for setting up the VCR and TV sets! We are planning more videos for one of the fall meetings.

One thing we used to do prior to the regular meeting was to have a mini swap meet. Let's do it again! Bring your swapping stuff to the July meeting (July 23). It's a chance to get rid of something you don't need and find those things you do need.

More details on the survey will be in the next issue of the Corvairsation. I became busy and travelled so much in June that I couldn't finish the summary.

Tires - how are yours? I lost two steel-belted radials (on the rear) to tread separation after a trip on a hot day just two weeks ago. More at the tech session...

*Tom Robinson*

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

We would like to join the Tucson Corvair Association. We will send you three complimentary issues of the Corvairsation and welcome you to 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 \$10.00 per year.

The regular monthly meeting of the Tucson Corvair Association was called to order at 7:45 PM by President Don Robinson at the Pica-dilly Cafeteria at 6767 E. Broadway, Tucson, Arizona on Wednesday, June 25, 1986.

The minutes of the previous meeting were approved as printed in the Corvairsation.

The outing at the Oracle Heights Recreational Center was a big success and enjoyed by all who attended.

Alan Atwood suggested that those who plan to go to the National Convention in Grand Rapids, Michigan, read "The Buck Stops Here". He also said that in order to attend the convention it is mandatory to belong to Corsa.

President Don Robinson announced that there will be no mid-monthly meetings in July and August, but he is working on a TSD rally in January of 1987, possibly with a stop at the Missile Site. (Time, Speed, Distance)

After the break, the drawing was held. Don Bortle won the license plate gift and the other prizes were won by Ed Carey, Ed Post, Ray Britton and Nadine Rentschler.

The gathering was entertained with a VCR tape of the convention center in Grand Rapids, Michigan and the surrounding area. Another tape was shown of three Corvairs and their trials and tribulations going down the International Highway and ending up in Panama.

A tech session followed.

The meeting was adjourned at 8:50.

Respectfully submitted,



**CORVAIR FOREVER !**

During the next few months, Corvairsation will spotlight each individual model year of the Chevrolet Corvair. We will start this month the the 1960 model.

1960 PRODUCTION: 250,007 units

Coupe:	<u>63,116</u>
500:	14,628
700:	36,562
Monza:	11,926

Sedan: 186,891  
500: 47,683  
700: 139,208

## SPECIFICATIONS

1980

**Overall length** . . . . . 180.0 in.  
**Height** . . . . . 51.3 in.  
**Width** . . . . . 67.0 in.  
**Wheelbase** . . . . . 108 in.  
**Displacement** . . . . . 140 cu. in.  
**Bore × Stroke** . . . . . 3.375 × 2.60 in.  
**Horsepower/Torque:**  
**Turbo-Air** . . . . 80 @ 4400/125 pounds-  
                                 feet @ 2400

**Super Turbo-Air 95 @ 4800/125 @ 2600**

**Compression Ratio:**

**Turbo-Air**..... 8.0:1

Transmission Ratios:

3-speed . . . . . 3.22, 1.84, 1.00:1

Automatic . . . . . 1.82, 1.00:1

Rear Axle Ratio:

Standard . . . . . 3.55:1

Optional . . . . . 3.8911

**MANUFACTURER'S  
SUGGESTED  
RETAIL PRICES**

1960

500 sedan 2-dr . . . . .	\$1,984
500 sedan 4-dr . . . . .	2,038
700 sedan 2-dr . . . . .	2,049
700 sedan 4-dr . . . . .	2,103

### CORVAIR REAR AXLE IDENTIFICATION

Series	Type	Plant Identification	G&A Buffalo
CORVAIR	3-Speed (3.55 ratio) . . . . .	-	BT
CORVAIR	3-Speed (3.89 ratio) . . . . .	-	BR
CORVAIR	Automatic Transmission (3.55 ratio)	-	BU
CORVAIR	Automatic Transmission (3.89 ratio)	-	BS

### TUNE-UP SPECS

Distributor: dwell: 31-34 deg  
gap: .016"(used) .019"(new)  
breaker arm tension: 19-23 oz.  
Spark Plugs: Standard: AC 46FF  
Colder: AC 44FF  
Tightening Torque: 20-25 Ft-Lb

## 1960 CORVAIR ENGINES

	Recommended Idle RPM	Distributor Part no. (Production)	Oil Color Identification	Centrifugal Advance (Engine RPM)	Vacuum Advance (HG)	Ignition Timing (Nominal)	Mounting Flange Identification
EARLY PRODUCTION 80-HP MANUAL TRANS.	450-500	1110252	CADMIUM	0° @ 400 32° @ 3600	0° @ 6" 23° @ 15.2"	4° BTDC	2 PADS
LATE PRODUCTION 80-HP MANUAL TRANS.	450-500	1110258	ZINC	0°-2° @ 600 32° @ 3600	0° @ 6" 23° @ 15.2"	4° BTDC	FULL DIAMETER
INTERMEDIATE PRODUCTION 80-HP AUTOMATIC TRANS.	NOTE 1	1110256	BLACK	0° @ 1700 20° @ 3600	0° @ 7" 23° @ 16.2"	16° BTDC	2 PADS
LATE PRODUCTION 80-HP AUTOMATIC TRANS.	NOTE 1	1110259	BLACK	0°-2° @ 1400 24° @ 3700	0° @ 7" 23° @ 16.2"	13° BTDC	FULL DIAMETER
EARLY PRODUCTION 95-HP MANUAL TRANS.	600-650	1110257	COPPER	0° @ 700 6.5° @ 1200 24° @ 4800	0° @ 8" 15° @ 15.5"	16° BTDC	2 PADS
LATE PRODUCTION 95-HP MANUAL TRANS.	600-650	1110260	COPPER	0° @ 700 6.5° @ 1200 24° @ 4800	0° @ 6" 23° @ 15.2"	13° BTDC	FULL DIAMETER

## 1960 TURBO-AIR

When introduced in the Fall of 1959, the Corvair displaced 140 cubic inches, gained from 3.375-inch bore and 2.60-inch stroke in a six cylinder, horizontally opposed configuration. With nominal 8 to 1 compression, it developed a rated 80 hp at 4400 rpm and 128 lb/ft of torque at 2800 rpm.

The engine has no block, *per se*. The box-like, cast-aluminum alloy crankcase is divided along a vertical centerline and each half has three pilot holes for individual cylinders which spigot into the case. Long studs thread into the case to retain the cylinders and pass through the cylinder heads which are shared by three cylinders each. The finned barrels are of cast iron machined to make up both with the case and a mating surface bored in the head combustion chamber area. No gaskets are used in the conventional sense; although copper rings are employed to cover chance manufacturing irregularities in the mating surfaces.

The crankcase halves are secured by short bolts at the parting line and make up into a sturdy, rigid unit of low weight. There are no conventional main bearing caps, since the two halves surround the crankshaft journals. The oil sump is separated from the crank by internal webbing of the case. The sump itself is a shallow pan carried below the case proper. The front of the engine, as installed, is the flywheel end and a separate light alloy bell housing is bolted to the main case. At the rear of the case is another cast alloy housing which provides for the oil pump, the primary oil galleries and the crankshaft seal. It also serves as a mounting for the distributor, the generator adaptor, the fuel pump, oil filler, oil filter and the belt idler pulley. A cast-aluminum cover which serves as a base for the air-cooling blower fits atop the case proper.

Several unusual design features are incorporated into the forged steel crankshaft. Both the camshaft gear and the flywheel are at the same end and there are no counterweights. Balance is achieved by staggering the three pairs of throws (which are 180 degrees apart) at 60-degree intervals. No torsional damper is required. The crank cheeks are markedly thick and, coupled with the short length and short stroke, the entire unit is an extremely rigid unit. To avoid possible failure at the torsional vibration node—the traditional flywheel bolting flange—the flange is omitted. Unlike the VW or Porsche, which use dowel pins in the end of the shaft, the Corvair crank employs a flange which is a part of the cam drive gear, pressed onto the shaft, and shear forces are taken by a Woodruff key.

The four main bearing journals are 2.09 inches in diameter; crankpins are 1.8 inches, quite sizeable in relation to the stroke, but relatively narrow. Rod bearings are .65 inch; three of the mains are .772 inch and the number one main (adjacent to the flywheel), which takes thrust, is .828 inches. Conventional insert bearings are used on both mains and rods, being babbitt overlaid onto a copper-steel shell backing.

The camshaft runs in bores machined directly into the case without benefit of inserts. This piece is unique in that it has nine lobes to serve twelve valves. Each of the exhaust lobes is double width, made possible by the fact that the valve arrangement is alternately intake, exhaust, down each side. There are no paired or shared ports.

Cam timing is not at all radical: 252 degrees duration and 96 degrees overlap with 3.44 inches lift.

The crankcase web which provides cam support also houses the hydraulic lifters, necessary because of the growth of the engine with temperature changes which are more severe than in a water-cooled type. These lifters are placed at 90 degrees to the cam and the pushrods are angled up to mate with the rocker arms. Pushrods are tubular steel and are surrounded by larger diameter steel tubes, sealed at

Valves are inclined and intake and exhaust are set at an angle of eight degrees relative to each other to separate the valve ports an additional amount. Intakes are 1.34 inches in diameter; exhausts, 1.24 inches. They are supported by cast iron guides shrunk into the head and make up with insert steel seats having 45-degree angle surfaces. Combustion chamber design is a modified wedge with spark plug opening equidistant between the two valve ports. Exhaust ports drop down and gases are carried out by individual tubes to a cast iron manifold on each head. These two collectors are connected by a crossover pipe and a single header pipe empties into a conventional muffler.

Inlet ports are contiguous with a manifold cast integrally with each head. Each rather shallow manifold is surmounted by a Rochester Model H carburetor, a single-barrel down-draft type with 1 1/4-inch throttle bore and one-inch venturi. No chokes are fitted to these carburetors. A butterfly in the common plenum-chamber-air cleaner arrangement positioned over the center of the engine is operated automatically to restrict incoming air for cold starts. The carburetors are positioned on the manifolds in offset fashion, between cylinders two and four on the left bank; three and five on the right bank, and turned 90 degrees relative to the fore-and-aft centerline of the car so that floats swing in at right angles to that normally found in carburetors on V8's. Linkage is by rods to the foot pedal.

Pistons are steel-strut, aluminum alloy, tin-plated slipper skirt type, grooved for three rings—two compression and one oil ring—all above the pin. The eight-inch pins are a press fit in forged rods and require no retainers. The rods, with 4 3/4-inch center-to-center length, are not overly hefty in cross section but are adequate for normal overstress.

Ignition, in typical Chevrolet fashion, is by Delco coil and distributor lighting AC 46FF sparkplugs via TVRS cable. The engine, being installed in fore-to-aft position, rotates in a counter-clockwise direction and cylinders are numbered from the rear alternately from bank to bank. Thus number one is the right rear, number two left rear, and so forth. Right bank numbers are one-three-five; left, two-four-six. Firing order is one-four-five-two-three-six and the timing mark is on the crank pulled with a degree plate mounted on the case.

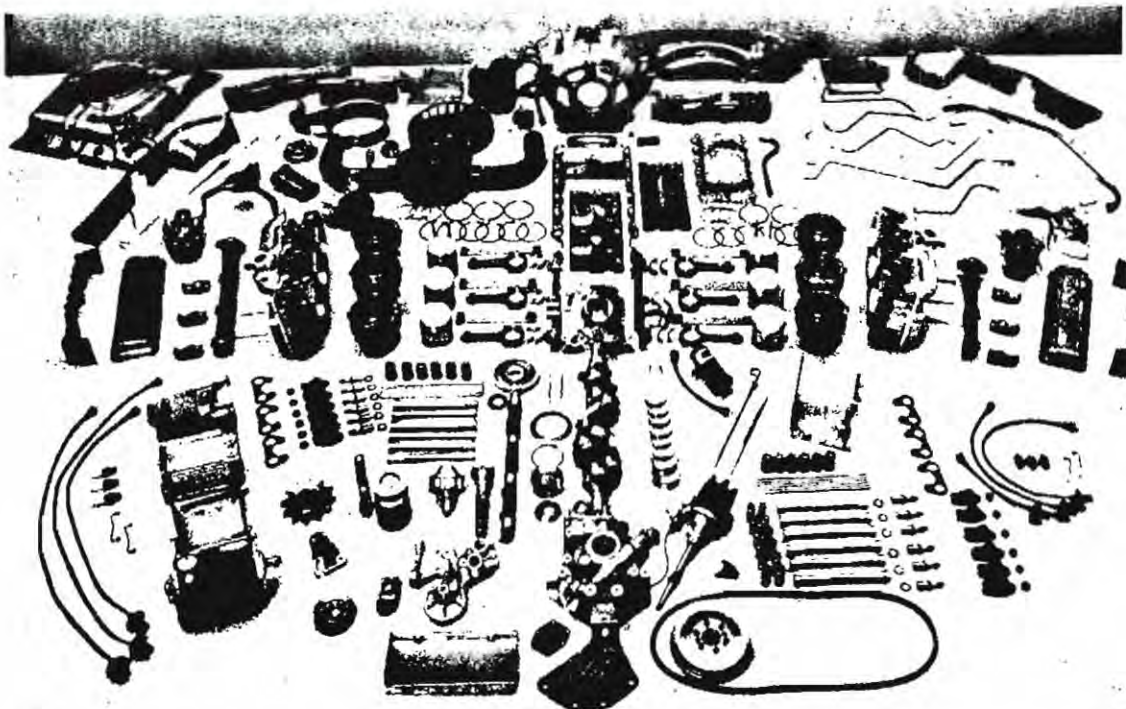
Cooling air is furnished by a horizontally-mounted 11-inch fan driven by vee belt from the crank pulley. Running at just under 1.6 times crank speed, the blower pumps out 1800 cubic feet of air per minute at 6300 rpm (4000 rpm, engine speed) and requires 8.5 hp for its operation at this speed. Air is drawn through an inlet aperture whose effective opening is controlled by a throttle ring governed by a thermostat. The thermostat, located in the lower shrouds, is an alcohol-vacuum type with a fail-safe feature which provides that the throttle ring will remain open in case of thermostat failure.

Air dumped in by the fan is contained by sheet metal shrouds which completely surround the engine. It is directed down over the finned cylinder heads and cylinders and through an aluminum oil cooler. The inlet control ring begins to open at an ambient air temperature in the shroud area of 195 degrees and reaches full open position at 210 degrees.

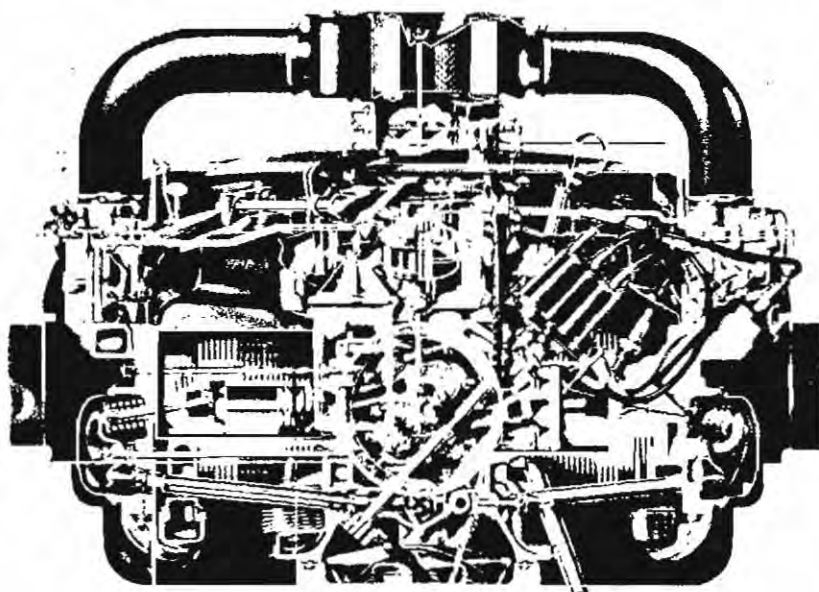
Oil circulation, which is also part of the cooling system, is picked up from the four-quart sump by a conventional gear type pump driven off the distributor shaft and forced at 35 psi pressure into the full flow filter which incorporates a 10 psi by-pass valve. Thence it is directed to the oil cooler (if oil temperature is above 60 degrees) and to the main bearings and cam gallery. Total oil capacity including filter is five quarts.

Other accessories, such as generator, control box, fuel pump, are standard GM items, so, while the configuration and assembly of the engine itself departs from what have been accepted as domestic norms, the "minor details," components which are first and most involved in routine maintenance, are familiar and easily serviced by mechanics not especially trained or schooled.





All the bits and pieces that made up the original engine. With a few minor exceptions everything here was created exclusively for the Corvair.



An inside look at the radically new Corvair engine.

## WAIT TILL YOU SEE IT! **Corvair** NEW COMPACT CAR BY CHEVROLET

AMERICA'S ONLY CAR WITH  
AN AIR-COOLED ENGINE  
(NOW YOU CAN  
FORGET ABOUT  
WATER AND  
ANTIFREEZE  
FOREVER!).



COMING FRIDAY, OCT. 2  
See it at your local authorized Chevrolet dealer's

## JUST DAYS AWAY! **Corvair** NEW COMPACT CAR BY CHEVROLET

AMERICA'S ONLY CAR WITH  
AN ALUMINUM AIRCRAFT-TYPE  
REAR ENGINE!



COMING FRIDAY, OCT. 2  
See it at your local authorized Chevrolet dealer's

## YOU'VE GOT A THRILL COMING! **Corvair** NEW COMPACT CAR BY CHEVROLET

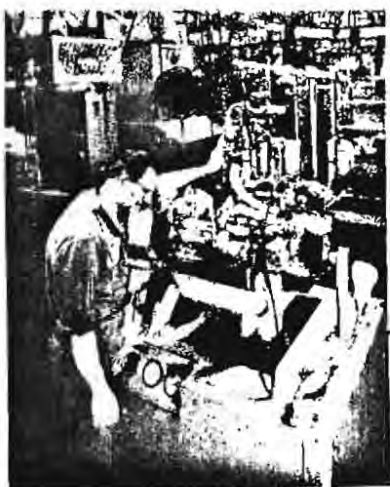
AMERICA'S ONLY CAR WITH  
THE ASTONISHING SOFTNESS  
OF COMPLETE INDEPENDENT  
SUSPENSION AT ALL FOUR WHEELS!



COMING FRIDAY, OCT. 2  
See it at your local authorized Chevrolet dealer's

## 1960 Corvair Optional Equipment

- Whitewall Tires RPO 661
- Wheel Trim Rings
- Aircraft-type Heater and Defroster
- Manual Radio FOA 103
- Rear Fold-down Seat RPO 664
- Heavy-Duty Battery RPO 345
- Padded Instrument Panel RPO 427
- Deluxe Body Equipment Group: includes right-hand sun visor, front arm rests, cigarette lighter RPO 347
- Comfort and Convenience Group: includes back-up lights, outside rear view mirror, windshield washer, glove compartment light. FAO 120
- Corvair Powerglide transmission RPO 360



Each engine was given a thorough test, first powered by an electric motor to insure all the bits and pieces were turning the right direction and not bumping into each other, and then on its own with a small dose of gasoline.

## ROAD & TRACK ROAD TEST 224



### CHEVROLET CORVAIR

#### SPECIFICATIONS

List price:	n.a.
Curb weight:	2450
Test weight:	2770
Distribution, %:	39/61
Dimensions, length:	180
width:	66.9
height:	51.8
Wheelbase:	108.0
Tread, f and r:	54.0
Tire size:	6.50-13
Brake lining area:	121
Steering, turns:	4.8
turning circle, ft:	39.5
Engine type:	flat 6, ohv
Bore & stroke:	3.38 x 2.8
Displacement, cu in:	139.6
cc:	2288
Compression ratio:	8.00
Bhp @ rpm:	80 @ 4400
equivalent mph:	87.5
Torque, lb-ft:	125 @ 2400
equivalent mph:	47.7

#### PERFORMANCE

Top speed (mg), mph:	88
best timed run:	n.a.
3rd ( ):	49
2nd (4500):	27
1st (4500):	27

#### FUEL CONSUMPTION

Normal range, mpg:	24/29
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#### ACCELERATION

0-30 mph, sec:	5.8
0-40 mph:	8.8
0-50 mph:	14.4
0-60 mph:	19.5
0-70 mph:	27.0
0-80 mph:	38.5
0-90 mph:	51.0
0-100 mph:	63.0
Standing 1/4 mile (est):	21.7
speed at end, mph:	63

#### GEAR RATIOS

0/d (n.a.), overall:	
4th (n.a.):	
3rd (1.00):	3.55
2nd (1.84):	6.52
1st (3.22):	11.4

#### TAPLEY DATA

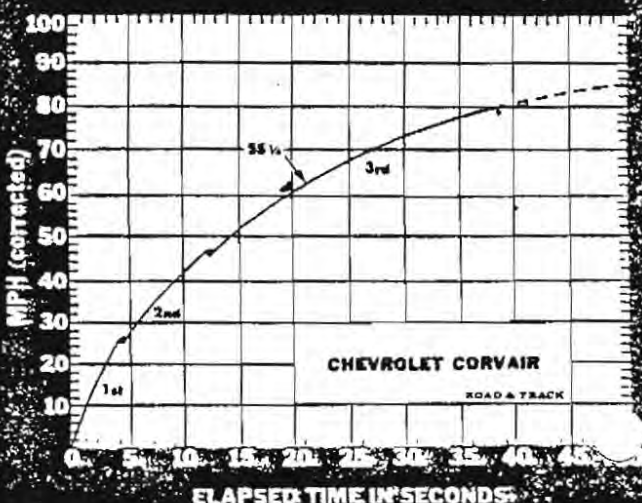
4th, lb/ton @ mph:	@
3rd:	190 @ 45
2nd:	350 @ 35
1st:	510 @ 20
Total drag at 60 mph, lbs:	127

#### CALCULATED DATA

Lb/hp (test wt):	32.8
Cu ft/ton mile:	88.2
Mph/1000 rpm (3rd):	19.9
Engine revs/mile:	3020
Piston travel, ft/mile:	1310
Rpm @ 2500 ft/min:	5770
equivalent mph:	115
R&T wear index:	39.6

#### SPEEDOMETER ERROR

30 mph:	actual 29.5
40 mph:	39.1
50 mph:	48.6
60 mph:	58.1
70 mph:	68.5
80 mph:	78.4
90 mph:	88.0
100 mph:	97.5





## TREASURER'S REPORT

Balance June 1, 1986.....\$984.33

### Income

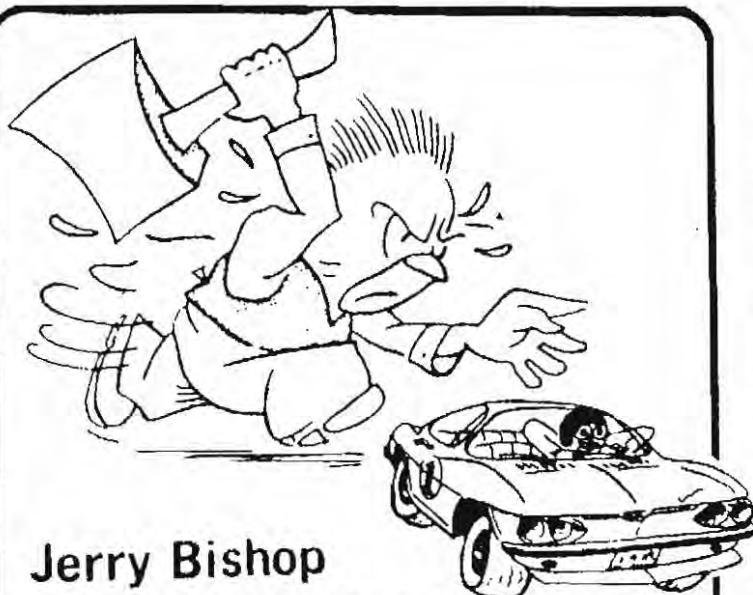
Corvairsation ads.....30.00  
 Raffle tickets.....35.00  
 Merchandise sales.....13.00  
 Aluminum cans.....43.05  
 Total Income.....\$121.05

### Expenses

Corvairsation.....54.57  
 Raffle prizes..... 3.00  
 Merchandise.....20.00  
 Beverages for tech session.....17.04  
 Incorporation report.....14.00  
 Pot luck & swim.....27.23  
 Total Expenses.....\$135.84

Balance July 1, 1986.....\$969.54

Alan Atwood



**Jerry Bishop**

is wreckin' em out -  
100 plus Corvairs!!!

**JERRY BISHOP'S TOWING**

**& SALVAGE 748-1444**

**4260 E. ILLINOIS.**

**TUCSON, ARIZONA 85714**

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**FOR SALE:** '64 MONZA Coupe,  
Good running engine. 110 HP  
automatic transmission.  
Body needs work. Leave  
message at 327-4718.

**FOR SALE:** TUNE-UP PARTS for  
1960 and early 1961. See  
the Mechandise 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,  
Bright Yellow paint,  
brown/tan velor/vinyl  
interior w/ cut pile carpet,  
3-prog wire wheel covers,  
radials, good looking inside  
& out. Was 4-speed-have  
most of the parts to change  
it back. PLEASE MAKE OFFER!  
Call Van @ 743-9185 (home)  
or 799-4012 (office).

**FOR SALE:** '63 500, 2-door,  
4-speed, needs tires and  
rear window, good body,  
engine renewed but has never  
been fully adjusted and run.  
\$550 (car in Marana) Call  
Linda Washburn, weekdays 7-3  
@ 887-5515. Leave name and  
message.

**FOR SALE:** '66 MONZA 2-door,  
110hp/4-speed, radials,  
regal red, nose cover, GOOD  
CONDITION. \$1000 or best  
offer. Call Dave Thompson @  
748-7105.

XSZ-2B

LARGER FRONT SPOILER  
WHEEL FLARES  
REAR SPOILER W/ SCOOP  
14X6 WHEELS / 205/60 RADIALS



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### **Corvair Specialists**

**foreign & domestic cars too**

**8 am - 5pm Mon - Fri**  
no appointment necessary

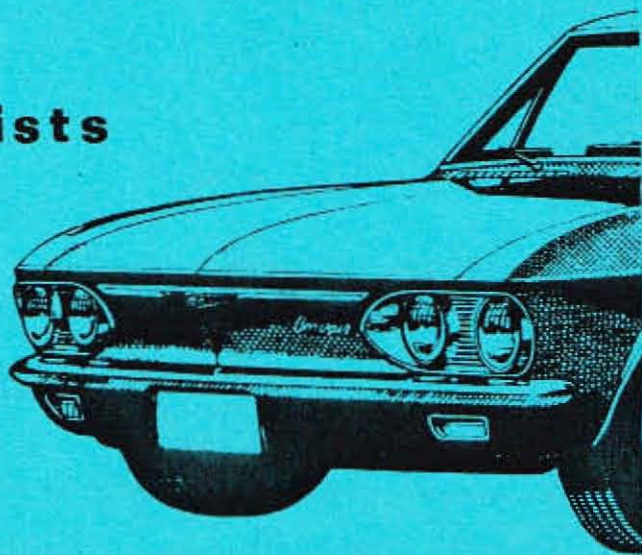
**ENGINE RESEALING**

**AIR CONDITIONING**

**TUNE-UPS**

**ENGINES REBUILT**

**\* TOWING \***





TUCSON CORVAIR ASSOCIATION REGULAR MONTHLY MEETING

FOURTH WEDNESDAY of each month.  
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

NO TCA MID-MONTH ACTIVITIES FOR

JULY & AUGUST

Regular monthly meetings will still be held, of course!

CORVAIRSATION EDITOR  
P.O. Box 50401  
Tucson, Arizona 85703



FIRST CLASS MAIL

