

Corvairisation

TUCSON CORVAIR ASSOCIATION

TUCSON, ARIZONA

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1964



BEST COMPACT SEDAN * CHEVROLET CORVAIR

That the Chevrolet Corvair won the all-important compact sedan category of Reader's Choice says something about the readership of this magazine. In the mid-'50s our most enthusiastic readers had to drive cars like the MG-TD if they wanted something small, fast and sporting. Nothing the American car manufacturers had to offer in those days even came close.

Now the picture has changed. American cars cover a much wider range, and ownership of high-performance machinery is no longer restricted to the wind-in-the-face buffs. Cars like the MG, Austin sedans, the Volkswagen or the Jaguar XK-120 pioneered a whole fleet of domestically produced cars of similar and occasionally superior specification. Significantly, it has been General Motors who has most often picked up the ball for the American automotive industry—first with the Corvette and later with the Corvair.

The enthusiast has grown up along with his cars (or perhaps it's the other way around). For a family man with a vital interest in automobiles, the Corvair makes good sense. It has often been likened to the Porsche yet is far more capacious than Porsche's ancestor, the Volkswagen. Both two- and four-door models are available and either can accommodate four people in relative comfort. The trunk area isn't as ridiculously large as front-engined American cars, but it is adequate for everything including taking the whole family on a cross-country vacation. It can attain and hold—easily—any cruising speed legal in the U.S. Gas mileage is good and service is as near as any Chevrolet dealer. In short, the Corvair is as practical as any American car, but enjoys the advantage of being compact and very easy to drive on the highway or in

town. Which doesn't leave much to be desired.

Volvo's PV-544 placed second in this category, providing both healthy competition and an interesting comparison. It too is an inexpensive, completely practical sports-type sedan. But where the Volvo is straight-forward and utterly conventional, the Corvair is mechanically radical, at least for an American manufacturer's product. The high degree of technical innovation (rear-mounted, air-cooled engine; all-independent suspension) must be more appealing to the general public; the Corvair's modern, progressive styling certainly is.

It's heartening to see all this cross-breeding at work: the acceptance by *Car and Driver's* readers of Detroit's more enlightened efforts and Detroit's success in providing the enthusiast-driver with a car as sporting and practical as the Corvair.

ENGINE Type	air-cooled flat-six
Bore x stroke	3.44 x 2.94 in, 87 x 75 mm
Displacement	164 cu in, 2688 cc
Power (SAE)	110 bhp @ 4400 rpm
Torque	160 lbs-ft @ 2600 rpm
TRANSMISSION	4-speed all-synchro
BODY AND CHASSIS	Unit-construction all-steel body
SUSPENSION	F: Ind., unequal-length wishbones and coil springs, anti-roll bar. R: Ind., swing axles, trailing arms, coil springs and transverse leaf spring.
BRAKES	9-in drums F & R, 198 sq in swept area
WHEELBASE AND TRACK	108, F 54.4, R 54.1 in
DIMENSIONS	L-180, W-67, H-51.5 in
WEIGHT AND DISTRIBUTION	2550 lbs, 38/62%
TIRE SIZE	6.50 x 13
PERFORMANCE 0-60 MPH	14.6 seconds
SPEED IN GEARS	31/51/75/95 mph
FUEL ECONOMY	18-25 mpg
BASE PRICE	\$2270



TUCSON CORVAIR ASSOCIATION

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

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.

CORSA MEMBERSHIP DUES are \$22 per year and include a subscription to the CORSA 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 Corvairsation Editor.

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Current TCA Officers,
Mark McKenna, Carole Sanford,
and the Corvairsation Editor.



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

Yes, there is a Christmas party! The big annual event will be Thursday, December 18th. By popular demand it will be again at the Rolling Hills Country Club. Make your reservations and menu selections before December 8th. We will have a sign-up sheet at the November meeting. Don't miss this party - there will be a gift for everyone! See the details elsewhere in this Corvairsation.

Looking ahead to January, we are planning a rally, which will be a simple straight-forward TSD rally. This is first rally we have tried in couple of years and I know you will enjoy it. There will be more in the December Corvairsation.

The Nominating Committee consists of Ernie Alloy, Alan Atwood, Allen Elvick and Mike Hayden. Within the next couple of months, this committee will be meeting for serious consideration of next year's officers. If you are approached and asked to run for an office, they will have considered your qualifications carefully; and I hope you will respond positively to serve our club.

At the October board meeting we discussed a need for a standing committee to evaluate or appraise Corvairs. Does this sound like something we should be doing? What do you think?

Hope you enjoyed the video on "How to Restore Your Corvair". I thought the tips and ideas were great.

Don Robinson

TCA Minutes

CORVAIRS 15 PRESENT 40

The regular monthly meeting of the Tucson Corvair Association was called to order at 7:45 by President Don Robinson on Wednesday, October 22, 1986 at the Piccadilly Cafeteria, 6767 E. Broadway, Tucson, Arizona.

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

Under old business, it was reported that TCA has 10 cars in the Casa de los Niños show, and the membership was reminded of the Fan Belt Toss in Palm Springs next month. The Christmas party will be on December 17, 1986 at the Rolling Hills Country Club Clubhouse.

The following guests were introduced: Norma Pisancano, Tom Stefanski, John Eliot, Diane Evans, Bill and Sandy Kirchner. A newcomer to the group was Ester Alex, wife of Cecil, who came to her first meeting.

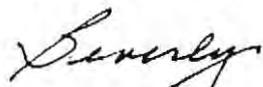
The mid-month activity for November will be a tour of the Titan Missile Site on the 15th.

Following the break the drawing was held. The prizes were provided by TCA. Vic Howard won the license plate award for HV 495. Larry Dandridge, Al Rivas, Dave Baker, Bill Gray, Pete Moga and Bob Rentschler were the winners of the drawing.

The gathering was entertained by a film entitled "How to Restore Your Corvair".

The Meeting adjourned at 9:00.

Respectfully submitted,



CORVAIR FOREVER !

This month, Corvairsation is spotlighting the 1964 Corvaire. We have done 1960 thru 1963 in the past four months and the remaining model years will follow in the months to come.

1964 PRODUCTION: 207,114 units

Coupe: <u>117,888</u>	Sedan: <u>38,221</u>
500: 22,968	700: 16,295
Monza: 88,440	Monza: 21,926
Spyder: 6,480	
R-95: <u>15,199</u>	Convertible: <u>35,806</u>
Rampside: 851	Monza: 31,045
Corvan: 8,147	Spyder: 4,761
Greenbrier: 6,201	

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
 150 HP Turbo (Dist P/N 1110314): 24 degrees BTDC

Spark Plugs: Standard: AC 46FF (44FF on 102 & 150 HP)
 Colder: AC 44FF
 Very Severe Service on 150 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 or 4 Speed (3.27 ratio) . . .	-	HA
CORVAIR 3 or 4 Speed (3.55 ratio) . . .	-	HB
CORVAIR Automatic Transmission (3.27 ratio)	-	HC
CORVAIR Automatic Transmission (3.55 ratio)	-	HD
CORVAIR Positraction (3.27 ratio) . . .	-	HG
CORVAIR Positraction w/Automatic Transmission (3.27 ratio) . . .	-	HH
CORVAIR Positraction (3.55 ratio) . . .	-	HJ
CORVAIR Positraction w/Automatic Transmission (3.55 ratio) . . .	-	HK
R10 . . . 3 or 4 Speed (3.55 ratio) . . .	-	HQ
R10 . . . Positraction (3.55 ratio) . . .	-	HR
R10 . . . Automatic Transmission (3.55 ratio)	-	HS
R10 . . . Positraction w/Automatic Transmission (3.55 ratio) . . .	-	HT

MANUFACTURER'S SUGGESTED RETAIL PRICES

1964

500 sedan 2-dr	1,990
700 sedan 4-dr	2,108
Monza sedan 2-dr	2,270
Monza sedan 4-dr	2,324
Monza convertible	2,481
Spyder sedan 2-dr	2,589
Spyder convertible	2,800
Greenbrier	2,855

SPECIFICATIONS

Overall length	180.0 in.
Height	51.3 in.
Width	67.0 in.
Wheelbase	108.0 in.
Displacement	164 cu. in.
Bore x Stroke	3.437 x 2.84 in.
Horsepower/Torque:	
Turbo-Air	95 @ 3800/154 pounds- feet @ 2400
Super Turbo-Air	110 @ 4400/180 @ 2800
Turbocharged . 150 @ 4000/232 @ 3200	
Compression Ratio:	
Turbo-Air	8.0:1
Super Turbo-Air	9.0:1
Turbocharged	8.0:1
Transmission Ratios:	
3-speed	3.22, 1.84, 1.00:1
4-speed	3.20, 2.19, 1.44, 1.00:1
Automatic	1.82, 1.0:1
Rear Axle Ratios:	
Standard	3.27:1
Optional	3.55:1

ENGINE SERIES NUMBER AND SUFFIX CHART

Manual Trans.	YC	Automatic Trans.	ZH
Manual Trans. and High Performance	YN	Automatic Trans. and C.A.C.	ZD
Manual Trans. and C.A.C.	YL	Automatic Trans. and High Performance	ZF
Manual Trans., C.A.C. and High Performance		Automatic Trans. C.A.C. and High Performance	ZG
Turbo-Charged with 4-SPD.	YM	Manual Trans. F.C.	V
Automatic Trans.	Z	Automatic Trans. F.C.	W

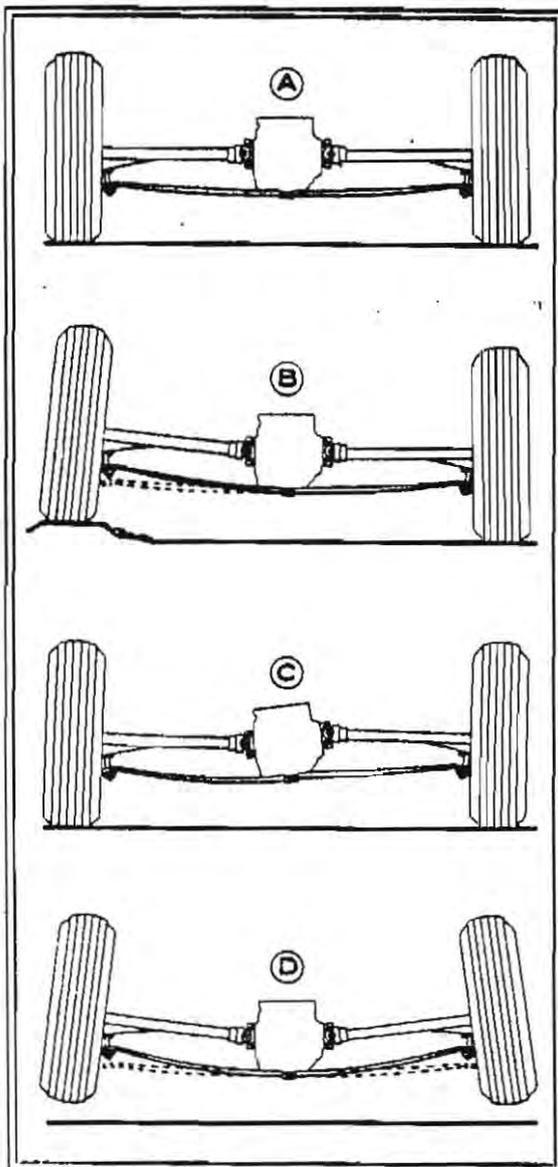
Monza 4-speed, 110-bhp

LIKE THE WEATHER that everyone just talks about, few people have ever done anything about air-cooled engines. However, a little over four years ago, Chevrolet did do something about it—by introducing the radical air-cooled Corvair. The success story of this car is emphasized by the fact that more than 1.25 million Corvairs have been built and sold.

A little background on the air-cooled story came out recently in a book by retired GM president Alfred P. Sloan, Jr., "My Years with General Motors." Here Sloan implies that the failure of the ill-fated Chevrolet copper-finned, air-cooled model of 1922 never would have happened except for the fact that overall corporate policy was not yet well organized. (The car was announced and pilot production was underway when it was suddenly dropped.) Yet, in 1959, Chevrolet's then general manager, E. N. Cole, did get corporate approval for his air-cooled car, the compact Corvair, and when Cole writes his memoirs the complete background story on this car may well be one of the highlights of his career.

The success of the Corvair is not due to any one factor; its compact size appeals, its appearance is very good (and the stylists, fortunately, have left it alone) and the air-cooled engine has proved itself practical, reliable and exceptionally long-lived. (One staff-owned Corvair has 90,000 miles on it with no major engine work.) Furthermore, while a buyers' service insists that the Corvair is not a "family car," the fact remains that this respected organization highly recommends the Volkswagen, which is 8% smaller than the Corvair in box volume. The Corvair is a very comfortable car, in sedan form, for a family of four. Taken in that perspective it is, then, a practical economical family conveyance.

Changes in the Corvair for 1964 are highlighted by a larger engine with piston displacement increased 13%. The original concept was an 80-bhp, 80-mph car that would perform on a par with the big 6-cyl. sedan and give about 25 mpg. The super de luxe Monza model, however, showed that buyers would pay extra for plush interiors and more performance. The original "1960½" Monza had a 95-bhp variation on the same size engine (140 cu. in.). The 1961 Corvair offered 145-cu. in. engines, with 98 bhp as an option (later increased to 102 bhp) and for "1962½" a 150-bhp turbosupercharged Spyder option.



With engine size now increased to 164 cu. in. for '64 by increasing the stroke from 2.60 to 2.94 in., the standard engine now has 95 bhp and the optional Super-Turbo-Air unit is rated at 110 bhp. This latter is an increase of only 7.7%, but more importantly, the torque curve has been boosted by 19.4%. This is much more significant and simply means that climbing a long mountain grade of 9% formerly required use of 3rd gear whereas the 1964 Corvair (with 4-speed transmission) can do it in high gear and at a speed of 70 mph, approximately 10 mph faster. It is also noteworthy that the 1964 car develops its peak torque and pulling power at 55 mph in high gear as compared to 62 mph formerly (with optional high-performance, non-supercharged engine).

For this test we asked for the 110-

bhp option with 4-speed all-synchromesh transmission. However, the car turned out to be a convertible, giving test results which are fractionally below what could be obtained from the lighter coupe or 4-door sedan. The actual weights at the curb for the 3 Monza models are:

Convertible	2640 lb.
Sedan	2555 lb.
Coupe	2530 lb.

We have driven enough Corvairs to sense the improvement, even before obtaining the actual test data. In actual figures the story looks like this:

	1963	1964
Test weight, lb.	2840	2940
Axle ratio	3.27	3.27
0-60, sec.	15.5	14.0
SS ½, sec.	20.5	19.5
SS ¼, mph.	67	70
Top speed	94	98

A portion of this improved acceleration must be accorded to the revised gear ratios in the 1964 Corvair 4-speed unit. Formerly, the 2nd gear ratio left something to be desired and a long gap from 2nd to 3rd. Now both 1st and 2nd have been moved up closer to third (which is unchanged) so that the speeds for shift points change as follows:

	1963	1964
3rd gear ratio	1.44	1.44
mph @ 5000 rpm	75	75
2nd gear ratio	2.35	2.18
mph @ 5000 rpm	46	49
1st gear ratio	3.65	3.20
mph @ 5000 rpm	29	33

An important change in the 110-bhp engine is a new camshaft with slightly more lift and less duration. This, of course, explains why both peak power and peak torque points come at a lower rpm than before. Theoretically, the '64 engine should be a little more tractable at low speeds, but we could detect no pronounced difference; the problem of bumbling and jerkiness below 30 mph in high gear persists. However, the 4-speed transmission is there to be used and 25-mph zones can be negotiated easily in 3rd gear.

Speaking of the transmission, it is notably quiet, perhaps even quieter than before. There is a peculiar low

CORVAIR

CAR LIFE ROAD TEST



1964 CORVAIR Monza Convertible

SPECIFICATIONS:

List price	\$2481
Price, as tested	2736
Curb weight, lb	2640
Test weight	2940
distribution, %	39/61
Tire size	8.50-13
Tire capacity, lb	3340
Brake swept area	198
Engine type	flat-6, ohv
Bore & stroke	3.44 x 2.94
Displacement, cu in.	164.0
Compression ratio	9.25
Carburetion	2 x 1
Bhp @ rpm	110 @ 4400
equivalent mph	94.4
Torque, lb-ft	160 @ 2600
equivalent mph	55.7

EXTRA-COST OPTIONS:

Wire wheel covers, radio, 4-speed transmission, tinted windshield, seat belts, 110-hp. engine, convenience groups	
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DIMENSIONS:

Wheelbase, in.	100.0
Tread, f and r	54.4/55.1
Over-all length, in.	180.0
width	67.0
height	51.1
equivalent vol, cu ft	357
Frontal area, sq ft	19.0
Ground clearance, in.	5.7
Steering ratio, o/a	25.0
turns, lock to lock	4.75
turning circle, ft	30.2
Hip room, front	2 x 26
Hip room, rear	47.2
Pedal to seat back, max.	39.0
Floor to ground	8.5
Luggage vol, cu ft	10.0
Fuel tank capacity, gal.	14.0

GEAR RATIOS:

4th (1.00), overall	3.27
3rd (1.44)	4.71
2nd (2.10)	7.15
1st (3.20)	10.5

PERFORMANCE:

Top speed (4550), mph	98
Shifts, rpm @ mph (manual)	98
3rd (4900)	73
2nd (5070)	50
1st (5070)	34

SPEEDMETER ERROR:

30 mph, actual	30.2
60 mph	59.2
90 mph	88.5

ACCELERATION:

0-30 mph, sec	4.8
0-40	6.9
0-50	9.3
0-60	14.0
0-70	19.5
0-80	27.9
0-90	43.0
Standing 1/4 mile, sec	19.5
speed at end, mph	70

CALCULATED DATA:

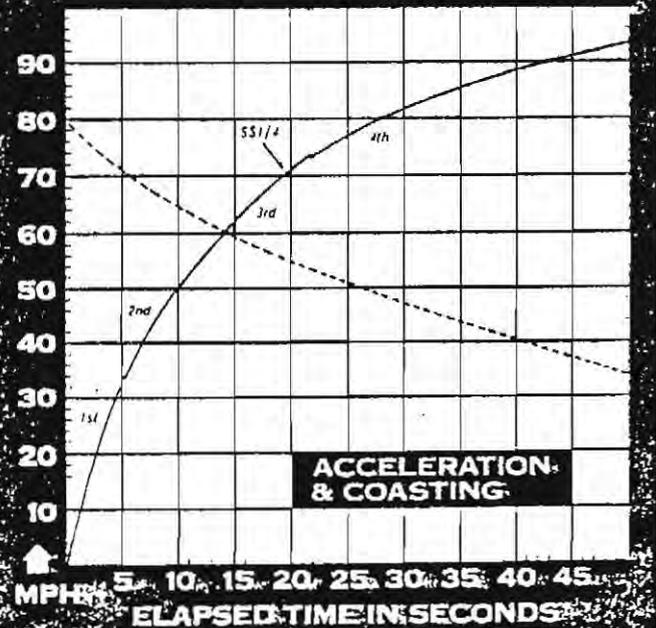
Lb/hp (test wt)	28.7
Cu ft/ton mile	90.5
Mph/1000 rpm	21.4
Engine revs/miles	2800
Piston travel, ft/miles	1370
Car life wear index	38.46

PULLING POWER:

70 mph, (4th) max. gradient, %	9.5
50 (3rd)	14.6
30 (1st)	25.9
Total drag at 60 mph, lb	120

FUEL CONSUMPTION:

Normal range, mpg	19-22
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whistling sound from the gears when first starting out, as well as the typical trouble with getting into 2nd gear without clashing. But once the gear oil is thoroughly warm, the transmission is very good indeed.

Corvair brakes have been improved for 1964 by a new seal design and the rear drums have 40 radial fins added. This emphasis on the rear brakes is opposite to conventional car practice, because the Corvair carries up to 65% of its total weight at the rear when fully loaded. Thus the rear brakes do more work than those in front. Our tests showed that fade resistance has improved and elimination of dirt and water entry is claimed to give the linings a longer life. However, while the brakes are passable, the rate of deceleration is not outstanding and owners who live in mountain areas would be well advised to remove the wheel trim discs to improve anti-fade characteristics.

There are a number of important

changes in the suspension and the handling qualities are somewhat improved. The car seems much less susceptible to wind wander and it corners with less roll and no tendency to hop at the rear.

Without going into great detail about the suspension changes, it can be stated that the ride is unchanged. What the engineers have done is to increase understeer by adding an anti-roll bar in front and reducing the rear roll couple in a very novel manner. A single leaf spring runs transversely under the differential housing. This spring (see illustrations) carries 40% of the rear end load while coil springs (not shown) carry 60%. Since the coil springs are softer than before, and the center pivot leaf spring contributes nothing as an anti-roll device, the result would normally be more roll in a corner. But, the heavy anti-roll bar in front more than compensates for this with the excellent results mentioned earlier.

All Corvair engines for 1964 incorporate certain improvements originally specified for the Spyder series only. These include chrome alloy steel for the longer stroke crankshaft, heavier section connecting rods, heavy-duty aluminum bearings, stiffer valve springs with dampers, Stellite-faced exhaust valves, better material for intake valves, chromium-plated top compression rings and a harmonic crankshaft vibration damper. These features will obviously improve the already excellent longevity of this engine.

Another new mechanical feature is a cooling fan cast of magnesium alloy instead of being welded up from stamped steel. It weighs only one-third as much as before and thus helps improve fan belt life.

The sum of these rather extensive changes indicates to us that Chevrolet is going all-out to make the Corvair a top-quality compact and, we feel, this has been made possible by the premium-priced Monza's popularity. ■

The Steering Box!

by Van Pershing

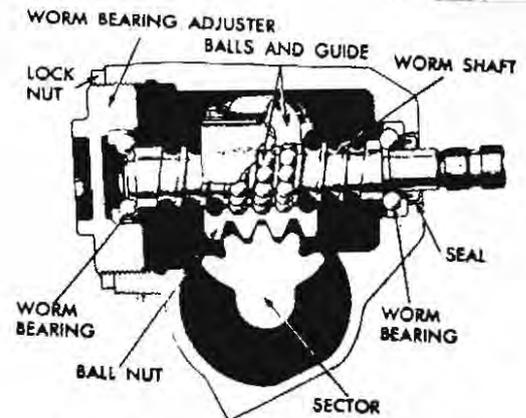
Maybe the question to ask is, "Should you learn how to rebuild a steering box, or should you learn how to adjust it properly? Let's talk about both.

The Corvair steering box is the recirculating ball type. In this type of box a worm gear moves the sector gear through a series of ball bearings, so the worm never makes actual contact with the ball nut except through the balls.

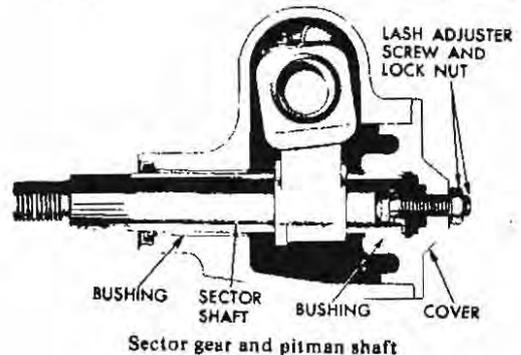
This box has a "high load" feature. This means that the steering friction is highest at the center, straight ahead position and lowest during turns. This must be taken into account when adjusting lash in the steering box.

Adjustment: The best way to adjust the lash is to remove the horn ring and gain access to the steering wheel hub nut. Underneath the car at the steering box, remove the pitman arm nut and with an appropriate puller remove the pitman arm from the sector shaft. This frees the entire system of drag so that you can adjust the "high load" friction without having to wonder how much is caused by the other components such as ball joints, tie rod ends, etc. Next, open the trunk and remove the plastic plug to gain access to the lash adjuster screw and locknut. To establish that the worm gear bearings are properly adjusted, loosen the locknut and back off the lash adjuster screw to eliminate sector gear friction, then measure the torque on the steering wheel hub nut and adjust if necessary to $3\frac{1}{2}$ - $4\frac{1}{2}$ inch-pounds. Do this with a crescent wrench on the worm bearing adjuster - be sure to loosen the locknut first and retighten it when you're through.

Next, find the "straight ahead" position of the sector gear by counting the turns from lock to lock at the steering wheel and dividing by two. With the sector in this "high" or straight ahead position, remove all lash by tightening the lash adjuster screw. The steering torque through the high point should be 8 - 10 inch-pound over the "free" torque measurement taken previously, but no more than 14 inch-pounds total. Be sure and tighten the locknut on the lash adjuster when you're done. After this adjustment, the relation of the wheels to the steering gear may have changed, so you'll need to compensate by adjusting the tie rod ends so that straight ahead for the wheels is the same as straight ahead for the steering box. Be sure to adjust both tie rod sleeves the same number of threads so



Steering gear worm and ball nut circuit



Sector gear and pitman shaft

that the toe-in of the front wheels isn't affected.

With the steering box adjusted properly, a couple of benefits can be seen. The car should be less susceptible to the effects of cross-winds and those nasty grooves in the highways. Another noticeable difference is the fact that the "play" in the steering wheel feels like it isn't there (even if there is a little).

Rebuild: The hardest part of the rebuild is removing the steering box from the car. If you're working on something with a worm gear shaft that goes all the way up to the steering wheel, you'll have to remove the steering wheel. If it is one of the models that has a coupler between the steering box and steering wheel, you'll have to undo the coupler and in some cases that will require cutting a hole in the wheel well sheetmetal. In either case, the pitman

arm must be removed from the box and the box unbolted from the car. Once the box is out, just start unbolting and unscrewing until you have the box in pieces. (See the exploded view).

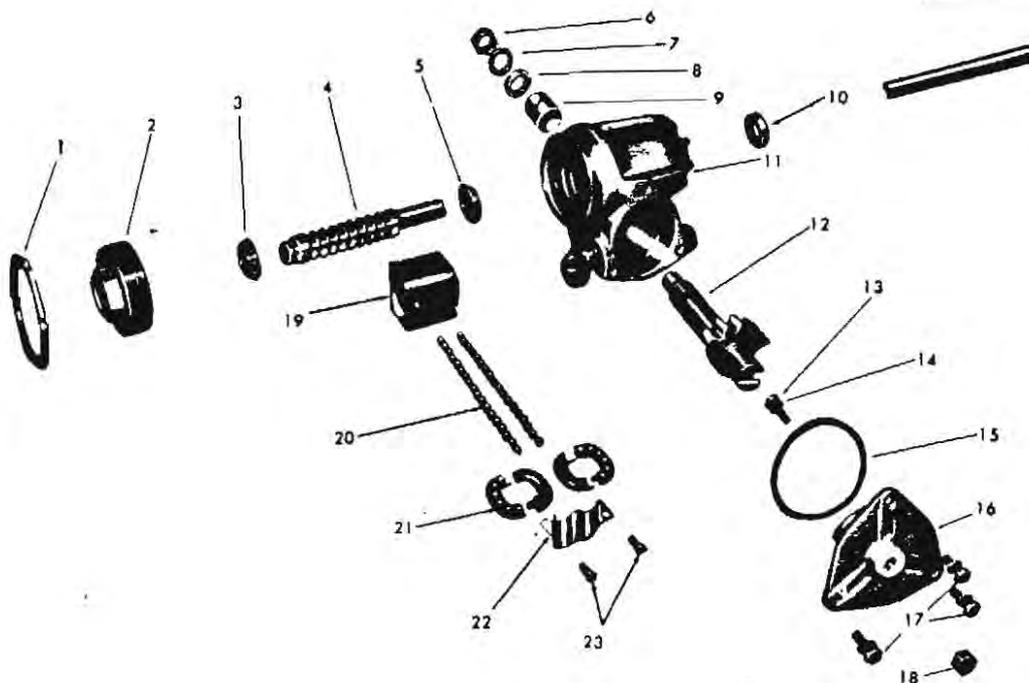
Once you have things apart, clean everything in solvent and check the parts for wear. Make sure the wormshaft bearings and races are smooth and unpitted. Likewise, the wormshaft and ball nut and balls should be smooth and unpitted. The pitman shaft bushing is another likely suspect for wear. All the bearings, bushings and balls are available from suppliers such as Clark's, et al, at fairly reasonable prices. As long as you've gone to all the trouble of taking the box apart, replace all the seals and gaskets. The package only costs around \$6.

Once you've got the replacement parts in hand and everything is clean, you're ready to start putting things back together. The most handy lubricant to use, and it works great, is plain old (new) chassis lube from your grease gun. Put a thin coat on all the parts before you start reassembly. You'll notice that there are two channels in the ball nut for the balls. There are a total of 48

balls, or at least there should be (okay then, look around on the floor by the work bench), 24 for each channel. Slip the ball nut over the worm gear about half way and proceed to insert the balls in one of the channels until you have a half a dozen or so (of the 24) left. Place these remaining balls in a well-greased ball guide and install the guide onto the ball nut. Repeat the operation for the other channel. Now reassemble the box in the pretty much the same manner as you took it apart, being careful that the gear on the pitman shaft is centered on the gear on the ball nut as you assemble. Pack the box full of the chassis lube. Once reassembled, reinstall the box in the car (torque for mounting bolts is 25 - 35 ft-lbs).

Once installed, adjust the box per the above instructions. Replace the pitman arm (torque it nut to 80 - 105 ft-lbs). And that's about it. (Don't forget to replace the steering wheel if you took it off!)

My guess is that you usually won't find much wrong with the box if you take it apart for a rebuild - a proper adjustment is more than likely the culprit. Happy Vairing. Van



- 1 Wormshaft bearing adjuster locknut
- 2 Wormshaft bearing adjuster
- 3 Wormshaft bearing
- 4 Wormshaft
- 5 Wormshaft bearing
- 6 Pitman arm nut
- 7 Pitman arm lockwasher
- 8 Pitman shaft seal

- 9 Pitman shaft bushing
- 10 Wormshaft outer seal
- 11 Steering gear housing
- 12 Pitman shaft
- 13 Lash adjuster screw
- 14 Lash adjuster screw shim
- 15 O-ring
- 16 Side cover

- 17 Side cover screws and lockwashers
- 18 Lash adjuster screw locknut
- 19 Ball nut
- 20 Balls
- 21 Ball guides
- 22 Ball guide retainer
- 23 Ball guide retainer screws

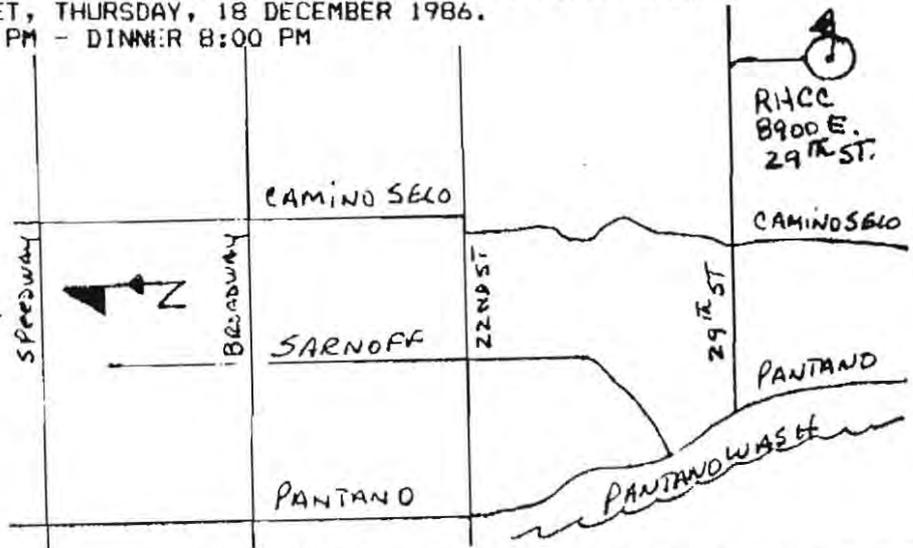
Steering gear, exploded view

Vairo 'n Spareo

FOR SALE: '67 500, 2-door, auto/110 hp, new windshield, mechanically sound, needs headliner and minor body work on engine cover. Car used daily. \$750 OBO. Call Bob Eggers at 885-4779.

!!!!CHRISTMAS PARTY!!!!

LET'S ALL SUPPORT OUR SOCIAL EVENT OF THE YEAR. LOTS OF PRIZES. MAKE IT EASY ON ME BY SENDING IN YOUR RESERVATIONS EARLY. THE PRICE INCLUDES DINNER, BEVERAGE, TAX AND GRATUITY. SELECT YOUR DINNER, TOTAL THE COST AND SEND ME A CHECK ALONG WITH YOUR ORDER BLANK. 8 DECEMBER IS THE DEADLINE. REMEMBER -- NIBLICK LOUNGE, ROLLING HILLS COUNTRY CLUB, 8900 E. 29TH STREET, THURSDAY, 18 DECEMBER 1986.
COCKTAILS 7:00 PM - DINNER 8:00 PM



ORDER BLANK

NAME: _____

DINNER SELECTION

NUMBER

PRIME RIB.....	_____	X \$9.50 = _____
TOP SIRLOIN.....	_____	X \$8.50 = _____
STUFFED SHRIMP.....	_____	X \$9.75 = _____
STUFFED SOLE.....	_____	X \$8.75 = _____

SEND ME A CHECK FOR THIS AMOUNT ----- TOTAL -----

To: Don Robinson
2044 W. Shalimar Way
Tucson AZ 85704

TREASURER'S REPORT

Balance October 1, 1986.....\$1016.44

Income:

- Dues.....40.00
- Raffle tickets sales.....38.00
- Merchandise sales.....61.50
- Aluminum cans..... 9.00

Total Income.....\$148.50

Expenses

- Corvairsation.....114.22
- Merchandise-raffle..... 9.35
- Miscellaneous.....19.82

Total Expenses.....\$143.39

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

Alan Atwood

MEMBERSHIP

NEW MEMEBERS:

Ron Quarantino
 Milt & Diane Evans
 Frank Held
 Don Leamon
 Kris Hart

DUES DUE NEXT MONTH:

Bender
 Wilkins

DUES DUE THIS MONTH:

Allain
 Baker

DUES PAST DUE

Lewis
 Sonn

Note that the Ruthless Computer allows you ONE month's grace, then DELETES you from the membership rolls. Don't let the Ruthless Computer claim you as its next victim!

OTTO PARTS

FOR CORVAIR ENGINE & TRANSAXLE PARTS
MANY NEW PARTS

- Failsafe cam gears
- Aluminum fan bearing ass'y
- Rebuilt fan bearing ass'y
- '66 '69 Trans main shaft
- '61 '65 Counter shafts
- Throw out bearing collar, steel
- High temp diff gasket sets
- 4 spider diff kits
- Reconditioned connecting rods
- Corv 8 mid engine kits

NEW '86 CATALOG NOW AVAILABLE \$4.00
 Catalog FREE with \$20.00 minimum order

OTTO PARTS Super Belts 2/\$22.00 + \$1.50 shipping
 California Residents add \$1.43 tax • '86 Catalog FREE with order

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(818) 579-5875

Catalogs available at the
 TCA meetings for \$2.00 ea.



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

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4260 E. ILLINOIS.
 TUCSON, ARIZONA 85714

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CORVAIR AUTOMOTIVE

622-0478

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(behind Bimsco Hardware)



Barry Cunningham - Larry Dandridge

Corvair Specialists

foreign & domestic cars too

8 am - 5 pm Mon - Fri

no appointment necessary

Saturdays by appointment

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Tune - Ups

Engine Resealing

Towing

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RV'S & MOTORCYCLES

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631 E. PRINCE
TUCSON, AZ 85705

RICHARD & PEGGY
AUFMUTH
PROPRIETORS

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

**Dec 18: Annual TCA Christmas Party. Mark the date now for the usual !
great time!!**

JANUARY MID-MONTH ACTIVITY: A RALLY - Stay tuned for details!

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



FIRST CLASS MAIL

