

# Corvairization

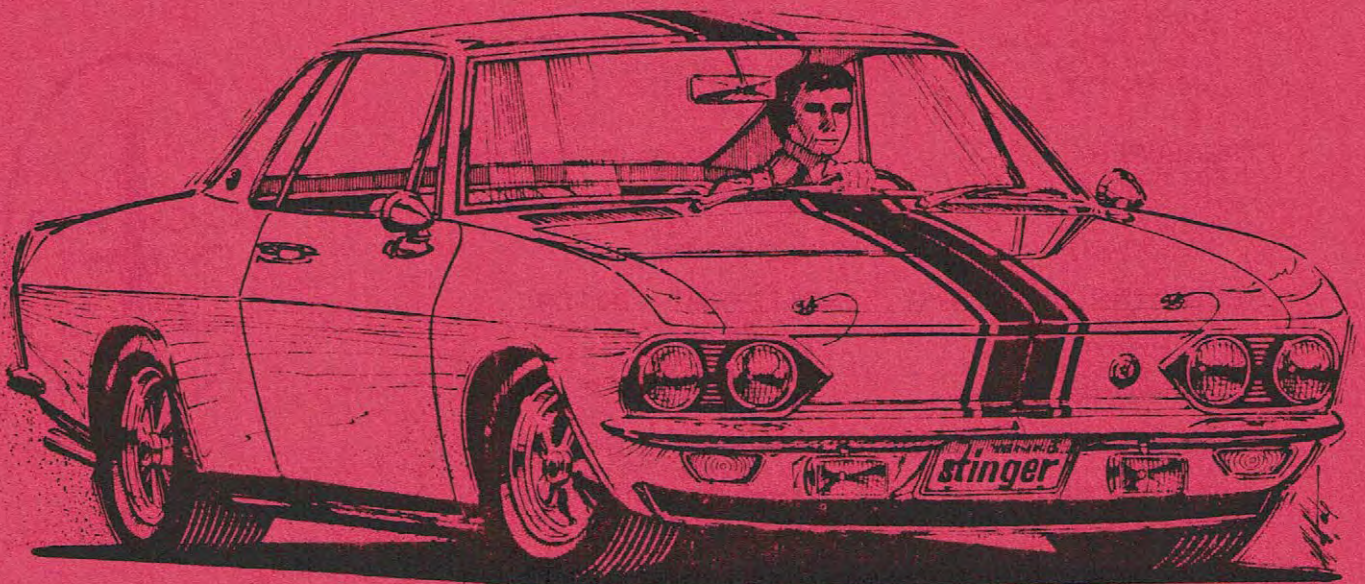
TUCSON CORVAIR ASSOCIATION

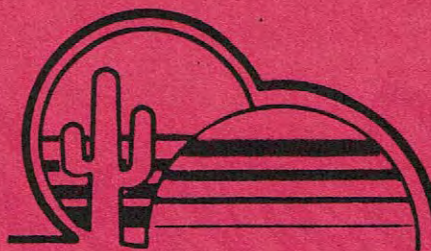
TUCSON, ARIZONA

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## 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 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.

**CORSA MEMBERSHIP DUES** are \$25 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 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 Corvairsation Editor. Articles are welcome for publication.

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

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#### **BOARD OF DIRECTORS**

Current TCA Officers, Al Rivas, Vic Howard 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 lots 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.....

The 1988 Corsa National Convention is in Ashville, North Carolina from July 26 thru 30. I wish I were going to be there to enjoy that beautiful area and take in the events. Gordon and Verne Cauble will be there and in August we will hear their report.

We had a good turn-out for the tune up and tech session at my house. It was a nice warm day but we took full advantage of the shade and cool drinks. We had snacks too and a real big hit was Esther Alex's cake. Most everyone watched the tune up video and Michele Mouton/Markku Alen Rallying video. In all, more than a half a dozen Corvairs were tweaked and went on their merry way. Thanks to everyone for all the muscle power provided to lift the body from the frame of my roadster restoration project.

This month there will be no mid-month activity while we are all in summer hiatus. We will participate in the 1988 Cedric Dempsey Cancer Center Run this fall. A part of this event will be a display of our cars in November. We will get full details of this event at our September meeting.

I will miss the July meeting because of work but I will be thinking about you wishing I were there. Dave Baker will be there with gavel in hand.....happy Corvairing.

Don Robinson



The regular monthly meeting of the Tucson Corvair Association was called to order at 7:45 PM by President Don Robinson on June 22, 1988, at the Picadilly Cafeteria, 6767 E. Broadway, Tucson, Arizona.

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

A guest, Joyce Stafford, was introduced.

Those present were reminded of the tech session to be held on June 26 at the home of Don Robinson.

Representatives from the Cancer Center, Julie Gebler and Michael Bassoff, were introduced and they invited the TCA to participate in a run to be held on November 13, 1988.

The membership was encouraged to join Corsa and receive the free magazine.

Our library has a new addition, a VCR tape entitled "Engine Tune-up". It is a two hour tape and is now available to be checked out.

After the break, the drawing was held. License Plate No. 9290, belonging to Don Chastain, won him a prize. Other prizes were won by Curt Britton; another guest, Beverly Martell; Allen Elvick and Frank Held.

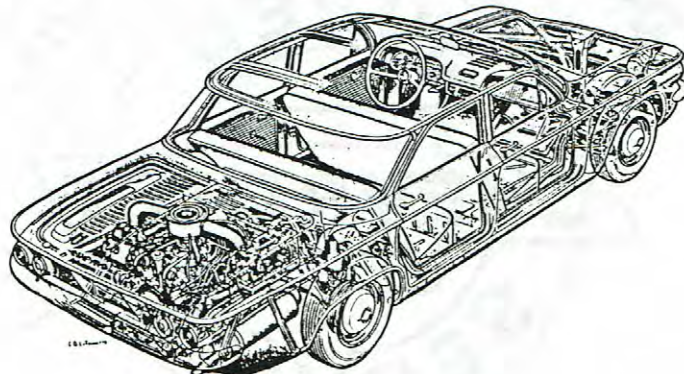
The announcement was made by Ed Sanford that he now has a job with Charter Hospital.

A tech session followed and For Sale items announced.

The meeting was adjourned at 8:40.

Respectfully submitted,

*Beverly*



## Fine Tuning

Trying to get your engine into really peak tune? Tired of listening to it ping on "modern" gasolines? Tired of retarding your ignition timing to eliminate the ping, but then having to suffer with poor gas mileage and lost power? Then give this a try.

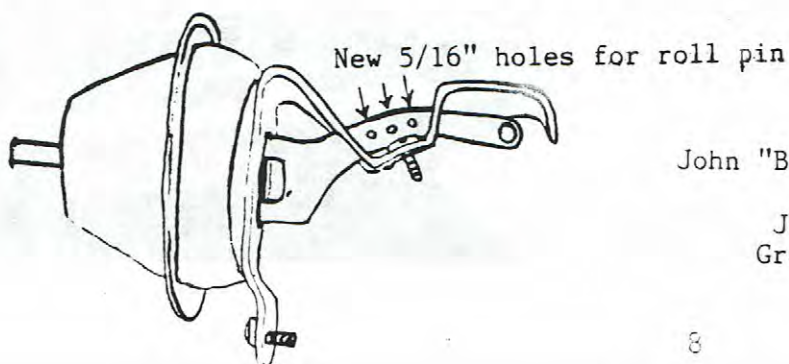
Three things determine your engine ignition timing. First, is the basic timing set by the position of the distributor. Second is the centrifugal advance built into the distributor. The third is the vacuum advance operating through the side of the distributor. Now it is easy to alter the basic timing - just give the distributor a twist. But that throws the entire timing off. The centrifugal advance can be modified by changing weights, springs, and stops inside the distributor. That works, but with this approach, you are controlling timing only by engine speed, which is fine for full throttle/maximum power operation.

But for many of the current problems with engine pinging, you really are more interested in how the engine behaves under light load conditions. This is where the vacuum advance comes in. It is designed to alter the engine timing based upon the combination of throttle opening and engine speed (load). They determine manifold vacuum.

The vacuum advance works by bringing engine (manifold) vacuum to the back of a spring-loaded flexible diaphragm. The front of the diaphragm is mechanically connected to a movable plate inside the distributor. As engine vacuum increases, the diaphragm is pulled by the vacuum (actually outside air pushes it) and the ignition timing is advanced. When the throttle is opened wider, or the engine comes under increasing load thus lowering speed, the manifold vacuum goes down, and the ignition timing is retarded. Simple enough.

Light load conditions, such as just cruising down the highway, calls for advanced ignition timing, just what the vacuum advance does. But when you hit a hill, or go out to pass, the more heavily loaded engine needs less ignition advance, or else it will ping. The problem comes in with "modern" gasolines. They just don't have the octane rating to allow a very large margin between the light load timing and the full throttle timing. What to do, since the Corvair vacuum advance was designed in the old days of heavily leaded gasolines?

Well, that turns out to be rather simple. The change in timing that the vacuum advance can produce is governed by the amount of movement in the arm that comes out of the vacuum advance canister. Its movement is limited by a small pin that goes through the arm. To reduce the travel, simply change the position of the pin! All you have to do is drill a small (5/16") hole (or a series of them if you want to experiment) through the arm, and insert a 5/16 roll pin in it. Remember that vacuum "pulls" the arm into the canister, so putting a pin closer to the canister will reduce the travel, hence reducing the amount of vacuum advance available. Give it a try, you can always move the pin back to the original hole if you don't like the results.



John "Bent-Wrench" Moody  
&  
Jim Simpson  
Group Corvair

Thanks to Valley Corvair

# A racing driver's

Sloniger] talks to Dan Gurney about his Chevrolet Corvair Monza Spyder with turbo supercharger.

RIGHT. One driver's personal transport: Porsche's team leader with the Chevrolet Corvair Monza Spyder convertible. Dan Gurney remains true to the air-cooled "boxers".

Virtually every Sunday Dan Gurney and his peers drive high-strung rapid, single-seater Formula I cars for a living. "Off-stage," these professionals have a wider choice of transport. Apart from those who fly from race to race around Europe, they are men divided in opinion for general transport. Some like sports cars, some prefer upholstered saloons with reclining seats, and a few even select automatic transmissions on the grounds that they change enough gears in the course of a race. What does Porsche driver Gurney use when he isn't hurrying the air-cooled flat eights? He hurries about the Continent in an air-cooled flat-six, and a supercharged one at that. The Californian drives a Chevrolet Corvair Monza Spyder convertible and his comments on this rather specialized American car with European leanings are more valuable than a road test in assessing the car for European conditions.

The Gurney transportation carries a name almost as long as its wheelbase, but it means this: The Corvair was something of a sensation for an American product with its rear-mounted "boxer" engine, all-independent suspension, air-cooling and styling that has been copied by a large number of Continental firms since the car was first seen. The original "Corvair" version, still in production, developed 81 (SAE) b.h.p. and scored an immediate hit with Americans. Chevrolet decided they had a highly tuneable engine and most of their sales seemed to indicate that the customers wanted something extra. The car was different anyway, so why not move it even "further out" in American parlance.

This brought us the Monza with 103 b.h.p., and it proved even more popular with Corvair specialists than Chevrolet had anticipated. In fact it threatened to be a class by itself and the largest car manufacturer in America moved to make an even more potent model by adding

an exhaust-gas turbo-charger. They added the word "Spyder" to the rest of the title—and that brings us to Gurney's car.

To clear away the technicalities, the car produces 152 American h.p. at 4,400 r.p.m., remaining at 8 : 1 compression. It features the "hotter" Monza camshaft, bi-metal exhaust valves, hard-chrome top piston rings, special crankshaft and connecting rods, improved ignition and a plastic cooling fan that looks very much like that on the Porsche *monoposto* Gurney drives at weekends. To go with this power increase—87 per cent over a standard Corvair and 47 per cent hotter than a Monza—they added stiffer suspension, metal-impregnated brake linings and extra instruments—but we can leave the results to the owner.

The lanky American professional comments, first of all, "I don't think you're going to have

an average driver in this particular model. He's going to have a little bit of enthusiast in him, although it's not a sports car. It's something different." Gurney expanded this explanation by saying, "It's nice and I've driven it around Paris, across to Stuttgart and even around the Nurburgring."

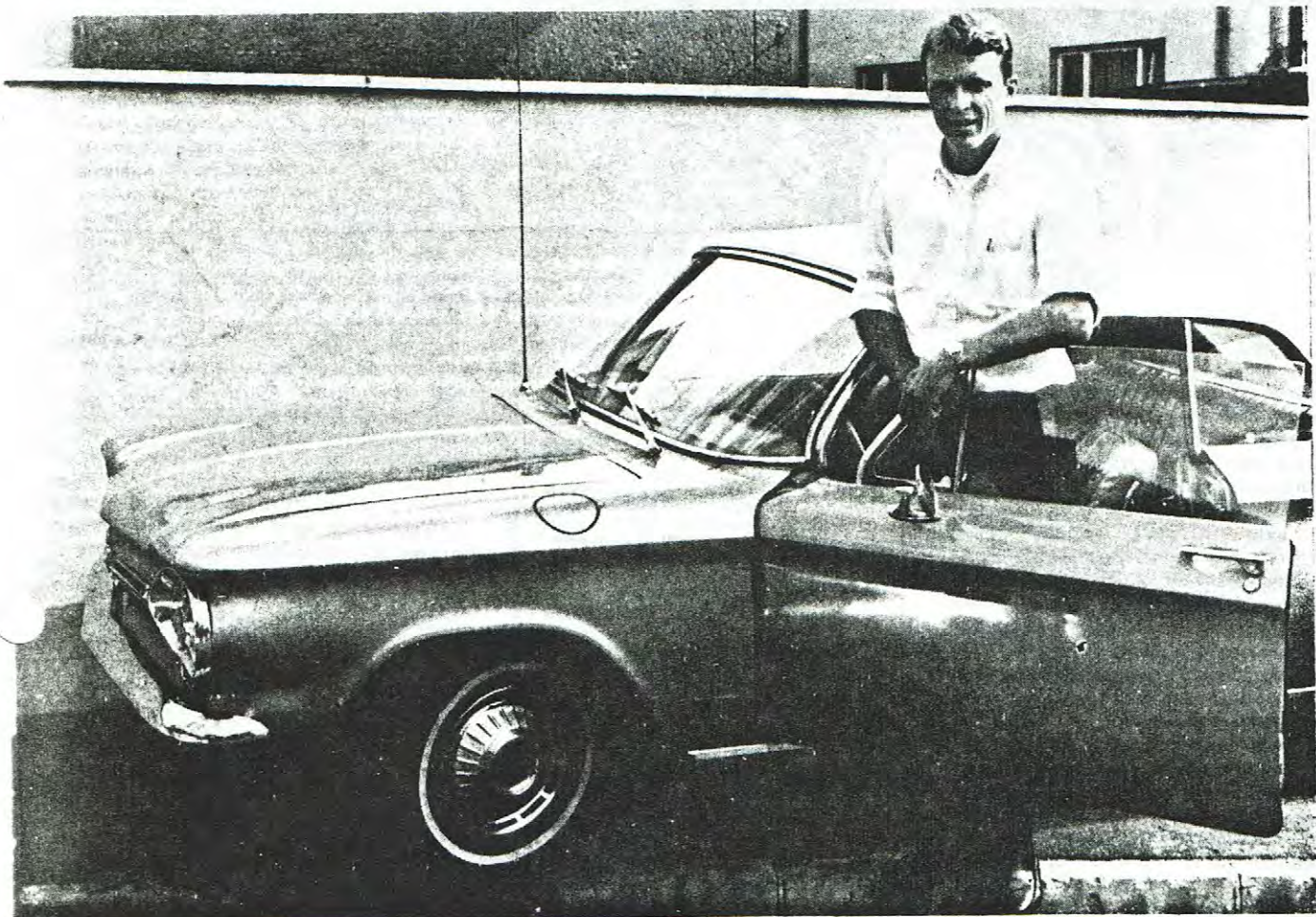
He added, with the Gurney grin, "The car is a lot better than you might expect it to be. I really don't know how to place it. It's sporty in a way, but sort of has that Detroit luxury air too."

Speaking of the handling Dan points out, "You have to run quite a lot of differential in the tyre pressures if you're going to drive quickly—you should have a lot more in the rear than they specify for a ride around town. I have about 38 pounds in the rear and 28 in front. They recommend a lot less." This traces to



Simple and restrained front view of the Spyder gives no indication of the urge inside. The licence plate seems at variance with the engine!

# personal car



the way you drive of course and Gurney admits, "the normal pressures give you a real nice ride but the tyres squeal and the car will use up a lot of road."

As for the stiffer suspension kit, "I felt when I drove the car from Paris to Strasbourg that the heavy-duty suspension was a little too heavy for the undulating French roads. Kind of jars you around. I think it would be better with maybe the standard suspension in front. I don't know what they've done to the rear but it's just about right."

Pursuing the same theme I asked him about cross-wind behaviour, since many rear-engined cars—the Corvair included—are not noted for their motorway tracking. He felt, "there's a slight bit of cross-wind feel but nothing serious. You get into the swing of things." He did add it was far less noticeable than the chief European exponents of rear

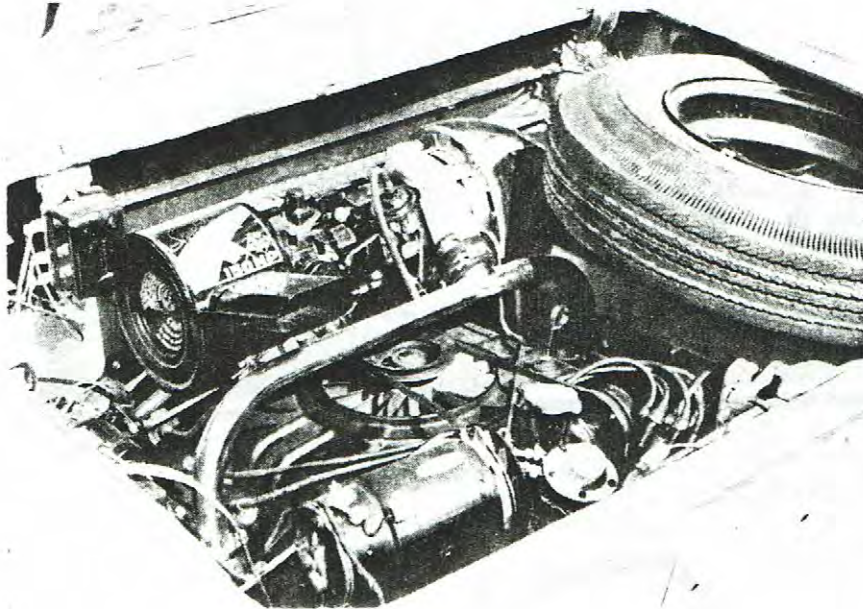
engines which he drove on rental last year. He capped the subject of handling by adding "it goes around corners like those at Nurburgring nicely. It corners flat, I mean."

The effect of the blower itself is naturally the prime subject with the Spyder version. This uses the exhaust gas to spin a primary turbine which, in turn, spins a second fan to compress the mixture for a single carburettor before it is fed to the six cylinders.

Gurney explains the effect this way: "the torque at the top is the most pleasant part of it. It has very, very good acceleration from about 65 to 100 m.p.h. For freeways or something like that—well it's really nice. In low or second you don't get quite as much effect from the turbo-charger because the car accelerates almost as fast as the little turbine does and the blower can't stay with you enough to give much boost."

He went on, "you have to learn how to drive it because the car doesn't have that instantaneous response. In fact, below 2,800 r.p.m. it's sort of like a VW as far as power goes but once you've driven it a while and realize that to really accelerate you have to keep the revs. up to get boost, why it seems fine."

A major feature of the old-style supercharged cars was noise. The owner replies to this, "no, at least the blower isn't noisy. The exhaust is fairly noisy but it never sounds like you're hurting the engine at all. If you're looking for the blower you'd hear it but otherwise you wouldn't realize it's there." He amplified this by reverting to the subject of torque. "It will out-accelerate a Porsche Super, for instance from maybe 65. It really has a lot of pull. Much more than I expected from a 2.3-litre engine with a car that heavy." This reminded him of the interior fittings,



The charger is clearly visible on top of the Spyder engine, with the rotors housed in the chrome "spinner" just under the spare tyre. The Spyder series also uses a plastic cooling fan.

which he obviously liked. "Besides the tach (rev.-counter), it has a cylinder head temperature gauge and manifold vacuum gauge," he pointed out. "You can see on your tach just when the pressure starts building. I like watching that little dial showing I'm getting some help instead of wasting all that exhaust pressure." As for comfort, he noted, "there is plenty of room for me. The pedal pressures with those brakes are about like our racing car. They would seem hard if you came from a boosted car but I don't like brake boosters. I heel-toe a road car and you can do it easily on the Monza."

Proceeding to the gearbox, which has four, fully-synchronized speeds, Dan said, "The gear ratio is more spaced for town driving than it is for high performance. It has fairly long steps and first gear is pretty low. As long as you keep your revs. up you don't have to down-shift much." He admitted, "I haven't been checking the speeds in the gears too much. Third is all through around 70. The red line is about 5,300. I shift it around 4,900 but it doesn't seem to mind if you take it higher, just fades out fairly abruptly."

On the subject of speed he said he hadn't run a true check, but "it will indicate about 110. I've checked the speedometer against European cars and it seems about the same, not wildly optimistic." Comfortable cruising speed? "Oh, 90 or 95 seems to suit it pretty well and 85 is nothing at all. You notice a load more than you would with a huge American car but it still has that torque."

To stop this moving automobile Chevrolet fits the sintered iron linings as part of the package. Gurney remembered, "I've talked to several Europeans who've owned Corvairs and objected to the brakes. But these are

#### TECHNICAL SPECIALITIES OF THE CORVAIR SPYDER MOTOR

Six-cylinder horizontally-opposed, air cooled engine. Bore 87.3 mm., stroke 66.0 mm., cubic capacity 2,376 c.c., compression ratio 8:1, power output 152 (SAE) b.h.p. at 4,400 r.p.m., maximum torque 209.8 ft./lb. at 3,300 r.p.m.

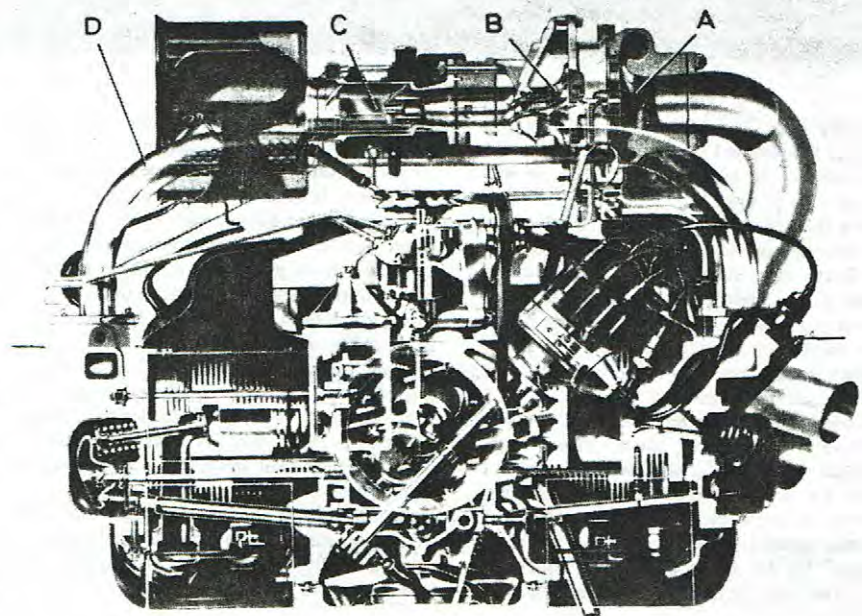
Single horizontal carburettor with three-stage venturi, turbo-compressor driven by exhaust gases. Single-stage radial drive turbine with 11 blades, radial compressor turbine on drive shaft with 14 blades, maximum revolutions 70,000 r.p.m.

Bi-metal exhaust valves with Nimonic 80A heads and chrome-silican-steel stems, hard-chrome upper piston rings, forged steel crankshaft, reinforced connecting rods, plastic cooling fan.

great. They have a very progressive feel, even without the boost." He's apparently spoken to a lot of Europeans about the car because, "I've had people stop me on the street in Paris and ask if they can buy one of those things over here. It attracts a lot of attention." Naturally enough this extra power—and the blower—means a greater fuel consumption. Gurney hasn't run a comprehensive check but estimates, "about 22 m.p.g. (Imp.). I think it costs you a little gas. For the difference between it and a normal Corvair I'd be willing to pay the gas bill." Service, on the other hand, has been virtually non-existent in the time Gurney's had the car. "There aren't any routines for the darn thing, really. I had the oil changed but there is very little lubrication and no tappet adjustments, for instance. I was surprised how well everything seemed to work right off." This is because the car was rushed from the assembly line to Paris for him in less than a week and never fully serviced.

Finally, he admits, "I've had one friend drive it who objects to the blower lag but you have to adapt. It's a centrifugal blower. You either like it or you don't but it doesn't bother me. I like the car." Would he make changes? "I would soften that front suspension," he notes, "and might try different tyres. Maybe lower the front a hair. Otherwise I think I'd leave it pretty well alone. I haven't had a bit of trouble, even with little things."

That is the professional driver's approach to the Chevrolet Corvair Monza Spyder.



Cutaway of the turbo-charged engine. (A) is the primary rotor, driven by exhaust gas, (B) the compressing rotor, (C) the horizontal carburettor and (D) the inlet manifolding to the cylinders.



# Vairo 'n Spares

**FOR SALE:** '62 MONZA 900, 4-door, automatic, radio, \$300, Jim Bailey, 794-3728 days, 881-8290 nights. 6/88

**FOR SALE:** '69 MONZA COUPE, 110HP, automatic, 12" mag wheels, good tires, new fuel pump & tune-up. Good driver, very reliable. \$750. Don Robinson 297-1356. 5/88

**FOR SALE:** 1968 MONZA CONVERTIBLE OHP, 14" wheels, new radials & mag covers, AM/FM cassette, taneau cover, & bumper guards, rust free body in excellent condition, beautiful interior engine needs work-rod noise. Rare & outstanding car. Asking \$3500 for a \$5000 value but negotiable. Call Gordon Cauble 299-1122. 5/88

**FOR SALE:** '61 700 4-DOOR automatic, ready to go anywhere, rust free body w/ new paint, interior good, needs only headliner, excellent tires & new battery. A \$2500 value can be bought for \$1500 - negotiable. Call Gordon Cauble 299-1122. 5/88

**FOR SALE/TRADE:** '61 LAKEWOOD, 110/auto, bright yellow, wire wheel covers. Nice inside and out. Asking \$1,500 or trade for a 2-door Monza of similar value. Call Van at 743-9185. 4/88

**FOR SALE:** '61 RAMPSIDE w/ Factory Camper. Dbl bed, sink & water tanks, stove & LP tank, port-a-pottie, etc. Only rust is on rt rear quarter panel. Mechanically perfect. White, rebuilt

**FOR SALE:** '61 LOADSIDE Pickup no rust, repainted in '87. White, rebuilt engine, 4-speed, new steel belted radials, reupolstered, rebuilt front end. Drive it away. Retiring, must sell, moving upstate. Byron Lee Miller, 733 W. 2nd St, Mesa, AZ 85201 or call (602) 962-1401 for more info. 3/88

**FOR SALE: PARTS:** '65 front suspension, 4-speed transmission and rear end, Mark Kenna 745-9209.

**FOR SALE: PARTS:** Kelmark conversion for '65 Corvair. Bellhousing, input shaft, shifter and subframe. Mark McKenna 745-9209.

**FOR THE DO-IT-YOURSELFER:** Mag ignition wires & long rotors, plus all regular ignition items. Wrapped fan belts, air & oil filters plus viton o-rings and oil cooler seals. Call Gordon Cauble 299-1122.

**FOR SALE:** '63 MONZA COUPE, factory air, 102HP, 4-speed w/ new clutch and new transmission, new battery, good tires, needs some interior & exterior work. Driven daily. \$1200 OBO. Call Paul Skinner at 296-4549 or 885-8104.

**FOR SALE:** New and Good Used Parts. Late model NOS gas door guard, \$17.50; Excellent '63 Monza coupe front & rear seats, blue, \$100; NOS upper ball joints for FC, \$10 ea; Used windshields for early & late model cars, 1/2 price; New main bearing set, std, \$15; New rod bearing set, +.010, \$20; New crankshaft seal, front, \$5 ea; '63 & '65 turbo distributors, \$20 ea; and many other new and good used parts. Call Gordon Cauble @ 299-1122.

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TRESURER'S REPORT

Balance June 1, 1988 .....\$1,019.74

Income

Dues.....20.00  
Corvairsation ads.....27.50  
Raffle tickets.....29.00

Total Income.....\$76.50

Expenses

Raffle prizes.....38.05  
Video tape.....29.75  
Christmas party deposit..75.00

Total Expenses.....\$142.80

Balance July 1.1988 .....\$953.44

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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

July 26-30: National CORSA Convention - Ashville, N.C.

NO TCA MID-MONTH ACTIVITY IN JULY!!!

Tucson Corvaire Association  
P.O. Box 50401  
Tucson Arizona 85703



FIRST CLASS MAIL