



Group Corvair Comments

GROUP CORVAIR'S NEWSLETTER FOR THE NATIONAL CAPITAL AREA



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Contributed by Jerry Yates

CALENDAR OF COMING EVENTS

(There are many local events over the year; search Google for "Maryland, DC or Virginia Car Shows" to find more.)

March

21 – Group Corvair Meeting, 7 p.m. We're cycling back to the Beijing of Greenbelt restaurant, 131 Center Way, Greenbelt, MD this month. The last time we were there we all ordered "family style" and got a wide variety of Chinese dishes. That seemed to work, but if you would rather order a personal dish, that's ok as well.

24-25 – 47th Annual Indoor/Outdoor Antique Automotive Swap Meet, Carroll County Agricultural Center, 706 Agriculture Center Drive, Westminster, MD. Two day event (Fri-Sat), 8 a.m. to 2 p.m. both days. \$2 admission. See the event flyer at: <http://www.carrollcountyagcenter.com/events/documents/2017final.pdf>

April

15 – **CHANGE!** The Group Corvair Meeting this month is moving to **Saturday, April 15**. No, we're not celebrating Tax Day or the day the Titanic sank, but rather we decided to have a spring weekend outing and go to the Fisherman's Inn restaurant on Main Street, Grasonville, MD; that's just across the Kent Narrows Bridge off Rt-50 as you go to the Eastern Shore. Our plan is to meet in the McDonalds restaurant parking lot near exit 29 on Rt-50 (1450 Whitehall Rd, Annapolis) and at 12:00 noon convoy to the Fisherman's Inn.

May

16 – Group Corvair Meeting, 7 p.m.

27 – Tentative date for the Bowie Memorial Day parade.

June

10 – Tentative date for the "Wings 'n Wheels" show, Frederick, MD.

18 – Sully Plantation/George Washington Chapter Model A Club sponsored annual Father's Day show.

20 – Group Corvair Meeting, 7 p.m.

27 – July 1 – CORSA International Convention, Independence, MO.

July

14 – 8th Annual Collector Car Appreciation Day.

18 – Group Corvair Meeting? Or do we plan to have a "Not Quite Fourth of July" picnic/meeting?

Minutes of the February Business Meeting

Marolyn Simpson

Killarney House in Davidsonville was the gathering place for the February 21 Group Corvair dinner and meeting. Seven members met at 7:00 for dinner. It was Andrew's birthday. Rob Neighbour had cleared it with the restaurant to bring in a birthday cake. So after everyone had finished dinner Andrew cut the cake (a big chocolate cake with lots of creamy frosting) and served it to everyone at the table. There was still a lot of cake, so he cut a large piece for the restaurant staff to share. The remaining cake was divided up among the club members to take home and enjoy.

Because of the birthday party the meeting was a bit late getting started. Jim Govoni called the meeting to order at 8:15. Jim Simpson gave the treasurer's report. There were no expenses during the past month; income was from dues.

Jim S. reported that several days before the meeting he had received a call from someone on Long Island about a Corvair Monza that he was trying to sell. Jim also heard about a Corsa that will come up for sale this spring. It is being sold by the daughter of the original owner, a former Group Corvair member, who has past away. The car has been garaged for about 20 years.

Jim G. then led a discussion on how cars are inherited and what is involved in the process.

At an earlier meeting Rob had suggested a trip to visit a car collector on the Eastern Shore. That trip will probably not work out--the owner is in his 90's and his wife recently died so he is probably not up to hosting guests. Rob also knew of another collector in the same area, but a visit there also does not seem likely.

The club is still planning a spring outing to the Fisherman's Inn just across the Chesapeake Bay Bridge on Saturday, April 15. This will be in place of the usual third Tuesday meeting. We will meet at the McDonald's on Route 50 just before the bridge at 12:00 noon and caravan to the restaurant. If you have any business items that need to be discussed, bring them to the restaurant--we will have a short meeting along with the socializing. We did this outing a few years ago and it was a big success so we thought we would try it again.

The March 21 meeting will be at Beijing of Greenbelt, 131 Center Way Road. It is in the original shopping district of Greenbelt next to the Old Greenbelt Theater in the Greenbelt Roosevelt Center. We will order a variety of dishes and share them family style.

The meeting was adjourned at 8:45.

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Dues are Due!

I've received dues from several members, but not from everyone! So if you haven't paid up for this year, you will have your chance at the next meeting or, if you can't make it there, send me (Jim Simpson) a check made out to Group Corvair. The dues remain at \$12/year.

Forty, Thirty and Twenty Years Ago This Month

Jim Simpson

In the March/April 1977 issue of *Group Corvair Comments* the club was gearing up for the Freestate Corvair Affair, to be held in Columbia. It was to full blown mini-convention with a concours, rally and autocross along with the usual car display and flea market. (I guess the '76 CORSA Convention at Valley Forge stirred up the club's enthusiasm!) Used Corvairs were pretty cheap back then; the newsletter listed eight cars with prices ranging from \$250 for a '63 4-door to \$1300 for a "fully restored" '62 Spyder.

In national news, the March 1977 issue of the *CORSA Communiqué* reported on the Board of Directors meeting. CORSA was up to 75 chartered chapters although they didn't list the total membership. In the chapter news, there were major spring regional and mini-conventions in planning for most of the country to be followed by the national CORSA Convention scheduled for Minneapolis in July. There was a pretty lively discussion in Tech Topics. In particular, Viton o-rings got a ringing endorsement from Chuck Norris. He related a story about one of his customers who had installed a set five years earlier. The car had been loaned to a family member who didn't notice that the fan belt had broken and totally ignored the red warning light. They drove until the engine stopped running! The engine had gotten hot enough that the spark plug boots melted and ran down onto the heads plus the oil pressure sender broke and sprayed the engine compartment with oil. After the spark plug wires, fan belt and oil pressure sender were replaced and fresh oil added, the engine started again! It was rough running initially, but smoothed out on the way home. After cleaning the engine, the owner found that the o-rings were sealing perfectly. Try that with the original neoprene o-rings! And there were ads for cars and parts; two full pages of cars for sale including Jim Reeves racing Yenko Stinger for \$7,000 (\$6,000 without spares). If only I'd had the money and foresight back then.

Moving a decade forward, the March 1987 issue of *Group Corvair Comments* focused on the coming year. Besides the usual meetings, we had tech sessions, autocrosses, a rally and our fall flea fair on the agenda. Group Corvair had been raising funds for Children's Hospital at the National Medical Center and donating money each year. We received a nice "thank you" letter for our 1986 donation. The Central Virginia Corvair Club was asking for donations to help restore the only remaining one of the two original 1960 Monza prototypes. They needed an estimated \$5,000

- \$6,000 to complete the project after which the car would go to the Corvair Museum. The cars in the ads from the previous month must have sold well; the March issue had only one car for sale, a '64 4-door Monza.

Ward Bourgondien made his debut as a CORSA Director in the March 1987 *CORSA Communiqué*. The theme for the rest of the *Communiqué* was Tech Topics. Larry Claypool contributed his experience to a heavily illustrated five-page article on rebuilding the Corvair carburetor. Larry also continued his “Stock Is...” series with this month’s focus being on headlight bezels (five different ones over the years), parking light lenses, headlights, side lights and other external items. Topping off the Tech Topic theme was a four page index of all *CORSA Communiqué* tech articles published through December, 1986. In the CORSA Classified, there was a nice selection of cars, but nothing that just jumped out as a “have to buy” car. But in the parts for sales, there were a lot of items that are now rare or unobtainable such as a complete Crown turbocharger, a '65 95 hp engine that had never been installed in a car and various mid-engine V8 parts.

Twenty years ago, in the March 1997 *Group Corvair Comments* Jim Simpson was commenting on the state of the club in the club’s president’s column. How did I get hooked for that job since I was right in the middle of getting our '66 Corsa completed for the Lake Placid CORSA Convention? In any case, based upon the minutes in the newsletter, we had been having some pretty productive meetings with relatively ambitious plans for the coming year and we even had two new members join the club. Curt Shimp, who retired from Mobil Oil (this was before Exxon and Mobil merged), wrote a good article on “modern” motor oils. He pointed out that the testing showed that the oils of 1997 were light years ahead in every respect of those from when the Corvair was new. One test that caught my attention was running an engine at 3000 rpm at wide open throttle while being loaded as if it were hauling a trailer up a steep hill for 64 hours straight. The bulk oil temperature was artificially held at 300°F, hotter than you’ll ever likely see on a Corvair engine. Engines using oils that meet this test – and therefore meet the then current API standards – show minimal wear and few deposits. And that was 20 years ago. In the 'Vair Vendor, sales were picking up again with 16 cars for sale. There was a good selection of earlies and lates, coupes, convertibles, Lakewoods and vans – something for everyone.

CORSA Board of Directors elections were in full swing in the March 1997 *CORSA Communiqué*. Five people were contending for the Eastern Division with two for the Central and one for the Western Divisions. Tech Topics continued the series of “Engine Recipes” with part three, ideas for a competitive autocross engine. The only areas that the five contributors agreed on was to bore the engine as much as possible, to deflash and clean everything up for maximum cooling and air flow, and to start with the four Rochester HV carburetors. After that, all five had diverging opinions on pistons, rings, cams, head modification, exhaust systems and ignition. I guess the lesson here is that there is no single “best” way to build a high performance engine. There was just over a page of cars for sale; a good selection of all models and years, but nothing that caught my eye as a “if only I’d bought that car”.

Where Did The Late Model Corvair Rear Suspension Come From?

Jim Simpson

This is based upon a posting by James Rice on the Virtual Vairs. As everyone knows, the early model Corvair rear suspension uses “swing axles” to provide an independent rear suspension (IRS). IRS allows the engine and transaxle to be firmly attached to the body of the car while the rear wheels can move independently of the fixed-in-place differential but also independent of each other. This gave the first generation Corvair car an excellent ride and good traction over uneven roads. Swing axles, however, are not without their faults, the major one being that the rear wheels change camber (angle with respect to the ground) with changes in load. In a straight line, this isn’t particularly important but when under hard cornering loads, those changes in rear wheel camber (and the commensurate changes in tire traction) can also make for tricky handling, in particular a fairly abrupt shift from under- to oversteer.

Chevrolet recognized this well before Ralph Nader and his book were more than a gleam in his publisher’s eye. For instance, Chevrolet supported racing the Corvair shortly after it came out in the fall of 1959. In a 6-hour endurance race in the fall of 1959, one Corvair had a rear tire fail which caused the car to flip. While this was not directly due to the swing axles, Zora Duntov (of Corvette fame) “fixed” the issue by changing springs and rear camber settings (extremely “negative” camber, that is, having the bottom of the tire farther out from the car than the top) and using better tires. But the handwriting was on the wall that swing axles were not the optimal IRS design and Chevrolet decided on a new design for the second generation Corvair.

But where did the basic design for the late-model Corvair IRS come from? From James Rice's posting: *It's also been said: "It was also Duntov who took the principles behind his IRS for Corvette to develop the rear suspension that debuted on the '65 Corvair." This subject has come up before. The IRS rear suspension on the LM Corvair, or the principles behind it, did not originate with Duntov's IRS on the '63 Vette.*

This IRS configuration was introduced by Eric Broadley (British race car designer and founder of Lola Cars) on his front engine Lola Mk 1 small bore (1100cc) sports-racing car early in the 1958 racing season in England. He then used it on the front engine Lola Mk2 Formula Jr in 1960 and the rear engine Mk3 F-Jr in 1961. Colin Chapman (British race car designer and founder of Lotus Cars) copied the design in 1960 for his rear-engine Lotus 18 formula car and Lotus 19 sports-racer. It may be the only thing Colin Chapman ever copied. Jaguar copied the configuration in 1959 on the prototype E-type Jaguar, the E1A. It was followed by the E2A, which was raced by American Briggs Cunningham's team at LeMans and elsewhere in 1960. The configuration was then used for the production E-type, introduced in 1961.

Duntov used this configuration on his CERV 1 open wheel car, which debuted in late 1960. Chevrolet R&D participated in the CERV 1 creation. The IRS configuration was used on the 1963 Corvette, introduced in the fall of 1962. We do not know if Duntov had any direct involvement in the 1965 Corvair's IRS. Chevrolet Production Engineering certainly had the talent, and undoubtedly access to the prints, for the IRS configuration. I have no idea if any of the Corvette and Corvair IRS parts are interchangeable. But I doubt it.

Thus, the LM Corvair's IRS configuration originated in England via Eric Broadley's 1958 Lola Mk 1, not with Duntov or his principles. So far as I know, only Jaguar and Chevrolet used the configuration in production cars. IIRC, the Corvette used it until the C4 entered production sometime in the early 1990's.(?) Jaguar also used it on all their production cars for a really long time, maybe until the XK-8 came on the scene in about 1996.

Actually that basic IRS design was used up until 2006 on the Jaguar XK8 and Aston Martin DB7. If you look at the Wikipedia article on the Jaguar XKE rear suspension design (https://en.wikipedia.org/wiki/Jaguar_independent_rear_suspension) you will be able to recognize the close relationship between the Jaguar XKE rear suspension and the late-model Corvair suspension. The 1963 and later Corvette IRS is significantly different, using a leaf spring between the wheels rather than the outboard coil springs on the XKE and Corvair, but even so, it still follows the essential design principles that were that Eric Broadley originated with his Lola sports-racing cars. So the late-model Corvair can lay claim to some excellent "racing genes" in its evolution.

Tech Topics

Jim Simpson

Changing Oil? You do change the oil filter with every oil change, right? Consider pre-filling the oil filter when you do. On a Corvair, it's easy since the oil filter is normally installed vertically – unless you have an air-conditioned car or one with a "smog pump". By pre-filling the oil filter, the bearings will have oil supplied just as soon as you start the car – no delay while the oil filter is filled.

Corvair Clutch Cable Problems: One of the more troublesome parts of the Corvair is the clutch cable on manual transmission cars. They are all made of a multi-stranded steel cable with the appropriate attachment fittings on the ends. One problem shared by all years is the cable itself failing. With repeated flexing sometimes one or two of the strands break allowing the cable to seem to stretch a bit while shifting. (The pedal has to go a bit farther down before the clutch is disengaged.) That's a sure sign the rest of the strands are on the verge of failure and it's time to replace the cable.

I can't speak to early-model cables, but one change they made with the late models was how the cable attached to the clutch pedal. On the late model, at the driver's end, the cable uses a small ball that was swaged onto the end of the cable. This fits into sort of a fork with a grooved clip on the arm operated by the clutch pedal. As you operate the clutch pedal, the arm with the fork swings in an arc changing the attachment angle of the clutch cable. Note that the clutch cable is under a lot of tension when you step on the clutch pedal. Ideally the ball slides smoothly in the fork and there is no side force put on the cable. Unfortunately that's not the reality. On all of the clutch arms that I've seen, the fork is too tight and the ball isn't free to move. Adding to the problem is that few people realized that ball & fork

hidden up under the dash needs to be greased once in a while. So with repeated operation, the cable is flexed right where it attaches to the ball and eventually the wires fatigue and fail.

The best fix is what Chevrolet finally did with the 1969 models! They replaced the ball with a Heim joint (a captive spherical ball and socket assembly) that fits on a pin overall greatly reducing the side forces. But you can help alleviate the situation on the '65 – '68 models by checking the original fork. You can bend one side of the fork a small amount to eliminate any binding – on my '66 I found that it was so tight there was mechanical interference keeping the ball from swiveling. That's the way it came from the factory! After you've assured yourself that the ball is mechanically free to move, make sure it is periodically greased to aid its movement.

You might also consider carrying a spare cable and the tools needed to install it. Clarks does offer a cable assembly that comes in two parts that makes it easier to store in a Corvair. I've heard that you can store a full sized cable under the passenger's side carpet next to the door sill, but haven't tried that myself.

One other note: I've heard that the reproduction cables that the Corvair vendors are currently selling are using a cable made with fewer but thicker strands. One issue with that type of cable is that it will be stiffer and somewhat more subject to fatigue failure. That makes it all the more important to keep the swivel ball free moving.

Improved Way of Adjusting Fan Belts: Most people when they adjust the fan belt use something like a large screw driver stuck down between the fan belt pulley and the engine shroud to provide some leverage on the idler pulley. This risks scratching the shroud if something slips. A better way is to make a **heavy** wire hook with one hook to fit over the hub of the idler pulley and the other (at 90 degrees) to fit on a pry bar. Use something like 3/16" welding rod to give it enough strength. Hook one end over the pulley hub, the other over the pry bar and rest the end of the pry bar on the idler pulley pivot bolt. That will save the engine shroud paint!

By the way, do NOT over-tighten the fan belt. Experience has shown that the shop manual specification is really too tight. If you adjust the fan belt so that you can just barely move the alternator/generator by hand with the fan belt cold, that's about right. Tighter tends to cause the internal reinforcing threads on the fan belt to break, causing the belt to loosen too much and flip or break.

Vair Vendor

For Sale: 1964 Spyder Engine, "best offer". Contact Bob Wildes, 410-778-8184 for more information.



For Sale: 1961 Corvair 900 (Monza), 4-door, 21,000 original miles. Excellent condition inside and out, never any rust. Repainted a teal green (acceptable, but not a great paint job) with the original blue/green interior. Powerglide automatic, resealed engine with later model magnesium fan and alternator, fresh carburetors. Have all original books and paperwork as well as receipts for parts from Clarks Corvair Parts. Asking \$7,000. Contact John Mays, 410-221-8735 for more information.

“WALKING” SUSPENSION

One of the most intriguing—and rewarding—features of Chevrolet’s revolutionary Corvair is its superbly smooth, supple ride. The reason for it lies in a suspension system unique among U.S.-built compact cars: independent suspension at all four wheels.

Here’s how it works: each wheel on a Corvair rests on its own deep coil spring, which absorbs road shocks independently of the other wheels. Say, for example, that you’re cruising along a choppy dirt road and your left rear tire suddenly sinks into a rut. In any other U.S. compact car, the *right* rear wheel would react as violently as the left to that jolt—which is only natural, since both rear wheels are locked together on a single axle. But in a Corvair, the wheels are divorced from each other, so you virtually “walk” over the ruts.

This “walking” suspension helps keep your Corvair glued firmly on the pavement for extra traction and control on slippery roads. What’s more, those resilient coil springs won’t squeak,



which means a quieter ride. And Corvair’s independent suspension cushions the car’s overall weight for a soft, comfortable way of going.

This 4-wheel independent suspension is, of course, a tremendously important advance in the design of compact cars. A five-minute turn at the wheel will show you just how important. The man to see is your Chevrolet dealer—and there’s no better time than now. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Technically speaking, Corvair is probably the most fascinating car to come down the U.S. pike in the past 49 years. Here are some of the engineering advances you’ll find: an air-cooled “pancake” six engine, mounted in the rear . . . unit construction . . . an amazing unit combining engine and transmission in one compact package.

corvair
BY CHEVROLET

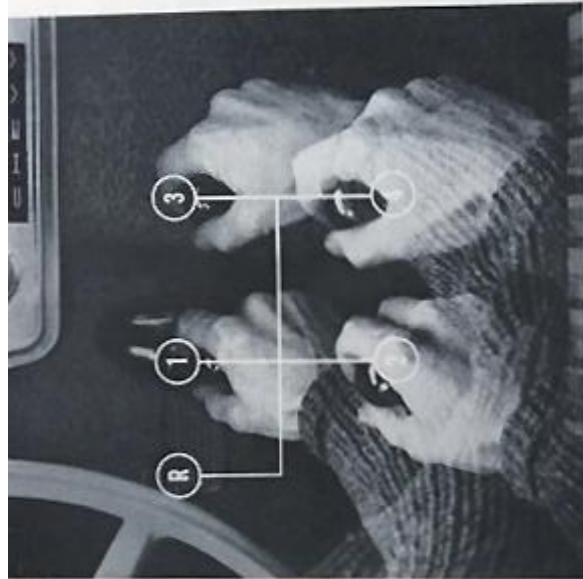
191

Group Corvair welcomes anyone in the Washington, DC area who has an interest in the Chevrolet Corvair. We sponsor a variety of events including shows, tech sessions, and social gatherings. Dues are \$12.00 a year, payable to Group Corvair and sent to the treasurer’s address. Group Corvair is a chapter of the Corvair Society of America (CORSA), P.O. Box 607, Lemont, IL 60439-0607, website: www.corvair.org CORSA memberships are available at various levels with corresponding dues. As a member, you will receive the award-winning CORSA Communiqué and be eligible to attend all CORSA national events, including the annual convention.

'61 CHEVY CORVAIR: THREE TRANSMISSIONS

You know, one extremely pleasant thing about Corvair is its versatility. For instance, take transmissions. You can, of course, choose the standard three-speed box or Corvair Powerglide*.

But the big news (and, please) is our new floor-mounted all-synchromesh four-speed transmission*. Essentially, it's patterned after the design you'll find on many a Corvette—and the experts say that one's among the best in the business. For the technically minded, Corvair's four speeds line up like this: first, 3.65:1; second, 2.35:1; third, 1.44:1 and top



1,000:1. Nicely spaced, superbly smooth.

Now, maybe you figure a four-speed gearbox gives you just another gear to shift. But then maybe you've never dropped your hand onto a palmful of pure driving sport. Frankly, though, it's next to impossible to sell you on an outfit like this in words.

You've got to sell yourself—which you'll probably do, once you've had a taste of it. At your Chevrolet dealer's... Chevrolet Division of General Motors, Detroit 2, Michigan.

*Optional at extra cost.



The 1961 Corvair 700 Club Coupe

Corvair, you know, is still the most advanced car in the land—and we've had a solid year to refine those engineering marvels: independent suspension all round... air-cooled aluminum engine in the rear and all the rest. Check into it—and while you're at your dealer's, get a load of that Greenbrier Sports Wagon!