STRAIGHT TALK

VOLUME 6, NUMBER 2

JUNE, 1992





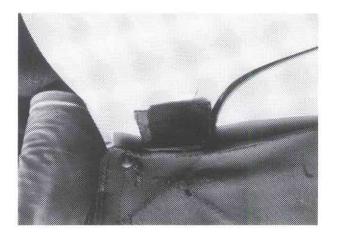
Soft Top and Hard Top Latches 56-62

Tapered hard top latch (left). Round soft top latch (right). See page 3.



57 Red Top Washer

(see page 11)



53-55 Soft Top Mohair Flap

(see page 11)

STRAIGHT-AXLE CORVETTE ENTHUSIASTS (SACE)

SACE (pronounced like sack) is a national club dedicated to enjoying the 1953 through 1962 Corvettes. Our quarterly magazine "Straight Talk" is published Mar/Jun/Sep/Dec.

Show locations are selected to provide fun activities for the whole family, comfort and convenience for a reasonable cost, and suitable facilities for the Corvettes. The owner selects the class in which the vehicle will be entered from the following categories.

Trailered Restored: Show room condition is the goal. These cars should have no paint chips, wear, oil leaks, etc. They should have the appearance of a new car that has never been driven.

Driven Restored: Some signs of wear are to be expected. These cars are used and enjoyed by their owners, so no deductions are made for minor paint chips, wear, dirt, or fluid leaks.

Contemporary Restored: These cars may have major nonoriginal items (i.e. engine, paint, etc.) may be partially customized, or in the process of restoration. The owner may select one item from each of three categories (interior, exterior, mechanical) on the score sheet which will not be judged, but full points will be awarded.

Unrestored: Cars which show their age and no attempts to hide it.
Points are deducted for new or restored items.

Custom: Expect to see lots of chrome, customized paint jobs, creative body work, suped-up engines, and other imaginative modifications.

<u>Display:</u> These are unique cars; one-of-a-kind racers, prototypes, etc. There's no way to compare them, so they are offered for viewing only. This class is also available to any participant who wishes to show a vehicle but not have it judged.

Owners who wish to have a vehicle participate are required to sign a hold harmless agreement and present proof of property and liability insurance for their vehicle.

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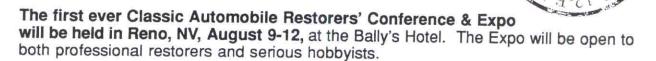
CAR EXPO '92

CLASSIC AUTOMOBILE RESTORERS' EXPO '92

AUGUST 9 - 12, '92 - BALLY'S HOTEL - RENO, NV

PRESS RELEASE

CLASSIC AUTOMOBILE RESTORERS' EXPO IN RENO AUGUST 9-12 -CAR CLUBS TO BE GIVEN SPECIAL PRIVILEGES



Over 40 hours of education will be offered, including:

- Rust: Causes, Effects, Removal Techniques, and Prevention;
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- Care for the Restored Car Protecting Your Investment
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And More!

These workshops will be offered from 9:00AM-12:45PM on Monday, August 10. On the morning of Tuesday, August 11, individual car clubs will offer education and meetings. Also, exhibitors will be providing live demonstrations on an ongoing basis on August 10, 11, and 12.

Running Changes 1

by Noland Adams

A tlast, the final restoration phase of my 53 has begun. Old #284 hasn't been on there road since 1965, a longer term restoration indeed. With the help of several folks in Fresno and Clovis, the car is now at Don Mullenhoff's. Don has a wealth of experience in older Corvettes, so I'm helping him.

Working on the 53 renewed my interest in variations between serial numbers. So starting with this issue, I'll be writing about running changes. Running changes affect us all, and its something that every member of SACE who owns a Corvette can get involved in.

First, let's define a running change. There are two types of changes that were performed by the Flint or St. Louis Corvette assembly plant. The most easily recognized is the model year changeover. An example is the 1957-58 headlights (was that 2 per side or 3 + 1?). Anyway, this is an example of a model year change.

Running changes are made during the model year production run. These may be noticeable changes like the 9 fin to 7 fin - and more -valve covers variations from 1956 to 1959 Corvettes. Or the tachometer changes within the 1958 model year. Or the changes from charcoal to black exterior paint during 1958.

More likely, running changes are small, often hard to detect items. Being a large Automobile Manufacturer, Chevrolet is constantly changing vendors. Let's say a certain type of clip is used to hold trim in place. (I purposely stayed away from safety items like steering nuts or bolts.)

In our example, a certain trim clip is unique to the Corvette, and each car uses 10 clips. As a new passenger car model is introduced, a new clip is fabricated to retain its trim. A later comparison shows that the two trim clips are close enough in design to use either one.

This would result in Chevrolet's purchasing department contacting both vendors for a price on larger quantities. The assembly line of both passenger cars and corvette would eventually be supplied with the same part number. If it was a different part, this would be a running change. Production line documents like the production part lists and the assembly instruction manual and perhaps the parts books would be changed to reflect the running change

Model year changes like the 1957 to 1958 front end changeover can involve hundreds of parts at once. Just think about this 1957 to 1958 change. Besides wiring harnesses, there are the light bulbs, retaining rings, bezels, and many small springs, nuts, bolts, etc. Then there's changes in the front fenders, bonding strips, outer trim and retainers, etc.

Running changes may involve only one item, or may include several items, like the fuel injection air cleaner changes in 1962. While running changes are smaller (by using less parts) each time they occur, running changes out-number model year changes 10 or 20 to one or more. We're comparing the parts quantity here, not the time each model year or running change occurs.

The reason we're giving running changes so much attention is that there are Corvettes out there with original but unacceptable parts. An example might be 1959 parts on a 60 model. Just how could such "wrong" parts be original?

New parts replaced last years parts during the model year changeover, but often there were extra parts leftover. Let's say 1060 production has started, but a large quantity of 1959 parts exist. In order to use up the leftover parts by installing if the previous year's part will fit the current production car.

The proper terms here are "fit and function". If the previous year's leftover parts fit and function properly. Then he requested a variance from Chevrolet Engineering in Michigan. If such permission to use the parts were granted, it could take a couple of weeks.

By now we're well into production- say 3 weeks. But in order to use up last year's stock, we're going to move them over to the assembly line where they will be installed today. This could include such items as door panels, think how this will confuse some Corvette owners 30-35 years from now. The owner might not even know until he/she sees another car, expecting to see an identical car. There are many such

examples of owners trying to determine just which car has original parts.

The most documented case of such an occurrence is with 1960 leftover radiators being used in 1961 Corvettes. Yet after a discussion at the SACE convention in Springfield last year, we found that the use of 1960 leftover radiators was misunderstood.

If you care, the bulletin is on page 350 in my book. What it really says is that there were both leftover copper standard radiators and high performance aluminum 1960 radiators . In the beginning of 1961 production, the copper radiator were installed on Corvette with standard equipment engines , and the 1960 type aluminum crossflow radiators will be installed on all 1961's. After the supply of copper radiators is exhausted, all 1961 Corvettes will use the 1960 type aluminum radiator on 230 hp cars.

Finally, "when the supply of 1960 type aluminum radiator is exhausted. Corvette production will use aluminum radiator part number #3150916 on all other engines." These last two "normal" 1961 radiators use the now familiar separate surge tank.

The owners of some cars with running changes would like to know if their parts are original, or perhaps just how rare their car might be. Like 1954, serial number 82 (E54S001082), which is a red car .His question is, do I have the first non-white Corvette? Actually, we'd like to account for all the red, black, blue, and ??? 1954's. If you know of a non-white 54. Please share that information.

At the same time, a 1957 owner is questioning his engine block, which appears to be correct by the casting date. He's owned the car since 1964, so he fells is this the original block. However, instead of the readily accepted 1957 block, 3731548, his bears the 1958, within the last 400 serial numbers. Any other late 57's out there with a 3737739 1958" block

Now for a list of running changes, the 1953 engine numbers:

Seri	al Number	Engine Numbers	Serial Number	Engine Number
1.		Lay300 *	204	Lav517174
3	************************		206	Lay517162
33			214	Lay517164
35	***************************************		225	Lay557854
51	*******************	T 120000014	226	
65	***************************************	The second secon	236	Lay566992
66			249	
79.79			253	Lay567025
80			260	1
89		Lay425223	265	1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
91			268	
93 .		Lay505454	276	I Ferroma
108		A STATE OF THE PARTY OF THE PAR	278	
112		Lay507604	281	Lay566999
131		Lay512507	283	
145		A COMMON	284	
149		T PERSON	288	Lav566988
of course			297	
1.757		St. of the second	300	A CONTRACTOR OF THE PARTY OF TH

* last 3 digits withheld by request

The first 1953 block casting number was 3701481, changing between casting dates J133 and J163 (OCT. 13 to 16, 1953) to the second type 1953 block, casting number 3835911, about serial number 230.

Note that my serial number 284 and the previous car (288) have consecutively numbered engines! the only two examples that exist, to my knowedge.

The above are just examples of running changes, ther are many more. We don't know the direction of futire article will take, because it will depend on the letters I get from you, the SACE members. I look forward to hearing from you.

HOT AUGUST NIGHTS

Every August in Reno there's a big fun event called Hot August Nights. This year there will also be a series of classes and seminars: Body Repair, Painting, etc. Roy Braatz and I have been asked to give a seminar or two, so we've told the folks that run the show what we can do. There's been no final decision, but we may be giving a seminar or two, plus there may be special events for S.A.C.E. members. See you in Reno, August 9-12, 1992.

Later, NOLAND.

CHIEF INSPECTORS COLUMN

by Larry Richter

As spring approaches, we un-mothball our cars, decide to do some detailing and pump up the tires, and to find where you put the keys last fall, then have a beer and sit and read Straight Talk. This month I would like to talk about two items.

1. Why have your car inspected? One of the reasons for this club is the knowledge that can be obtained on our Straight axle Corvettes. We are solely dedicated to a nine year span of early Corvettes. As time goes along we will lose various facets of production and will become changed due to lack of research, lack of knowledge and lack of fully understanding what really happened. I have been around the Corvette hobby for many years, and every time I go to a show and judge or observe or listen, Ilearn something else about these early Corvettes. As we continue to learn about these cars, it becomes an ever increasing need to research and to obtain information that we can use for our cars. We find that someone has decovered or come across a piece of information that is vary unique. Just because it is written in a judging manual or a book is no sign that it may be 100% correct.

If you are interested in the custom cars, what unique item can you do to your car that nobody else has thought of. How can you improve on an idea that somebody else has on thier car. Someone is building thier car and sit around and talk and exchange ideas. How about this? How about that? The best way to learn the car, weather it be original, modified or custom, is to inspect these cars. The best way to know what you have is to have your present automobile inspected. We are a learning club, no one has all of the answers. I received many calls and many letter regarding questions on Corvettes. some I know and some I will admit that I don't know the answer, but I believe we can find the answer with enough people putting thier thoughts together. Wouldn't it be nice to know everything about the car?

So, in closing on this point, come to our conventions and have your car inspected. Who knows, we may find out some unique point or learn something new.

2. The second item is the points situation. We have had much conversation over the last 2 or 3 years about granting points or not. We took the various flight awards away and went to a straight percentage. If we are going to continue to have a good club, we need a measurement. What is the measurement? If you have a pass or fail, what is that measurement? If you have a

pass or fail, what is that level? You still have a mark that is a percentage or points to go against. When we are in a show we are competing with no one. Each car is individual and each person can receive 94+ or everyone can receive 50%. Why did they mark me down? You go back and you look and say, "well this, I suppose, could be a little bit neater" or "yes," I could have done a little better detail on that piece of fiberglass or metal" I could have restored the original part instead of using the incorrect later item. So I believe we must keep our measurement as a benchmark for these automobiles. What we do need to accomplish is better training for our inspectors so we go through the cars a little faster and teach a little better. Again, there are a lot of items that we know the answer to. There are a lot of items that we think we know the answer to., but may not.

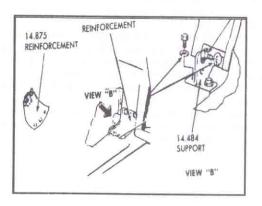
In closing this column, we need to all gather information, share information, and learn. Wouldn't it be dull if we knew 100% of everything. So keep your knuckles skinned, the frustration coming, those four-jointed wrenches turning on those little hidden bolts in our cars,

and see you at the Convention this summer.

Larry Richter, Chief Inspector

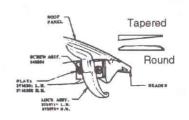
Seat Belt Reinforcements

HE DRAWINGS on this page show the location of the reinforcements used in Corvette from 56-62. Not all 56-57's had them, 58 up did. They could be added to 53-55, and some were added maybe by the dealer? But usually 53-55 was a 3 inch flat washer type affair. Now, for 56 up, two types were used, one was reinforcement panel inner l/s or r/s having the bolt pressed into the plate, and second was a plate where a bolt was added. They were riveted to the body using 1/8 x 3/8 rivets, if a bolt was used, it was a 5/16 - 18 x 7/8 which also used a lock washer and nut. Remember some 56-57 didn't have them installed to the body. where as you needed to order and install them. The outer reinforcements were always there, riveted to the body, because it was used to support either the power top, or soft top brackets whether they were installed or not. Concerning the belts themselves, is still an on-going argument, so I'll NOT get in to that at this time.



Soft Top and Hard Top Latches 56-62

riginal latches are of the short handle type for Early vetts and the longe handle type for Mid-year vetts. This is something I beleave most owners of early vetts know, BUT most owners don't know the difference between a soft top and a hard top Latch.



Because of the configuration of the hard and soft top header being different where the latches are installed, each one is a unique design The back side is either tapered or round.

This is a consideration when you latch the top to the windshield, other wise the guide pins have a tennessee to bind while you draw down on the latches, (this can be a reason for broken pins, latches, and a poor seal, keeping rain out). If some one, some day, does repro. a latch, check to see if it is tapered

or round. Are you starting to see the rationality for paying attention to a real original part??? Again, this would be the time to look for original latches because you know the judges after reading about this well know what you know now, and well have this added to the next judging manual. And you

the SACE members, now have a jump on those people that are not SACE members in locating them first.

Fig. 1 shows the round back side which is used on a soft top, also the tapered back side which is used on a hard top. Looking in Clymer handbook page 205, and looking at the photo, they show the wrong tapered latch on a soft top, remember, that is a drawing. But you are looking at a correct 56-early 59 top frame, (A) is were you would lengthen the frame header to fit the windshield, the gap between the frame side plates, illustrates the year as being 56-59. and notice rubber, weatherstripping starting from the middle

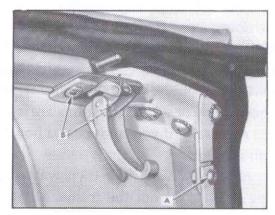


Figure 1 - 1956 to 1959

of the side windows, that is NOT reproduced by any one. Also while your in the smaller yellow book, check page #219 Fig 2, and you well see the mid-year 59-62 soft top frame assy. illustration, that doesn't have a gap at the plates, and also the (ONE) piece header weatherstripping that only goes the distance of the header, and had corner blocks and the metal strip using screws to hold it on. This is

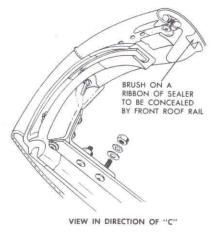


Figure 2 - 1959 to 1960

the one you get today, some suppliers say is the right one for all years. I can only find part numbers for (I believe the soft top),#3729720 R/H and #3729719 L/H.If someone in the great corvette world,has the other numbers, or prints,for the hard top, please let me know. Again; this is something most owners may not know,but remember! you read it here first. Note; for those that also own a mid-year 1963-67, the same applies. The soft top latch is round, while the hard top is tapered, same back area as the early corvettes. EDITOR ROY

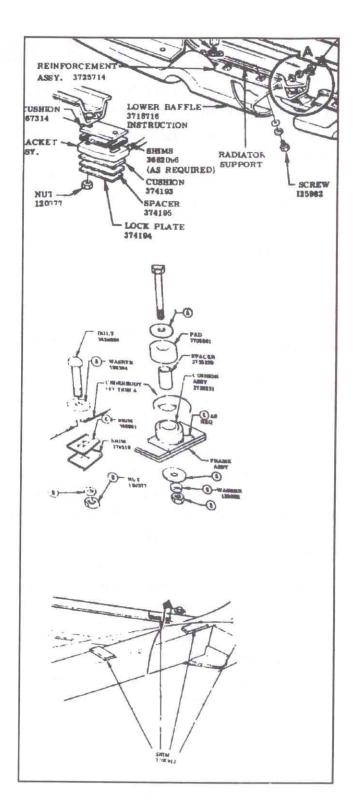
Body Fitting

I have always wanted to try and explain a misunderstanding. Because most owners are not thrilled about removing the body during a restoration, thinking that upsetting the mounting shims well cause problems, when reinstalling the body. I have witnessed owners that have accomplished doing it that way, and I have to take my hat off to them, think of it!, to remove the power train, stripping the paint, rebuilding the front and rear frame parts, and cleaning the frame, MAN that's endurance, determination or madness. But, if you could remove the body in a day, wouldn't it be more simple doing those things with it off?

Think of it! 12 bolts, disconnecting the steering, gas line, tail pipes, splash shields, and a few wires and off she comes. Paying attention as to how many or where the shims are is O.K but not necessary, if you understand how the body fit is obtained.

Everyone may have their own way of removing the body from the frame, but once everything is disconnected, I put a rope on the rear trunk hinges and the front female hood latches, then using a come along lift the body from the frame. (regardless of how you do it) once the body is removed you will see how easy everything is to work on. And once the body is done and painted, I reassemble all the body parts completely before reinstalling it.

NOW: lets think of placing the body on the frame as if it had never been on a frame before. Assuming the frame is straight (not bent), you place a (one) rubber cushion at each location in the cockpit area along with a (one) steel shim placed on TOP of the cushion and using masking tape ,tape them to the frame. Now with doing only that, set the body down on the



frame, and tighten the bolts.

Now try to see in your minds eye that the center body area is level, and secure to the frame. With this done-now is the time to hang the doors aligning the gap along the bottom and front fender. UP or DOWN, and FOR-

WARD & BACK by loosing the (THREE) bolts inside the door, at the hinges, top and bottom. The, IN and OUT will aline the door skin to the body skin, by loosening the top and bottom hinges (TWO BOLTS & TWO SCREWS) at each hinge at the body, Push in or pull out, if by some reason the door leading edge is still not matching nice (you shim the door between the hinge and door itself)

Try by adding a shim forward or rearward at the three bolt locations. Think it through, as you go about it, and it well make sense to you. O.K. with this done, the next step is to think of the body bolted to the frame at the center area and the doors aligned with the body. You (may now have a gap) at the rear of door and body. HERE is now how the guys on the line determine the amount of shims used

By raising the front or rear of the body (raising either end, and shimming) is how the DOOR rear area gap is closed. Looking at the drawing where the body is flexible is where pressure is put, which in turn also puts pressure in the floor pan area needing to also add the four cushions between the floor pan and frame, which reduces movement of the floor pan, as you step in.

Using a floor jack raise the body at the rear CENTER and install the rear rubber cushions, next at the front, again with the jack raising the body and with what shims you have or got as a kit set them in. Now: looking at the gap between the body and the rear of the door, you either raising the front, at the radiator support, using shims, and at the rear, doing the same, close the gap till you are satisfied. Starting at the front, then going to the rear, back and for the, and shimming, will close the gap. Remember! rubber gets old, things move and if you need an adjustment, by using this procedure you can correct your problem. These Corvettes were, by most part, hand built, and by shim-

ming various areas, the body was corrected for fit. Trunk, soft top lid, and hood are BODY SKIN aligned, using shims. I see many Corvettes not using shims that are restored thinking they look unacceptable using them and putting up with a poor fit, G.M. used them and vary few Corvettes didn't. The reason I am writing about this, is to try and make owners understand (how and why shims where used) and not to be concerned about removing the body to restore or correct a poor fit. EDITOR ROY

It's Spring Again!

A h yes. Spring, when a young man's fancy turns to corvettes. But this is a different kind of spring-like rear spring dates. Lately I have been asked about the dates on springs-just how does one decode the code found on springs? if anyone knows, please drop me a note (PO Box 1134, El Dorado, Ca 95623), or write an article for Roy about rear spring dating. Thanks!



S.A.C.E. Corvette

Owned by Mike Hache.
Purchased Vancouver, BC.
\$1,800 at 3 a.m. September, 1979.
Car 1957 Fuelie 283CI, 283HP.
Driven most weekends.

Experts (90-100) Revisited

by Dale Pearman

long time ago, (longer than I care to remember), a very nasty man in an Army uniform with stripes filling both his sleeves expressed his opinion regarding my being, ancestery, and hopes for the future. He insisted that I lay in a puddle of mud, then sit in a puddle of mud, then kneel in a puddle of mud and finally stand in a puddle of mud while firing a 0.30 caliber Garand M-1 rifle at a bullesye target with a red flag waving back and forth across it! It seemed that the more the flag waved, the more angry the Sergeant became. His remedy for whatever was bothering him was to have me do push-ups and spend hours cleaning pots and pans in the kitchen. I had many such episodes with this game until finally I won a prize: "MARKSMAN". I received a pewter medal and lots of praise. Evidently, a given number of shots had more or less hit the center of the target resulting in a numerical score. Motivated by my success, I became increasingly interested in shooting that stupid gun and soon qualified as a "SHARPSHOOTER." I simply achieved a higher numerical score than that required for "MARKSMAN". The next stop was "EXPERT"! You had to score very well for this rating. Perfect was 100. EXPERTS scored 90-100 points; SHARPSHOOTERS scored 80 to 89; MARKSMEN, (or MARKSWOMEN) scored 70-79. I never did achieve an EXPERT rating. I remained a SHARPSHOOTER.

There are several M-1 EXPERTS in my platoon. It was amazing how much they seemed to know about the rifle in addition to how to use it. They knew its weight, muzzle velocity, length, maintenance procedures, adjustability, etc. One person even knew about the finishing techniques, steel quality, etc.! He must have been a gun nut. Whenever any of the rest of us had a question about the M-1 we would ask one of the EXPERTS who usually had the answer. They provided leadership for us and not surprisingly were advanced in rank and priviledge. I cannot recall anyone's being envious or resentful over the accomplishments of these EXPERTS. We were grateful to associate with them because a lot of their expertise "rubbed off on us." They wore EXPERT medals proudly on their dress uniforms.

In the Corvette hobby, things are a lot different. Noland Adams is reputed to have once commented that you work your head off to help someone solve a restoration problem, give them the answer, and they kick you in the shin as a reward! I can agree that on occasion it seems that way to me as well. Corvette people tend to hang a label on everything and everyone in the hobby. If you attempt to investigate an issue and

then share your findings and opinions in print or by word of mouth or video tape, you get labeled, "EXPERT". The longer you've been at it, the more you become widely known as an EXPERT. I don't know of anyone in this hobby who has proclaimed him (or her) self as an EXPERT. This status gets assigned to you by others and can be either welcomed or unwelcomed. Marketing people attempt to sell books, tapes, and seminars by proclaiming individuals, "EXPERTS. NOTED CORVETTE HISTORIAN, KNOWLEDGABLE ENTHUSIAST," etc. In my case I think ABSURD, as well as funny as all heck, to be regarded by some as an expert. I know what I know and I have a great deal of respect for what I don't know; which is a lot! No one person knows it all! I've been at this hobby seven days a week for the last ten years and have owned Corvettes since 1961 but I've learned more in the last four months about 1961 Corvettes than at any other point in time due to the opportunity to disassemble an unmolested example of a 245 HP convertible. For the last five years I've been disassembling and judging Corvettes while photographing and writing about what I find in the process. By sharing this information I've been labeled, "EXPERT"

I'm really a Corvette SHARPSHOOTER (80-89)! Labels are important to some of us so I'll be just as happy if you call me "SHARPSHOOTER", or "MARKSMAN" or preferably, "GOOD-OLE-BOY" from West Tennessee. I don't need to be regarded as an EXPERT. Some of us have no sense of humor anyway. Some of us behave in spectacular ways when an individual is called an EXPERT. Is this egoistical behavior, jealousy, envy, stupidity, or the correct way to regard leadership? I'm ALWAYS on the defensive with experts who are trying to sell me something!

In the last issue of S.A.C.E. "STRAIGHT TALK", volume 5, number 4, December 1991, Carolyn Grasso-Prince talks about the Corvette Experts by using the word, "EXPERT" to label those whose opinions and behavior are clearly detrimental to the Corvette hobby. I think that she has a problem with the word, "EXPERT", as so many of us do. I truly think, as does Carolyn, that closed minds have no place in hobby leadership. I know of no one person who has all the answers, let alone all the "correct" ones. Carolyn "hits the nail on the head" in identifying the Corvette CLONE problem that results from rigid adherence to judging manuals by both restorers and judges. These manuals are full of mistakes and are constantly changing. Nothing in them is ABSOLUTE, EXCLUSIVE or

INVARIANT. Good judging reflects the relativity or absolutes. Experts who deserve the label are certainly aware of this situation. My concept of an expert has a lot to do with EXPERIENCE, willingness to learn, change one's mind and avoid absolutes in rigid standards. It also has to do with sharing information and helping others. I have no problem at all in regarding such people as Noland Adams and many others in this hobby as EXPERTS. They are the leadership and they have my attention and respect.

The point of this rhetorical upchucking is that I wish

we could label Corvette bores as just that: CORVETTE BORES! These folks are the ones with ulterior motives who have the closed minds and "know it all." Lets give the true EXPERTS the label, recognition respect and reward that they have so justly earned. "EXPERT" is NOT a BAD WORD! (It's 90 to 100).

Dale Pearman, U.P.S., C.O.D. Corvette Sharpshooter (80-89) Atwood-By-The-Railroad Tennessee 38220 (901) 783-5276

1958-1962 CORVETTE DASH PADS

by Larry Richter

Yes, installation of the dash pad for these years of Corvettes is a challenge, but I believe that most of us can do a better job than a professional restoration shop due to the time and care that we take in the restoration of our early Corvettes. Once you decide to do this project, there are a couple of books you need to have. First, the Corvette Servicing Guide, body sections 1-4 through 1-9. The second item is a very good article written in the Corvette Restorer Magazine Vol. 16, No. 2 by Joel Calcagno. After you have read and digested those two articles, I will offer the following tips.

1. As you are disassembling items, label them so that they may be reinstalled in reverse order. I do this with masking tape and a ballpoint pen. This is exceptionally important with the instrument cluster and radio wiring.

2. Be sure to clean the old glue from the dash to make a nice, smooth surface. While you are dismantling, observe any problems that you see with the old dash pad such as pulling out behind the windshield, speaker grill not fitting correctly, end caps not fitting correctly, and study as to the why of those particular problems. Save the dash pad that you have removed for a guide as you are reinstalling the new one.

3. Cut a piece of hard plastic approximately 1/8" larger all the way around than the rearview mirror base and put under the dash pad. What this does is hold the rearview mirror up a little bit more so you do not get that tremendous depression when the mirror is cinched down.

4. For glue I use Super Weatherstrip 3M Adhesive, Part No. 051135. The reason for using this over Contact Cememt is that it leaves you 5 to 10 minutes to manuever and work the new pad into position. If you use a contact type of cement, there is no movement once it makes it bond.

5. It helps a great deal if you have at least one or two

other people to help pull, tug and fit. Here, you cannot use the 10 lb. sledge hammer and 4 ton port-a-power, you have to use a little finesse.

6. As Joe referred to in his article, on the insert on the passenger side and behind the instrument cluster, all of the foam needs to be cut out behind those units. Without removal you will be unable to install the grab bar and cluster in its correct position. Be sure to leave as much of the black as you can and just remove the foam.

7. Last, but not least, plan ahead. If you are replacing the dash pad and you need to put rubber in your windshield, change windshields, repair the radio, or do instrument work, you need to do all of this at one time, because it will all be apart.

Like Joe, I believe that we, as Corvette restorers, can do as good or a better job ourselves than a professional restoration shop can. Plus, one more advantage, we learn about these early Corvettes and how they were put together. Good luck in this restoration project.

Larry Richter Coos Bay, Oregon

Speed Tip #1

by Tony Catalano

HERE IS A good product out on the market that will get rid of the splits and cracks in the steering wheel. It's called MARINE TEX and as you may have assumed from the name, it is originally intended for your plastic boat. It comes as a two part system, mixing a catalyst with the main component. Mix it up, spread it on. The hotter the day or stronger the heat lamp, the quicker it will dry. After it has hardened it can be carved or sanded as needed. This filler will not shrink or check. Then give your wheel a squirt of your favorite color and your rollin'. The product is recommended by the Classic Chevy Club and is available in their parts catalog. It, of course, is also available at most boat marinas and marina supply stores.

TECH HELP

ELBOW

E arly fuel lines being the 3/8, use a vary unusual elbow that is a 45% inlet for the rubber hose and is six sided or hexagon. Imperial is the manufacturer. Corvette Central sells them under part number #351416. No where else I know of (parts houses, that is) carries them, also only the 55, having 5/16 line use the same type elbow.

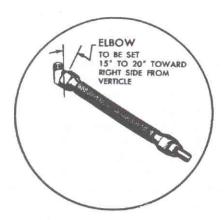


Figure 1 3/8 Elbow

F. I. RATIO LEVER

The way we did it. Back in the old days, as the saying goes. I didn't have a Mercury Manometer to check the settings of my F.I., and few guys did, so we learned how to using our eyes and ears.

Sending your unit out to be repaired or restored is O.K. and they well set-up your unit to the factory specks. But not all vette engines are the same weather rebuilt or not. Manifold pressure and vacuum, control the operation by 99% for setting the power and economy stops. (Assuming that all other components are correct and good).

First; the Economy screw= this screw to make it simple, controls idling, and cruising.

The Diaphragm Lever sets against it after the engine is warmed up ,or cruising at a steady speed. So knowing this -if you notice black smoking at idle or ,cruising or your spark plugs are running lean or rich, you either lengthen or shorten the screw, which in turn well shorten or leathern the lever travel causing less or more fuel to reach the engine.

Second; the Power screw= this screw to make it simple, controls warm-up, while choke is ON, or during acceleration. So knowing thisif you notice black smoking on warm-up, or during acceleration you either lengthen or shorten the screw, which in turn well shorten or lengthen the lever travel causing less or more fuel to reach the engine. Then after you have tuned the unit in, you need to re-adjust the Diaphragm to housing measurement or travel.

Now this may sound to simple to some people, but it is! In fig. 2 you see the words lean and rich, and it means just that, the screws control just how much fuel reaches the engine, I drive our F.I 57 all the time, and when I was setting up our F.I unit I carried a hex-wrench and wrench with me so I could tune in the F.I on my travels, knowing that everything else was O.K. (Black smoke accelerating lean the power stop, black smoke at idle, lean the economy stop). Leaving the side shielding off, I could check the plugs looking for a lean condition. This was how I also dialed in my metering rods on my 55 vette too. That I wrote about in a back issue.

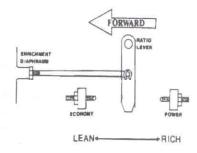


Figure 2 Fuel Meter Diagram



The Northwest Chapter
invites all STRAIGHTAXLE CORVETTE ENTHUSIASTS
(1953 - 62) and their
families to the RESORT AT
PORT LUDLOW in Port Ludlow,
Washington for the 6th
Annual National Convention.

The National Road Tour along the Pacific Coast of California, Oregon and Washington on Highway 101 is being organized by Lucy Badenhoop, phone (916) 729-1165.

The featured year Corvette will be the 1962 on the 30th year since it's introduction. A special collection of 62's is planned and a commerative award will be presented to everyone who brings their 62.

We are putting together an all day trip to Victoria, British Columbia, Canada on the Victoria Clipper, the cost to be determined by the number of people wishing to go.

If you have questions, or need additional information, contact the meet organizers, Bill & Donna Eldridge, 561 Olele Point Road, Port Ludlow, Wa. 98365.

PHONE (206) 437-2120 or FAX (206) 437-2450

1992 NATIONAL CONVENTION JULY 23-26, 1992 Port Ludlow, Washington

Name Spouse/Companion
Non-Member Guests
Address
City State Zip Phone
Membership Number
Year Corvette you are bringingTo be inspected? Yes No
☐ Yes, reserve me parking space for my trailer. Rig size
Complete VIN if car is to be inspected
☐ I'd like to help inspect. Specify Division ☐ 53-55 ☐ 56-57 ☐ 58-60 ☐ 61-62
☐ I'd like to help with tabulation of score sheets.
☐ Please reserve me a space(s) on the Victoria Clipper. How many?
Registration Fee (postmarked by July 1, 1992) \$40.00. Late Fee (after July 1) add \$25.00. Guest Fee (must accompany member) \$10.00 each.
NOTE: Anyone wishing to have their car inspected must volunteer to inspect in a class other than their own.
1953-62 Inspection Certification \$25.00. Display car only (no fee)
Reception Hamburger Barbecue \$10.00 each. How many?
Barbecue on Beach \$18.00 each. How many? Children 12 and under \$13.50. How many?
Local Road Tour (plan to participate).
Awards Banquet \$25.00 each. How many? Children 12 and under \$18.75 each. How many?
1992 National T-Shirts ☐ Small ☐ Medium ☐ Large ☐ @\$12.50.
HOLD HARMLESS AGREEMENT
I agree to insure my vehicle and property against loss, damage and liability and to provide proof of such insurance to SACE. I agree to assume the risk of any and all damages or injury and to indemnify and hold harmless SACE, its Officers, Directors, Agents, Employees and Chapters for any acts of omissions which may result in the theft, damage or destruction of my property or injury to me or to others occurring during or as a consequence of this meet. Incomplete forms will be returned. YOU MUST BRING YOUR INSURANCE POLICY OR VALID CERTIFICATE OF IN-FORCE LIABILITY INSURANCE.
Signature Date
Auto Insured with
Policy Number
Please send completed form and checks to:

Please send completed form and checks to:

SACE NATIONAL 1992 561 Olele Point Road Port Ludlow, Washington 98365 (206) 437-2120

STRAIGHT-AXLE CORVETTE ENTHUSIASTS 6th NATIONAL CONVENTION PORT LUDLOW, WASHINGTON JULY 23-26, 1992

The resort at Port Ludlow is located on the beautiful Olympic Peninsula across Puget Sound from Seattle. It features a championship golf course, marina, olympic size pool, sauna, tennis courts, boat rentals, and sandy beaches for long strolls. Playing and relaxing, plenty of fresh air and open spaces. Reservations should be made as soon as possible by calling the resort at 1-206-437-2222 outside Washington state or 1-800-732-1239 in Washington. Our rooms are blocked until June 23, so make your reservations now. Make sure to mention SACE when registering.

SCHEDULE OF EVENTS

	THURSDAY, JULY 23, 1992
12:00- 5:00	Registration Package Pickup
12:00- 5.00	Swap Meet
12:00	Car Wash
1:01	Arrival of Highway 101 Road Tour from California
2:00- 5:00	Tech Session/Workshop
5:00- 6:30	Welcome Reception
6:30- 7:30	Barbecue
8:00-10:00	Tech Session/Workshop
	EBIDAY IIII V O. 1000
7:00	FRIDAY, JULY 24, 1992 Car Wash
7:30- 6:00	Boat Trip to Victoria, British Columbia for sightseeing and shopping
9:00	Owner's meeting
9:00- 3:00	Inspection Certification
12:00- 1:00	Lunch for Inspectors
4:00- 5:30	Tech Session/Workshop
5:30- 6:30	Blind Man Dinghy Race
6:30- 7:30	Barbecue on the Beach
7:30- 9:30	General Business Meeting
9:00-???	Dancing at The Wreck Room
	SATURDAY IIII Y 25 1000
8:30-10:00	SATURDAY, JULY 25, 1992 N.W. Chapter Meeting
9:00	Swap Meet
10:30- 4:00	Scenic Road Tour (Bring your camera)
6:00- 7:00	Social Hour
7:00- 9:00	Awards Banquet
9:00-12:00	50s & 60s Dance
	CHNDAY
8:30	SUNDAY, JULY 26, 1992 Farewell Breakfast

FOR MORE INFORMATION CALL: BILL OR DONNA ELDRIDGE AT (206) 437-2120.

SCHEDULE SUBJECT TO CHANGE

Pacific Coast Hwy 1 thru California, Oregon, and Washington. Scheduled to arrive in Port Ludlow WA in time for the SACE Sixth National Convention 23-26 July (separate registration required).

NAME		
STREET		
CITYSTATEZIP		
PHONE		
COMPANION NAME		
COMPANION PHONE		
Corvette YearColorLicense		
Will you bring a car trailer?enclosed?length?		
Would the trailer be available to help breakdowns to town?		
It is strongly recommended you bring a CB radio. Will you?		
Coastal town you plan to join us		
YOU WILL BE PROVIDED MAPS & A LIST OF OVERNIGHT STOPS & HOTELS. Note: You must make & guarantee your own hotel reservations.		
HOLD HARMLESS AGREEMENT: I agree to insure my vehicle and property against loss, damage and liability. I agree to assume the risk of any and all damages of injury and to indemnify and hold harmless the organizer, representatives and participants of the road tour for any acts or omissions which may result in the theft, damage or destruction of my property or injury to me or to others occurring during or as a consequence of this event.		
SIGNATUREDATE		
QUESTIONS: Lucy Badenhoop (916) 729-1165		

MAIL \$25 U.S. FUNDS & THIS FORM TO:

Lucy Badenhoop P.O. Box 2288 N. Highlands, CA 95660-8288



TECHHELP

TONAWANDA OR FLINT TAKEN FROM CLASSIC CHEVY WORLD

hevrolet had two primary engine plants _at which all engines were cast and assembled. All of the Corvette engines as well as the 1956-57 dual four and fuel injection engines were built at the Flint plant. There are several ways to tell a Flint casting from a Tonawanda casting. The first and most obvious difference is the presence of the oil galley plug at the front of all Flint blocks. The Tonawanda casting had no plug in this location. Another method of identification is the large "T" cast into the Tonawanda blocks next to the casting number. The Flint block do not have this marking. The casting date code differs between plants. The date code on the Flint block would read "D 6 6." A similarly dated Tonawanda block would read "D 6 56." Additionally, the engine code stamped on the block in front of the passenger side cylinder head has an F prefix on the Flint block and a T prefix on Tonawanda blocks. Tho- car and vett used the casting numbers of 3720991. Also the new engine now had a permanent oil filter built into the block, causing another change in the oil pan. Again; as I suggested in past issues, our members should join the Classic Chevy World. Many article they write concern our corvettes and many parts are interchangeable with corvette. Their number is 1-407-299-1957.

BETTER THAN NEW BRAKES

If your in need of a rebuilt Master Cylinder or Wheel Cylinder, and cost is a factor, you can have them reconditioned using brass sleves, rather than stainless steel, at a much lower cost.

I have used White Post Restorations, in Virginia (703) 837-1140, to do mine and have

been very pleased with the results. They will glass bead clean, bore over-size, press in the brass sleeve, and size to original specifications.

Wheel Cylinders\$40.00 Per Sleev Master Cylinder\$50.00 Per Sleev Simply disassemble your cylinder and send the cylinder housing only.

Editor



Duntov Cam Contour Change

by David R. Bartush

AMSHAFT part #3736097 had the intake and exhaust cam contour revised in March of 1988 per Chevrolet Motor Division. It is unknown what was involved in the contour revision (283/283 F.I.).

Do you know any details such as: What changed? Why it changed? Will the operation of the motor/car be different with the "revised cam versus an "original" cam in regard to power, driveability, sound, etc.?

I had to tap one of my sources at GM Engineering. He informs me that according to the blueprints there was some very minor contour changes made on the sides of the intake and exhaust lobes. I am told that these changes are insignificant and probably were made during a tooling changeover. The new machines probably having a slightly different cutting pattern.

In addition, the prints show a slight modification to the face width of the rear cam bearing surface.

The operational aspects of the cam remain the same as does all lash adjustments, etc.

As a further note, the prints showed there was another revision made to this cam on 2/26/81. I did not ask what revisions were made at that time.

Hope this answers your questions satisfactorily.

David R. Bartush



TO

Mr. Maurice Olley

ADDRESS Research & Development Section

FROM

Mr. Z. Arkus-Duntov

ADDRESS Research & Development Section

SUBJECT

Thoughts Pertaining to Youth, Hot Rodders and Chevrolet

DATE December 16, 1953

THE HOT ROD movement and interest in things connected with hop-up and speed is still growing. As an indication: the publications devoted to hot-rodding and hop-upping of which some half-dozen have a very large circulation and are distributed nationally, dod not exist some 6 years ago.

From cover to cover, they are full of Fords. This is not surprising then that the majority of hot-rodders are eating, sleeping and dreaming modified Fords. They know Ford parts from stem to stern better than the Ford people themselves.

A young man buying a magazine for the first time immediately becomes introduced to Ford. It is reasonable to assume that when hot-rodders or hot-rod influenced persons buy transportation, they buy Fords. As they progress in age and income, they graduate from jalopies, to second hand fords, then to new Fords.

Should we consider that it would be desirable to make these youths Chevrolet-minded? I think that we are in a position to carry out successful attempt. However, there are many factors against us —

- 1. Loyalty and experience with Ford.
- 2. Hop-up industry is geared to Ford.
- The law of numbers thousands are and will be working on Fords for active competition.
- Appearance of Ford overhead V-8, now one year ahead of us.

When a superior line of G.M. V-8's appeared, there were remarkably few attempts to develop these and none too successful. Also, the appearance of the V-8 Chrysler was met with reluctance even though the successes of Ardun-Fords conditioned them to acceptance of Firepower.

This year is the first in which isolated Chrysler developments met with success. The Bonneville records are divided between Ardun-Fords and Chryslers.

In the non acceptance of G.M. V-8's, the very slow beginning of acceptance of Chryslers, cost must have played a part. Like all people, hot-rodders are attracted by novelty. However, bitter experience taught them that new development is costly and long and therefore are extremely conservative. From my observation, it takes an advanced hot-rodder some three years to stumble toward the successful development of a new design. Overhead Fords will be in this state in 1956-57.

The slide rule potential of our RPO V-8 engine is extremely high but to let things run their natural course will put us one year behind and then not too many will pick up Chevrolet for development.

It seems that unless some action the odds and the time factor are not overcome, Ford will continue to dominate the thinking of this group.

It seems that unless by some action the odds and the time factor are not overcome, Ford will continue to dominate the thinking of this group. One factor which can largely overcome the handicap would be the availability of ready engineered parts for high output.

If the use of the Chevrolet engine will be made easy and the very first attempts will be crowned with success, the appeal of the new will take hold and not having the stigma of expensiveness like the Cadillac or Chrysler, a swing to Chevrolet may be anticipated. This means the developmment of a range of special parts — camshafts, valves, springs, manifolds, pistons and such will be made available to the public.

The association of Chevrolet with hot rods, speeds and such is probably inadmissible, but possibly the existence of the Corvette provides the loop hole. If the special parts are carried as RPO items for the Corvette, they undoubtedly will be recognized by the hot-rodders as the very parts they were looking for to hop up the Chevy.

If it is desirable or not to associate the Corvette with speed, I am not qualified to say, but I do know that in 1954, sports car enthusiasts will get hold of Corvettes and whether we like it or not, will race it. Most frequent statement from this group is "we will put a Cadillac in it." They are going to, and I think this is not good! Most

likely they will meet with Allard trouble — that is, breaking sooner or later, mostly sooner, everything between the flywheel and road wheels.

In 1955, with the V-8 engine, if unaided, they will be still outclassed. The market-wise negligible number of cars purchased for competition attracts public attention and publicity out of proportion to their number. Since we cannot prevent the people from racing Corvettes, maybe it is better to help them to do a good job at it.

To make good in this field, the RPO parts must pertain not only to the engine but to the chassis components as well. Engineering-wise, development of these RPO items, as far as the chassis concerned, does not fall out of line with some of the planned activity of our group. Use of light alloys, brake development — composite drums, disc and such — are on the agenda of the Research and Development group already.

As I stated above, V-8 RPO engine has a high power potential — it is hard to beat inches, but having only 80% of cubic inches, it has 96% of square inches of piston area of the Cadillac. In my estimation, the power output comparable to the Cadillac can be obtained not exceeding 270 ft. lb. of torque at any point. (323 ft. lb. of Cadillac?*. The task of making power train reliable is therefore easier.

The thoughts are offered for what they are worth — one man's thinking aloud on the subject.

Z. Arkus-Duntar.

Z. Arkus-Duntov

ZAD:hs

* The comparison pertains to a special type of Cadillac

53-55 Soft Top Mohair Flap

by Roy Braatz

N A PAST issue I mentioned this before, but I've been asked about it again, so I decided to rewrite another one.

Originally 53-55 had this unique feature made into the soft top material on the left and right side near where the side snap is. The reason was to keep air from going up your neck (which only seems to happen when the side windows are installed, and you open the vent window on either door.) And if you live in a climate that is cold, you usually would have the side windows installed. I heard where people stuff a sock there to close off the air. Fig. 1 shows an original top on a 53. About a two inch wide mohair, backed by soft top material and is sewn into the soft top stitching. When raising the top before you snap the snap, you would first lift the flap in place. I have never seen any company that makes a top with this characteristic. I believe they are not aware of it. If you already have a good repro top installed, you just have to make up one and sew it in yourself (it is of the same mohair material that the rear lower seal is). then you can spend time rationalizing to others that it was originally done that way. Editor

57 Red Top Washer

by Roy Braatz

GAIN IN ONE issue I mentioned the red top Awasher, that the original had a raised area and a circle with the Trico logo inside it. I see ads that say original red tops at a cost that is an absurdity for the wrong one. The ones I've seen, that are accepted original, are the second design that was used on many different makes in the 60's, like truck, studebaker and so on. I found mine at a Vette swap (cheap) because the seller thought it was wrong, because all the other 57's had the second design, and he thought that was right. This is a very hard top to find, because it came on the Vette when new and the second design was sold over the parts counter. This is a fact, that many people aren't aware of, that Trico at times would supply one design directly to the factory and another design to the parts houses, and many other suppliers did this too. One was a G.M. spelled out requirement to the plant assembly and the parts department could have been or was a servicable part, called a second design or a replacement. Also the bottom container was a soft milky white material, not a hard white container as the second design. —Editor

Where Have All The Corvettes Gone?

by Art Burns

In THE WEEKLY newspaper, Old Cars News & Marketplace, an article appeared some months ago stating that about 90 percent of all Corvettes produced are still in existence. The writer gives the reasons for this as high cost when new, a non-rusting fiberglas body, and buyers who pampered and cared for their Corvettes as an image symbol. The writer goes on to say that Corvettes have maintained a strong collector draw since its introduction, and that the rate of loss due to accidents is low, despite the attitudes of insurance companies.

While I obviously agree with the article on most of the points, I question the 90 percent survival rate. We all know that Corvettes produced in the last 20 to 25 years are still relatively plentiful, but the earlier Stingrays and "straight axles" seem a bit more scarce. By that I mean we don't see the earlier "classics" on the road, at car shows, or at auctions as often. Why is this? I offer a few reasons.

First, many of the older Corvettes are reaching the point where certain restoration parts of high quality are hard to find. The result is that some deteriorated cars are being used for parts rather than being restored. The cost of doing a frame off restoration on an old Corvette can often exceed its market price when completed.

Secondly, foreigners are starting to realize the desirability of Corvettes. For example, I read that Japanese collectors are actively seeking certain older American vehicles, including the Corvette. Price seems to be no problem to them. While this does not mean that the cars no longer exist, it does mean that they are no

longer available in the U.S. market. By the way, can you imagine American collectors eager to buy old Japanese cars?

Then there are the stories about old Corvettes hidden away in old barns. In fact, I sometimes dream of finding a '57 fuelie buried under hay bales in an old barn somewhere. These tales have the same intrigue and fascination as stories about old Spanish galleons loaded with gold treasure still resting on the ocean floor of the Caribbean. Seriously, I doubt very many Corvettes are still hiding in barns waiting for some avid restorers to bring them back to life someday. On the other hand, I know several owners of older classics that allow their cars to just sit in their garages or sheds while they never drive them, do anything to them or show them. At one time they were enthusiasts, but have lost interest for some reason and never decided to sell the cars. I suspect this is true for some Corvette owners. The unfortunate thing about this is that Corvettes tend to deteriorate from lack of use, just like any other vehicle. Frames and chassis parts rust, brakes freeze, engine parts corrode and wiring gets brittle.

Keeping Corvettes in existence is one of our main objectives as enthusiasts, restorers and collectors. While General Motors probably never anticipated the widespread interest in preservation of these cars, the Corvette will continue to be the source of pride and enjoyment for many of us.

Where have all the Corvettes gone? . . . Gone to graveyards, everyone? No, gone to some caring, enthusiastic, fun-loving car nut, hopefully.

TOO LATE TO CLASSIFY

FOR SALE OR TRADE: Repo: 56-57 fig. 8 coil brkt. \$35. Repo 56-57 frt. whl. opening mldgs. \$18 pair. Repo 56-62 heater block off. \$25. Repo 56-57 st. line radio block off. \$25. Repo 58-62 radio delete plate w/script \$35. Roger Brower, 11520 S.W. Glenwood Ct., Tigard, OR 97223-3303, 503-620-4918.

FOR SALE: 1959 fuel injection #7017300 ser. 1088. Complete with distributor #914, asking \$5,500, make me an offer or trade for 57 parts. Call Mike at (604) 873-5981 or write me at Center Point, P.O. Box 19557, Vancouver, British Columbia, Canada V5T4E7.

WANTED: T-101 main case for a 1958 Corvette, dated 11-57 to 1-58. (702) 359-3788.

WANTED: 56-57 driver seat back. 56-57 pass. seat btm. Orig. 56 beige lft. kick panel. Early 56 dist. shield. Information or corres. with previous owners of 56 #2. Roger Brower, 11520 S.W. Glenwood Ct., Tigard, OR 97223-3303, (503) 620-4918.

FOR SALE: N.O.S. S.S. Valve Stem Caps for 53-62 Corvettes. 5 for \$5.00. Send check or M.O. to: George Marra, 13239 Elderberry Lane, Grass Valley, CA 95945.

· FOR SALE ·

FOR SALE: Help: Seeking information on my 57' Corvettes: SN: 4169, last info-'62, probably black with Ca. title. SN: 5628, last info-'78, black titled to Tim Kilby, Quincy, ILL. SN: 5805, last info-64, titled in Minnesota. Any information on previous owners or help with cars title history procedure would be appreciated. Need '57 parts or project car. Harald Lamberts, 515-986-3381 La. member #788.

FOR SALE: 53-55 stuff—53-54- N.O.S. wide blade fan \$45, 53-54 power pack, radio speaker-rebuilt \$300, also have 55-\$350,53-54 original style 4-leaf clover battery caps with yellow ring -3 at \$55, all above items include shipping. 1954 radio- works \$1954.00. 53-54 distributor-offer, 53-54 metal shielding-offer. call Jack 413-549-6500 after 7PM est. or write box 59 Hadley, MA. 01035.

FOR SALE: Original 58-61 radiator #3141674 dated 59C record. excellent \$675.,3-5/8'offset generator pulley \$75, I pr. rechromed repro. front bumperettes \$135, correct tack-drive generator alum. front plate \$60. restored 4445 fuel pump #100, 17" straight tip fan #50, 1 pr. 7 fin low script head covers staggered holes \$100, 57 earl 58 stepped pulley \$60, 1 pr. US patent #2,458,810 seat belt buckles #250. Call 414-733-1553.

FOR SALE: #166, 1955 Corvette, 3 speed, frame, chrome, power train done. Have most all original parts needed to complete. \$30.000. Lets talk, you couldn't buy the parts I have for the amount, and near complete as it is. 916-265-5947. SOLD.

FOR SALE: 54 Corvette project car, was originally pennant blue with tan interior, very late serial No. 53 Buick Skylark wire wheels. Many hard to find items included. soft top, side curtains, ignition shielding, 3 carbs with 2 pot cleaner. Six cylinder engine with 3-speed manual trans. Missing trim, corner bumpers & radio. \$9500. Bill Kluss, (805) 388-1188 (days) (805) 497-2120 (evenings).

FOR SALE: 1953-62 Steering gear assy. parts, restoration, and exchange service. steering literature & information sheets. T-3 headlights \$32 set (4), mixed \$9.00 ea. (2) complete 4/11 posi units, 1955 & 62 Corvette. David (501) 758-2177.

FOR SALE: #891 dual point. 1960 date \$125.00 rear spring pr. 1960 4-leaf \$200.00, tack drive generator late 61 \$200.00, Banjo with axles, back plates 59-62 \$300.00, B.F Goodrich non D.O.T. blackwall N.O.S. \$75.00 door r/h 63 coupe with original glass \$250.00, F.I. unit modified Hi-polish \$1350.00 Aftermarket 67 BB hood

\$250.00 door r/h 67 coupe with original glass \$200.00, Tri-power 400hp Mix-match but choice \$800.00, Failed magazine collection sets (offer). Lanny Larson P.O. Box 5202, Vacaville, CA. 95696.

FOR SALE: Compete number matching 3-speed setup from 1957 #4400 includes trans., shifter, bellhousing and all misc. items. Bob Sheppard (408)476-1674.

FOR SALE OR TRADE: 56 2x4 carbs and 394 Intake Manifold. (6-1151 and 6-1156 tops.) Trade for 57 carbs and manifold or power top assembly. (515) 986-3381, Harald Lamberts (#788).

FOR SALE: 1958 283 passenger engine (60,000 miles, was running) almost complete to carb. Includes starter. 739 block, stamped F326E. 772 heads, all dated around C-58, \$450.00.

FOR SALE: 1956 265 Corvette 991 block stamped 0445842-F566R (low hp dual quads) dated D66. Has crank main caps, rods and 40 over pistons, \$375.00.

\bullet W A N T E D \bullet

WANTED: Original 1961 NOS or excellent air cleaner base (230hp), black sunvisor, decklid weatherstrip ends, gas pedal fan belt (#3759221), oil filler cap. Bill McClear #676; (602)998-9780.

WANTED: Frame or rolling chassis for 1957 Corvette. Will trade a 1962 rolling chassis/power glide frame. 1961 white canvas top sewn window \$50.00.879 distributor \$50.00, 519 block. April 60 \$150.00, 548 block may 57 \$200.00. 1956 long block (fg) code. (216) 755-4656 after 6:00 ask for Glenn #809.

WANTED: 1955 electric shaver, two so-so wheel covers and what have you? Editor 916-265-5947.

WANTED: WAYNE OF NEW YORK, with 57 frame and other parts. You didn't leave your telephone number. Please call again. Any New York SACE member, if you lent Straight Talk to a "Wayne", please ask him to call me. (515) 986-3381, Harald Lamberts (#788).

· E V E N T S ·

Lexington, Oh. June 26 thru 28. Pro-Team presents Concours d'Elegance at Mid-Ohio's United Telephone Vintage Grand Prix, Car Judging, Vintage (SVRA) Racing, Corvette only Parking Corral, swap meet, etc. info. Jeannine Zimmer at (614)876-3344 or Beth Landis at Pro-Team box 606, Napoleon Oh 43545 PH.(419) 594-5086.

1953-1962 Corvette Steering Gear Assembly

by David Harrington

HE STEERING GEAR PARTS LAYOUT is taken from the CORVETTE SERVICING GUIDE (1962 edition S-12), which thoroughly covers this topic as well as other major technical areas going back through 1953 (Fig. 12). This service (shop) manual can be purchased through your favorite literature vendor. If you do not have a source let met know because this manual is a must for any Corvette straight axle owner/enthusiast.

The 1953-62 Corvette steering gear assembly sometimes seems to be an area of mystery and the unknown. To my knowledge, prior to this article, there have been four other articles written. Three in the NCRS Restorer Magazine, and one in the SACE Straight Talk publication. These articles have been included with this text to the editor for publication if room permits. Hopefully this presentation may also shed some light and understanding as to the functional anatomy of the '53-'62 Corvette steering gear assembly.

A few months ago I ran a small personal advertisement concerning some steering parts, and to my amazement found that a great number of straight axle owners throughout the country seem to have steering gear problems, such as I once had with my 1960 Corvette. Most of the people I have talked with have virtually the same problem, and that is 8 degrees or more excessive "slack or play" in the steering wheel from the center position, or . . . the dreaded culprit, a "DEAD or HARD spot(s) which may occur when turning the steering wheel at any point in the turning radius. At one time I even thought of removing the steering gear assembly from my car, but for fear of what I might find inside the gear housing, along with little or no knowledge of the subject, and no real availability of parts, frustration just led me to "put up" with this problem for awhile.

It wasn't until several months ago that I befriended an excellent mechanic from the "old school", who specializes in pre-seventy Corvettes, small block Chevy engines, drag-raced classics in the late fifties, and is one who still likes a challenge. Because of him I became mentally prepared to tackle the steering project. With a 2½ year old restoration behind me, and a fairly "high point" car, I felt it was time to try and eliminate a steering problem that had plagued me for so long. This would have been a much easier task to accomplish had I been prepared to restore the steering when the car was originally torn down but . . . no, restorations aren't supposed to be made easy. So on we go.

Steering Assembly Removal

1. Remove the engine compartment lid (hood).
2. Disconnect the "positive" battery cable. 3. Pull the steering wheel (use a puller) and all necessary brackets,

and wires from the mast jacket located inside the cockpit. (Fig. 7, VIEW A.) 4. Fuel injected cars of course remove the air breather assembly. 1961 and 1962 models remove radiator reservoir tank. The left exhaust manifold need not be removed. 5. Remove lower left side heat shielding if appplicable with radio option. 6. Loosen the lock nut and turn the lash adjuster a few turns counterclockwise to remove the close meshing of the worm gear teeth and the sector roller wheel (Fig. 2, Photo H). 7. Disconnect drag link from the pitman arm (Fig. 1). 8. Remove the pitman arm from the steering sector shaft (use a puller) and the steering gear housing from the frame (Fig. 7, VIEW B). 9. With a friends help rotate gear assembly to clear frame and engine while bringing it up and forward to remove from engine compartment. Helper can assist the mast jacket through the fire wall.

Dismantling Steering Gear Assembly and Inspection

Now we get to the "Nitty Gritty". The steering section shown in the referenced shop manual (ST-12) (Fig. 7) 6as a great guide to the technician 25 or 30 years ago. It was also a necessary aid in showing the steering systems' mechanics, maintenance, adjustments and alignments. Thirty plus years later we have a somewhat different scenario than those who were working on a "steering gear box" only 2 to 10 years old. Today's Corvette is maybe? . . . The one that has been "setting-up" for the last 15 years, the one that has been under water for the last few years, or maybe the one that hit two street curbs and caught fire. You get the drift. I have been inside quite a few of these old gear assemblies over the last several months, as I'm sure some of you have over many years. IT'S NOT A PRETTY PICTURE! If you attempt this yourself, mount a clothespin on your nose, as thirty year old grease, if there is any left in the gear housing, can be Pole-Cat stinky. Also be prepared for the possibility of some water and GOO to come pouring out. 1. Place assembly in vise and loosen lock nut on the worm bearing adjuster cup (Parts 1 and 2) in the steering gear parts layout. 2. Put a pan under assembly to catch bolts or whatever else comes out of the housing. 3. Loosen lock nut on end of sector shaft (Part #16) in Fig. 12. Remove four bolts holding side cover and pull cover (Part #15) along with sector shaft and roller wheel assembly (Part 11) from housing (Part #7) NOTE: if sector shaft does not clear housing easily, turn the worm shaft by hand to release sector hrough side of housing. 6. Remove adjuster cup (Fig. 12, Parts 1 and 2.) 7. Draw the worm gear and shaft from the housing. Lay worm and shaft (Part 4, Photo D) in safe area on bench. 8. Remove lock nut from the lash adjuster and screw the lash adjuster through the side cover (Fig. 2, Part #16 & 12). The lash adjuster can then be removed from the slot on the sector shaft (Fig. 2, Part 11, Photo H).

Inspection

Photo A shows the entire sector roller assembly. Notice the lash, nut and shim (Photos G & H); the two needle bearings, one being wider than the other (Photo C); The grease seal next to the splines for the pitman arm (Photo A). Also in (Photo A) you will notice the worm gear is still in the housing with the worm shaft removed. Notice the "blind spline" which mates the worm and worm shaft together in (Photo D.) This view may dispel any rumors that the worm gear and shaft were welded together. You laugh? I have had people tell me they were told to remove the worm by cutting it from the shaft! Thoroughly clean all parts in solvent and dry with cloth. Lets now get to the major problem area(s) which cause steering "slack" and or the "hollow/dead" space that may be felt through the steering wheel. The sector shaft ROLLER WHEEL is where 95% of the above mentioned troubles are found. The outer edges of the wheel rotate, and are "driven" against the worm gear spinals (teeth) in a push-pull motion (See Photos H & J). After thirty plus years of this action, even as hard as this steel is (Rockwell hardness of 58-61 on the C scale with special carbide steel going into the 80 range), leaves a curvature or concave surface of varying degrees on the wheels' outer edges. In this case the lash adjustment is not enough to remove this kind of slack. Repair of the roller wheel has and is being done by some people. I have been involved with doing this type of repair and I can tell you it is a very specialized technique and does require a knowledge of metals along with professional machining to produce a safe steering part. The roller wheel bearings total 22, eleven riding on either side of the wheels' inner/outer races, which are held together with a lock "snap" ring & groove (Photo B).

In more severe cases where a car has been subjected to a harsher environment or by stressed steering linkage, the roller wheel edge can show severe "patch" pitting, chip holes, or steel flaking (Photo B). Let me add however, that sparse pin-head pitting will not affect having slack or hollow steering. Factory fresh original wheels were not perfectly smooth. Vary rarely have I seen severe wear to the worm gear which is within the same Rockwell hardness as the roller wheel. The sector shaft needle bearings parts (#10, Photo C), the worm gear cone bearings (Parts 3 and 5), and races (Parts 6 and 2, Photo E), are usually found to be in fairly good condition only if a sufficient amount of quality gear grease (packing) is found surrounding all the components and no water has penetrated the housing. The mast jacket bearing assembly (Part #17, Photo F) has ELEVEN 1/8 inch ball bearings. The bearing

assembly itself can be taken apart, cleaned and relubricated. The housing side cover GASKET (Part #14, Photo A) will be destroyed when the cover is removed so a replacement will be necessary. The packing rubber and retainer (grease seal) (Part #8/9, Photo C) usually has deteriorated and will need replacing. Check the sector shaft lash adjuster end for proper clearance. Check the lash shim to see if it has been altered (Figure #17, Photo G) shows the relation of the roller wheel and worm gear if the lash adjuster had been turned to far clockwise which would "lock up" the steering completely. (Photo H and J) show a side and frontal view of how the gears "ride" and properly function in the housing. When repacking housing I have found the best lubricant is a CV front wheel drive joint lube which will not "channel" when cold and not "break down" when hot.

Always check steering linkage (see Fig. 1). Check the tie rod ends for any "looseness" or wear (Fig. 20). 2. Check the steering connection rod (drag link) (Fig. 5). In general all steering linkage should be thoroughly inspected to eliminate any possibility of additional steering "slack" outside the gear housing.

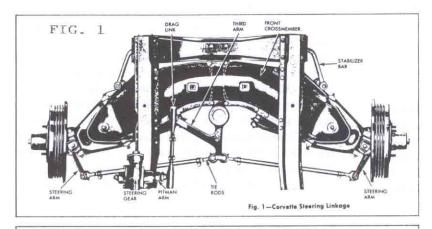
1949-54 Chevrolet Passenger Car/ Steering Ratios:

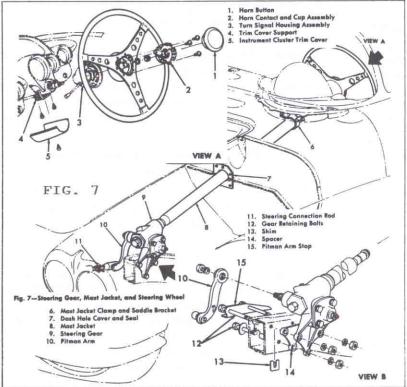
In desperation, due to the scarcity of Corvette steering gear parts and knowledge, these gear parts, if in good condition, could be used in the Corvette housing Passenger car gears will not, however, interchange with a Corvette worm and roller wheel or vice versa. The passenger car steering ratio is a 22.1:1 as compared to a Corvettes' 21.1:1. The fast steering adapter was introduced for Corvette in 1960 as a GM dealer aftermarket part to produce a 16.3:1 steering ratio (Photo K and L). Ratio Terminology: If you were able to turn the Corvette steering wheel in one direction 360 degrees 22.1 times, the sector shaft would rotate one full revolution.

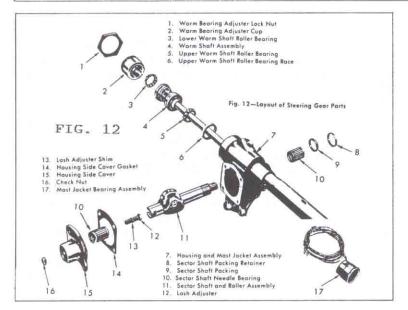
Imagine the leverage of a large diameter 17" steering wheel going down to a 1 & 11/16 inch roller wheel. Talk about "torque". Engineers later realized this poor combination and in 1955 revised the Chevy passenger car gearing system while Corvettes' somewhat antiquated steering remained unchanged through 1962.

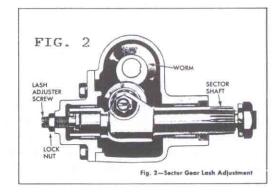
Dot Steering Rebuilders, a division of Dot Deco Products Co. now has a reproduction sector shaft ROLLER WHEEL (Photo M). Also available are parts, rebuild kits, and restoration services for the 1953-62 Corvette STEERING GEAR ASSEMBLIES. Due in late June will be a very correct reproduction 16.3:1 ratio FAST STEERING ADAPTER. If you would like more information you can write to the company, P.O. Box 6723, Sherwood, AR 72116. FAX (501) 753-6830.

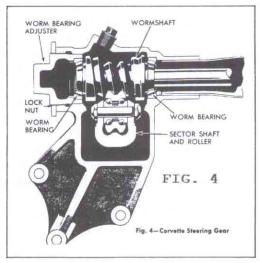
David Harrington 27 Oak Tree Circle N. Little Rock, AR 72116











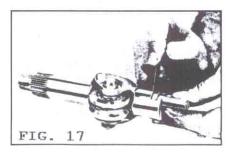


Fig. 17—Checking Sector Shaft Lash Adjuster End Clearance

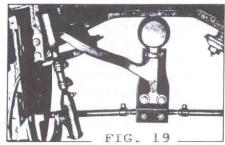
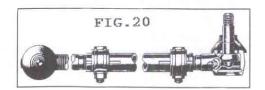


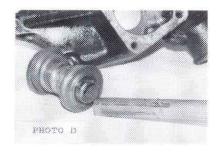
Fig. 19—Fast Steering Adapter (typical)



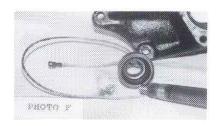


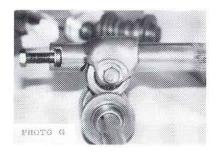




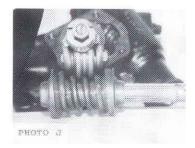




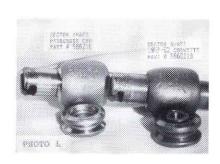












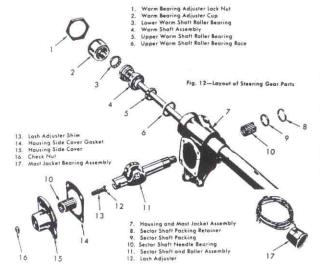




STEERING GEAR ASSEMBLY 1953-1962 CORVETTE

PARTS PRICING & REBUILD SERVICE

ROLLER WHEEL W/BEARINGS ROLLER WHEEL (ORIGINAL) ROLLER WHEEL BALL BEARING SECTOR SHAFT (only)	(LOS) SS (NS)	(part # 11A)	Reproduction Restoration Original wheel Limited stock	\$149.00 \$125.00 \$ 3.00st \$ 95.00
WORM GEAR (only)			Restoration	\$125.00
***********	*****	****	***********	*****
WORM BEARING ADJUSTER LOC				\$ 20.00
UPPER / LWR WORM SHAFT RO			S) (part #3 & 5)	\$ 20 .00pr
UPPER/LWR WORM SHAFT BEA	KING KA		S) (part #6)	\$ 22.00 pr
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SECTOR SHAFT NEEDLE BEARIN	IGS	2 (N	S) (part #10)	\$ 20.00 pr
LASH ADJUSTER		(LO	S) (part #12)	\$ 5.00
LASH ADJUSTER SHIM GM PAR	T #605142	(N	S) (part #13)	\$ 3.00
GASKET (housing side cover)			S) (part # 14)	\$ 3.00
HOUSING SIDE COVER			S) (part #15)	\$ 20.00
CHECK NUT		(N	200 11 11 10 10 10 10 10 10 10 10 10 10 1	\$ 2.00
MAST JACKET BEARING ASSEME	RLY		S) (part #17)	\$ 25.00
COMPLETE STEERING ASSEMBL'			e) West and	\$450.00
				\$135.00
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Our steering gear parts and rebuild services are guaranteed to meet the original manufacturers specifications, quality, and tolerances. LOS are #1 condition original parts. All individually purchased steering gear parts are shipped with a reference guide which will aid in the proper and final installation, adjustments, and maintenance of the steering gear components. Dot Products is not responsible or liable for the clients improper or negligent installation and adjustments.

MSR

* NRS = New Reproduction Stock NS = New Stock LOS = Limited Orig. Stock

> P.O. Box 6723 Sherwood, AR 72116 (501) 758-2177

TEN POINT STEERING GEAR REBUILD SERVICE

- Completely disassemble steering gear housing and all components.
- Remove all old grease and clean all parts and bearings.
- Inspect all bearings for wear.
- Inspect roller assembly for any pitting, and wear.
- Inspect worm assembly for any excessive wear, chips, and nicks.
- Check lash adjuster and shim for wear and proper spacing.
- External housing surface is refurbished and painted to chasis black.
- Replacement parts and original components are reassembled and repacked with a higher quality CV joint lubricant.
- Steering gear assembly and components are weight stress tested. Lash adjustment is set to preinstallation specifications.
- Complete steering maintenance and adjustment literature is provided for customers reference to properly complete installation to automobile.

GEAR LUBRICANT

It is recommended that a front wheel drive CV joint lube be used for best results in repacking the steering gears and housing. This lubricant will not break down when hot, and will not "Channel" when cold like the original chasis greases. CV lube usually comes in a vinyl bag and can be purchased at any auto parts store.

WORM GEAR REMOVAL

Contrary to rumor, the worm gear is not welded to the worm shaft. The two are mated with a $2\frac{1}{2}$ inch splined taper. Therefore there is no need to remove the worm gear from the shaft with a hacksaw or cutting torch and destroy valuable parts. If you are not blessed with the correct GM J tool, press, or puller, the worm gear can be easily removed by opening a vice just enough to allow the worm shaft through vertically and letting the worm gear rest on top of the vice cushioned with a piece of wood or soft metal for protection. Using a $\frac{1}{2}$ inch brass punch and hammer, hold the worm gear and punch with one hand and with the other tap the worm shaft down and through the worm gear.

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Technical advisors have three duties: (1) answer questions from the general membership; (2) record the questions and answers and transmit them to the Straight Talk editor for publication; and (3) provide assistance in the preparation of a technical guide book.

Any member wishing to make use of this service may contact the advisors listed. If you write, please use the form and include a stamped, self-addressed envelope. If you phone, have the information ready for the top half of the form before you call.

Be considerate of the time zone differences, and place your call so it is received between 8:00 and 9:00 pm for the advisor. If you want the advisor to call you back, be willing to accept a collect toll and leave a message that you are requesting SACE technical assistance.

Technical Panel Officers:

Larry Richter,	Chief
SACE Technical	Panel
PO Box 328	
Coos Bay, OR 9	7420
(503) 269-1815	

Roy Braatz, Editor Lucy Badenhoop, Author Straight Talk Magazine SACE Technical Guide 14521 Bear's End Dr. Nevada City, CA 95959 N Highlands, CA 95660 (916) 265-5947

PO Box 2288 (916) 729-1165

Technical Panel Advisors:

(53-55) Mike McCagh
1715 Frederick St.
Cumberland, MD 21502
(301) 777-0089
(53-55) Steve Sokolof

(56-57) Ken Kavalchek (58-60) Dwight Farmer 6966 Boneta Road 5232 Foxboro Landing Medina, OH 44256 (216) 336-9611 (804) 495-0154

4524 Baltimore Ave. Philadelphia, PA 19143 (215) 382-6366

(56-57) Jeff Reed 239 W Main St. Mesa, AZ 85201 (602) 461-3229

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Originals are sold out, but xerox copies are available.
 Volumes 4-3 and 4-4 were skipped so 1991 could begin with 5-1 and put our membership year and magazine year on the same schedule.

The club also offers for sale the SACE TECHNICAL GUIDE, used to inspect cars during our shows. Vol I General and Vol II Mechanical are currently available (a total of 250 pages for \$25). Vol III Interior is in work and Vol IV Exterior is planned. The Technical Guide covers all ten years of the straight-axles, showing you which part numbers were correct for which series of cars.

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