



INTAKE MANIFESTO

Official Publication of the Arizona Chapter, NCRS

Summer 2021 Issue

CHAIRMAN'S MESSAGE BY PHIL D'ALESSANDRO



It's almost Memorial Day as I write this and it will have passed when you read it, but as I recall visiting Normandy in 2019, the 75th Anniversary of D-Day, the remembrance was still a fresh memory in August for all of us visiting the landing beaches and the American Cemetery. Those of us who have served have a unique appreciation of those who never returned, giving us the precious gift of freedom. As we are coming out of another "war", one that has taken so many lives, we seem to have lost sight of humanity, of our fellow brothers and sisters, regardless of color or creed who need all of us to unite and resolve the underlying issues that divide. The time to do this is now.

Quite a way to open my message but, it's my message.

I want to thank the Board of Directors, Chapter membership, our sponsors and those who donated to the 2021 Regional. In addition to the CORE Team leaders, their volunteer members as well as the spouses that contributed to the success, we can look back at one of the most successful Regional Judging Events ever held. The challenges we faced, a new hotel/casino facility, new management, delayed construction, facilities not open, confusing new operating rules, last minute approvals, relocation of and realignment of the judging floors, all while dealing with the unknowns of COVID-19 rules. Not just State rules but Sovereign Nation rules. To add to my sleepless nights, the final "go" approval was only 102 days before first arrivals. But we did it, and to those who did not attend or participate, you missed a great meeting. I believe we were able to demonstrate that NCRS was back, and the fence-sitting members could/should attend the National Convention. See the enclosed letter from the National President below.

The Regional is not a "fund raiser" event. Did we spend money, yes, we did. Was it well spent? I believe it was. Did we make money, no. Why didn't we make money? One major sponsor completely backed out, donations were less, support was less, and support services were significantly more. Food costs significantly higher and since not all food outlets were open in the hotel/casino, we had to make accommodations for meals at a higher cost. Plus, the off-site Western BBQ required bus transportation for safety concerns and the evening musical entertainment was an enhancement to the night. Despite this, as a Chapter, are we in a solid financial position, yes.

The Silent Auction, supporting Harvest Compassion, continued our commitment to this valley-wide resource center. Assisting almost 10,000 families, Harvest Compassion is available to all in need and accepts no government funding and /or food product to serve their local neighbors. Our non-Holiday event donation, the NCRS National Matching Funds of \$500 and the Regional Silent Auction, provided almost \$4,000 to Harvest Compassion. Thanks to all of you who made this possible.

What's next? September (date and location TBD) will be Part 2 of Bill Calorico's presentation. Part 1 to be held June 19th at Gary Bennett's Chandler garage.

Our Fall Judging Event, a five-point judging meet, to be held at StreetSide Classics, located in Mesa, October 8 - 9, 2021. Thanks to Dallas Ramirez for inviting us to use the facility. More to come later.

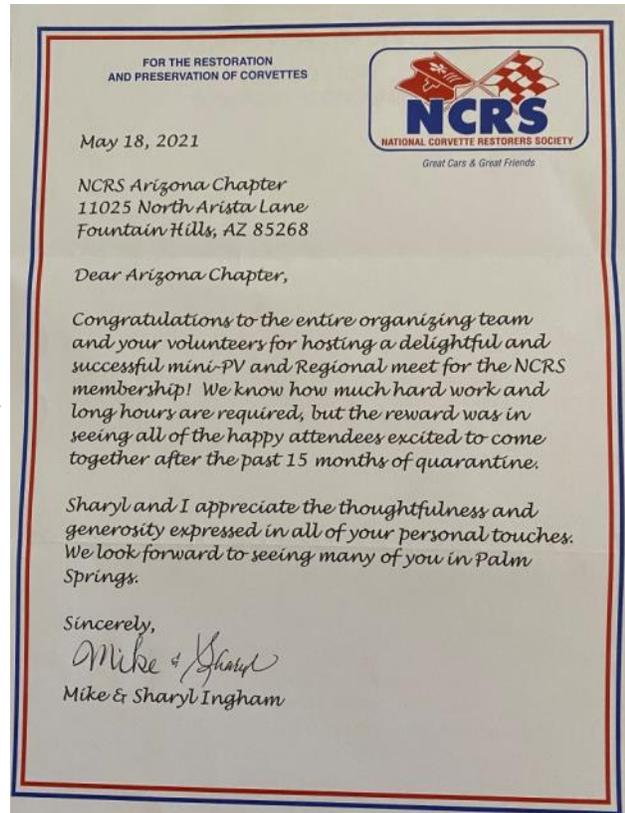
INSIDE THIS ISSUE

2021 Officers / Sponsors	2
Calendar	3
April Driver Recap	4
AZ Regional Recap	5-6
Judging School Recap	6
Q2 Treasury Update	7
Fall Chapter Judging Meet	7
C1 Fuel Gauge Troubleshooting	8
Reconfigurable Fuel Pump	9
Photo Tribute to Tom Robertson	10

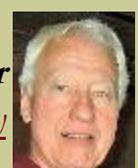
November activity TBD but I am working on the Annual Meeting/Holiday Event which will include results of Board of Directors election. Yes, it's that time of the year. The entire BOD is up, apart from Loren. Want to become more active in the management of the Chapter or want to recommend someone (check with that person first, no surprises), let our secretary know when the form is distributed. More information will come out in the fall.

One additional thought. Our prayers go out to the numerous members of our club who are dealing with serious illness or conditions. We hope for a full recovery and to see all of you soon at an upcoming event. Remember, should any of you need assistance of any kind, reach out to a fellow friend and member. We have your back, always.

Looking forward to seeing as many of you possible at the National Convention. Have a safe and totally enjoyable summer.



2021 AZ Chapter Board

	Chairman <u><i>Phil D'Alessandro</i></u>	
	Vice Chairman <u><i>Dave Talley</i></u>	
	Judging Chairman <u><i>Gary Craig</i></u>	
	Treasurer <u><i>Dave Barclay</i></u>	
	Membership <u><i>David Peterson</i></u>	
	Secretary <u><i>Brad Vigesaa</i></u>	
	Webmaster <i>Loren Peterson</i>	
	Newsletter Editor <u><i>Garry Mion</i></u>	
	Activites Chairman <u><i>JR Richards</i></u>	

NCRS (National Corvette Restorers Society) is a national organization open to all persons interested in the restoration, preservation, history, and enjoyment of Corvettes produced by the Chevrolet Motor Division of the General Motors Corporation. NCRS is not affiliated with Chevrolet or General Motors.

Membership in the Arizona Chapter of the NCRS is open to all members of the NCRS National Organization. Dues are \$20 per year. For membership information, please visit our website at www.arizonancrs.com.

NCRS registered marks used in the "*Intake Manifesto*" are NCRS Founders Award®, NCRS Master Judge Award®, NCRS Performance Verification Award®, NCRS Flight Award®, NCRS American Heritage AwardSM, and NCRS Sportsman Award®. All are registered with the United States Department of Commerce and Trademark Office.

The Arizona Chapter is proudly sponsored by the following businesses. We appreciate all that they do in support of our Chapter, so Please Support Them!



THE WORLD'S GREATEST COLLECTOR CAR AUCTIONS™



2021 SCHEDULE OF EVENTS

Date	Activity & Contact Information
January 9	Heart of Ohio Chapter Virtual Judging School—Wheels Part 1
January 16	Judging School & Chapter Meeting
February 6	Heart of Ohio Chapter Virtual Judging School—Wheels Part 2
February 13	Concours In The Hills
March 5-6	Southern California Chapter Judging Meet—Anaheim, CA
March 12-13	Southern Arizona Chapter Judging Meet—Tucson, AZ
March 20	Judging School & Chapter Meeting
April 10	Chapter Driver—Bartlett Lake
April 17	Judging School & Chapter Meeting—TBD
May 11-16	Arizona Regional—We Ko Pa Resort & Casino, Fort McDowell Online Registration
June 10-12	Heartland Regional—Cedar Rapids Iowa
June 19	Judging School & Chapter Meeting
July 17-22	NCRS National Convention—Palm Springs, California
September TBD	Judging School & Chapter Meeting—Body Paint Part 2
October 8-9	Fall 5pt Chapter Judging Meet— Streetside Classics Mesa
October 15-16	SoCal & CCC Joint Fall Judging Meet— Buellton, CA Registration Opens July 15th
October 21-23	Lone Star Regional—Frisco, TX Online Registration
November 20	Judging School and Chapter Meeting—TBD
December TBD	Chapter Holiday Party TBD

The above list of events are subject to change. Visit the [Chapter Website](#) for latest details

These events may be impacted by the Covid-19 social distancing guidelines put into effect by federal, state, and local agencies. Updates, as soon as we know them, will be sent out to chapter members.

Throughout 2020, a few chapters started holding online judging schools, and being a virtual event, attendance was accessible to all NCRS members. Our chapter held several such judging schools, including the very first one. Attendance was typically in the 75-110 range, and as long as you were registered and stayed for at least half the class, you would receive one judging point.

The Heart of Ohio Chapter was one Chapter that held these judging schools, and took it one step further by recording them. You can go their Chapter website [here](#) and find links to the school videos.

There are some online schools happening in January and February of 2021, and they have been noted in the calendar above. Visit Nationals news and events webpage [here](#) to stay informed on other possible online schools that may become available.

GET INVOLVED!

THROUGHOUT THE YEAR THE CLUB IS LOOKING TO HOLD TECHNICAL AND SOCIAL ACTIVITIES IN ADDITION TO OUR TRADITIONAL JUDGING ACTIVITIES.

IF YOU HAVE AN IDEAYOU THINK OTHER MEMBERS OF THE CLUB WOULD BE INTERESTED IN, PLEASE CONTACT A BOARD MEMBER TO DISCUSS IT.

APRIL DRIVER RECAP BY JOHN RICHARDS

The Arizona NCRS Chapter held our annual driving event two years after the preceding event. Last year's event was cancelled due to Covid 19 but since most everyone is now vaccinated we decided to go ahead April 10. The drive commenced with 11 Corvettes at We Ko Pa Resort in Fountain Hills and proceeded Northbound through the



town along the lake until an unexpected local art fair closed the main road and caused an unplanned detour. Fortunately our fearless leader, Phil D'alesandro being a local resident, rescued us and expertly led us out of town with minimal disruption. We continued on to an interim stop at Alpio's at Troon where the monthly Cars and Coffee event was in progress. Even though we arrived after prime time there were still plenty of great cars to observe, lots of Vettes included,

especially multiple C8s. As usual Alpio's display area was filled with cars and mementos from his collection. Seven more Corvettes joined our group at this point so when we departed there were 18 Corvettes of all age groups and more than 30 participants.



After that enjoyable interlude we ventured Northeast out to Bartlett Lake. The last 12 miles of the journey were on the Bartlett Lake road, a winding and hilly challenge to vehicles but with great views and the sense of being out of the large metropolitan area. No doubt this was everyone's favorite portion of the day. Upon arrival at Bartlett Lake we parked together at the only eating establishment for miles. The Cove Restaurant had prepared for our arrival by arranging a long table where we could be together along with a special menu. Considering our numbers and many other guests to include a group of Harley enthusiasts the wait staff was somewhat overwhelmed but managed to take care of all of us. The weather cooperated so we all were outside in the shade and enjoyed a commanding view of Bartlett Lake.



This event was the first time the club has had a chance to be together in a social atmosphere in over a year.

Overall, it appears to have been a big success.

AZ REGIONAL RECAP BY GARY CRAIG

The 2021 Arizona Regional was held May 13-15 at the We-Ko-Pa resort in Fountain Hills, Arizona. This was the first Regional since the close-down of all Regionals and National due to the Covid-19 epidemic. To help car owners achieve their Duntov pre-requisites, we also held a Mini PV event on May 12. This Mini PV event was allowed by Dave Brigham for our Regional in May and Cedar Rapids Regional in June. So, Arizona Chapter was the first to do this Mini PV. From participants' comments, this Arizona Regional was a big success and everyone was glad to be back together with all of our friends and enjoying all of our Corvettes. Everyone loved the welcome reception dinner on Thursday night (lots of good food and drinks, I definitely participated in the drinks) and the BBQ dinner at a western themed location that included a live band on Friday night was a lot of fun, great food and drinks.

There were 147 families and 51 Corvettes that attended the Regional and Mini PV. The weather was good, not too hot (less than 100 degrees) and with the new covered parking structure, our Operations day (Thursday) was much better (cooler and out of the sun) than the AZ Regional 3 years ago so we did not bake the cars or ourselves. Luckily, most owners brought their cars out and had them ready in the parking structure on Wednesday afternoon so it allowed the Operation Judges/Team Leads to get started on time on Thursday and most cars were finished before noon. One concern that cropped up was that pushing the cars into the Ballroom area transited the Casino back area so we had to have Casino security people around when we moved the cars into position. The fabulous work of Dave Talley and his crew made this job easy and there was no trouble on getting the cars in and out.

We could not have had such a successful Regional without our volunteers at registration as well as the fabulous Tabulators. Cathy Bergmann, head Tabulator, and her crew of Tabulators finished very early on Saturday so we were able to get the cars out of the old Bingo Hall and Ballroom in plenty time to setup the Banquet. Oh, and of course, we couldn't have a Regional without all of our judging teams and team leaders. Thank you all for your time and efforts.

Saturday, we held our Banquet where all the awards were given out. I have to thank Newt Johnson on creating a great slide presentation where all the car and owner pictures were displayed on the big screen when they received their award. This went off without a hitch.

For the Mini PV, we had 8 cars that attempted the Performance Verification test and had 3 cars pass, which shows that this is a tough test! For the normal Regional PV, we had 5 cars that attempted the PV test and had 4 cars pass, a good showing! Friday and Saturday were busy days with 29 cars judged on Friday and 11 cars judged on Saturday. We had 7 cars in the 63-64 group so Bill Calorico and his team were busy on Friday. I have to give Thanks! to Bill Calorico; he stepped up and was the Team Leader for the 63-64, 65 and 66 group of cars plus presented our Judging School on Thursday. Thanks Bill!!! Once we were cleared by Dave Brigham to move the cars out, John Richards and his crew were able to move all 9 cars out of the Ballroom in short order.

We were well represented by Arizona Chapter members at this Regional with the following awards:

Name	Year	Award	Name	Year	Award
Frank LaBue	1954	Top Flight	Joe Hitzel	1959	Top Flight
Foster Thomas	1962	Top Flight	Gary Bennett	1963	PV
Gary Bennett	1963	Top Flight	Tom Howey	1963	Top Flight
Roy Deopere	1964	Concours 427	Ward Gappa	1965	Top Flight
Kevin Dewitte	1966	Top Flight	Bill Hendry	1966	2nd Flight
Roy Deopere	1966	Concours Blue	Mike Johnson	1967	Top Flight
Bob Swaback	1967	Top Flight	Jim Rand	1967	Top Flight
Jerry Diquattro	1970	Top Flight Bowtie Sign-off	Bruce Tanninen	1970	Top Flight Bowtie Sign-off
Mark Ricotta	1971	Top Flight	Ron Coleman	1985	2nd Flight
Don Davies	1988	Top Flight	Bruce Dietz	1996	Top Flight
Darold Shirwo	2000	Top Flight	John LeGate	2002	Top Flight
Pete Bergmann	2002	PV			

Thank You Sportsman Display: Keith Kolerus: 2006

Duntov and Bowtie/Star Display Certificate Presented To:

Russ Beyer: 1960 Duntov Display

Bob Swaback: 1967 4 Star Bowtie Display

Ray Geiger: 1967 2 Star Display

On the next page are pictures of the above cars.

To see pictures posted by Vinnie Peters of the event, go [here](#).

AZ REGIONAL CHAPTER CARS PHOTOS BY NEWTON JOHNSON



Joe Hitzel



Bill Hendry



Jerry Diquattro



Pete Bergmann



Foster Thomas



Kevin Dewitte



Mark Ricotta



Keith Kolerus



Gary Bennett



Roy Deopere



Ron Coleman



Russ Beyer



Bruce Tanninen



Bob Swaback



Don Davies



Bob Swaback



Tom Howey



Jim Rand



Bruce Dietz



Ray Geiger



Roy Deopere



Mike Johnson



Darold Shirwo



Frank LaBue

Ward Gappa



John LeGate



JUDGING SCHOOL RECAP—BODY PAINT P1 BY GARY CRAIG

On June 19, the Arizona Chapter held a chapter meeting and judging school discussing Judging Body Paint - Part 1. This judging school was Part 1 of a 2 Part series. The judging school was held at Gary Bennett's garage near the Chandler Fashion Mall. Thank you Gary for allowing us to use your garage for this judging school. The school was well attended by 21 members. Bill Calorico gave us a powerpoint presentation that was very informative and went over all the nuances on Judging Body Paint and using the NCRS flowchart for Judging Body Paint. During the presentation, a very good discussion was led by Bill on the usage of the flowchart for various types of paint. Paint attribute topics were discussed like distinctness of image, orange peel, buildup on edges, and where lack of paint is usually found as seen on original cars. Additionally, the difference between shine and DOI/orange peel was discussed. I have to thank Bill Calorico for presenting this information for all of our members benefit. I look forward to Judging Body Paint - Part 2 that will be conducted in September, where Bill will lead all of our members on putting his information into practice by using example Corvettes as a hands-on judging process. Look for the flyer that will be sent around the first of September.

Q2 TREASURY UPDATE BY DAVE BARCLAY

If your personal information (e.g. address, phone number) or email address has changed, please email those changes to me at treasurer@arizonancrs.com.

Our financial balances as of Jun 30, 2021, are: Checking Account: \$1,513.43
 Money Market Account: \$25,099.29

Income	
2021 Regional Registrations	9,966.98
2021 Regional Advertising	1,400
2021 Regional Sponsors	2,500
2021 Regional Shirts	522.84
2021 Regional Banquet, Buffett	2,061.79
2021 Regional Trailer Parking	300
2021 Regional Vendors	255
Member Dues Received-2021 thru 2030	465.06
Interest Earned	0.75
Total	\$17,472.42

Expenses	
2021 Regional Shirts	5,160.95
2021 Regional Deposits	10,000
2021 Regional Entertainment	1,050
2021 Regional Audio Visual	3,552.22
2021 Regional Brochure	2,174.37
2021 Regional Pins	520
2021 Regional Security	2,150
2021 Regional Signs	352.16
2021 Regional Speakers	905.48
2021 Regional Tabulators	181.47
2021 Regional Food Service	31,017.14
2021 Regional Judging Support	1,919.51
2021 Regional Transportation	600
2021 Regional Miscellaneous Favors	1,102.87
2021 Regional Silent Auction	117.60
2021 Regional Refunds	1,699.13
2021 Regional Administrative	553.56
Judging Schools	74.81
Good Will	510.79
Web Site	234.25
Administrative	74.08
Total	\$63,950.39

The March 29, 2021 thru June 30th, 2021 accounts break down as shown above and to the right.

FALL CHAPTER JUDGING MEET BY GARY CRAIG

On October 8 & 9, we will hold our 2021 Fall Chapter Meet at a new location: Streetside Classics Showroom in Mesa.

Friday will be Operations Judging and a Judging School followed by Flight Judging on Saturday. Please mark your calendars!



C1 FUEL GAUGE TROUBLESHOOTING BY DAROLD SHIRWOOD

A while ago when I was getting one of my '57s ready for judging the fuel gauge was not working right so I fixed it with my prior work experience. I had worked for Stewart Warner in Chicago as an engineer in the instrument division from 1960 to 1965 and I was responsible for design, troubleshooting, quality control, redesign and customer service of all instruments Stewart Warner made including, all dash gauges, speedometers, sending units and electric fuel pumps. I also had the great joy of being the primary servicing engineer for Harley Davidson speedos and I got to go to Milwaukee every month to their plant and play with their goodies. So with my vast experience in gauges I took on the fixing of my '57s gas gauge - as a side note I also had to fix the gas gauge on one of my '54 Oldsmobile, but since the Oldsmobile's sending unit was on top of the tank and in order to get to it the tank had to be dropped so the Corvette was a lot easier.

Understanding that the fuel gauge is one of the most important gauges in the instrument panel and it is simple in both function and operation. When it is not operating properly, it seems to be a big mystery - but it's not. Test the basic parts of the circuit and you can easily identify the problem. The early, early Vettes (53, 54 and first 55s) had a 6 volt system and if your vehicle has been Changed to 12 volts from 6 volts, you must not hook up the fuel gauge directly to 12 volt power. It is a very sensitive gauge and the windings will be damaged by 12 volts and you must use a special fuel gauge resistor to protect the original 6 volt fuel gauge that will be running in a 12 volt system.

All Corvette fuel gauges from the 1953 to the 1960's operate on a 30 ohm scale. At zero ohms from the sending unit, the dash gauge should read Empty; at 30 ohms it should read Full. It is vital that the sending unit is matched to the dash gauge. If you decide to, or are using an after-market fuel gauge in the dash, you must have a sending unit that has a matched ohm rating or it will not function properly. The sending unit is merely completing the circuit for the dash gauge by grounding it to the chassis, just like a light bulb must have a ground to operate, the fuel gauge must also be grounded to operate. As the float arm is raised, the resistance is increased, until (at the top) the resistance should be 30 ohms (Full). At the bottom, resistance is zero (or completely grounded) and should indicate Empty at the gas gauge.

If your gauge reads FULL AT ALL TIMES:

A. Probable Causes

1. Wire from dash gauge to sending unit is broken and/or the connection is corroded (not making good electrical connection);
2. Resistance wire inside sending unit is broken;
3. Sending unit is not properly grounded to tank or tank is not properly grounded to chassis.

B. Testing

1. Remove the wire from the contact stud on the sending unit and ground it to the chassis. If the gauge now reads Empty, the trouble is either poor grounding of the sender or a bad sending unit.
2. If the gauge still reads Full, touch a grounded test wire to the sending unit terminal on the back of the dash gauge. This terminal is often marked with a red tag. If the gauge now reads Empty, the wire from the dash to the sending unit is broken or the connection to the dash gauge is corroded.
3. With the sender removed from the tank, connect an ohm meter to the sending unit (one lead to the contact stud and one to the housing) and check the resistance of the sender as you manually raise and lower the arm. This reading should be 0 to 30 ohms (or very close).
4. If none of these tests finds the problem, the dash gauge is the problem and should be rebuilt or replaced.

C. Repairs

1. Make sure that a good ground is present at the dash gauge and also at the sending unit. Run a separate ground wire to the chassis if necessary.
2. Sliding contact arm may not make good contact to the resistance wire windings in sender. If you are experienced with electrical repairs you may be able to clean the wiper and resistance wire coil or replace the wire. Otherwise send the unit to a specialist or replace the unit. Check for good ground at sender body and gas tank.

If gauge reads EMPTY AT ALL TIMES: .

A. Probable Causes

1. Wire from sender to dash gauge is shorted to ground;
2. Sending unit IS shorted internally;
3. Float in sender is defective.

B. Testing

1. Disconnect wire from sending unit at tank. If gauge now reads Full, the trouble is in the sending unit.
2. Disconnect sender terminal wire at dash gauge. If gauge now reads Full, the wire to the sending unit is shorted to ground and replace wire.

C. Repairs

1. Look for broken or loose wire in the fuel gauge circuit and within the sending unit.

Note that many GM dash gauges are interchangeable by exchanging the face of the gauge to retain the original appearance. Also, many GM sending units will interchange by modifying the float arm. Original sending units can often be repaired. Check to make sure that the proper 6 or 12 volt power is present at the ignition side of the dash gauge. If changing from 6 volt to 12 volt, be sure to install a special fuel gauge resistor inline before hooking up to 12 volts. Make sure to have a good ground at the sending unit, fuel tank and also the dash gauge.

RECONFIGURABLE FUEL PUMP BY GARRY MION

The Covid virus has done more than just disrupt our social calendars, it has impacted the automotive parts supply chain. One item that came up late last year was a replacement pump for a 1963, 250HP roadster. The pump in the car was not only old, but the wrong configuration in many ways. Not representative of the standard pump, p/n 5594657, or Type 4657, in any manor.

Being a driver, there was no need to go out and find a real-deal AC 4657. Cost was one issue, and the likelihood of needing a rebuild had to be considered, which only added further to cost. Rebuild kits alone for these pumps are \$55+. So finding a replacement pump of a similar configuration would work just fine. In fact, one could even use a sealed pump, like what is found on '67 300HP cars.



A common replacement pump that looks similar to an AC 4657 is the Airtex 4657 (pictured at left). Thing is, nobody had them in stock, and availability was estimated to be several months out. Objective was to complete the replacement sooner rather than later.

The interesting thing about a 4657 pump is that it can be reconstructed from four other AC fuel pump model numbers simply by rotating the fuel body. This is accomplished by removing the ten screws that hold the fuel body to the upper portion of the fuel pump, rotate the fuel body to the proper position, and replace the ten screws. Sounds simple enough, and it is. Care needs to be taken not to disturb the diaphragm when doing this.

As it turns out, only the Airtex Type 4665 was in stock (Rock Auto), so I purchased it, made the change, and installed it in the car. Delay averted. Problem Solved.

Here are the other fuel pump part numbers that can be reconfigured using the same component pieces:

5594432 (Type 4432) '58 Chevy 348 or Fuelie

5594656 (Type 4656) '58L-'62 Corvette

5594657 (Type 4657) '63-'67 Corvette

5594665 (Type 4665) '60-'66 Chevy Truck

5656559 (Type 6559)

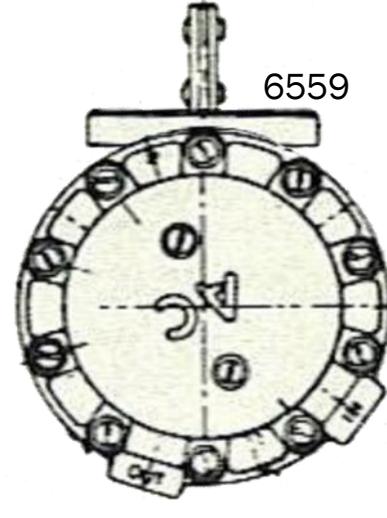
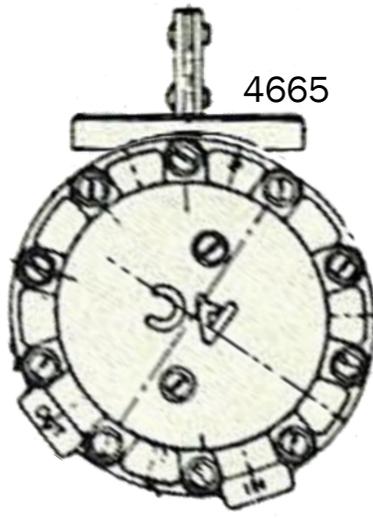
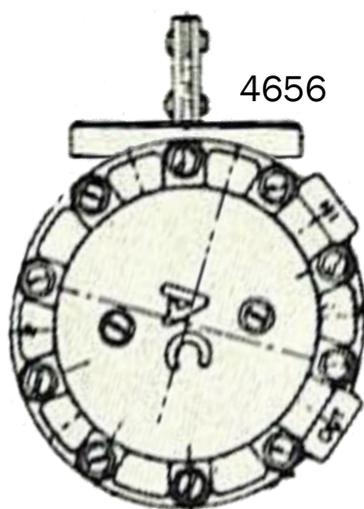


PHOTO TRIBUTE TO TOM ROBERTSON BY GARRY MION

Longtime Arizona Chapter member Tom Robertson passed away back in February due to complications from contracting Covid-19. Tom, along with his wife Carolyn, joined NCRS back in December of 1993. From that time, Tom was active in the Chapter, along with researching information needed to restore a 1966 Big Block Air Roadster he had purchased in 1989. I didn't meet Tom until I joined the Chapter in 1997. It took a bit of time and parts hunting, but Tom did finish the car, and what a beautiful car it turned out to be. I went back through pictures I had taken since joining the Chapter, and found some ones with Tom in them that I wanted to share with you. For those that have been round for a while, you may recognize the event and the location. Rest in Peace Tom!



ARIZONA CHAPTER

