

# NCRS-RMC



May - June 2001

Issue 5 & 6

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## CHAIRMANS MESSAGE

By Bill Lucia

By the time this newsletter reaches you, our Rocky Mountain Chapter meet will be history. Closed,....Done....In the books.....With that in mind I have a number of questions for you.

Did you attend the meet? If you missed it you missed a good one. This meet had one or more aspects of the larger regional meets including door prizes, a number of really neat cars, good food, plenty of "Black Hat Judges", a great (indoor) facility, ribbons and awards, a super team of tabulators and a chance to meet new friends and get re-acquainted with some we have not seen in some time.

Did you have your car judged or did you volunteer as a team leader or perhaps a judge or even an Observer

Judge? If you did not you missed out again. Eight cars were presented for flight judging and we had a number of "Black Hats" present and working all day. You just don't get that kind of saturation at a larger meet. By the way, the "Black Hats" were very approachable and answered a ton of questions all day long. You really did need to be there to get the benefit of the knowledge transfer. I personally learned a number of neat judging tricks from our good friend Dan Pyzel.....oh I had to put up with some merciless teasing but it was well worth it.....Thanks Dan!!!!!!!!!!!!!!

Perhaps more importantly, what did you learn at the meet? If you judged or OJ'd, did you learn something about the judging process? If you had your car judged, did the judges point out some things that you did not know or perhaps something you missed or, more importantly, something that just deteriorated over time? I know I learned a few lessons the hard way and it cost me a hand full of points. I won't lose those points this summer in Galveston....that's for sure. That's some pretty cheap points to be able to earn back before a National or Regional.

I think by now you should have gotten the message. If you missed this meet you missed a good one. Jack and Jim did the usual perfect job in getting every aspect of the meet complete at least fifteen minutes ahead of schedule. The tabulators worked quietly and efficiently. We had out of Chapter visitors. The judges were fast, fair, accurate and friendly. The cars were all neat and the owners (all of them) came away with flight awards. Oh, I think we were all home by 6:00 PM too.....You just can't beat that for fun.....One last question....see you next year???? I think you get the point...Now on to other items of interest.

I promised that I would harp on you about participation so here goes. Have you made plans yet to attend the

next Chapter meeting? Be aware that you need to attend and vote for our new slate of officers for 2002. If you can't attend, be sure to send in your ballot, located elsewhere in this newsletter. Another question: have you made plans to attend the National or one of the Regionals yet? Do so NOW....and remember we get points for our chapter for participating.

On another note we are actively looking for another sponsoring Chevy dealership for our Chapter. Ralph Ridge, Jim Lennartz, Jack Humphrey and I are working on this initiative at present. We have some potential dealerships in mind and we are in the process of speaking with them about supporting our chapter. We will report on our progress at our next meeting.

On the National scene we have a new President, Vinnie Peters. Vinnie has been an active member just about forever and we are fortunate to have a dedicated and competent person to succeed Tim McKeon. Thanks Tim for your service to our organization. On a go forward basis be sure to give your support to Vinnie and his staff. This is a tough job and arguably one of the most important ones for which a member can volunteer.....yes I said volunteer.

On that note I'll close but before I do, I'll take one more opportunity to thank everyone who supported the Chapter meet.....Thanks and well done to all who participated!! Be sure to look for Jacks judging report on the meet in the following pages. Oh and don't forget to VOTE!! See you next time.

## JUDGING

**By Jack Humphrey**

With our January judging school behind us, we turned to Flight Judging in March. Turnout was great with the best RMC membership registration ever! I have to say a sincere thanks to the Chapter for burning those first class stamps to let us know you were coming. It made my job and that of the team leaders flow sweetly by giving us an advance view of who would be there to make up the teams necessary to judge the registered Corvettes.

Ten cars registered for Flight. One didn't show due to the weather and another was a 'special' case that I'll address later. Of the remaining eight cars participating, all achieved either Top Flight or Second Flight awards.

Our team leaders did an excellent job of selecting judges, managing the flow of paperwork, and getting

the event concluded with time to spare! Howard Loomis put together the straight axle ('53-'62) judging team. Bill Barcus handled mid-year Corvettes ('63-'67). And, Jon Whiteley performed team leader chores for the shark entries ('68-'82).

Even though we had the indoor facility of Jerry Roth Chevrolet, it was touch and go right up to the start of the meet from a weather perspective. The forecast changed quite a bit in the days preceding the event. Some weathermen called for mild showers the day before to the morning of the meet, while others predicted up to a few inches of snow 'sometime' around the day of the meet. I paced the floor most of the week leading up to the meet....

We'd made a contingency plan to be able to delay the meet one-week should there be clear and present indication of inclement weather. The definition of 'inclement' varies depending upon whose eyes you look through. To some it means my Corvette might get wet. This is not my definition! Heck, these cars were built to be used on the highways and a little rain or mild snow-fall simply makes a cleanup chore.

On the other hand, a bona fide Rocky Mountain spring blizzard dumping over a foot of snow and snarling traffic flow is a major impediment. It means both cars and people may be unable to travel. What good is it to host an event if nobody attends? This is what I wrestled with the week before the event.

The decision was compounded with other caveats. Several key judges had indicated their schedule prevented them from attending if we delayed. A couple of owners had mentioned the same. Plus, Jerry Roth Chevrolet had asked us to put a stake in the ground 48-hours in advance. They needed to order/cancel food and juggle parking plans to accommodate us. We simply couldn't wait until the morning of the event to see what the weather would be....

So, the Thursday before, phone calls and e-mail was traded and I made the decision to 'go' for it. If anybody felt he/she wasn't in the decision loop, the advertised plan was to host the event on March 17<sup>th</sup> unless it was postponed with 48-hour advance notice. There just wasn't enough time to contact everyone and confirm our 'go' status.

As things turned out, the weather was not too good in the foothills (just shy of a foot of snow) with equivalently poor conditions to the north of Denver. In the city itself, there was maybe 1-2 inches of snow. By the time we

got to the south side of town where the event was, the roads were almost completely clear and dry. Whew!

In Flight Judging, the meet results were:

Member	Year	Award
Tom Johnson	1957	Top Flight
John Marsico	1962	Top Flight
Dan Tillapaugh	1965	Top Flight
Bill Lucia	1966	Top Flight
Darwin Kuhlman	1966	Second Flight
Gil Pettegrew	1969	Second Flight
Steve Gruenler	1972	Top Flight
Mathew Jekot	1972	Second Flight

In addition to the Flight cars, Martin Egan brought his 1977 4-Star Bowtie and McClellan, Mark of Excellence Corvette to display. Also, Jack Humphrey (das me), drove his 1965 Duntov, Mark of Excellence car for display—you see, they do go through the snow!

Sportsman awards were tendered to:

Ralph Ridge	1961
Bill Barcus	1966
Jeff Todd	1966
Rick Bebee	1967
Eckhard Pobuda	1973
Steve Beatty	1966

All braved the weather to bring their Corvettes and provide moral support and visual examples of similar automotive history to those members participating in Flight Judging. Plus these are only the Corvettes and owners who received club awards. There were another handful of RMC folks who brought general display Corvettes to round out the Judging Field and I say thank you, folks!

Earlier, I mentioned one car was a 'special' case. The car was a straight axle that bore fuel injection badges. Under the hood was a service replacement, 350 cubic inch, carburetor equipped engine. Judges were confused on how to handle the situation. Certainly, this was not the factory original engine, but how do you deal with the 'cross over' issues. For example, should the exterior team deduct for the presence of FI emblems when the engine doesn't have a fuel injection unit?

As we were wrestling with these nuisances, the team leader approached with another caveat—the car had NO VIN tag! Well, that settled the issue immediately.

We had to refuse to Flight Judge the car. According to the NCRS Judging Reference Manual, Section 2 – NCRS Judging Purpose, Standards, Guidelines, Rules & Procedures, Rule 1 states:

“NCRS Flight Judging is presently open to any 1953 through 1982 production Chevrolet Corvette as long as the owner(s) is an NCRS member in good standing. The vehicle must be entered and shown in the name of, and by, the owner/member and proof of ownership, such as state vehicle registration or a copy of the ownership title, must be available for confirmation. The car must have the correct attached, Chevrolet factory Vehicle Identification Number (VIN) plate, or attached valid state-approved replacement ID plate which matches title and/or registration. Should a car appear with a Chevrolet (GM) issued duplicate VIN plate, it must be accompanied with acceptable documentation for the Chevrolet Division of General Motors confirming issuance. Any car appearing without identification as described shall be ineligible for any NCRS judging.”

This car had neither a factory VIN tag nor a state-approved replacement plate attached to it. The registration and insurance papers for the car cited a proper factory VIN corresponding to the year of manufacture. The owner produced a very interesting series of letters. Aged original correspondence from the delivering dealer to Chevrolet and back documented this car had been received without a VIN tag! In the correspondence stream was a notarized letter from GM stating the VIN of the car and a replacement tag was being issued/enroute. The State of Colorado used this document to register the vehicle. The correspondence stream didn't stop there, however.

Later letters showed the ball had been dropped and the replacement VIN tag never showed up. A second replacement VIN tag was requested. Apparently, this replacement VIN tag did make through the pipeline, but got misplaced at the delivering dealership! So, this car has a proper VIN number, but still doesn't have a VIN tag on it. The owner brought the car to understand his options....

Obviously, this is a bona fide case for a reproduction VIN tag. But, I'm still scratching my head. We solved the day's crisis, by obeying club rules and not accepting the car for Flight Judging. We did a 'courtesy' review of the car (score sheets were used as unofficial template of originality and condition), but we did not tabulate the sheets nor did we record our findings. The owner was happy with our compromise, but let's return to my head scratching.

How should this Corvette be shown? Rule 1, cited, is clear. The third sentence requires the VIN tag be 'attached' to the car. The fourth sentence addresses Chevrolet (GM) issued duplicate VIN plates, but makes no mention of the requirement for 'attachment' to the car. There's an excellent audit trail with this car to document; (1) it left the factory without a VIN tag, and (2) it was delivered to the original owner without the VIN tag being attached.

Two questions precipitate. First, if the owner obtains a reproduction VIN tag, does it qualify under the fourth sentence as a 'duplicate' VIN plate? Second, Section 2, Rule 2 states:

"Cars are to be judged to the standard of vehicle appearance, and as equipped, at the time and point of final assembly by the Chevrolet Motor Division of General Motors Corporation. Presentation for judging is to be in the condition normally associated with that of a Corvette which has undergone the then-current standard Chevrolet Dealer New Car Preparation for delivery to a purchaser, exclusive of any dealer or purchaser inspired, additions, deletions or changes."

Does this mean this Corvette should NEVER have a VIN tag affixed given the unique nature of its documented history? As I read our rules, they appear to conflict... Contract lawyers are taught to anticipate conflict. What do you do if a situation arises where one clause conflicts with another and the circumstance wasn't foreseen? Do you toss out the whole contract? I don't see a 'tie breaker' rule in our standards—interesting...

I'll make a point to get the answer(s) and get back to you. Stay tuned!

## ACTIVITIES

By Dirk Gaddis

If you're like me, you've got Spring Fever in a big way! The best cure for that, is to get the car out of mothballs. Take a look at your options!

The month of May is a **BUSY** one. Locally, we have a car show scheduled at Bear Creek High School, on Friday the 4<sup>th</sup>, from noon 'til 3:00. If you don't know, I'm the Auto Shop teacher there, and have promised the kids a small show. They will be bringing their cars, and I'd love to have some of yours there too. It will be very informal, with no judging or awards. Just get together, do a little bench racing, and inspire the next generation of Corvette owners. Bear Creek is located just off of Hampden (285) and Kipling. From 285, take Kipling

north to the first available Right (Girton). Take the first available Left (only about ¼ block from Kipling) and go to the stop sign. At this point, you will be looking at the back of the school, and the 3 garage doors of the Auto Shop. We'll be setting up there. If you can find some time, I hope to see you there!

Our Chapter meeting is on the 19<sup>th</sup>. We will be voting for persons to serve on the Board of Directors. If you are unable to attend the next meeting, please be sure to fill out the voting ballot, and send it to Rick Reiff. He will need to receive it before the meeting, so send it early.

Also on the 19<sup>th</sup>, we will have a Tech. Session on Air Conditioning. Jim Lennartz, who is licensed to handle the recycling and recovery of A/C gases, has again stepped up to the plate. He will demonstrate his valuable knowledge on the old Corvette systems, as well as introduce us to the newest replacement for R-12. Contact him, if you want your car to be a part of the demonstration. He has a number of cars lined up, but may be able to fit you in.

From the 7<sup>th</sup> – 13<sup>th</sup>, Bill Barcus has set up a Road Trip that coincides with the *Hot Rod Magazine* "Power Tour". See the article in this newsletter for further information.

The Western Regional, in Scottsdale, AZ, is scheduled for the 3<sup>rd</sup>-5<sup>th</sup> of May, and the Heart of America Regional, in Joplin, MO, is scheduled for the 24<sup>th</sup> – 26<sup>th</sup>. If you go to either or both of these events, please be sure to let me know...it gives your Chapter points towards the "Chapter of the Year" award.

In June, I'll try to get a Road Trip put together. I have some ideas, but at the moment, no time. Keep posted for your post card, for further details of the plans.

In July, on the 4<sup>th</sup>, we always try to go do a picnic and parade in Monument, CO. Eckhard and Terri Pobuda are our hosts, and will try to get the information to us in time for the June post card.

### MAY

4<sup>th</sup> – **Informal Car Show** - Bear Creek High School - 12:00 ' til 3:00

7<sup>th</sup> – 13<sup>th</sup> – **Hot Rod Power Tour Road Trip** – See article in this Newsletter

19<sup>th</sup> – **RMC Annual Chapter Meeting** –

## JUNE

at *Corvette City* – 11:00 AM  
Followed by a Tech. Session on Air  
Conditioning – Jim Lennartz

**1<sup>st</sup> – 2<sup>nd</sup>** – Old Car Council Swap Meet  
– Adams County Fairgrounds

**16<sup>th</sup>** – RMC Chapter Meeting and  
Road Tour – Dirk Gaddis

## MEMBERSHIP

By Jon Whiteley

Rocky Mountain Chapter membership presently stands at 77 members, ten of which are new members for 2001.

Please welcome our newest RMC members:

- Lothar Kremer of Franktown – blue/white 365hp '65 coupe + red/black '93 coupe
- Tom & Kim Dilulio of Highlands Ranch – blue/white 454'67 roadster
- John & Flora Marsico of Arvada – red/red 340hp '62 + red/red '92 coupe
- Thomas Ridge of Commerce City – green/tan '90 convertible (son of Ralph)
- Tom & Janet Sims of Highlands Ranch – silver/red (nice combo!) 245hp '61

**NOTE:** In the past, I have printed membership directories near the end of the year for distribution at the December Holiday party. This year, we've decided to print and distribute them at the *start* of Corvette season. If you want a directory, they will be available, while supplies last, at the May 19<sup>th</sup> Chapter meeting.

Now that the weather is getting nice, I encourage new members (and 'old') to drive your Corvette to the next meeting or event. Please be sure to introduce yourself and your car - we love to see 'new' cars. Catch you on May 19<sup>th</sup>.

## MERCHANDISE

By Eckhard Pobuda

## MERCHANDISE – IN STOCK

ITEM	PRICE
Golf Caps...Red, White, Gray, Maroon, Natu-	\$11.00

ral/Green, and Natural/Blue	
T- Shirts...Silk screened Front & Back (Gray)	\$10.00
Sweatshirts...Silk screened Front & Back (Gray)	\$20.00
Short Sleeved Polo...White, Red, Blue & Gray (RMC Embroidered)	\$30.00
Long Sleeved Polo...Dark Gray & Blue (RMC Embroidered)	\$35.00
Light Weight Polo...Short Sleeved (Teal )	\$20.00
Shop Coats...Gray (RMC Embroidered)	\$35.00
Chambray (RMC Embroidered)	\$30.00
Jackets (RMC Embroidered) Satin	\$70.00
Corduroy	\$75.00
Steamboat Hat Pins	\$1.00
RMC Hat Pins	\$3.00
Name Tags	\$5.00

On all Clothing items in XXL, please add \$2.00 to the above quoted prices.

## ARTICLES and MISCELLANY

## REGIONAL DIRECTOR'S REPORT

By Dennis Kazmierzak

Following are the highlights of the March 24, 2001 Board of Director's Meeting:

Vinnie Peters was elected the next President of NCRS. Dale Fiet, Region III Director, was chosen as Vice President. Vinnie thanked Tim McKeon for his leadership and dedication to NCRS.

**Membership** – There are currently 14,368 members, a net increase since this time last year of 598.

**Financial** – Items covered in depth included the financial reporting from the Bowling Green National, all Regionals in 2000, the National Road Tour, tax-exempt status of all Chapters, new equipment requests, sponsorship income and a projected budget for 2001. Attendees at the National Convention this year will be glad to hear that a label maker was purchased to alleviate the time that it has taken in the past to print name badges for those who register at the Convention.

**Judging** – Roy Sinor presented his list of completed projects, current projects and future projects. Among the completed projects are revisions to the 1975-77, 1953-55, 1956-57 and 1965 Technical Manual & Judging Guides, updated inserts in the 1967 Technical

Manual & Judging Guide and revised score sheets for 1956-57 and 1968-72. Projects currently in progress include revisions to the 1958-60 Technical Information Manual & Judging Guide and updates in format and revisions to the Bowtie score sheets. Work also continues on the 1984-85 Technical Manual & Judging Guide.

**Regions & Chapters** – In response to answers on a recent survey to Chapters, a template is currently being designed so that in the future, Chapters can file their Annual Report as well as Regional Applications electronically. In the Chapter of the Year Program, 21 chapters are involved this year. All chapters are doing well with the exception of Tennessee Valley and Kentucky Chapters which have been dissolved.

**National Road Tour** – There are 31 registrations to date for the National Road Tour. The highlight of this year's road tour is a stop at the Texas Motor Speedway.

**National Corvette Museum** – *Rick Baldick, the new Corvette Brand Manager, has proven to be a strong supporter of the Museum and will be attending the National Convention in Galveston. The best news is that during 2000 the Museum was approved as a tax exempt facility by the State of Kentucky. Feedback from the Museum was very positive concerning the NCRS 2000 Convention.*

**Publications** – A new printer is on board after July of this year in an effort to increase service to the membership while holding down costs. Member participation in member ads in The Driveline has nearly doubled since 1999. The Restorer published 102 articles by over 50 different authors. This also represents a record for member participation. Cooperation among both editors and the National Judging Office has resulted in not only a cost savings but also increased member participation.

**Public Relations** – Each year NCRS identifies a Chapter to host its National Convention. It is important that Convention budgets be based on the needs and requirements of each Convention, with sponsorships based off a requirement matrix developed by the host Chapter with input from National. The National Activities Chairman will manage contact with National sponsors while contact with local sponsors will be the responsibility of the host Chapter. It is also very important that the Chairperson of each Regional work closely with the National Public Relations Officer. This policy was developed as a result of feedback from some of

our National sponsors who would rather deal with one person in the organization.

**Activities** – The following Regionals were approved for 2001:

Florida	January 23-26
Laughlin, NV	March 23-23
Asheville, NC	April 25-27
Des Moines, IA	June 13-15
Bend, OR	June 27-29
Ste. Sauveur, Quebec	July 11-13
Waco, TX	Oct. 31-Nov. 2

Reports were given on the status of the Convention this year in Galveston, Monterey in 2002 and Hershey in 2003. No formal application was received for the 2004 National Convention, so applications will be considered at the July 2001 Board meeting. Region II plans to make a formal proposal at that time.

**New Business** – A proposal to create a new award entitled the President's Award was accepted. Nominations will be considered from each Regional Director for members who have given outstanding service to NCRS. This is in addition to the Member of the Year Award.

**NCRS Logo** – NCRS is a non-profit organization as a social club for the common benefit of its members. The NCRS logo and its name are its most unique assets. The logo includes both the name of Corvette and the crossed flags, both of which are trademark items owned by Chevrolet and licensed by Chevrolet to NCRS. It is important to remember that this license is revocable by Chevrolet in the event of improper usage by NCRS. Therefore, an NCRS Logo Policy has been established that says that the use of the NCRS logo in connection with any event sponsored by any other organization is an inappropriate use of the NCRS logo. If a Chapter needs direction or requires clarification on this matter they should contact the National Public Relations Officer.

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## MY FIRST CORVETTE DRIVE

By Vance Davis

In high school, all I could think about was cars – hot rods and custom. I built models and customized them. I spoke chopped, channeled, sectioned, lowered, the lower the better. Shave that chrome! I drew hot rods in my notebooks. By the time I was a Senior in high school, my stock clerk job at the local A & P allowed me to buy my first car, a '49 Ford, then a '53 Studebaker

and a '50 Chevy. Each cost less than \$50.00. I had 1 to drive, and 2 to work on. My driver was always in rotation.

When I graduated from high school, I got a job as a Lab Technician, and bought my first "good" car, a '57 Studebaker Silver Hawk. I bought it on payments of \$40.00 per month. After 6 months my urge to hot-rod and customize took over, first shave the chrome, lower the hood, custom paint. Swap the engine for a 389 tri-power Pontiac. Smoke those tires!

Every Friday night was race night. Cruise the two Big Boy drive-in restaurants, 5 miles apart. Time the lights, so you can stop by a potential challenger for a drag race. Six lights, six potential races, maybe the same car 2 or 3 times. After the races, we would head down to the White Stallion for a few beers and some retro racing.

One of the guys I worked with, bought a '62 Corvette. It was beautiful! Then, one Saturday morning, I spotted a used '62 Corvette on the local Chevy used car lot. A black, 340 HP, 4 speed, with 2 tops. I called my best friend and said, "Let's take the '62 Vette that Harvey's got on his lot for a test ride". We went into the used car office...what luck, my friend knew the salesman. He had sold him his '57 Chevy convertible. "I'd like to test drive that Corvette you have, maybe trade in my '57," he said. "I'm sure you will love it, it's really fast," the salesman said, as he handed him the keys. "Would it be OK if my friend goes with me?" "Well, OK, but don't be long."

We got into the car, smiling ear to ear. He fired it up and eased off the lot. Our first stop was the gas station. Two bucks a piece – that should last awhile. Next stop, my house, to take off the top. Now lets see what this baby will do! We lived in the suburbs, and had a wide, straight road we used for grudge drag racing. A Start – Finish ¼ mile was marked on the pavement. Hold it a 4000 RPM, pop the clutch, and hold on! My God! The noise, the smoke, the rush! Red line (65 mph), power shift into 2<sup>nd</sup> gear, red line (85 mph), power shift into 3<sup>rd</sup> gear, red line (105mph), WOW! This was fun! We took turns and made 2 or 3 passes each. Then we went to my girlfriends house, and the three of us toured the countryside for almost an hour. Then, we picked up his girlfriend, and rode around for another hour. What time is it? 4:00 PM, my watch read. Time really flies when you're having fun. We better get this car back.

"Where have you been?" yelled the salesman. "I was ready to report the car stolen." "I'm sorry," Ken said. "I just wanted to be sure I liked it. Now let's see what kind

of a deal we can make with my '57 on trade." That calmed the salesman down. Well, Ken never bought that car, but we were both hooked on Corvettes.

Four months later, the 1963 Corvettes came out. Ken and I found ourselves right behind one, on our favorite test track. We were awestruck! We followed it for 20 minutes. I was smitten. I had to have a String Ray! But that's another story.



## BELLHOUSING ALIGNMENT

By Jon Whiteley

I recently came across some information in a Richmond Gear manual that I felt was worth sharing. I have heard a few members tell tales of woe regarding their freshly rebuilt transmissions and this article presented the cause and solution to several common problems that perhaps have been incorrectly attributed to clutches or transmissions.

The body of the article (in different font) was originally credited to G-Force Products. **With permission received from Richmond**, the information in the Richmond manual and the article that accompanied it follow:

Proper alignment of bellhousing to the motor is critical! The most common problems associated with a mis-aligned bellhousing are: jumping out of gear, vibration, excessive pilot bushing wear, difficulty shifting, or excessive wear of the tailhousing bushing. OEM and high performance drivetrain components have manufacturing tolerances which can shift the bellhousing into an unacceptable position.

From the engine block viewpoint, all machining for the main bearings is done at a right angle to the surface where the bellhousing bolts to the block. Anytime an engine is line-honed or bored, it could move the crankshaft centerline [in relationship] to the dowel pins at the rear of the block.

Whenever a new bellhousing or a rebuilt motor is involved, we strongly recommend [indexing] the bellhousing to assure proper alignment. An article specific to proper bellhousing alignment is included for your un-

derstanding of the importance of this matter. See the following article for further instructions.

Bellhousing alignment is absolutely essential [for] smooth, reliable clutch and transmission operation. Of major importance is the position of the bellhousing on the rear of the engine; the centerline of the transmission input shaft must line up exactly with the centerline of the crankshaft. In addition, the transmission mounting surface (rear of the bellhousing) must be parallel to the clutch engagement surface of the flywheel.

All too frequently the bellhousing or scattershield is merely bolted up by using the factory installed dowel pins as a guide. But the placement of the dowel pins and the positioning of the dowel pin holes in the bellhousing can be affected by the manufacturing tolerances of mass-production. Frequently, these tolerances multiply to produce considerable alignment error.

A variety of problems can result from the bellhousing being out of alignment: pilot bearing failure, transmission bearing failures, clutch chatter, sloppy shifts, sluggish clutch movement, rapid synchronizer wear, or popping out of gear. And of course, the transmission and/or clutch takes the blame for what is really a bellhousing alignment problem.

A dial indicator (with magnetic base) is needed to verify bellhousing alignment. Using stock dowel pins, install the bellhousing and tighten securely. The trueness of the flywheel should be the first checkpoint because all subsequent alignment checks will use the flywheel face as a measuring point. The flywheel face must be perpendicular to the centerline of the crankshaft if consistent, smooth clutch action is to occur. This can be determined by mounting the dial indicator on the bellhousing. Rotate the crankshaft slowly recording any variations on the dial indicator by measuring from the bellhousing face to the flywheel (a runout of .005" is acceptable). If the flywheel runout is more than .005", check for dirt or burrs on the face of the flywheel or crankshaft. If there are none, flywheel warpage may be the problem and the flywheel may be in need of resurfacing.

[Second], affix the dial indicator to the flywheel (prior to clutch installation) and attach the indicator so that it contacts the bellhousing's transmission mating surface about one inch outside the rear opening. (Be sure to avoid the transmission mounting bolt holes and clutch pivot ball hole). Rotate the crankshaft slowly by hand and note any variations in the indicator reading to determine if the surface is parallel with the flywheel. Maximum variation between the highest and lowest readings is .005". If a greater variation is found, place shim stock in line with the low point between the bellhousing and the block. Adjust shim thickness until variation of .005" or less is

obtained. Again, carefully check the mating surfaces for dirt and burrs to make sure these are not causing the problem.

[Third], remount the dial indicator so that it measures the inside diameter of the rear opening in the bellhousing. Once again, be sure there is no paint buildup, nicks or burrs on the edges of the opening. Slowly rotate the crankshaft and check the dial indicator readings. The maximum variation is .010" because the actual error is the total variation divided by two, or .005" misalignment. If the variation exceeds .010", realignment is required. Make several revolutions of the crankshaft to verify the readings.

If the bellhousing must be realigned, one of several approaches can be used. In any case, the stock dowel pins must be removed from the block and discarded. The stock pins must be removed carefully to avoid distorting or otherwise damaging the pin holes.

The first method consists of simply loosening the bellhousing bolts to permit repositioning of the bellhousing until a dial indicator reading variation of .010 or less is obtained. It may be necessary to enlarge the bellhousing bolt holes slightly to obtain sufficient movement. Then tighten the bolts and recheck it to ensure the housing hasn't shifted. With the bolts securely tightened and the housing properly aligned, choose two points approximately 180 degrees apart. It will be necessary to drill through the bellhousing flange and into the block for installation of the new dowel pins. The new pins need not be as large as the stock ones. A diameter of 1/4" - 5/16" is sufficient. Once the new pins are in place, the bellhousing can be removed and reinstalled without need to check the alignment.

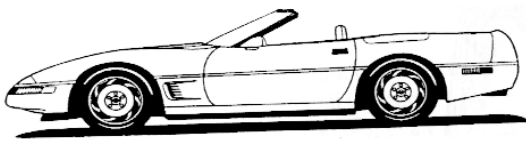
The second method utilizes offset dowel pins. These special pins are offered in three offsets: .007", .014" and .021", in both 5/8" and 1/2" diameters. Before installing the offset pins, drill and tap a small hole in the side of each dowel pin hole (in the block) so that a small Allen-head set screw can be used to lock the offset pins in place after the alignment is completed.

When installed, the offset dowel pins can be adjusted with a screwdriver to obtain proper alignment. In some cases the dowel pins must be polished with a strip of emery cloth to permit them to be rotated in the dowel pin holes with a screwdriver. Adjustment with these offset pins can be tedious and time consuming, so be patient. After this is completed, tighten all bellhousing bolts and recheck the alignment one more time. If everything is okay, the bellhousing portion of the job is done.

But there's one more part to check; the front bearing retainer on the transmission. The outer diameter of this

retainer, not the transmission bolts, determines placement of the transmission on the bellhousing. Therefore, it is important that the bearing retainer be matched to the bellhousing being used. The retainer should fit snugly in the opening of the bellhousing. If it doesn't, another retainer of proper diameter must be used.

I hope some will find this information useful. The next time you're replacing a clutch, it might not be a bad idea to at least take a few measurements with a dial indicator and see how your bellhousing 'stacks up'.



## ROAD TRIP!

Bill Barcus has proposed a road trip in May that includes running for a couple of days with the *Hot Rod Magazine* POWER TOUR. This year's POWER TOUR is the 7<sup>th</sup> annual event, and is going from Pontiac, Michigan to San Bernardino, California (a total of 2,414 miles). Several people who have done this ride in the past say it is a great time. Bill's proposed trip is as follows:

- May 7  
Denver to Amarillo, TX to join the POWER TOUR
- May 9  
Amarillo to Albuquerque, NM with POWER TOUR

If anyone is interested in joining the POWER TOUR for a few days and seeing some other sights along the way, please contact Bill Barcus. A group has been assembled and preferences will be expressed in Albuquerque to see what route to take home.

Bill Barcus  
H: 303-773-2633  
O: 303-361-0083  
Email: [bbarcus@uswestmail.net](mailto:bbarcus@uswestmail.net)

Further information and registration for the POWER TOUR itself can be found at [www.emapusaevents.com](http://www.emapusaevents.com). Be sure to look for the POWER TOUR event as there are several car-related events listed at this site.

If you have attended an NCRS Regional, Chapter, or National event, please let me know. I will also need to know if you showed your car, or had it Judged, and if you participated in the Judging or Tabulating. Each of these activities gains points for your home Chapter. Also keep me posted on the status of any articles you have written for the *Restorer*. Dirk Gaddis (303) 771-8239 or E-mail at [Racz-Gaddis@att.net](mailto:Racz-Gaddis@att.net)

## CHAPTER OF THE YEAR

The Chapter of the Year program runs from National Convention to National Convention. On a monthly basis, each Chapter submits a report of activities and attendance to the National Vice President. We receive points for a variety of activities, with some items worth more or less points.

At the end of the year (June), we must submit an Annual Report, listing information relating to the level of participation of our individual members. They want to know how many of our members are Judges and/or Tabulators, how many of our members have Duntov Awards, etc.

New member, Donna Hanner, has set up a spreadsheet to help us arrive at the totals. Donna jumped in and offered her experience in this process, since she did it for her previous Chapter. **Donna – THANK YOU!** If you were at the last meeting, you may have already given us your information...if not, please fill out the form and return to me before June. You can get this information to me at a meeting, call me at (303) 771-8239, via E-mail at [Racz-Gaddis@att.net](mailto:Racz-Gaddis@att.net), or send via regular mail to:

Dirk Gaddis  
2515 E. Fremont Ct.  
Littleton, CO 80122

Please list both yourself and your spouse, if applicable, in regards to Judging and Tabulating (example: Both Donna and Chuck are Judges, only Chuck is a Master Judge. Only Donna is a Tabulator).

In regards to the various awards, please list a quick description of the car that has received the award (example: Founders Award® - 1982 Coupe, Duntov/McClellan Award – 1965 Roadster). Be sure to list all of the cars and awards you have.

Your participation in this Annual Report is greatly appreciated! Hopefully, with your help, we'll be receiving an award at the Annual Awards Banquet.

Member Name	
NCRS Member #	
Judge	
Tabulator	
Master Judge	
Master Tabulator	
Sam Folz Award	
Founders Award	
Sportsman Award	
American Heritage Award	
Duntov/McClellan Award	
Bowtie Award – list car & # of stars	
Member National Corvette Museum	

## ROCKY MOUNTAIN CHAPTER OFFICERS

<b>CHAIRMAN</b>	Bill Lucia
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Term expires: 12/31/2002	
<b>VICE CHAIRMAN</b>	Ralph Ridge
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Term expires: 12/31/2001	
<b>EDITOR</b>	Lisa Racz
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Term expires: 12/31/2002	
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Term expires: 12/31/2001	
<b>AST. JUDGING CHAIRMAN</b>	Jim Lennartz
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Appointed position	
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Term expires: 12/31/2002	
<b>TREASURER</b>	Richard Sullivan
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Term expires: 12/31/2001	

<b>ACTIVITIES</b>	Dirk Gaddis
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Term expires: 12/31/2001	
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<b>MEMBERSHIP</b>	Jon Whiteley
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Term expires: 12/31/2002	
<b>TECHNICAL ADVISOR</b>	Gary Steffens
CorvetteMasters@cs.com	(303)762-8388
Term expires: 12/31/2002	
<b>COMMUNICATIONS</b>	Bob Davis
RDav@iname.com	(303) 838-9529
Appointed position	

Membership in the NCRS is open to persons interested in the restoration, preservation and history of the Corvette produced by the Chevrolet Motor Division of General Motors Corporation from 1953 through 1982. NCRS is not affiliated with Chevrolet or General Motors.

Membership in the Rocky Mountain Chapter of the NCRS is open to all members of the NCRS National organization. Dues are \$30.00 for the first year, and are \$20.00 per year for renewal. First year dues entitle the new member to a Chapter ball cap and membership name tag.

Advertising in the Rocky Mountain Chapter Newsletter is free to all active members, for all Corvette related items or Corvettes for sale. Commercial advertising rates for the Newsletter are \$15.00 for a business card, \$25.00 for a ¼ page, \$40.00 for a ½ page and \$60.00 for a full page. All rates are quoted for 6 issues or one years printing. Contact the editor for further information. All editorial material can be sent to the editor.

NCRS registered marks used in this publication are: NCRS Founders Award®, NCRS Master Judge Award®, NCRS Performance Verification Award®, NCRS Flight Award®, and NCRS Sportsman Award®, and are registered with the United States Department of Commerce and Trademark Office. The NCRS American Heritage Award<sup>SM</sup> application is pending.

## CLASSIFIED ADS

Our Classified Ads can be found on the Web Page – If you'd like to include a picture, contact Bob Davis for the "how to" instructions.

**For Sale:** Beautiful Black 1997 Camaro – Automatic Coupe. V-6, 74,700 miles, Grey Cloth Interior. Bottom dollar pricing at \$9,500.

**Available:** Secure, Alarmed, K-9 Protected, Climatically Controlled, storage space for your Corvette. Patrolled daily.

Dirk Gaddis (303) 771-8239

E-mail [Racz-Gaddis@worldnet.att.net](mailto:Racz-Gaddis@worldnet.att.net)

**For Sale:** 1990 GMC Suburban w/ '93 modified 454CI (300 plus HP). TCI modified HTD400 trans & 3" SS exhaust. For more info, contact :  
Dennis Kazmierzak (303) 697-8428  
E-mail [DJKazmierzak@worldnet.att.net](mailto:DJKazmierzak@worldnet.att.net)

**For Sale:** 8 X 20 Enclosed Car Hauling Trailer. Electric Brakes, Aluminum Skin, Good condition. Includes Load Leveling Reese Hitch. \$2,500.00  
Ralph Ridge (303) 660-8531  
E-mail [RockyMtnRidge@cs.com](mailto:RockyMtnRidge@cs.com)

**For Sale or Trade:** 1961 Corvette Owner's Manual with the insert card. Good Condition. \$150.00 or trade for 1965 Corvette Parts.  
Martin Egan (307) 632-5806  
E-mail [Egan19651977@cs.com](mailto:Egan19651977@cs.com)

## Humor and other useless Info.

*(reprinted from the Queen City Chapter newsletter)*

### OLD WISE SAYINGS

- Never test the depth of the water with both feet.
- Before you criticize someone, you should walk a mile in their shoes. That way, when you criticize them, you're a mile away and you have their shoes.
- It may be that your sole purpose in life is to serve as a warning to others.
- Timing has an awful lot to do with the outcome of a rain dance.

### INTERESTING QUESTIONS

- What hair color do they put on the driver's license of a bald man?
- Why do they sterilize the needle for a lethal injection?
- When dog food is new and improved tasting, who tests it?