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Chairman

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Editor

**BUSINESS MEETINGS &
TECH SESSIONS**

Hightstown Elks Club
110 Hickory Tavern Road
Hightstown, N.J.

3rd Monday of the month at
8:00 p.m.

THE 2013 CORVETTE SEASON IS IN FULL BLOSSOM!

Chairman's Column

By: Ed DiNapoli

I think that summer is finally coming and our cold wet spring is going to leave us, after all it is almost July 4th. The rainy weather caused us to cancel our display of NCRS information and greetings at the Bar A show, put on by the Corvette Express people. This event was to be part of the requirements for our Top Flight Chapter status. Our Chapter Vice-Chairman, Howard Welch, will be rescheduling this event and establishing a road tour event towards our goal of 2013 Chapter Top Flight. At the National in Virginia we will be getting our 2012 Chapter Top Flight Award. If my memory serves me, this will be the 13 year in a row that we achieved high National recognition for the Chapter. This is a terrific record and all the chapter members that participated in the functions that made this pos-

sible should be proud of this accomplishment.

It was great to see Vito again at a CNJ event and for taking time out of his busy schedule to attend our May Business Meeting. He addressed the membership and offered clarity on several controversial judging issues. We also discussed the aging of the NCRS membership and what it means to the future of the organization. It was obvious that we need younger involvement and interest in the Corvette hobby, in order to pass on Corvette history, development and NCRS culture.

In our attempt to continue the education of chapter members of Corvette knowledge, the following technical sessions have occurred: Mark Rudnick, our past Chairman and 68-72 Team Leader, put on a Judging Technical Seminar on a 69 L88, explaining all the nuances of this famous Corvette. I know from members attending, that it was informative, entertaining and offered nice Saturday relief

from working around the house. Joe Ronzo our 73-82 Team Leader, gave an excellent presentation regarding, Air Injection Reactor (AIR) emission control system. He covered, how to determine the year of each of the components, while discussing the full workings of the system. Dave Mognoni, our Chapter Judging Chairman, shared his experience from the National Judging Retreat in Texas. This event is held over several days with the best NCRS Judges and Team Leaders directing the activities. This is not a routinely scheduled event and if you would like to attend you must keep your attention to National information sources to see when the next retreat will be scheduled. I would like to thank Mark, Joe and Dave, for their contributions to our chapter and sharing their Corvette experiences with our members. If you have an expertise or Corvette knowledge that you would like to share with
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C4 ECM WOES

By: Bob Zimmerman

For many of us who were raised at a time when carburetors and distributors were in high fashion, we were taught that for an internal combustion engine to run you

needed two things; fuel and spark. It wasn't too difficult a task to determine if one or both ingredients were missing thus making diagnosis pretty basic.

With the advent of the micro-

chip, it didn't take long for engineers to figure out that the i.c. engine could be managed far more efficiently in terms of spark, air/fuel ratio and tail-pipe emissions by employing the microchip. Consequently
(Continued Page 2)

Chairman's Message

(continued from page 1)

chapter members, please contact Dave Mognoni and he will make sure you get into our education program.

We are in the planning stages for our 2013 Chapter Show, which will be held at the Loughin's home in Mendham, NJ, on September 8th. If you are interested in showing your car make sure you send in your registration form to Ralph Greer as soon as the Driveline appears at your doorstep, as we will be accepting only 4 cars for Flight Judging.

The National will be on us before we know it. With it being in Hampton Roads Virginia, it offers all of us in the Northeast an opportunity to enjoy all the things that a National has to offer. I guarantee that there will be more Corvette functions and events than you will be able to attend. You will wish there were more time to fit everything in.

As you probably know, our Chapter Secretary, Pat Addonizio and I have been working on a new web site for the Chapter. I am happy to report that we will have the new site up in the next several weeks. I would like to thank all the members that offered support to our efforts to bring a cost effective web site to the chapter.

In closing, the NCRS has many terrific programs to offer, so choose the activities of your liking, and enjoy your Corvettes.

C4 ECM Woes

(Continued from page 1)

The first computer controlled engine management system was created. Electronic Spark Control and Throttle Body Injection became the new terms in the mechanic's lexicon.

The innovation proved to be quite successful and the evolution of the computer in automotive applications grew exponentially from the mid eighties to early nineties. Suddenly computers could do a host of other tasks besides just engine management. By the mid nineties Corvettes contained multiple processors to manage ABS systems, traction control systems, transmission shifting, dome lamps, Low Tire Pressure Warning, Delay Accessory Bus bars and enhanced Driver Information displays. Anyone who has driven a 92 or newer Corvette along an icy roadway will marvel at how much control and stability are available thanks to the microprocessor.

As with any electronic device, and more so with computers, heat and vibration can eventually be fatal to them. One of the biggest hurdles for engineers was to create a safe environment for such a relatively fragile innovation. As the computer sophistication increased so did the size relegating its location from under the dash to the engine bay. Suddenly this sensitive electronic device took up residency in a very harsh environment subject to enormous temperature extremes, road debris and exposure to engine fluid leaks. It's no wonder these little marvels are failure prone in many C4's built from 1988 to 1993.

Consequently, we often see C4's on the judging field with re-manufactured ECM's. Typically these units don't cost a lot of point deductions in the originality column of the judging sheet but for the purist there is no substitute for the real thing.

A number of years ago I diagnosed a failed original ECM in my 93 Corvette. In order to secure a replacement unit from my local Chevy dealer I would have to provide my v.i.n. pre-pay the cost and surrender my failed unit when I picked up the replacement. The ECM's are no longer being manufactured by GM and the rebuilding process is sublet to an approved GM vendor who will need your failed unit as a core.

I would have to include myself in the ranks of those whose cars contained the dreaded reman ECM label stigma. But thanks to an enterprising wife with consummate E-Bay skills, she was able to locate an original LT-1 ECM for \$80.00 with the seller's promise that it was a functional unit removed from a wrecked Camaro. The seller explained that he was going to adapt a tuned port system on his '32 deuce coupe but the project never materialized. That adaptation would require the use of the ECM that was now no longer needed. So a few days later it arrived in good order and I promptly installed it in my Corvette. Problem solved. Everything was working perfectly and I suddenly had my faith in humankind restored. It is important to note that I had removed the PROM chip from my faulty ECM and installed it in the replacement unit. The PROM (Programmable Read Only Memory) contains all the elements needed to manage my particular vehicle.

So, having a working replacement ECM in my car, and having the original one as well allowed me to compare the original labels. The labels both contained bar codes, both had the same service numbers and were configured the same but varied by part number, Julian date code and PROM code. I concluded that if I could remove the cover portion of the defective ECM from the chassis I might be able to do the same with the replacement unit and merely change covers. I would then have a working ECM in my original case that would score perfectly for flight judging. The following illustrates that endeavor.



Photo 1

Step one is to be sure the ignition key is in the off position and the battery is disconnected. Next, locate the three 10 mm nuts that secure the ECM to the plastic carrier located adjacent to the brake booster/ master cylinder. The outboard nut is under the plastic and is only accessible from the front. (Photo1). Once the three nuts are removed lift the ECM up and out of the carrier. Depress the plastic clip located on the main ECM harness to disengage the tapered plastic dust shield over the connectors and slide it to the outside to remove. (Photo2)

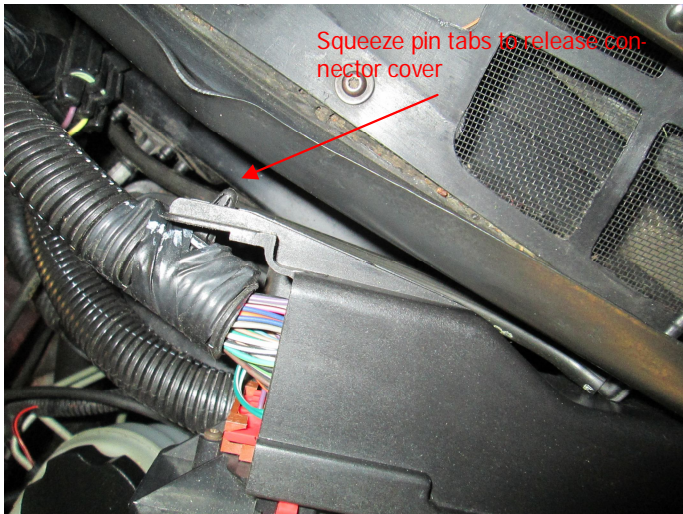


Photo 2

Next depress the red plastic tabs securing each of the four harness plugs to the ECM starting with the outer connector and working to the inboard side of the ECM. There are two red plastic tabs on each connector. One on top and one on bottom. (Bottom ones not illustrated in photo 3). The wires associated with each connector are routed over the adjacent connector so you must remove the outer harness first moving in one at a time to allow clearance for each adjacent harness.

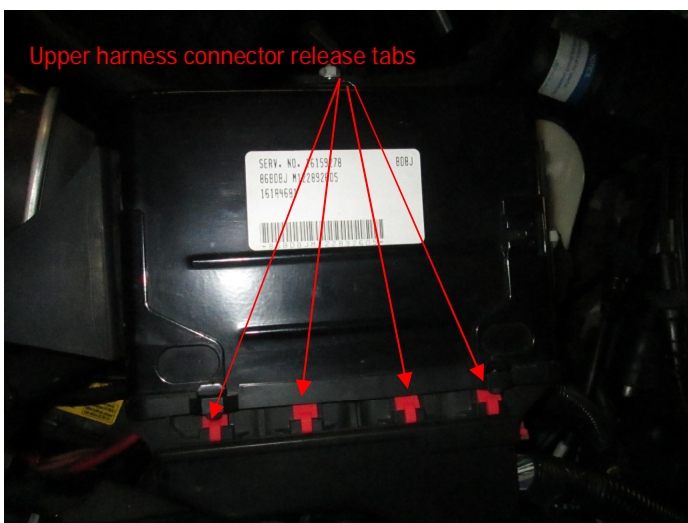


Photo 3

Place the removed ECM on a suitable flat work area and be certain to be discharged of any static electricity. The underside of the ECM has a pot metal cover secured with four 7mm hex head screws with rubber washers. See photo 4. Remove the cover to expose the EPROM.

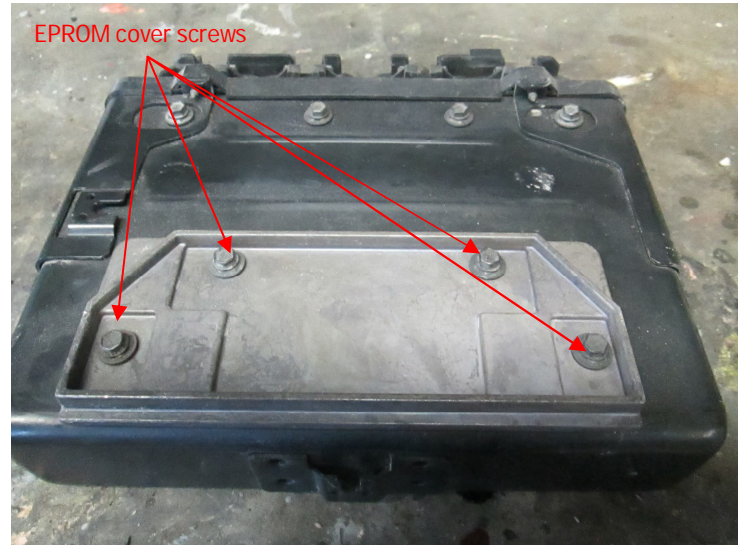


Photo 4

The bottom side of the cover contains a green rubber seal and a rectangular shaped piece of cork glued to the lid that is used to apply light pressure to the EPROM to help keep it from dislodging due to road vibration. See photo 5.

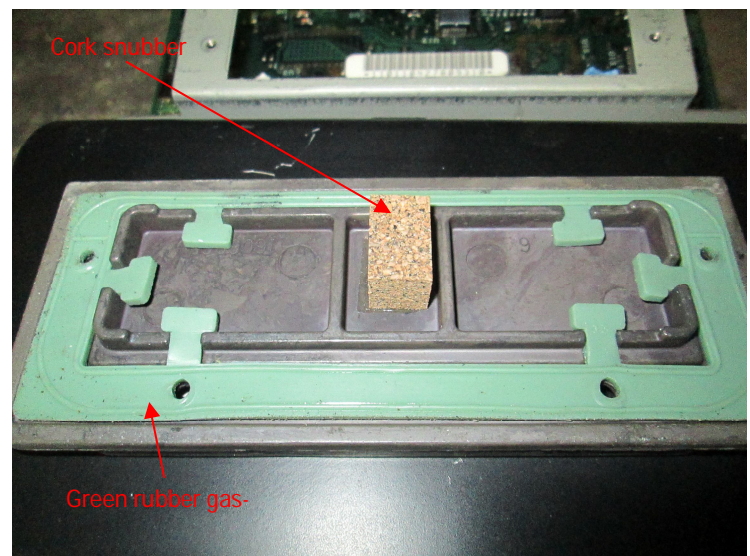


Photo 5

Next step is to remove the EPROM from the ECM chassis. There are two plastic tangs on either side of the EPROM, one white and the other blue. Disengage the plastic tangs by moving each one outward away from the EPROM. As the tangs hinge outward the underside of the tangs help lift the EPROM from its chassis receptacle. Once disengaged simply take the EPROM out of the cavity. See photo 6.

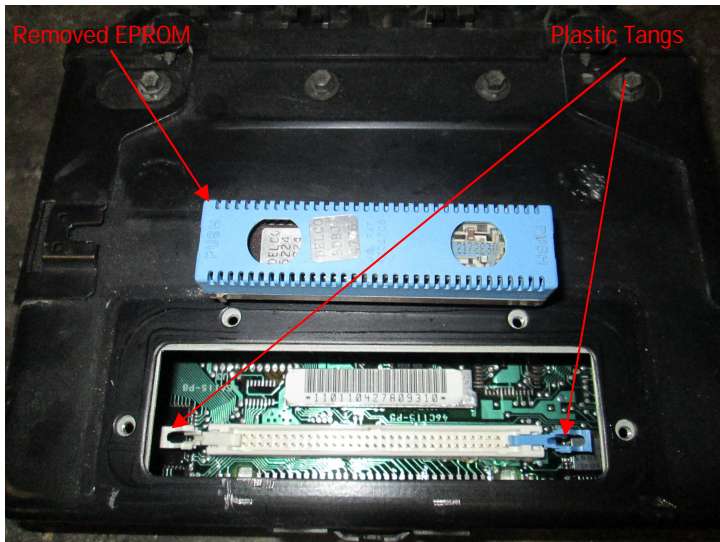


Photo 6

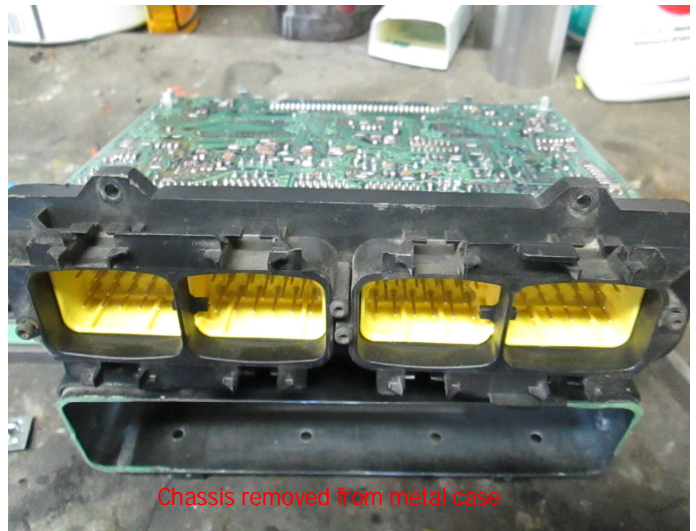


Photo 8

Next remove the four remaining 7mm hex screws from the bottom of the case and the four sheet metal hex screws at each corner of the four harness connectors. See photo 7

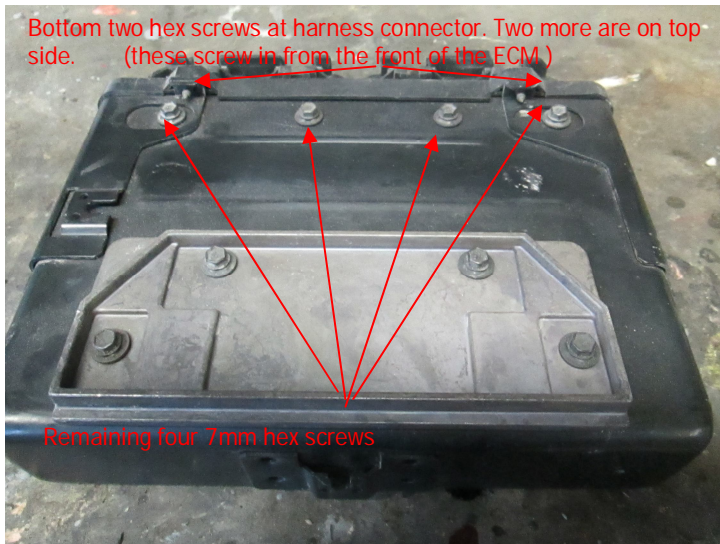


Photo 7

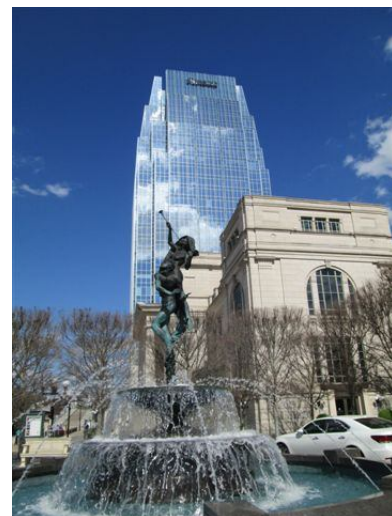


Once all fasteners have been removed, using a medium slotted screw driver, pry carefully and evenly between the plastic end cap and the metal case to release the green rubber dust seal. Once the gasket has been released from the case simply slide the chassis out of the metal case. See photo 8. Do the same with your replacement ECM and simply exchange the two placing the serviceable chassis into your original case. Line up all screw holes in the case and chassis after making certain the rubber gasket has been properly seated and secure all fasteners. Install the ECM after re-connecting the four connectors from the main harness. NOTE: It won't hurt to spray an electrical cleaner/lubricant on the gold ECM connector pins prior to installing the harness connectors. Slide the connector cover in place and re-attach the cradle nuts. Connect battery power, start engine and be sure there no malfunction indicator lamps illuminated and then road test the car.

Southeast Regional at National Corvette Museum April 10-12

By: Bob Zimmerman

If you love Corvettes and country music you didn't want to miss the Southeast Chapter's regional meet at the NCM in Bowling Green, Ky. My wife Sharon and I teamed up with Mark and Mary Tulley and another couple from the Metro Long Island Chapter and drove the 800 miles in our Grand Sports. Despite steady rain from Columbus, Ohio to Bowling Green the trip was fun and enjoyable. Light C4 entries allowed us to finish up judging early enough in the day to drive to Nashville, TN and visit the Country Music Hall of Fame and downtown Nashville. Here are some images of the event.





New England Regional Marlborough, MA May

Some Images from the event along with a special announcement made by National Judging Chairman Roy Sinor. Roy used this regional event seminar to announce that as of July 22nd he would be stepping down as the NCRS National Judging Chairman ending a 17 year run as the NJC. He further announced that his replacement would be the 1953-1955 National Team Leader Dave Brigham. As many of us know, Dave has been an active member of the New England Region and as such it was very appropriate to make the announcement at this event.



Northern California Regional Lake Tahoe June 8-10

By: Bob Zimmerman

Some regional meet venues are good, some are great and then some are absolutely spectacular. Lake Tahoe definitely falls into the latter category. Hats off to Mike & Sharyl Ingham, Art & Glorie McNay, the Tidwells and many other Northern California Chapter members for staging a very memorable regional and allowing us to share in the chapter's 35th anniversary celebration.



Items For Sale or Wanted

ALL ITEMS ARE ORIGINAL UNLESS NOTED OTHERWISE
PHOTOS WILL BE FORWARDED UPON REQUEST PRIOR TO SALE OR
ITEMS WILL BE BROUGHT TO NEXT MEETING.

IF AN ITEM HAS TO BE SHIPPED, THE ADDITIONAL SHIPPING COST
WILL BE INCURRED BY THE PURCHASER.

PAT FULLAM- 609-268-7603---FULASSOC@COMCAST.NET

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\$15.00

1963 – CORVETTE SHOP MANUAL - \$25.00

1964 – CHEVROLET RADIO – SERVICE SHOP MANUAL – IN-
CLUDES CORVETTE. - \$15.00

1964 – CORVETTE SHOP MANUAL – SUPPLEMENT. - \$15.00

1965 – CORVETTE SHOP MANUAL – SUPPLEMENT. - \$15.00

1968 – CORVETTE OWNER'S MANUAL – PRINTED AUGUST
1967. - \$25.00

1975-77 CORVETTE TECHNICAL INFORMATION MANUAL &
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\$30.00

1977 – CORVETTE ASSEMBLY MANUAL, WITH BINDER -
\$17.00

1992 - FACTORY SERVICES MANUALS (BOTH VOLUMES) -
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VETTE EMBOSSED ON HANDLE. - \$20.00

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OF VOLUME ONE, CORVETTE RESTORER -SUMMER 1975
VOLUME 2, NUMBER 1 TO SPRING 1978 VOLUME 4, NUM-
BER 4. - \$45.00

WHITE NCRS BINDER– CONTAINS CORVETTE RESTORER - SUM-
MER 1978 VOLUME 5, NUMBER 1 TO FALL 1979 VOLUME
6, NUMBER 2, CORVETTE NEWS APR/MAY 79, DEC/JAN
1980, APR/MAY 1980. - \$30.00

EARLY NCRS SINGLE PAGE CLASSIFIED AD LISTINGS. - \$5.00

EARLY NCRS 1956/57 SURVEY. - \$5.00

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1997 CORVETTE SALESMAN TRAINING PRODUCTS- GIVEN TO
CORVETTE SALESMAN FOR REFERENCE, INCLUDES WRIT-
TEN INSTRUCTIONS AND VIDEO. - \$30.00

CNJ Chapter Meeting Schedule

July 15 Business Meeting 8:00 p.m. Elks Lodge

August 19 Technical Meeting 8:00 p.m. Elks Lodge

Sept. 8 Annual Chapter Meet 8 a.m. to 4 p.m. to be held
at the Loughlin residence 462 Cherry La. Mendham

Oct 21 Technical Meeting 8:00 p.m. Elks Lodge

Nov 18 Technical Meeting 8:00 p.m. Elks Lodge

Dec 15 Annual Holiday Brunch KC Prime Restaurant &
Steakhouse 4160 Quakerbridge Rd. Lawrenceville



Hope many of you are planning on attending the National Conven-
tion later this month at Hampton Roads. See you there!

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