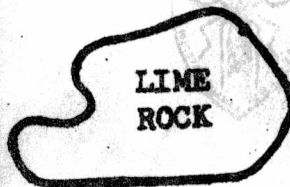
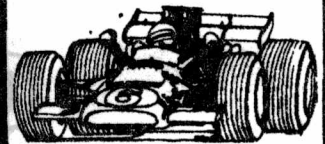


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The Mohawk-Region SCCA membership
meets the first Wednesday of each month
at the Center Inn, Glenmont, at 8:30 p.m.

KNOCK-OFF

EDITOR, PUBLISHER, CIRCULATION, etc.

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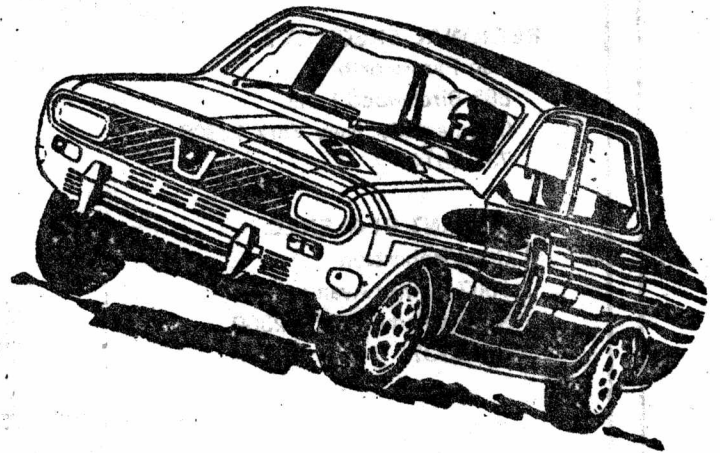
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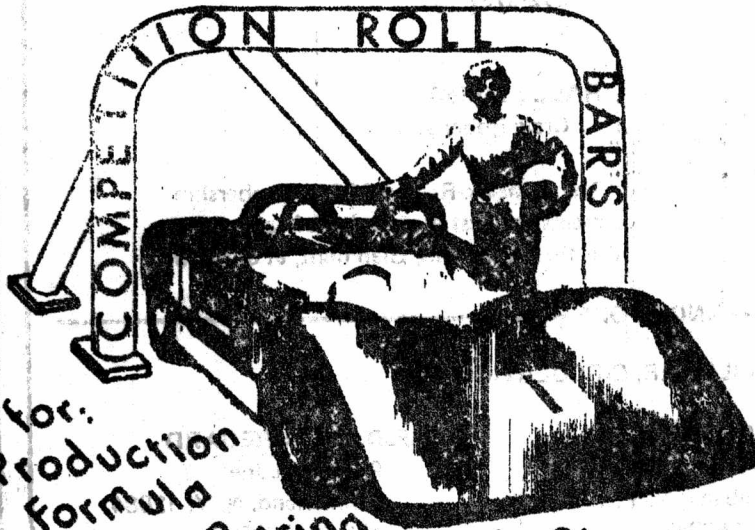
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The monthly membership meeting of the Mohawk-Hudson Region SCCA was called to order at the Center Inn on 2/5/75 by H. Farnsworth.

Secretary's report was approved as read.
Treasurer's report was approved as read.
Asst. R.E. no report.

K.O. Staff - Judy Beauregard reported the postal permit has been accepted by the Guilderland P.O. and we are waiting to hear from the Albany P.O.

Competition Director - There will be a meeting March 9th for all Competition Drivers to organize. The meeting for novices will be sometime after March.

Activities Director - NYSIRA will hold all their events at Cossayuna Lake. The Snowflake Rally will be 2/15/5. Reg. at 3:30 E. Greenbush Shop. Center-Rts. 9,20,4. First car off at 5:01. BMSC has an ice trial 2/8/75. March 15-16 NEDiv Rountable in Gettysburg, Pa.

Solo II Chairman not present. Judy Beauregard said she has a definite yes for the periphal parking lot. But 2 weeks before each event permission has to be granted. This is due to the energy problem.

Area 11 Meeting was reported on by Gene Birdsey. There will be a NYSRRC this year open to all competition drivers regardless of region. Drivers have to participate in 2 events. There will be a general mailing to all NEDiv drivers. Each region in Area 11 is assesed \$40.00 per event held.

National Convention was reported on by Carl Corrin.

The R.E. presented the following awards....

A citation was presented to Paul Hacker by the Watkins Glen Race Course for the Lap Record, Paul now holds for the long course.

A citation was read and will be presented to Phil Raeder for his lap records on both the long & short course at Watkins Glen.

The Past R.E. pin was presentd to Carl Corrin.

The R.E. expressed the hope that members would write letters to the Schenectady Gazette to get the column, Wheels by Bill Kane back in the newspaper.

The movie on Road America, 1960 was presented.

Respectfully submitted:

Marie Corrin
Marie Corrin, Secretary

from the editor . . .

This column this month should be To the Editor. The following letter was received during the past month. We appreciate hearing from our readers and members. By your comments we can try and bring what you want to see in your paper.

Dear Marie:

This past issue of the Knock Off was superb. Absolutely great. We especially enjoyed the article for Competition Drivers, it was full of information. I hope you and your staff can dig more up for future papers.

You're off to a great publication.

Sincerely,

(s) Connie & Tim McIntyre

Thanks for the kind words. ed.

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REGIONAL Rally Roundup

Well here it is the second month of 1975 already. First we will have a last minute plug for the Snowflake Rally, if you are reading this article prior to Feb. 15. If not, proceed to the next paragraph without passing GO. According to the Rallymaster, this year's Snowflake may well go down in history as the third hill-climb that Mohawk-Hudson has ever sponsored. The only difference being that in this event you get to go down the other side as fast as you went up. The rallymaster also promises that there will be snow on the majority of the route, unlike the past several. (although I must admit that it probably wasn't the fault of those Rallymasters). So strap some one into the passenger seat, throw some flares and what-have-you in the back, and come on down to the East Greenbush Shopping Center between 3:30 & 4:00 and join the fun.

The big news this month is that the region which has brought to you (yes you, you lucky member) the New York State Road Racing Championship, the North Atlantic Road Racing Championship, the INEC (?) Area 11 Road Racing Championship, and other sundry extravaganzas is going to be participating in the North American Rally Championship if all things go well. That catchy title is my own as the series doesn't have a proper name at the moment. The proposal however, which has been brought forward by Dave Hathaway (of Parsimonious fame) of the Berkshire Motor Sports Club, is that this area have a rally series which will count towards a championship. The series would consist of seven rallies of which two would be put on by M-H, BMSC and Empire Motor Sports Club, each, and the seventh would be a joint effort. Although this is all in the planning stages at the moment, it looks extremely good that this will come off and may well be the best thing to happen to rallying in this area since Dave McClumpha resigned as Rally Chairman (only kidding, Dave- heh, heh). There will be more on this in upcoming months but anyone having ideas or suggestions concerning the series contact me.

The intra-club calender committee met a while ago to come up with dates for the year and at the moment M-H is scheduled to put on four rallies in '75. These are:

Feb 15 - Snowflake
Apr 6 - Elssah Grebredleh
Sept. 28 - Saratoga Safari II
Nov 9 - ??

At the moment the Nov. 9 date does not have a name or chairman. If anyone out there has gotten this far into this article (yawn) you might be qualified to put on a rally as you have demonstrated extreme preserverance. If interest please let me know - otherwise till next time. POR.

.....Howard Geer

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HOW TO START RACING WITH THE SCCA

To obtain your SCCA Novice Log Book you must:

1. Be a member of the SCCA, Inc. (National Membership)
2. Be a member of the Mohawk-Hudson Region, SCCA.
 - a. membership in National is \$25.00 per year.
 - b. membership in Mo-Hud is \$5.00 per year.
 - c. Send check payable to Mohawk-Hudson SCCA for \$30.00 and membership application to J. Fantelli, Damask Dr., Elnora, N.Y. 12065. (Renewals are to be sent direct to Denver SCCA Office)
3. Be over 18 years of age.
 - a. 18 to 21 years of age needs a Minor Release.
4. Apply for and receive your "Novice Log Book" (which is your Novice Racing License). HOW??
 - a. Have the SCCA Physical Form filled out by a doctor.
 - b. Have two passport type pictures - the two-bit machine type will do.
 - c. Supply your membership number - from membership card.
 - d. Send all of the above plus \$3.00 check to the Competition Director, Bill Morris, R.D. 2, Riverview Road, Rexford, N.Y. 12148. and he will issue the Novice Log Book.
5. You must buy at the time of issuance of the Novice Log Book, or have in your possession, A "General Competition Rules" (GCR) Book. The "Production Car Specification" (PCS Book is also necessary if you are going to race a production car.
6. The "Drivers Log Book" which records each race of your SCCA career is also required.
7. A "Vehicle Log Book" is required at each event and is to stay with the car as it changes owners. These books come with 4" diameter SCCA stickers - one required for each side of the race car.

Bill Morris or Jack Fantelli has the above listed books. Below is a list of Forms and Books available and cost.

Membership form (National & Regional is combined)	No Charge
Minor Release	No Charge
Novice Log Book	\$3.00
Physical Form	no Charge
General Competition Rules (GCR)	\$2.25
Production Car Specifications (PCS)	\$1.40
Drivers Log Book	No Charge
Vehicle Log Book with 2 SCCA stickers	\$1.00

The National SCCA Convention was held Jan 24 thru 27th. The following is a report on the convention and also the trip to and from.

After about 3400 miles the Fantelli's and Corrin's have returned from the National Convention. The trip down in the Winnebago was smooth with the only problem being a clogged gas filter from some 46¢ gas. Leaving Tuesday after work and Zero temp. we arrived in sunny Ft. Lauderdale Thursday afternoon in 90° temp.

The convention was unique as it was held aboard the SS Emerald Seas, cruising to Nassau in the Bahamas and return. The ship was pleasant. It was unique in that there was an eight degree list. A goof by the engineers. It was great on the down hill but tough on the up hill. The ship was 1½ hours late in leaving I told you it was an SCCA event. Friday night out there were no meetings scheduled. There were slot machines which opened as soon as the ship was far enough at sea. Carl was the winner at the slot machines--enough to pay for his drinks??

On Saturday we arrived in Nassau. The ship was our hotel. Various meetings and Seminars were held. All similiar to a NEDiv convention where problems of regions are discussed and suggestions are made. Several meetings were closed meetings at which attendance is taken. This was a surprise to me. I feel that meetings should be open to all who want to attend. One closed meeting was for the Governors and R.E.'s. It was held down, down in the theater room. This was a perfect spot for such people. Of course if we had had another Poseidon they would have been on top.

Aside from meetings the Corrins and Fantellis ventured out onto the island of Nassau on motor bikes - 90 cc Yamahas. "Eveil" Corrin didn't dump his bike once (thank goodness as I was on the rear). Driving is on the left hand side. There were no motor bike mishaps while we were driving, but while Carl & I were walking down the main part of the city, one tourist drove his bike up Carl's leg. We also drove over to Paradise Island and found a private beach and relaxed. Back on board ship for the cruise back.

Sunday Evening was the Annual Awards presentation. Each person for dining is assigned a seat in the Dining Room used for the duration of the cruise. We sat with Ray & Pat Anton from NER. Ray it turned out was presented the Rookie of the Year Award based on his outstanding achievements in his first year of Ntl. Championship Road Racing.

Other Awards:

- To Fred Phillips, A Formula Super Vee driver the Kimberly Cup for the greatest improvement in Competition ability.
- To Mahoning Valley Motorsports Inc. the Seasongood Trophy- for the injury-reducing tire barrier at the track. Mahoning Valley also received the award for best regional publication for the medium category (this is where our region falls into... M.V. was deserving as it is a great paper.ed)
- To Alex Keller the highest award - The Woolf Barnato Trophy.

We docked in Miami Monday morning & spent the rest of the day at Jack's Father's house, lounging about the pool in 85° temp. Tues. we headed to Disney World where the Corrins got their cards as a "member in good standing on the Goodyear Grand Prix Racing Team". It was a tough drive. After a day & a half we motored on to Daytona. Practice for the 24 hour and IMSA Race was going on, but at \$3.00 per. just to watch practice it didn't seem worthwhile. We attempted to get passes as SCCA people but IMSA didn't see fit to let us observe. After all IMSA does get most of its workers from SCCA.

We drove onto the 30 mile beach in Daytona before heading to the beach at St. Augustine. We decided the beach at St. Augustine was more secluded and we wanted to camp overnight on the beach. While cooking dinner we began to realize that high tide might be rolling in. Carl's duty was to pace from the Winnie to the water. We discovered in 15 minutes the tide had come in 10 paces. Mercy Mercy!! Time to head to drier land. Start the Winnie up...whir...whir...the tires are acting just like the winter snow except it's in the sand and the bottom of the sand isn't pavement but China!! A little digging and some sweating and Carl pushing, we got out turned around and got to dry land. Checking in the morning we might have been an amphibious Winnebago. Next day to Cape Hatteras N.C. we have to get there by ferry. Spending the day there we realize the warm weather is over and unfortunately the vacation is about over too.

MORE HIGHLIGHTS OF THE NATIONAL CONVENTION

The SCCA financial situation has climbed from a deficit of about \$70,000. in 1973 to a net income of \$69,448 in 1974. One fact on the financial statement is in 1974 Pro Racing spent \$82,355 and brought in \$99,559, while Club Racing spent \$85,340 & brought in \$154,549.

The Solo Board Report was accepted by the Bd. of Gov. This has to do with revision of National Solo Classes. These changes will be passed on to our Solo rules committee for possible update in our classes.

Club Competition Board.

- 1975 Medical Form has a requirement for a stress EKG. This will be struck from the form and will not be necessary.
- Fuel Test Kit: The requirement for Regions holding Ntl. Races to own this kit is suspended and referred back to the Comp Bd.
- Appendix M. - 1975 Appendix M mandatory requirements apply to spectator races only. Non-spectator races will meet the minimum requirements as spec. in the 1974 Appendix M.
- Formula F weight: 1975 will continue two weights i.e. minimum weight for the FF uprated engine will continue to be 930 lbs.
- Dry Sumps: approved for all club prod. & Sedan classes. (Optional)

Items up for future discussion is Formula Super V & possible wings as are now legal in Europe.
and a possible Super National Series in addition to CSPRRC.

National Convention Cont.

By-Laws Committee - Cutting down the number of Governors on the board. Also discussed was possible changes submitted by the NEDiv as to the Bd. of Gov. tableing proposals when time is short or unsure of a proposed recommendation.

Also one Governor is looking into National Conventions as to where they should be held? should they be all work? all social? or a combination?

The next National Convention is in Philadelphia in 1976.

Other SCCA News from Denver.....

The ACCUS, meeting in New York City in January approved a second United States Grand Prix for 1976 - the U.S. Grand Prix West to be held April 11 at Long Beach, Cal. The date request has been submitted to the FIA for approval.

Plans for the 2.23 mile circuit utilizing city thoroughfares as submitted by the G.P. Assoc. of the City of Long Beach have been approved by FIA & SCCA but are contingent upon proposed improvements being completed. The ACCUS also approved date request for the traditional U.S. Grand Prix in Watkins Glen for Oct 5, 1975 and for Oct 3, 1976.

Talks are continuing between the SCCA & USAC regarding joint sanction of the 1975 Formula 5000 series.

The Pro Rally Series schedule for 1975 is:

Feb	15-16	Sno*Drift, Grayling, Mich.
March	1-2	20 Stages, Grayling, Mich.
April	12-13	Olympus, Olympia, Wash.
May	3-4	Night Trials, Portland Ore.
June	14-15	Marathon 400, Traverse City, Mich.
June	28-29	LaJornada TraboJose, Bakersfield, Cal.
Aug.	9-10	Happiness is Sunrise, Olean, N.Y.
Aug	30-31	Big Bend Bash, Alpine, Texas
Sept.	20-21	Sunriser 400 Forest Rally, Chillicothe, Ohio
Oct.	4-5	Nor'wester, Leavenworth, Wash.
Nov.	15-16	Mojave 24-Hour, Barstow, Calif.
Dec	6-7	El Diablo, Green Bay, Wis.

Any Mo-Huders interested??



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July 2, 1974

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Tel. 202-426-0670

MONTHLY DEFECT INVESTIGATORY CASES REPORT

JUNE
1974

The U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) released its regular Monthly Defect Investigatory Report today, listing all investigations opened, suspended, and/or terminated during the month of April 1974.

The report lists two investigations suspended, nine new investigations opened, and none terminated. Six of the newly opened investigations stem from NHTSA's recent survey into alleged weaknesses in auto jack-stand models -- a small supporting device used to take the weight of a vehicle, after it is jacked up, during servicing or repairs. As noted in the report's new-case summaries, all of the jack-stand investigations cite specific models which allegedly cannot safely carry the weights for which they are intended.

BASIS FOR INVESTIGATION:

These cases were opened April 24, 1974, on the basis of a consumer report concerning a failed jack stand. A survey-type testing program was conducted on various jack stands purchased from retail stores. The testing consisted of statically loading each jack stand to the load rating on the label. The subject jack stands failed the testing. Failure is defined as a deformation of a significant jack stand part. Investigation was initiated in each case to determine whether the alleged failure is potentially a safety related defect within the meaning of the National Traffic and Motor Vehicle Safety Act of 1966.

Mohawk-Hudson Region SCCA - Knock-Off

Case Number: C4-46
Manufacturer: Western Auto Stores
Make: Western Auto A-5030
Model: Wizard Auto Jack Stand
Year(s): Various

Possible Problems: Jack stand allegedly does not support the total load as stated on the label.

Case Number: C4-47
Manufacturer: Pathfinder Auto Lamp Company
Make: Orion Industries, Inc.
Model: 80510/7224 Auto Jack Stand
Year(s): Various

Possible Problems: Jack stand allegedly does not support the total load as stated on the label.

Case Number: C4-48
Manufacturer: S.S. Kresge Company
Make: K-Mart Stores
Model: Stock Number 80511 Auto Jack Stand
Year(s): Various

Possible Problems: Jack stand allegedly does not support the total load as stated on the label.

Case Number: C4-49
Manufacturer: Auto Specialities Manufacturing Company
Make: Drednaut
Model: 6-41601 Auto Jack Stand
Year(s): Various

Possible Problems: Jack stand allegedly does not support the total load as stated on the label.

Case Number: C4-50
Manufacturer: Montgomery Ward
Make: Wards Riverside
Model: 61-5662 Auto Jack Stand
Year(s): Various

Possible Problems: Jack stand allegedly does not support the total load as stated on the label.

Case Number: C4-51
Manufacturer: Globe Fabrication Company
Make: Globe Fabrication
Model: JS-100 Auto Jack Stand
Year(s): Various

Possible Problems: Jack stand allegedly does not support the total load as stated on the label.

TECH NOTESby BOB WELLS1975 (Racing) Gasoline

Unbeknown to some and suspected by most, the octane rating of motor gasoline has been steadily deteriorating since the Middle East Tea Party. For street use this poses only a minor inconvenience - For racing purposes it can be a disaster. At the 1974 CSPRRC at Atlanta, it is estimated that about 100 engines showed signs of severe detonation.

Some background is in order. In the early days of this century a means of evaluating gasoline for use in the technically improving internal combustion engine was needed. The anti-knock quality of a gasoline is a measure of its ability to resist knocking. That is, its ability to resist premature detonation in a laboratory test engine. As you know detonation is an uncontrolled burning of the fuel. A smooth flame front across the combustion chamber does not occur. Detonation is a violent collision of flame fronts within the cylinder occurring after the spark plug has fired. This detonation or hammering or knock or ping (take your pick), when severe, can destroy (explode) an engine in short order. "Ping" is the audible vibration of the piston crown and/or the combustion chamber walls. This vibration leads to stress cracking. If the detonation is not severe enough to explode the engine, it will raise the combustion chamber temperature to the point of preignition and the fuel mixture ignites without spark. The temperature can get high enough to melt the pistons.

Gasoline is usually a blend of many compounds and the anti-knock properties of these blends is investigated using a standard designed, single cylinder, variable compression ratio engine. This engine was accepted as standard in the gasoline industry because of the efforts of the Co-operative Fuel Research Committee. Therefore, this engine is known as the CFR engine.

TECH NOTES
1975 (Racing) Gasoline

by BOB WELLS

To set standards for motor gasoline, a compound known as iso-octane was arbitrarily assigned a value of 100 because it was the compound best known to resist detonation at the time, (circa 1920). For a zero value, one of the poorest chemicals in resisting detonation was selected and this was n-heptane. All fuels are rated against these standards (and mixtures of them). A gasoline with an octane rating of 100 is one which acts as if it were made up of only iso-octane. A gasoline with an octane rating of 90 is one which acts as if it were made up of a mixture of 90% iso-octane and 10% n-heptane. Since improvements have been made in processing crude gasoline, compounds have been discovered which are considerably better than iso-octane. Such a compound is meta-xylene with an octane rating of 117. In such a case, tetra-ethyl lead is added to the iso-octane until the iso-octane is equal to the test sample. Below is a list of some compounds with octane ratings of 100 or better:

<u>Compound</u>	<u>Unleaded RON</u>
Iso-octane	100
Cyclopentane	101.3
1,4-diethylbenzene	106
Ethylbenzene	107.4
o-xylene	107.4
Isopropylbenzene (cumene)	113.1
p-xylene	116.4
m-xylene	117.5
Toluol	117.8

Be aware that most of these compounds are poisonous and many are highly flammable. Most of these items are not for sale except in large industrial quantities. These chemicals are also solvents and may attach natural and synthetic rubber and plastic.

TECH NOTES
1975 (Racing) Gasoline

by BOB WELLS

To confuse matters there are three octane ratings for a given gasoline.

- a.) Research Octane Number (RON) is determined in the laboratory test engine (single cylinder - variable compression ratio) which is run under very controlled conditions at low RPM, moderate load and low inlet air temperature. This gives a much higher octane rating than the road performance of a gasoline warrents.
- b.) Motor Octane Number (MON) is determined under more typical "real world" conditions at higher RPM, high load, and higher inlet air temperatures.
- c.) Pump Octane Number (PON) is the average of RON and MON or $\text{MON plus RON divided by two}$. PON is not a test value. It is arithmetic average octane value displayed on the service station pump as required by the Federal Trade Commission.

Using these values (MON, PON, RON) we come upon another facet of motor gasoline - Sensitivity. Sensitivity refers to the range between MON and RON. The wider the range the less sensitive the gasoline - the narrower the range the more sensitive the gasoline. As an example let us look at two gasolines having the same PON of 98. Gasoline A has a MON of 93, a RON of 103 and a PON of 98 or a sensitivity of 10 octane units. Gasoline B has a MON of 97, a RON of 99 and a PON of 98 or a sensitivity of 2 octane units. Gasoline A is a less sensitive gasoline than B. However Gasoline B is better for racing purposes because, although the posted PON value is the same for both gasolines, Gasoline B achieves this average with a higher MON (97 vs 93). The higher MON value is more important for our purposes because it is measured under conditions more related to racing conditions. So you can

see that one octane rating number by itself does not give us the true picture of a particular gasoline's utility.

The pump octane of all gasolines has dropped substantially from their 1973 values. As an example: 1973 Sunoco 260 had a RON of 104.0, a MON of 97.0 and a PON of 100.5. 1974 (Sept.) Sunoco 260 had a RON of 101.3, a MON of 94.0 and a PON of 97.7. Small as it may seem, the loss of 3.0 MON octane points could spell disaster to a high compression/high ignition advance engine. When you consider that Sunoco 260 was (and probably still is) the highest octane motor gasoline you could buy, the other brands of "high test" are even more pale in late 1974. As an added warning, it should be realized that there will be variations in the octane value of the same brand of gasoline from the same pump over a period of time. This is partially the result of the pooling of stocks within an oil company and the trading of products between the oil companies.

It should be mentioned that higher octane (with a higher compression ratio) is not an easy answer to achieving more power. To stop detonation we use higher octane fuel. It achieves this "anti-knock" by burning slower. So we advance the spark to start the burning earlier so that burning is finished before it all goes out the exhaust valve (this would give you less power than a lower compression ratio using lower octane fuel). Since about 40° advance is maximum on most engines, we see that there is a practical upper limit to octane number. For racing engines this is about 104 RON (with a corresponding MON of less than 100).

There is an approximate correlation between compression ratio and octane requirement. Above a compression ratio of about 9:1, there is approximately a 2 (PON) point octane requirement increase for each point increase in compression ratio (provided that the gasoline sensitivity is no more than 5-6 points). We are speaking of compression ratio not compression pressure. Compression pressure is the result of the volume of

TECH NOTES
1975 (Racing) Gasoline

by BOB WELLS

gas trapped in the cylinder after the valves have closed. This volume is a function of the induction flow and valve (cam) timing and overlap. As an example, a supercharged engine will have a low (numerical) compression ratio. However the compression pressure is high due to the loading or packing of the cylinder cavity by the forced induction. It is possible to have a high compression ratio engine with a low compression pressure if the intake flow and valve timing do not let in a full charge of fuel and air. Remember that compression is not the only item affecting octane requirement - the shape and design of the combustion chamber, incoming mixture swirl and temperature and the ability of the combustion chamber (including the valves) to dissipate heat will all influence and engines octane requirement. Often using a richer mixture will help prevent detonation due to its cooling effect.

Now to the reason for all these words.

As you were informed in a previous NNJR Newsletter, it will be legal to "doctor" gasoline in 1975 provided oxygen and nitrogen bearing additives are not used. However, as any Drag Racer will tell you, making "Fuel" is a tricky (and often expensive) business. In order to help you avoid trouble I have talked with John Timanus, Pete Regna, Jack Clark, and other people around the country who have "schmartz" in this field. What follows is (I hope) the first in a series of gasoline hints.

Motor gasoline can be octane upgraded by the addition of toluene (toluol). This is an aromatic hydrocarbon which mixes readily with gasoline. It has a lower specific gravity than gasoline so the resulting mixture is lighter and less dense. For each 10% toluene added to gasoline you will raise the RON about 0.6 octane points. As an example using 60% 1974 Sunoco 260 with an RON of 101.3 plus 40% toluene, we get a mixture with an RON of approximately 103.7 or almost equal to 1973 Sunoco 260 (104.0) BUT---because of the change in specific gravity and density, mixtures with

TECH NOTES
1975 (Racing) Gasoline

by BOB WELLS

more than 25% toluene will probably require a rejeting of the carb(s). Also since this mixture raises the RON (which is measured at low RPM and light load) you will probably still get detonation under high RPM and high load conditions. More detonation than you would have gotten from using 1973 Sunoco 260 under the same conditions. Of added importance is the fact that more than 15% Toluene may swell and weaken natural and some synthetic rubbers, which means that it will attack O rings, fuel lines, pump diaphragms, foam baffeling in the fuel cell and cause delamination of the cell bladder itself. As a final problem, the percentage of toluene reduces the percentage of volitiles in the gasoline which makes for a hard starting mixture.

Another route to octane upgrading motor gasoline is by the addition of Aviation gasoline. Avgas comes in three flavors - Red 80/87, Green 100/130 and Purple 115/140. The numbers refer to lean octane rating /rich octane rating. These ratings are of little value to us since they are measured by a different test proceedure than motor gasoline and take into consideration the different requirements of take off, low and high altitude and very cold air temperature. Red avgas is too low for our purposes and Purple avgas is only available at a few military bases. Green avgas is the best bet of the three and is reasonably available from local, light plane airports. For each 10% of Green avgas added to motor gasoline you will raise the PON about 1 octane point. So that 70% 1974 Sunoco 260 with a PON of 97.7 mixed with 30% Green avgas will give a mixture with a PON of 100.7 or about equal to 1973 Sunoco 260 (100.5). However, again we have a two edge sword. Avgas is lower in specific gravity than motor gasoline, so rejeting may be in order. Also of importance is that avgas has a lower heat value (BTU) than motor gasoline so a mixture with as much as 30% avgas will produce less power than you

TECH NOTES
1975 (Racing) Gasoline

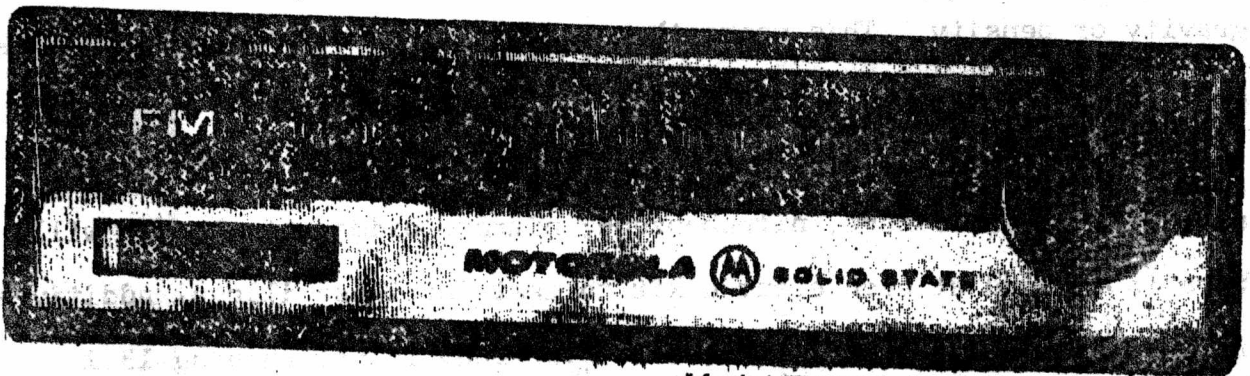
by BOB WELLS

would expect based on octane number alone.

There are commercial additives on the market that require about a 10-20% addition rate to be effective. Since many of these additives are mostly (if not all) toluene you run into the problems outlined above. There is a new recently introduced (non-lead--non-toluene) additive, which has an addition rate of about 2% for a 5 octane point improvement. This low addition rate results in practically no change in specific gravity or density. This means there should be no retuning or rejeting required.

As a closing reminder, you may NOT use oxygen or nitrogen bearing additives (nitromethane, nitrobenzene, nitrous oxide, etc.). We will have in Impound at each event a kit to test for these illegal additives. Be sure your octane needs are real. Everybody is not running 13:1 compression, 32° advance and 9000+RPM. Some clear thought on these three parameters could give you a strong and reliable engine that does not demand 100+PON octane gasoline.

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The following is another article taken from the Finger Lakes Region's TOP END by George Dennis.

ALL THE THINGS THAT GO WRONG.....

Hot Damn! Do things ever go wrong when you are trying to keep a race car going? Mal functions, oversights, and the "I forgot to do that" are a fact of life. It seems to be independent of the amount of money you spend on racing. You can learn a lot from someone elses failures if they know why the failure happened themselves. During any bench-race session, any racer usually gets around to talking about the one he almost won if only the _____ hadn't broke. (Fill in the blank yourself).

When somebody talks about their problem, I always try to ask why they think it happened, or how did they find the problem. If somebody tried something and it didn't work, I'm not about to spend my money or time on it unless I think that I could improve on their techniques, or accomplish the same thing in a different way. So on to the bench racing.....

Even before you get to the track, a broken trailer hitch can cause very serious consequences, and a spoiled weekend. I know of three occasions this year where the hitch ball has come loose or broken off on the way to a race. I check the trailer over every time I stop for gas. Wiggle the wheels, check the tie downs and feel the nut on the ball. If you do a lot of towing, a new ball each year is cheap insurance. Naturally, safety chains are a must. Be sure that they are strong enough to handle your trailer if it breaks loose. If you ever have a chance to test the strength of your safety chains with a breakaway, put on new ones as soon as you can. The old ones are probably stretched or weakened. Make sure your car fits on your trailer properly. Arriving at the track with a race tire rubbed through is unnecessary grief.

Even putting the car on the trailer has caused some guys problems. I watched a driver putting his car on the trailer at Lime Rock a couple of years ago. His method was to unhook the trailer from the tow car and put jack stands under the back end of the trailer. He would jump into the race car, fire it up, and drive up the ramps. Naturally, the front of the trailer would come up into the air until the car was far enough on the trailer to balance, then the nose would drop down. Bingo, he was loaded. The last time that I saw this act in progress, it was a beauty. When the balance point was nearing, the clutch grabbed or something and the race car lurched forward, bringing the front of the trailer down with a crash. The front of the race car bashed into the tire rack and the wheels went over the front end of the trailer bed. It took

him about 3 hours to unscramble that mess. All because of carelessness. Common sense would have saved him a lot of grief. In my first drivers' school the lack of a lock washer on an accelerator linkage bolt cost me 15 minutes of time on the track. Then at a race last year a bell crank on the linkage between the carburetors came loose, requiring a pit stop during the race. That little item is now welded in place.

An improperly soldered coil terminal wire causes a very sudden halt to the engine when it comes loose. All electrical connections have to be properly made up and tightly secured.

In my second school, a FV driver parked next to me, came back from his practice session on the hook with a wheel missing. Turned out what he forgotten was to tighten the wheel lugs. The lugs should be put on and tightened with a torque wrench. They should be rechecked each and every time prior to going out on the track. That includes all practice and qualifying sessions as well as the race. When you mount your exhaust system remember that the engine rocks sideways. If your exhaust is bolted up solid, something will break when the engine rocks. A slip joint, a short piece of flex pipe or flexible hangers will eliminate this problem.

A small hole drilled in the ears of the radiator and rocker cover caps with a piece of wire attached will save some grief. Leave some slack in the wire and attach the other end to something solid. There are three good reasons for this. Should the caps come loose, you won't lose them on the track. Also, you can't misplace them if they are attached. If you drop a cap while putting them on in a hurry, just pull up on the wire and the cap is back. The last may save you some burnt fingers trying to fish out a cap that fell on a hot header.

A book could be written about the failures that were explained away by saying "It'll last one more race." The one I heard about eventually was told in part in CAR and DRIVER. A 75¢ water hose was getting weak on this guy's Corvette. A replacement wasn't readily available, so "it'll last one more race." It didn't. As this driver was approaching the kink in the back straight of the old Glen course, the hose let loose emptying 24 quarts of steam and antifreeze on the competition behind him. The first guy behind stabbed his brakes, the second guy drove off the track--reportedly without looking. The spot where he came back on course was occupied at that instant by Brock Yates in the CAR & DRIVER Mustang project car that they had on loan from Ford Motor Co. For the lack of a 75¢ part, Brock had a smashed

in door. Then there's the guy that never got around to greasing the car when there were so many important things that had to be done. On the pace lap he discovered that the car had become extremely squirrely. After two hairy laps, he did a perfect pirouette in the old Glen Chicane (degree of difficulty - 3.2). Color that a DNF.

Tech never seems to check the back end of the car, so this driver never got around to improving his gas tank mount. He was leading his class at the Fun One by 45 seconds when he noticed his fuel pressure disappearing. The tank mount had shifted, breaking off the fuel filler cap. The gas slopped out, the tank tilted, and he ran out of gas - DNF.

On a Spitfire, one of the weakest points in the car, is the rear axle. Rarely a race weekend goes by that a Spitfire doesn't lose a wheel because of a broken rear axle. This is also common in Sprites, and I am sure in many other makes of cars. If this is a weakness on your car, check that often. If you follow the Nationals, you probably have heard of Joe Hauser. He pulls the axles on his Sprite after every time he goes on the race track. Competition axles certainly reduce the chance of breakage, but they have their limits too.

There is a guy running Nationals this past year that has been loosing his engine more often than not. He has 5 finishes in 12 starts. He thinks he has traced his problem to a weak advance spring in the distributor. There is another nickle-dime part that has caused hundreds of dollars of damage.

Then there is the one where a piece of a rocker shaft support pedestal broke off and lodged in the push rod tube holes. When the guy was trying to fish it out, it fell through to the oil pan, since it was a big piece and since the pan had a screen on it there was no way that it could hurt anything--wrongagain! The oil pan screen wasn't secured down, the piece fell through, got picked up by the oil pump and sheared off the oil pump drive--DNF.

I would like to have a buck for every race driver that has slipped in a new super hot high lift cam, and neglected to check the valve retainer to valve guide clearance at full lift. Interference at that point will pop off rockers one after another.

Writing about these things is beginning to make me nervous. I think I will go and see if I can find something wrong with my own car.

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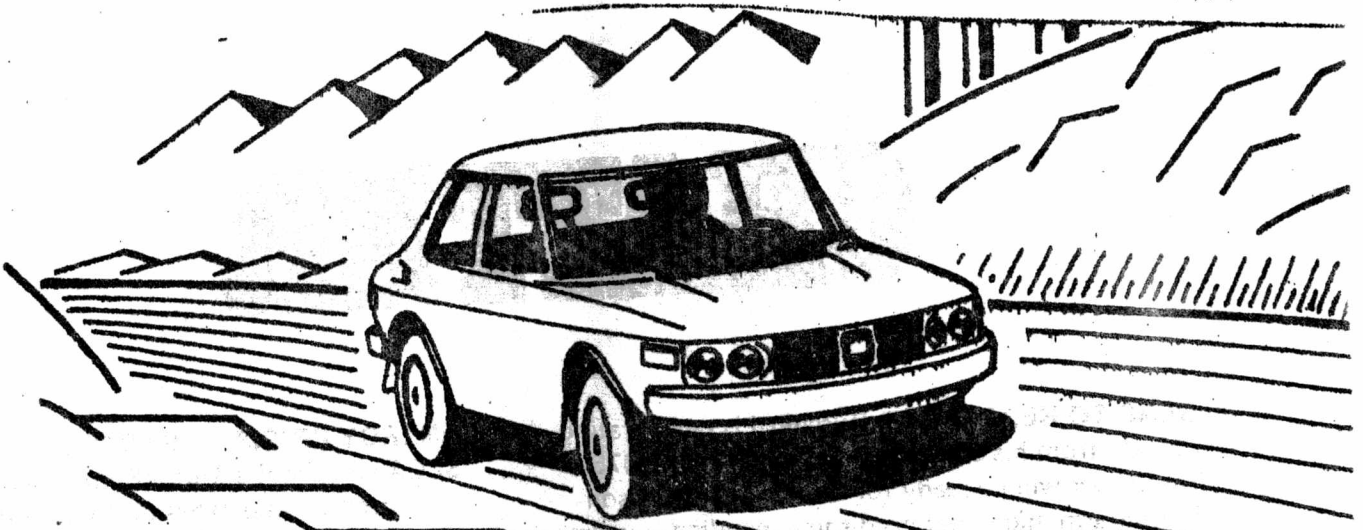
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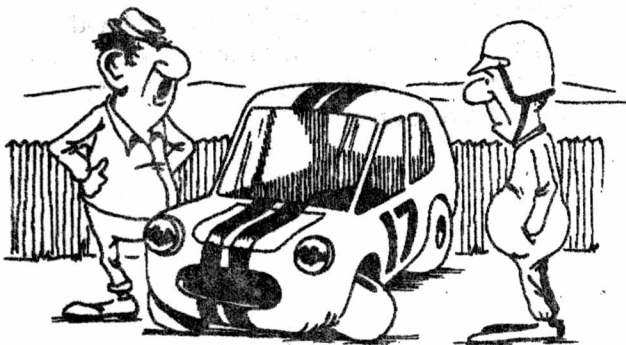
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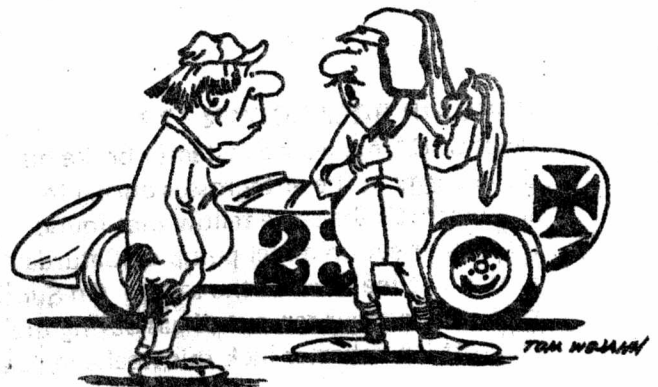
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TOM WOJAHN

"HOW MANY TIMES HAVE I TOLD YOU...
DON'T KICK THE TIRES?!!"



TOM WOJAHN

"THIS THING IS SUPPOSED TO STREAM OUT
BEHIND ME AND LOOK NIFTY... BUT I CAN'T
GET UP ENOUGH SPEED."

CHATTER

GLAD TO HEAR . . . Bill Ruschetti is recuperating quickly from his accident — of January 29, 1975. His Duster will be ready for the Autocross season but his arm might still need some mending — we're all betting on you Bill!

TRI-VETTES LTD . . . It's been brought to our attention that our local Tri-Vettes Ltd. won top honors in the Northeast Region of the National Council of Corvette Clubs, which includes New England, New York and New Jersey. Leading the club to these point standings were: Rich Lussier, 1st overall — Don Peterson, 2nd overall — and Bob Place 4th overall. These three men alone entered 85 sanctioned events in 1974. This is surely the reason they weren't able to make any of our own autocross and rally championships series. Maybe this year we'll see a little more of Rich and his '68, Don's black '66 and Bob's '63 coupe. Anyone want to challenge them at a speed event, rally, etc. ???

CORVAIR BREAKDOWN ???

What SCCA member constantly broke his dune buggy at the autocrosses during the summer? It's the same fellow that found his corvaireat up a fuel pump on Saturday at the first Ice Race of the season. On Sunday that same corvaireat ran out of gas during the cool-off lap — better luck this weekend Joel

ENERGY CRISIS . . . GAS CRISIS . . .

SCCA and Empire Motor Sports Club have been given permission to use the Washington Avenue Peripheral Parking Lot once again this year. However, — if the President and Governor add a 10 to 20 cent hike onto the cost of gas or if there is a gas shortage etc. will be asked to find another place. As we all know — that's easier said than done. Please keep your fingers crossed as well as watching local lots for a possible second choice in case of a National Energy Program. NOTE: The Bureau of Parking Services worded our permission that "they are glad to give us permission" — this is what we like to hear — if we behave, clean up and don't cause any problems we are welcome to return in the future.

HOME AGAIN . . . Marilyn Heacox returned to Ellis Hospital and completed surgery successfully. This should be her last visit. Three cheers for Marilyn's complete recovery!

*THIS IS YOUR PUBLICATION — WE NEED TO KNOW WHAT YOU'RE DOING
All "tidbits, chatter, idle gossop" will be appreciated*

KNOCK-OFF STAFF — Jean, Marie, Judy

WHAT'S HAPPENING ??????? QUE PASA ?????

FEBRUARY

- 8-9 ICE RACES NYSIRA COSSAYUNA LAKE
For info. Call Roly Heacox at Kaye's or Fred Karl
at New Salem Garage, for phone no. see their ad's
in the Knock Off.
- 8-9 BMSC ICE GYMKHANNA - LAKE PONTOOSAC, PITTSFIELD, MASS.
Registration 11:00 a.m. - start 12 noon
- 15 MO-HUD ANNUAL SNOW FLAKE RALLY
Registration 3:30. First Car off 5:01 p.m.
East Greenbush Shopping Center. Info H. Geer 392-3498
- 15-16 ICE RACES NYSIRA - COSSAYUNA LAKE
- 16 SMMC ICE GYMKHANA - WHITE LAKE, N.Y.
- 22-23 ICE RACES NYSIRA - COSSAYUNA LAKE
- 23 AMEC ICE GYMKHANA - BALLSTON LAKE
Reg. 11:00a.m. Start 12 noon - The Good Times
- 24 MO-HUD EXECUTIVE BOARD MEETING 8:00 - The Corrins

MARCH

- 1-2 NYSIRA CHAMPIONSHIP - COSSAYUNA LAKE
- 5 MO-HUD REGION MONTHLY MEETING 8:00p.m.
Center Inn, Glenmont, N.Y.
- 24 MO-HUD EXECT. MEETING 8:00 - The Fantelli's

APRIL

- 2 MO-HUD REGION MONTHLY MEETING 8:00 p.m.
Center Inn, Glenmont, N.Y.
- 6 MO-HUD REGION SCCA RALLY TSD
Place to be announced
- 13 EMSC RALLY TSD
Place to be announced
- 27 MO-HUD REGION SCCA SOLO II SCHOOL & EVENT
NYS Peripheral Parking Lot, Washington Ave., Albany
- 28 MO-HUD EXECUTIVE BOARD MEETING - BILL MORRIS'

WHAT'S HAPPENING ????????????

MAY

- 4 BMSC SOLO II EVENT
Zayres Parking Lot, Pittsfield, Mass.
- 4 EMSC FUN RALLY
Place to be announced.
- 7 MO-HUD REGION, SCCA MONTHLY MEETING 8:00
Center Inn Glenmont, N.Y.
- 11 AMEC AUTOCROSS
Albany-Saratoga Race Track, Malta, N.Y.
- 18 EMSC SOLO II EVENT
NYS Peripheral Parking Lot, Washington Ave., Albany
- 27 MO-HUD EXECUTIVE BOARD MEETING
- 31 New England Region PRONTO RALLY

JUNE

- 1 MO-HUD SOLO II EVENT
NYS Peripheral Parking Lot
- 4 MO-HUD REGION SCCA MONTHLY MEETING 8:00
Center Inn , Glenmont
- 8 EMSC FUN RALLY
- 8 AMEC AUTO CROSS
Albany-Saratoga Race Track, Malta, NY
- 29 EMSC SOLO II EVENT
Washington Ave. Peripheral Parking Lot
- 28 MO-HUD REGION SCCA - AUTOSPRINT - LIME ROCK, CONN.
- 30 MO-HUD EXECUTIVE BOARD MEETING

JULY

- 2 MO-HUD REGION SCCA MONTHLY MEETING
Center Inn, Glenmont
- 6 BMSC SOLO II EVENT
Zayres Parking Lot, Pittsfield, Mass.
- 13 AMEC AUTOCROSS
Albany-Saratoga Speedway, Malta
- 27 EMSC SOLO II EVENT
Washington Ave. Peripheral Parking Lot

WHAT'S HAPPENING ????????

AUGUST

- 1-2 MO-HUD SCCA, DRIVERS SCHOOL & REGIONAL RACE
Lime Rock Park, Conn.
- 6 MO-HUD REGION MONTHLY MEETING 8:00
Center Inn - Glenmont
- 9 EMSC BLIND RALLY
- 10 AMEC AUTOCROSS
Albany-Saratoga Speedway, Malta
- 17 BMSC SOLO II EVENT
Zayres Parking Lot - Pittsfield, Mass.
- 25 MO-HUD EXECUTIVE BOARD MEETING

SEPTEMBER

- 3 MO-HUD REGION SCCA MONTHLY MEETING
- 7 MO-HUD SOLO II EVENT
NYS Peripheral Parking Lot
- 7 AMEC AUTOCROSS
Albany-Saratoga Race Track, Malta
- 14 MO-HUD ANNUAL PICNIC - ART FREDERICK'S ESTATE
- 21 EMSC SOLO II EVENT
NYS Peripheral Parking Lot
- 28 MO-HUD RALLY - SARATOGA SAFARI II
- 29 MO-HUD EXECUTIVE BOARD MEETING

OCTOBER

- 1 MO-HUD REGION SCCA MONTHLY MEETING
- 5 BMSC SOLO II EVENT
Zayres Parking Lot, Pittsfield, Mass.
- 12 MO-HUD SOLO II EVENT
NYS Peripheral Parking Lot
- 19 EMSC RALLY TSD
- 26 SOLO II CHAMPIONSHIP
NYS Peripheral Parking Lot
- 27 MO-HUD EXECUTIVE BOARD MEETING

WHAT'S HAPPENING ????

NOVEMBER

- 1 BMSC HALLOWEEN RALLY
- 5 MO-HUD REGION SCCA MONTHLY MEETING
- 9 MO-HUD REGION RALLY

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R. E. REGIONAL RAMBLINGS

Thanks to the Ruschetti's, we have met with our sister clubs early in the year and arrived at a tentative schedule for our events in 1975. When AMEC finds out what their situation is going to be, some revisions may take place. So check the calendar and start planning! My thanks to all who cooperated to get this busy calendar prepared. From what Judy Beauregard tells us, negotiations for the NYS Peripheral Lot are progressing well.

For those who don't know already, I have one piece of unhappy news. Bill Ruschetti was injured when another car spun on a slippery road and hit Bill. The driver of the other car was killed. Bill's left arm was shattered in three places and has lots of other sore spots. You might send him a funny card to cheer him up. Bill states flatly that his seat belt and quick reflexes (developed from many years of competition experience in autoslalom with SCCA) saved his life. Amen, I say.

Art Frederick has agreed to chair the April 27th Autoslalom School. Art has a reputation for running a very superior school. I suggest you start spreading the word on this event now! Get to all those people who said they wanted to learn last year. For those of us who are just plain rusty it's the time to scrape off the barnacles. And remember, the second half of the event is our first Autoslalom of the year. Run it and get your points towards the championship before the hotshoes get their new equipment out of the garage!

For those of you who want to design an autoslalom course so that your car can take FTD, get in touch with Sandy or Phil and sign up as chairman for an event. Your course must be approved by either Sandy or Phil before the course map can be printed. And remember that the results and workers list must be given to Craig Robertson on the same day as the event. (Also to the K.O. Editor so results can be printed. ed) How about one or more of you gals taking a crack at it?

How about a safe driving tip during the winter months? For those of you with automatic transmissions (Ugh!), when you approach a full stop - especially on a down hill and when the car's on fast idle - slip the gearshift into neutral while braking. This reduces the tendency for the front wheels to lock up and the rears trying to push, causing the car to slide sideways into the curb. Try it! You'll like it!

.....Nap Farnsworth, R.E.

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