

DOT LIBRARY  
NOV 1 11 1975

# news

# NHTSA



Volume 1  
Number 8

Published by  
National Highway Traffic  
Safety Administration

U.S. Department of  
Transportation  
Washington, D.C.

NHTSA News is a semi-monthly publication prepared for all agency employees by the Executive Secretariat, Room 5215, Nassif Building, 426-2876. Distribution is on the 1st and 3rd Monday of every month.

Editor M. J. Noll

November 1975

## In Search of the "Ideal" Car



Looking ahead to the mid 1980's are members of the Research Safety Vehicle team. They are (left to right) Kennerly Digges, chief of the Structures Research Division; Ed Chandler, program manager; Jerry Kossar, Minicars contract technical manager; and Frank Richardson, Calspan contract technical manager.

For years highway safety officials have sought to develop an ideal car. A utopian vehicle that would be fun to drive and yet protect its occupants in even the severest of crashes.

An impossible dream? NHTSA officials didn't think so, and in 1969 they launched a program for the development of Experimental Safety Vehicles (ESVs) to probe the upper limits of state-of-the-art safety performance. It was a bold venture which captured the attention of the world. Soon other countries--England, France, Germany, Italy, Sweden and Japan--were to join in this effort. The program brought about an unprecedented international exchange of motor vehicle safety technology and research, and the results were good. Several truly safe vehicles--vehicles that could withstand crashes up to 50 miles per hour--were developed and tested.

Not surprisingly, many of the features demonstrated by these vehicles can be seen on the road today. The energy-absorbing bumper, the damage-resistant "soft nose," and structural designs which are programmed to fail at a fixed force to provide crash-energy management have all come about from the ESV program. And the research data gained from this project is being used to formulate motor vehicle safety standards. Such features as air bags and antiskid

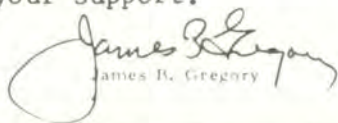
(See Ideal Car on page 4.)



## From the desk of ...

The 1975-76 Combined Federal Campaign is now underway in the Department of Transportation. It has my full endorsement, as well as that of Dr. Gene Mannella, whom I have designated as NHTSA's vice-chairman. Together, we invite the support and participation of each member of our agency in this Bicentennial year campaign. This year's campaign offers both an appropriate and meaningful way that each of us can participate in the celebration of our nation's 200th anniversary. Much of the strength of our nation is found in the resolve and dedication of the people, safeguarded by the institutions they have formed to carry out those functions which they cannot perform individually. The local United Way agencies, the national health agencies, and the international service agencies to which your CFC contributions will be apportioned, devote their full-time efforts to aid and rehabilitate the sick and needy, to ease the burdens of old age and to meet other human requirements.

In 1976, the Department of Transportation will have an annual payroll in the Washington area of over two hundred million dollars. The Departmental Combined Federal Campaign goal is just over five hundred thousand dollars. I am hopeful that Secretary Coleman's confidence that we can make this year's campaign a success will be fully realized with a fine showing by NHTSA. Dr. Mannella and I count on your support.

  
James B. Gregory

There is no problem of human nature that is insoluble.

--Ralph J. Bunche



The Administrator

## Wanted: Original Articles

The editor of Highway Safety Literature is actively seeking original research articles for publication in this monthly abstracting journal, published by NHTSA.

Articles submitted need not necessarily reflect the views of the agency, but should conform to guidelines set forth in NHTSA Order 170-3. They may be critical examinations of work efforts, studies reflecting trends of research activities, state-of-the-art-reviews, or other contributions providing an awareness of ongoing NHTSA technical activities. All submissions will be reviewed and evaluated by a panel of experts in appropriate subject areas.

For detailed information call Winifred Desmond, room 5108, ext. 62768.

## Job Openings

For complete details on these job openings, see the official vacancy announcements. Vacancy announcements are posted on the NHTSA Bulletin Boards at both the Nassif and Transpoint Buildings. They are also distributed to each Office Director.

Supvy. Res. Mech. Engineer, GS-830-15, RD. Opens: 10/30, Closes: 11/19. NHTSA 76-11.

Economist, GS-110-9, P & E. Opens: 10/30, Closes: 11/19. NHTSA 76-12.

Oper. Res. Analyst, GS-1515-9, P & E. Opens: 10/30, Closes: 11/19. NHTSA 76-13.

Gen. Engineer, GS-801-11, P & E. Opens: 10/31, Closes: 11/21. NHTSA 76-14.

## Thanksgiving

Ah, on Thanksgiving Day, when from East and from West,

From North and South, come the pilgrim and guest, When the gray-haired New Englander sees 'round his board

The old broken links of affection restored, When the care-wearied man seeks his mother once more,

And the worn matron smiles where the girl smiled before. What moistens the lips and what brightens the eye?

What calls back the past, like the rich pumpkin pie?

John Greenleaf Whittier



For our little ones, leaving home can be a debili-

tating experience, or an opportunity to grow, learn, adjust. Parents who make the decision to send a child to day care must weigh many factors. In a paper entitled "What Happens to Children in Day Care?", Dr. Bettye Caldwell of the University of Arkansas refutes seven of the most common arguments about the debilitating effects day care may have on children. In short, her points are:

The experiences children encounter in day care centers are as various as those they encounter in school.

"Children enrolled in day care, on the average, show significant gains on standard intelligence and achievement tests."

With immunization and some medical supervision, day care children can be kept healthy.

These children do not lose their attachment to their mothers.

They do not necessarily become emotionally disturbed.

They care for their playmates, thus developing a sense of community.

Though day care serves the function of child "socialization," it need not be considered "Socialist" in the sense of "un-American," for it can teach a child "to adapt to a pluralistic society in which representatives of all ethnic and cultural groups have equal rights and privileges."

Dr. Caldwell supports her arguments with collected data from various studies and with examples from her own experience. A copy of her paper is available in room 5312, Nassif Building.

In choosing a child care center, parents may wish to follow some guidelines presented by the state of Maryland Department of Health and Mental Hygiene, Division of Maternal and Child Health. The Department suggests:

Visit several centers before choosing. Visit in the morning, when children are active, not sleeping. Don't choose by phone.

Ask to spend time in all the rooms where your child would be throughout the day. Look for equipment like blocks, a playhouse, books, paint, clay, art materials, objects of scientific interest which may be handled, a place to hammer, saw and build with wood. Shelves and boxes of jumbled playthings are confusing to children.

Look at the faces of the children. Are they absorbed in their play--talking, moving about, learning from each other? Or are they sitting, waiting to be told what to do.

Notice whether the adults really listen and respond to each child and give help and guidance to a child when stopping undesirable behavior. Be wary if the adult has one tone of voice for you and another for the children.

Note whether there is an outdoor play area with some equipment.

Ascertain the center's policies on opening and closing hours, snow days and holidays, parent and center responsibility for illness or accident, insurance, payment of fees, adjustment for absenteeism, notice of withdrawal, parent participation and the exchange of information between the center staff and parents. Ask:

How many adults will be taking care of your child--and for how long? How many children in his group.

Who will greet your child in the morning and who will be there when he leaves?

What meals and snacks will your child be served each day? Do the adults eat with the children in small groups?

Will your child be made comfortable at naptime with a cot, a sheet, a light blanket of his own?

It is best if you can take your child to the center, of course. If someone else must take him, consider how long the child will be in transport, what safety measures there are to insure against accidents, whether an adult other than the driver will be accompanying the child.

**graffiti**

**Beneath the slab  
John Brown is stowed.  
He watched the ads  
and not the road.**

Ogden Nash  
"Lather As You Go"  
Good Intentions (1943)



## "Ideal" Car

(from page 1)

brakes are presently available as optional equipment on some models and may become standard in the future.

But even dreams can be altered by time and conditions. Such was the case when the energy crisis hit--hard and fast--in 1973. Americans, frustrated from waiting in long lines for gasoline, hurried to trade in their big gas guzzlers for smaller, more economical cars. Commuters lined up at bus stops, and frequent weekend trips to the beach were replaced with backyard baseball games. A car was valued primarily for the number of miles per gallon it could achieve.

Anticipating the shape of things to come, and particularly the fuel crisis a few months away, NHTSA introduced in March of 1973 at the International ESV Conference, Kyoto, Japan, the Research Safety Vehicle (RSV) program. It had become clear that the next generation of safety vehicles must look well beyond safety alone and consider other major societal goals for the automobile--energy, economy and environment. This is what Dr. Gregory calls the "S3E" concept.

In brief, the specific goals of this program are:

**Safety:** To design a vehicle weighing under 3,000 pounds which will reduce, to the maximum

extent practical, the societal costs of automobile accidents in the 1985 time period.

**Energy:** To achieve a fuel economy level of 30 miles per gallon for the EPA combined driving cycle.

**Economy:** That careful constraints on production and maintenance costs be maintained and that all features included on the RSV produce a societal benefit which is greater in value than the life-cycle cost of the feature.

**Environment:** That the vehicle meet or exceed the recommended 1982 federal emission standards. Another "ideal" car. Another dream that is well on its way to becoming a reality. Chances are that the car you own in the mid-1980s will be based on the findings of this program.

Phase I of this program was officially launched on January 18, 1974, when contracts were awarded to five firms--AMF, Calspan, Ford, Minicars and Volkswagen. During this initial phase, the five contractors defined the program needs through detailed analyses of current accident data projected to the mid-1980s. To do this, the contractors first had to study trends in expected automobile usage, with particular emphasis upon population growth, economic factors, roadway trends, anticipated regulations, and alternate modes of transportation. Contractors then used this data as a basis for

their preliminary conceptual designs which also reflect cost-effectiveness considerations and projected safety payoff.

In May 1975 final reports were submitted. Again, results were good. Next came Phase II, with two of the five contractors selected to continue development of the RSV design. The two contractors participating in this Phase are Calspan Corporation and Minicars Incorporated. Target date for Phase II completion is October 1976.

Another bold venture, with goals tempered by reality. "Ideal," under the S3E concept takes on a new meaning. For S3E is a concept, not a vehicle. It is a program for judging how the personal automobile can best be planned to give the mobility that society demands from it and yet satisfy the growing energy, environmental and economic constraints of that same modern society which militate against it.

What we envision in an end product is more than one single design. Each may well represent a good, well-balanced design for its class of vehicle, for no single design could truly meet all of the automotive needs of our society for the future. What we ultimately hope to achieve are a number of utopian vehicles, each "ideal" for the particular purposes for which they would be used. For example, a vehicle which would be "ideal" for urban use might be one with very high perfor-

mance in terms of energy savings and fuel economy, with perhaps somewhat less than "ideal" levels of safety and emissions performance.

This dream, then, is an end result. And by giving the manufacturers this flexibility, NHTSA is laying the groundwork for an innovative approach to automotive regulation in safety, energy and emissions. The results of the RSV program, along with those of separate studies being conducted in energy, economy and environment by DOT, ERDA and EPA will help define more carefully the interaction of the four S3E variables. Hopefully, if this dream is fulfilled, it will show what society can really afford in terms of its automobile of the future.

## Automobile Jacks

A flat tire. What an inconvenience. Aren't you glad you have that spare? And the jack? Yes, you knew that would come in handy someday. But now what in blazes do you do with it?

If you're not sure, find the nearest phone and call for help. Careless and improper use of automobile jacks can and has caused accidents resulting in serious injury and even death.

Prime causes of accidents involving jacks are:

Improper use of the jack system.

Insufficient strength of the jack system.

Insufficient strength of the vehicle structure at the point where the jack is used.

Improper match between the jack and the vehicle.

Malfunction of the jack system.

Instability of the jack and vehicle when elevated.

As an aid to motorists, NHTSA has recently published a delightfully clear and concise booklet appropriately titled "Automobile Jacks." In addition to pointing out the dangers involving jacks, this booklet explains the types of jacks in language even the layman can understand, and supplements this with drawings. And it further points out what you should and should not do when using jacks.

Author of the booklet is consumer affairs specialist Bernie Ames of PACS. Kevin Cavey of MVP provided technical guidance for its preparation. The need for such a booklet became apparent through letters received as a result of a news release on jack stands indicating that some vehicle users didn't know the difference between a jack and a jack stand. The booklet also provides safety guidance for those vehicle users who have occasion to use jacks only infrequently and thus are unfamiliar with the precautions necessary. And it's turned out to be a "best seller." The Jack Institute, an insti-

tute of manufacturers of mechanical and hydraulic jacks for industrial and automotive uses, has asked for 5,000 copies. In a letter to Associate Administrator for Motor Vehicle Programs Robert Carter, the Jack Institute said:

"Because of the excellence of the booklet and its intended purpose, the member manufacturers would like to get the message of the booklet, particularly the do's and don'ts when using jacks, to the jack user. This can be done by the jack manufacturers at the point of manufacture and be included with the packaging for the automotive aftermarket.

". . . it is important that the booklet reach the jack user with the safety message from the NHTSA."

We think so too. Do you have your copy yet? You can get it from the distribution office, room 5202.

## Coming Events

### November

- |       |  |
|-------|--|
| 19    | Coast Guard WITY program. Jamie Taylor, women's program coordinator, Naval Materials Command, to speak on "Developing Career Horizons." 2 p.m., room 2230, Nassif. |
| 20-22 | American Association for Automotive Medicine, 19th Annual Conference, San Diego, Calif.  |



## Odometers

by Karen Kreshover  
Attorney Adviser



In October of 1972, Congress passed a law, the Motor Vehicle Information and Cost Savings Act, aimed at protecting consumers from buying vehicles that have had their odometer mileage altered. It is well-known that a vehicle's odometer mileage is relied upon by a buyer as an indication of the vehicle's condition. A low odometer mileage not only influences a buyer to pay more for a vehicle, but in many instances is the factor that persuades him to make the purchase.

The odometer provisions of the Cost Savings Act are geared toward preventing the type of fraud that occurs when a vehicle is sold with incorrect mileage. They prohibit any alteration of an odometer's mileage, whether by disconnection, resetting, installation of some device, or operation of the vehicle while the odometer is nonfunctional. If an odometer is repaired and incapable of registering the same mileage as be-

fore the repair, it must be adjusted to read zero and a written notice with the date of repair and odometer mileage before the repair must be affixed to the vehicle's left door frame. The same procedure must be followed whenever an odometer is replaced.

Whenever a vehicle is transferred to a new owner (by sale, gift, or otherwise) a written disclosure of the vehicle's mileage at the time of the transfer must be provided by the seller to the purchaser. If the correct mileage is unknown, however, the Act requires a statement to that effect to be furnished in written form to the buyer. The statement must also include the date of the sale, the seller's name, address, and signature, the vehicle's make, body type, year, model, vehicle identification number, and last plate number, and a statement referring to the application of the Cost Savings Act. The disclosure statement must be filled out just prior to the vehicle's transfer of ownership and may be included on the bill of sale, the title document (if state law permits), or a separate paper. Be certain you receive this statement, with all of the required information, anytime you purchase a vehicle (new or used) or receive one as a gift. You must also complete such a statement anytime you sell or give a vehicle to another person. Sample copies of the

required disclosure statement form may be obtained in the Chief Counsel's Office.

Violation of any of the odometer requirements may subject the violator to civil liability where his actions were intended to defraud. A person who has been wronged in some way by a violation may sue the violator in state or federal court and, if successful, recover \$1,500 or three times the amount of actual damages sustained, whichever is greater. It is important in such a suit that one be able to show that a violation of the Act was committed, that it was committed with an intent to mislead or defraud, and who actually committed the violation.

Determining whether your odometer has been altered can be done in several ways. One way is to compare the mileage currently indicated on the odometer with that indicated on the disclosure statements provided to prior owners of the vehicle. The odometer regulations do not require that persons retain disclosure statements they receive. Therefore, you may not be able to establish an alteration in this way. As an alternative, you may contact prior owners of the vehicle to ask them what they recall the odometer mileage as being when they gave up ownership. To find out how to trace back the chain of title, contact your state department of motor vehicles. If

this proves inconclusive, have a mechanic examine your car. Often, some evidence of tampering is left.

The problem of odometer fraud is widespread. However, knowledge of the law and the rights it gives you as a consumer can go far toward combating the problem.

## Only a Consumer

"The milkman waters milk for me;

there's garlic in my butter,

But I'm only a consumer,

and it does no good to mutter."

--N. Waterman (1911)

Consumerism. What is it? It is the effort to equalize the rights, access to information and power of the buyer with those of the seller. And it is on the increase.

Voices are being raised and heard. Yours can be one of them.

What your rights as a consumer are and what you can do to protect them are covered in a pamphlet entitled "Only A Consumer?" Single copies are available free of charge from The Christophers, 12 East 48th Street, New York, New York 10017.

Also available from The Christophers is The Consumer List, a free list of publications and public and private consumer-protection organizations.

## Who's Who in NHTSA

Ray Moody raises rabbits, ducks, geese, chickens, dogs, cats, fruit trees, goats and bees. Bees? The mere thought is painful and induces the urge to run. But, to Ray, they are just another aspect of a six-acre farm buzzing with life.

Ray is a physical scientist for the Office of Vehicle Research Safety.

After he bought his farm a few years ago, Ray decided to plant some fruit trees. Soon, he realized that he would need a source of pollination. Bees seemed the best. So, for the last 5 or 6 years, Ray has been a beekeeper.

He started with two hives and now has five. Each hive contains about 60,000 bees. Each represents a lot of potential stings.

Ray says he is stung frequently; however, his home remedy has prevented the stings from bothering him. He advises that you should never pull a stinger out. Rather, you should scrape it off. If you put Clorox on it, you'll never know it happened, he says (provided that you take care of the sting within 10 minutes, that is).

According to Ray, each hive has its own personality and problems.

The bees produce between 30 and 300 pounds of honey each year, depending on the weather. Ray says that they seem to produce



To Ray Moody, bees are just another aspect of his six acre farm which is buzzing with life.

more honey after a cold winter.

Ray also raises dairy goats, Alpine and Nubian. He selected goats because they make good pets and are easy for his wife to handle. Each goat produces up to 2 gallons of milk per day, he says.

Ray's original goal was to raise all the food he and his family needed. But that no longer seems possible since his children have gone their separate ways, and only he and his wife remain to do the chores.

Ray and his wife do get away from the farm occasionally for square dancing and round dancing.

Also, he has been quite active in implementing Prince William County's Hot Line, a number people can call to discuss their problems.

With a combination of bees and telephones, we could say Ray is a very buzzy fellow.



# The Crash Environment

Motor Vehicle Programs is involved in two major areas in the development of Federal Motor Vehicle Safety Standards. It is concerned with understanding the crash environment in order to correlate the relationship of automobile occupant accident injury to measures of crash severity.

Through the years, MVP has identified a number of ways in which this understanding of crash severity can be performed. The best approach has been the installation of crash recorders which can actually monitor crash events. Unfortunately, it has not been possible to date to utilize this method. Another approach has been the use of analytical tools to reconstruct motor vehicle crashes. One such available approach is the Simulated Model of Automobile Collision (SMAC) developed by Calspan Corporation. The SMAC program works with accident investigation data reported by trained accident investigators. The accident scene evidence is utilized as input into the SMAC program and the eventual outputs of SMAC are initial vehicle speeds and directions.

SMAC allows the calculation of parameters which can then be related to occupant injury. Performing these types

of analyses with this program over a wide range of motor vehicle crash incidents may provide a detailed understanding of distributions of crashes and injuries. It may then be possible for NHTSA to gain better understanding of the crash environment, assess the benefits of proposed countermeasures (rulemaking), and provide more accurate mathematical/laboratory simulation of the crash environments.

Current use of SMAC to perform these reconstructions is limited by the availability of appropriate accident data. As this accident data base increases, it will be possible to perform these analyses. The program is currently used primarily to reconstruct car-to-car crashes. Hopefully, further development of the program will allow reconstruction of other collision types.

## Regional Highlights

### Region V

Mrs. Gayla Barker, secretary to Region V Administrator Gordon G. Lindquist and Mrs. Linda Burns, clerk-steno, are the petite pair who carry the major share of responsibility for the myriad of tasks involved in the support of the regional office.

Mrs. Barker is a native Chicagoan and a graduate of Thornridge High School in Dolton,

Illinois. Her federal career began with FHWA's regional office in Homewood, Illinois in March 1969, where she supervised their clerical pool. At the time of her transfer to regional office NHTSA in January 1972, we were still co-housed with FHWA. Gayla has been the recipient of a special achievement award. Her outside interests center around their newly purchased home and involve sewing and gardening.

Mrs. Burns is also a native Chicagoan and a graduate of Theodore Roosevelt High School in Gary, Indiana. She attended Chicago City College and continues to pursue her education "part-time" at Thornton Community College.

Linda is relatively new in federal service. Her career began with this office in April 1972. She has been the recipient of two special achievement awards and was nominated for the Federal Employee of the Year Award for the Chicago Metropolitan area in 1974.

Her outside interests, in addition to three lively children, include active participation in the Women's club of her church, crocheting, and fund-raising for the church school.

Both women are "achievers" and a constant source of positive comments by the States, Washington Office, and the various publics we serve. They reaffirm this office's belief in the old cliché "Good Things Come in Small Packages."