STATEMENT OF

ALBERT BENJAMIN KELLEY

SENIOR VICE PRESIDENT, INSURANCE INSTITUTE FOR HIGHWAY SAFETY

ACCOMPANIED BY

BRIAN O'NEILL

VICE PRESIDENT FOR RESEARCH, INSURANCE INSTITUTE FOR HIGHWAY SAFETY

BEFORE THE

HOUSE COMMITTEE ON INTERSTATE & FOREIGN COMMERCE

SUBCOMMITTEE ON CONSUMER PROTECTION AND FINANCE

OVERSIGHT HEARINGS

ON THE

MOTOR VEHICLE INFORMATION AND COST SAVINGS

ACT OF 1972

May 6, 1977

We are appearing today, at the Subcommittee's invitation, to present the results of recent Insurance Institute for Highway Safety research bearing on the adequacy—or more precisely, serious inadequacy—of present and prospective federal standards to reduce the damageability of cars in very low-speed crashes.

IIHS is an independent, public-service organization. It is a nonprofit, tax-exempt, scientific and educational organization dedicated to reducing the losses—deaths, injuries and property damage—resulting from crashes on the nation's highways. It is supported indirectly or directly by insurance companies writing the bulk of automobile coverage in the United States. IIHS conducts research involving a wide range of pre-crash, crash and post-crash factors that contribute to the huge amounts of unnecessary deaths, injuries and property losses resulting from crashes on the nation's highways.

The motoring public has come to expect its cars routinely to suffer hundreds and sometimes thousands of dollars in damage in the most minor sorts of collisions; indeed, that expectation has brought the term "fender bender" into the American language. Yet most of the damage is needless; it could and should be designed out of future cars, thus saving countless dollars otherwise spent on repair parts and labor, and countless hours of wasted time while cars are in the repair shop.

None of this comes as news, of course. During the past eight years, hearings held by this subcommittee and the full House Interstate and Foreign Commerce Committee, two Senate committees, and the U.S. Department of Transportation have developed voluminous records making clear that:

1. The technology for developing effective damage-preventing bumper systems has long been available to car manufacturers, but still is being widely withheld from their customers.

2. The cost of parts needed to repair cars after "minor" crashes—parts whose damage-induced purchase also represents an inexcusable drain on shrinking natural resources—has soared in recent years.

3. DOT's present standard (FMVSS 215) to prevent damage to safety-related components of the car in very low-speed test crashes (five miles per hour front and rear into barrier and three miles per hour corner impact with a test pendulum)* has had insufficient effect in reducing the damageability of cars made since the standard went into effect on September 1, 1972.

4. There is <u>still</u> not in effect a DOT standard, as mandated by Title I of the Motor Vehicle Information and Cost Savings Act of 1972, to reduce property damage in front and rear low-speed crashes. After repeated postponements at the request of auto manufacturers, DOT in February 1976, finally announced that such a standard would take effect, in two stages, in the 1979 and 1980 model years.

(The first stage would require bumpers that prevent damage in specified low-speed impacts, <u>except</u> damage to the bumper itself—one of the so-called "crash parts" that is most costly for consumers to replace. Some cars tested by us were meeting the first-stage requirements as long ago as 1975. The second stage would preclude virtually all damage, including to the bumper, in such impacts. At least one manufacturer, Volvo, is certifying its cars as already meeting the second-stage requirements.)

---

*Originally the compliance test was even weaker; the rear-end test speed was only 2.5 miles per hour.

The announced test procedures were no different than the extremely weak ones now applied for FMVSS 215, and the lead time to the effective date of the second stage, if counted from passage of the 1972 Act, would total seven years.

Most recently, DOT has again indicated the possibility of further delay; it has issued a proposal to defer the second stage of its Title I standard for yet an additional year, that is, until the 1981 model year. It did this at the request of two automobile manufacturers who alleged in petitions that the 1979 model year effective date for the second-stage requirements is "only" one year later than that of the first-stage requirements, thus providing insufficient lead time. The petitions for yet another postponement were written four years after passage of the 1972 Act, with its clear intent of reducing wasteful, avoidable property damage as spelled out in Title I.*

Meanwhile, in the real world, new-car bumper designs reflecting backward technology continue to flout the public-interest goal of the 1972 Act, which was to substantially reduce built-in low-speed impact damage—the kind that does, but need not, occur in parking lots, driveways and city streets all across the country, millions of times a year—and thereby to ease the consequent economic burden on consumers, insurers, and the nation generally.

As I said a moment ago, FMVSS 215, the present "safety" low-speed damage standard, did bring about some reductions in damage sustained by cars that we have impact-tested since the standard took effect in

---

*With this testimony we are providing for inclusion in the record of this hearing a copy of our response to DOT's present proposal (Docket Nos. 74-11 and 73-19, Notices 13 and 10), to delay the second-stage requirements until the 1981 model year.

1972. FMVSS is a performance standard (as would be a DOT standard responsive to Title I of the 1972 Act); this means that in meeting it, manufacturers may choose bumper designs of any sort, including those that are unnecessarily heavy, costly to repair and replace, and marginally effective—so long as they comply with the standard's very modest impact test requirements.

As our past testimony to DOT and this subcommittee has shown, FMVSS 215 has too often been met with bumpers that are in fact needlessly heavy, needlessly expensive to repair and replace, and needlessly ineffective in crashes that differ even slightly in type or speed from those specified in DOT's weak compliance tests.

(The public has been misled to believe that such bumper designs are compelled by the federal standard rather than by manufacturer decision—just as it was misled to believe that the unpopular "ignition interlock" safety belt use system was developed and pushed at government initiative, when the truth was that the ignition interlock was developed and pushed by auto company interests, over the objections and better judgment of the responsible government agency.*)

For some years the Institute has been crash testing new cars to determine their low-speed impact performance. Most recently we looked

---

*"Mr. MOSS. Mr. Chairman. I would like to make a correction in the statement of my good friend, the gentleman from California (Mr. Rousselot), who implied that this was some bureaucratic conspiracy which brought about the interlock. The interlock was brought about over the objections of the Department of Transportation as a result of the visit of the presidents of two of the major manufacturers of automobiles with the President of the United States, and at a subsequent meeting attended by Mr. John Ehrlichman, Mr...(Peter) Flanagan, and another White House aide, the order was issued to the Department of Transportation to go along with the interlock rather than the alternative system which the Department of Transportation had under study as an intermediate device. Now, Mr. Chairman, that is the fact." (The Honorable John E. Moss ((Calif.)), Congressional Record - House, H8136, August 12, 1974.) Congress repealed the "interlock" standard in 1974.

at a number of 1977 model domestic and foreign cars in very low-speed impact situations and found, to put it bluntly, a pattern of designed-in damageability that mocks the spirit not only of the 1972 Act's property damage reduction goals but also the human protection goals of the National Traffic and Motor Vehicle Safety Act of 1966.

Today we will show you, first, excerpts from films of our tests. (The complete damage results are attached as an appendix.) As these excerpts show:

—The present FMVSS 215 requirement has somewhat improved the ability of new cars to resist override and damage in very low-speed front-to-rear crashes—but much more improvement is needed.

—In very minor corner impacts of the kind not covered by DOT's compliances tests for FMVSS 215 and for its prospective Title I standard, current-model car designs invite substantial amounts of needless damage.

—The 1977 Chevrolet Impala, highly touted by General Motors as "more efficient in its use of this earth's space and materials than full-sized cars of the past", is susceptible to damage of a kind never before seen in our corner-impact crash test program.

—In frontal crashes as low as 10 miles per hour into a wall, some new-car designs are permitting doors to jam closed, thus sealing their occupants in the car and cutting off rapid escape in the event of fire or other injury-threatening emergency.

(BEGIN FILM OF 1977 CRASH TESTS HERE)

Low Speed Crash Tests: 1977 Model Cars

10 MPH Front into Rear Tests

1977 Ford Pinto	$353.05	(both cars)
1977 Chevrolet Vega	$427.45	(both cars)
1977 Chevrolet Impala	$440.70	(both cars)
1977 Plymouth Gran Fury	$594.21	(both cars)

5 MPH Front into Angle Barrier Tests

1977 Ford Granada	$256.85
1977 Ford LTD	$318.45
1977 Plymouth Gran Fury	$359.40
1977 Toyota Corolla	$386.55
1977 Datsun B210	$436.86

10 MPH Front into Angle Barrier Tests

1977 Ford LTD	$804.71
1977 Datsun B210	$823.58
1977 Ford LTD II	$844.25
1977 VW Rabbit	$848.16
1977 Chevrolet Impala	$928.00

Jammed Doors: 1977 Ford LTD 10 MPH Front into Barrier Tests

$686.30	(front-end damage)
$128.40	(passenger door)
$164.30	(driver side door)

(END FILM OF 1977 CRASH TESTS HERE)

Mr. Chairman, something is terribly wrong with car designs so flimsy they permit doors to jam in frontal impacts as low as 10 miles per hour. That such designs are entirely unjustified is clear from this short sequence:

(SHOW VOLVO FILM CLIP HERE)

In that impact of a 1975 Volvo sedan at 35 miles per hour into a barrier, those doors did not jam; we were able to open both of them following the crash. Yet the doors on some new cars on the market today cannot do as well even at 10 miles per hour, nor are they so required by federal safety standards.

As we showed you a moment ago, the new cars we tested are so designed that they incur many hundreds of dollars worth of repair-requiring damage in bumps as low as five miles per hour corner-into-barrier. Yet designs have been available for years to totally eliminate such damage.

In 1971, in testimony before the Senate Antitrust and Monopoly Subcommittee, the president of a leading manufacturer of shock absorbing devices disclosed that his company was ready and willing to produce and sell to auto manufacturers high performance, low cost bumper mounts that would substantially exceed existing federal compliance test requirements.* Ten weeks ago, after analyzing the results of our five mile per hour corner impacts of 1977, we got in touch with that company, Tayco Developments, Inc., to ask whether it could develop—using its long available technology—a prototype bumper with the same general characteristics as a standard

---

*Statement of Paul Taylor, U.S. Senate Commerce Committee, hearing on "Automobile Insurance Reform and Cash Savings," May, 1971.

bumper, but with the ability to prevent damage to itself and its car in such impacts.

The film you are about to see shows the result of that inquiry. First you will see our five mile per hour corner impact of a 1977 Gremlin with its standard bumper. Then you will see another 1977 Gremlin in a five mile per hour corner impact test—this time, equipped with the bumper prototype developed by Tayco Developments, Inc. in less than eight weeks. Finally, you will see the latter car in a front-into-barrier test that substantially exceeds the present as well as prospective federal low-speed impact standards.

(GREMLIN FILM HERE)

Low Speed Crash Tests: 1977 Model AMC Gremlins

Standard Bumper: 5 MPH Front into Angle Barrier Tests

1977 AMC Gremlin	$236.20

Modified (Tayco) Bumper: 5 MPH Front into Angle Barrier Tests

1977 AMC Gremlin	$ 0.00

Modified (Tayco) Bumper: 7 MPH Front into Barrier Tests

1977 AMC Gremlin	$ 0.00

(END GREMLIN FILM)

Paul and Douglas Taylor, whose company developed the prototype bumper shown in the film, are here and available to answer questions about their work should you have any.

Mr. Chairman, the history of the 1972 Act, as well as the DOT's own interpretation of the Act's purposes, makes clear that the elimination of damage at such very low speed bumps as those represented by DOT's compliance tests—five miles an hour front and rear into barrier and three miles an hour pendulum into corner—was seen as only the first in a series of standards-making steps that ultimately would substantially reduce designed-in crash damage in front and rear impacts at higher speeds and across a wide range of crash types.

As of today, none of these steps has been taken—not even the first one of putting in place a firm effective date for the Title I standard to eliminate damage in such compliance tests. And so, the waste goes on.

Thank you.

TEST PROGRAM 1977

MAY 3, 1977
IIHS

ESTIMATED COST TO REPAIR

	05 MPH FRONT TO ANGLE BARRIER	10 MPH FRONT TO ANGLE BARRIER	10 MPH FRONT TO BARRIER	10 MPH FRONT	10 MPH TO REAR	10 MPH BOTH
1977 PLYMOUTH GRAN FURY	359.40	720.76	438.50	445.58	148.63	594.21
1977 FORD LTD	318.45	804.71	686.30	16.40	260.10	276.50
1977 CHEVROLET IMPALA	237.30	928.00	---	163.00	277.70	440.70
1977 CHEVROLET CHEVELLE	97.70	726.80	---	115.90	238.45	354.35
1977 FORD LTD II	219.30	844.25	---	212.60	135.75	348.35
1977 CHEVROLET NOVA	233.70	668.50	---	139.40	128.60	268.00
1977 FORD GRANADA	256.85	659.55	---	137.60	179.95	317.55
1977 PLYMOUTH VOLARE	222.06	518.35	---	101.86	137.76	239.62
1977 CHEVROLET VEGA	122.40	791.93	544.35	170.50	256.95	427.45
1977 FORD PINTO	252.15	576.60	396.70	205.55	147.50	353.05
1977 AMC GREMLIN	236.20	675.76	540.30	98.45	97.35	195.80
1977 CHEVROLET CHEVETTE	176.55	552.45	---	95.05	95.05	190.10
1977 VW RABBIT	109.71	848.16	---	61.26	54.65	115.91
1977 DATSUN B210	436.86	823.58	---	72.12	72.15	144.27
1977 TOYOTA COROLLA	386.55	720.31	---	41.20	89.95	131.15
1976 HONDA CIVIC CVCC	223.50	457.70	---	2.20	2.20	4.40
AVERAGE	243.04	707.34	521.23	129.92	145.17	275.09

PRICES AS OF 1976
LABOR RATE $ 11.00
SUBLET RATE $ 4.00

INSURANCE INSTITUTE for HIGHWAY SAFETY
WATERGATE SIX HUNDRED
600 NEW HAMPSHIRE AVENUE, N.W., WASHINGTON, D.C. 20037 • TELEPHONE 333-0770, AREA CODE 202

FOR RELEASE ON DELIVERY
ESTIMATED 2 P.M. EDT, MAY 6, 1977

CONTACT: LYNNE SMITH
PHONE: 202/333-0770

New-Car Bumpers Flout Intent Of '72 Law, IIHS Tests Show

Despite passage of a law five years ago to bring about more damage-resistant bumpers on new cars, 1977 model cars still have been designed so that they incur many hundreds of dollars worth of damage in corner bumps as low as five miles per hour, the Insurance Institute for Highway Safety told a House hearing today.

Testifying before the Subcommittee on Consumer Protection and Finance, the Institute presented the filmed results of its latest low-speed impact tests of current-model domestic and foreign cars, showing that:

- The present federal "safety" bumper standard "has somewhat improved the ability of new cars to resist override and damage in very low-speed front-to-rear crashes – but much more improvement is needed."

- "In very minor corner impacts [not now covered by the federal standard], current-model car designs invite substantial amounts of needless damage."

- The 1977 Chevrolet Impala, claimed by General Motors to have a "more efficient" design, "is susceptible to damage of a kind never before seen" in the Institute's corner-impact crash test program.

- "'In frontal crashes as low as 10 miles per hour into a wall, some new-car designs are permitting doors to jam closed," sealing occupants in the car and cutting off rapid escape in the event of fire or other emergency.

Benjamin Kelley, senior vice president of the Institute, told the subcommittee that "the technology for developing effective damage-preventing bumper systems has long been available to car manufacturers," but most are still withholding such improvements from their customers. He said that since passage of the Motor Vehicle Information and Cost Savings Act in 1972 – which contemplated what the chairman of the subcommittee has called "immediate" low-speed bumper protection – the auto companies have been able to stall federal deadlines for such systems until the 1980 model year.

Kelley noted that the Department of Transportation has now proposed, at the request of two car makers, yet another delay of the standard's effective date, to the 1981 model year.

The Institute also showed crash test film of a bumper designed by Tayco Developments, Inc., using long-available technology, that was able to prevent all damage to itself and the vehicle, not only in five miles per hour corner impact tests but also in seven miles per hour front-into-barrier tests conducted by the Institute.

A car equipped with the new bumper was available for viewing during and after the hearing.

(The full text of Kelley's statement is attached. Film of the IIHS crash tests is available from Lynne Smith at the hearing or at IIHS offices, Suite 300, Watergate Six Hundred, Washington, D.C. 20037, 202/333-0770.)

The Insurance Institute for Highway Safety is an independent, nonprofit, scientific and educational organization. It is dedicated to reducing the losses—deaths, injuries and property damage—resulting from crashes on the nation's highways. The Institute is supported by the American Insurance Highway Safety Association, the National Association of Automotive Mutual Insurance Companies, the National Association of Independent Insurers Safety Association and several individual insurance companies.