



COMMONWEALTH of VIRGINIA Department of Motor Vehicles 2300 West Broad Street

DONALD E. WILLIAMS

MAIL ADDRESS P. O. BOX 27412 Richmond, Virginia 12468

# IGNITION INTERLOCK REPORT

December, 1989

To the General Assembly:

As required by House Joint Resolution 378, I am submitting attached report on ignition interlock devices. the The report was prepared by the Virginia Transportation Research Council and the Department of Motor Vehicles. Information was obtained from states which have begun implementation of ignition interlock programs as well as those who have recently passed enabling legislation. The operation and considered, integrity of the devices were along with certification requirements. A number of considerations have been identified for decision making should Virginia proceed with legislation to initiate an ignition interlock program.

Sincerely,

World & Will:

Donald E. Williams Commissioner

DEW/bk

Attachment



# DEPARTMENT OF MOTOR VEHICLES IGNITION INTERLOCK REPORT

## Contents and Highlights

I.	Introduction	Page	1
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- II. Overview and Effectiveness.....Page 3
  - The court has discretion to authorize use of ignition interlock devices.
  - Devices are generally used in conjunction with more traditional sanctions for offenders convicted of drunk driving.
  - Installation, certification and service requirements of ignition interlock devices are promulgated through administrative rulemaking.
  - There is no definitive data concerning the impact of ignition interlock programs and their ability to deter drinking and driving.

# III. Technology, Reliability and Certification...Page 6

- Ignition interlock devices require the driver to take a breath test to determine blood alcohol content (BAC).
- A BAC greater than the limit activates the ignition interlock function, thereby preventing the vehicle from being started.
- A National Highway Traffic Safety Administration (NHTSA) sponsored test evaluated ignition interlock devices and found them to be accurate for persons following the instructions.
- The devices could be circumvented in laboratory tests.
- Additional testing is needed to evaluate the performance of the devices under actual field conditions.

# IV. Implementation Considerations......Page 10

- States vary in their views of providing access to ignition interlock devices.
- Some states have designated funds be available for offenders who are unable to pay for the device.
- Other states consider the devices to be a voluntary condition of probation.
- Liability concerns have been averted by inserting provisions into enabling legislation.

# V. Conclusions and Recommendations.....Page 13

- There is little known about the performance of ignition interlock devices in deterring drinking and driving.
- The costs of program implementation are undetermined.
- Legislative action should be delayed pending completion of field evaluations of ignition interlock programs.

## PART I INTRODUCTION

The problem of alcohol impaired drivers has plagued American society for years. Few issues have consumed as much time in the legislative assemblies of the states as how to minimize and control the abusive use of alcohol on the highways. This abuse has resulted in hundreds of deaths and injuries, along with large economic losses each year.

In a country where the rights of the individual are protected and where a long tradition of limited government interference is respected, it is difficult to find statutory remedies that can arrest the problem and reduce the risks associated with alcohol impaired driving to tolerable levels. Harsh penalties often seem to result in low levels of enforcement. Less stringent penalties seem to bring increase arrests, but don't appear to strike fear in the hearts of offenders. For many persons, suspension or revocation of their operator's license merely results in unlicensed drivers on the highways.

Educational and legislative efforts have been initiated to persuade and require motorists not to drive after consuming alcoholic beverages. In addition, judicial and administrative efforts have been directed toward the same goal. In spite of these efforts, drunken driving remains a serious social, economic, and highway safety problem.

Technological advances have produced a novel, and as yet unproven, method of preventing the operation of a motor vehicle by an intoxicated operator: ignition interlock devices.

Ignition interlock devices require a driver to provide an alveolar (deep lung) breath sample by blowing into the mouthpiece of a handheld unit for four to six seconds. The vehicle may be started only if the driver's blood alcohol content (BAC) is lower than the preset limit programmed into the interlock device. The ignition system of the vehicle will be rendered inoperable if the BAC of the driver is greater than the preset limit. The units are compact, easily installed, and easily removed without permanently damaging the vehicle.

During the 1989 session of the Virginia General Assembly, a resolution was passed to evaluate existing ignition interlock programs, and study the feasibility of Virginia implementation and possible benefits to the Commonwealth. A copy of House Joint Resolution 378 is shown in Appendix A. Ignition interlock programs to date have been directed toward three groups of drivers convicted of driving under the influence of alcohol (DUI): recidivists, persons under 21 years of age and offenders with high BAC levels. As of July 1989, 16 states had passed legislation permitting the installation of ignition interlock devices:

Alaska	California							
Idaho	Indiana							
Iowa	Kansas							
Maryland	Michigan							
Nevada	North Dakota							
New York	Ohio							
Oregon	Tennessee							
Texas	Washington							

All of these states use the ignition interlock device to supplement probation and/or restricted licensing. As with probation, the devices are installed at the discretion of the court. The implementation of successful ignition interlock programs will ultimately depend on the level of confidence the courts have that the devices will perform as designed.

#### METHODOLOGY

This report is a summary of information prepared by Charles Stokes and Cole Wilson of the Virginia Transportation Research Council. The project was carried out in several phases. First, a review of the literature was conducted to obtain background. Second, a comparative review was conducted of the statutes, rules and regulations of the states with ignition interlock legislation. And third, information from vendors regarding their technology, testing and installation requirements for ignition interlock devices was reviewed.

Officials from state motor vehicle departments, police departments and highway safety representatives were contacted to obtain information regarding the status of current and proposed legislation.

Vendors were contacted for technical information regarding the specifications, installation and operation of ignition interlock devices. In addition, technical information was obtained from publications of the National Highway Traffic Safety Administration (NHTSA) and from states that had approved the use of ignition interlock devices.

#### PART II OVERVIEW AND EFFECTIVENESS OVERVIEW OF STATE STATUTES AND PROGRAMS

The majority of the 16 states with ignition interlock statutes are presently developing rules and regulations for certifying the devices and administering their programs. Differences exist on issues addressed in the enabling act and those governed by administrative rules and regulations. The substantive information pertaining to each state's ignition interlock program is summarized in a table in Appendix B. Some items are incomplete as final specifications have not been approved in all states.

Nearly all of the 16 states authorize the installation of ignition interlock devices at the discretion of the court for both first and repeat DUI offenders. Texas, which does not include first offenders in its program, is considering an amendment to allow the use for first offenders. Offenders are required to submit proof of an ignition interlock installation to the proper authorities within 30 to 90 days of conviction. The motor vehicle licensing agency is then notified and a restricted license is issued with a notation that the individual may operate only vehicles in which an ignition interlock device has been installed.

Ignition interlock devices are generally used in conjunction with the more traditional conditions of probation for DUI offenders, such as driving only during designated hours and/or locations. Iowa allows offenders to drive only to and from their place of employment or during the course of employment, provided it is not for more than 6 days per week or longer than 12 hours per day. New York requires mandatory license revocation for 6-12 months prior to permitting an offender to drive with an ignition interlock device. The New York post-revocation license is valid only for driving to and from work, school, court, or the doctor, and for one additional 3-hour period on a nonwork day. State statutes typically defer to the discretion of the court to determine the length of time an ignition interlock device is to be installed. Requirements vary from a 6-month minimum to a 1-year maximum for first offenders to a 5-year maximum for repeat offenders.

The offender generally pays the costs associated with using the device, including the purchase/lease price, installation and service. Several states mandate the creation of a fund to provide equal access to indigent offenders. Concern over the expense prompted some states to allow DUI fines to be reduced by an amount equal to the costs of the ignition interlock device. Although cost is not specifically addressed by some jurisdictions, courts may use discretion in imposing reduced fines to offset a portion of the costs. Offenders are generally permitted to drive a company vehicle during working hours without having an ignition interlock device installed. The employer must be notified by the offender of the DUI conviction and the offender must keep a record of the notification in the vehicle that is being operated. This exception does not apply if the offender owns an interest in the company.

Any ignition interlock device installed must meet the certification standards of the respective state, which are generally promulgated through administrative rulemaking. Programmable BAC thresholds for the operation of ignition interlock devices range from 0.02 percent to 0.05 percent, with some states leaving the level to the court's discretion.

Most states require that installation and servicing of ignition interlock devices be carried out by specially approved and regulated centers. Additional requirements include performance of installation and service away from the customer and service personnel must not have been convicted of a DUI offense in the previous 5 years. Scheduled service appointments are necessary to maintain accurate calibration of the device, monitor use through the electronic data log and detect any evidence of physical tampering. Service requirements range from every 60 days to as long as once a year. Some jurisdictions have found 3 months to be an acceptable balance between the expense and inconvenience to the offender and adequate monitoring. Although regulation might set parameters for servicing an ignition interlock device, the court has the option to establish other requirements based on its determination of the severity of the offense or the characteristics of the defendant.

Eight states do not address insurance coverage for the vendor of ignition interlock devices, four require only that it be adequate and two mandate coverage of \$1 million per occurrence and \$3 million maximum. Kansas, Maryland and Texas specifically forbid both criminal and civil suits against the state arising from injuries related to the use of ignition interlock devices. Several jurisdictions require the vendor to indemnify the state for any costs incurred from ignition interlock litigation. In addition three states have statutes placing limits on their liability when an ignition interlock device has been mandated.

Six states specifically require ignition interlock devices to have a warning label stating it is a misdemeanor to assist in circumventing or tampering with the device. The assistance or tampering must be performed with intent or knowledge, though not in all jurisdictions. Knowingly or intentionally lending, renting or leasing a vehicle to a person with a license restricted for ignition interlock use may also be punished as a misdemeanor.

#### PROGRAM EFFECTIVENESS

A number of preliminary studies have analyzed the available data on ignition interlock programs. These interim studies have little information on the effectiveness of ignition interlock devices in preventing drunken driving, but they do contain administrative evaluations and recommendations for improved program operations. For example, an interim study of program operations in four pilot counties in California includes proposals for a minimum one-year installation period, administrative procedure refinements for more efficient operation and a one-year extension of the evaluation to provide more conclusive program effectiveness results (EMT Group, 1988). The results of the extended evaluation are due in December 1989.

**OREGON** - The state of Oregon conducted a pilot ignition interlock program in eleven counties. Any person wanting a hardship license had to have an ignition interlock device installed in their vehicle. The offenders in the pilot program were compared to a "control" group of offenders issued a hardship license in other counties not requiring the device. The study stated there was not enough information to draw conclusions about the traffic safety benefits of the ignition interlock program.

MARYLAND - The ignition interlock program in Calvert County, Maryland, was evaluated by the University of Maryland from January through September 1988 (Baker, 1989). It was found that repeat offenders were positive in their assessment of the ignition interlock device while first time offenders showed hostility toward being required to use the device. The short evaluation period and small sample size prevented a useful comparison of recidivism rates between the control group and experimental group.

OHIO - The University of Colorado, in conjunction with Guardian Technologies, is currently conducting a study to evaluate the success of the ignition interlock program in Hamilton County, Ohio (Morse and Elliot, 1989). A September report on the short term results indicates recidivism rates for the control group were over three times greater than the experimental group during the first 26 months (9.0% vs. 2.5%), although the small sample size and the short observation period "increase the difficulty of detecting evidence of significant DUI recidivism differences" (p. 2). 10.3% of the users reported attempts to circumvent the device, with a quarter stating they left the vehicle idling so as to avoid using the ignition interlock device. The report also stated nearly 93% of the users reported some difficulty in starting their cars on a regular basis. The categories and proportions of difficult starts as reported by the participants are as follows:

- 30% device faulty
- 20% device too sensitive
- 25% problems with breath code
- 15% weather related problems
- 10% battery/ignition problems

**PENNSYLVANIA -** Carlisle, Pennsylvania is currently administering an ignition interlock program that has been in The offender's license is suspended effect for 18 months. for only one month with the agreement to accept an ignition interlock device as a condition on probation. This agreement is in lieu of a 6-month suspension when an ignition interlock device is not used. According to one official, 250 devices were installed. Two rearrests have occurred. This compares with a recidivism rate of approximately 22% for drivers without the device. It is not known if there are differing characteristics of those not given the option of ignition interlock shortened probation versus persons given the option.

Although there is considerable information describing the intent of ignition interlock programs and their preliminary operational phases, there is no definitive data concerning the impact of the programs. Thus no conclusions concerning the ability of ignition interlock programs to deter drinking and driving can be drawn at this time.

PART III TECHNOLOGY, RELIABILITY AND CERTIFICATION IGNITION INTERLOCK TECHNOLOGY

There are two basic questions related to the implementation of ignition interlock programs. First, is the technology sophisticated enough to produce reliable devices? Second, is enough known about the field performance of the device to set standards for production and use?

The Autosense Corporation and Guardian Technologies Incorporated currently manufacture and sell ignition interlock devices in the United States. Breath Test USA anticipates marketing a device developed in Australia. The Autosense device is being used in California and the Guardian unit is being used in California, Oregon, Maryland and Ohio. Each of the devices requires the driver to take a breath test to determine BAC. An alveolar (deep lung) breath sample is needed to obtain the greatest accuracy. The driver blows into the handheld portion of the unit for four to six seconds in order to gain an adequate sample. A low BAC, compared with the preset limit, allows the driver to start the vehicle. A BAC greater than the limit activates the ignition interlock function, thereby preventing the vehicle from being started.

Some devices require the driver to use a unique series of "puffs" as an identification code to initiate the test. The purpose of offender identification is to prevent an unauthorized person from starting the vehicle. Research and development efforts may allow voice analysis to be used in conjunction with breath samples as a means of identification in the future. This could reduce the possibility of another person performing a test for an impaired offender. Each device also displays a warning sticker stating it is illegal to assist an offender in starting an ignition interlock equipped vehicle.

Retesting is used as a means of monitoring increasing BAC. A driver's BAC may rise above the preset limit after the initial test if the test is performed immediately after the consumption of alcohol but prior to its absorption into the bloodstream. A retesting feature requires the driver to perform a second test at a set time after passing the initial Depending on the manufacturer, the driver may retest test. while driving or may be required to park the vehicle and turn off the ignition. If the second test reveals a higher BAC level, the driver must perform subsequent tests at regular intervals until the BAC decreases, assuming the BAC never exceeds the preset limit. Exceeding the preset limit during retesting activates the vehicle's headlights, signal lights, 4-way flashers and/or horn until the vehicle is parked and the ignition turned off. The Breath Test USA device requires a mandatory retest which can be performed while the vehicle is in motion. Retesting is an option on the Guardian unit and the vehicle must be parked with the engine off.

There are some concerns associated with the retesting feature. Safety problems may arise if a driver's concentration is distracted in heavy traffic while performing the retest while the vehicle is in motion. If drivers are unable to locate a safe retest location in a timely manner they may be forced to perform an unsafe maneuver to exit the flow of traffic. Installation and removal of the ignition interlock device are usually performed at dealer service centers. Some vendors anticipate licensing local dealers to service devices in designated areas. Installation and removal times range from one to five hours. Wiring and electrical connections are sealed to aid in the prevention and detection of tampering. Little if any permanent modification to the vehicle is required for installation. Training and instruction in the use of the device are conducted at the service center at the time of installation. Twenty-four hour customer phone service is provided to assist offenders in need of additional instructions or Service contracts are available for emergency service. units that are purchased, and service costs for leased units are included in the monthly payment.

#### RELIABILITY

Innovative offenders have developed a number of circumvention techniques. Alcohol free breath samples have been stored in containers such as mylar balloons or plastic The samples are then used when an offender is unable bags. to pass the test legitimately. Water, cigarette filters, industrial filtering material and other fibers have been used to filter the alcohol out of the breath sample before it enters the ignition interlock device. Bypassing the ignition or "push" starting the vehicle may also circumvent the device. These attempts are recorded on an electronic data log and are revealed during servicing. Offenders have been known to leave the vehicle idling while they drink. thereby eliminating the need to be tested before driving. Α person may also choose to violate probation and simply drive another vehicle without an interlock unit.

Pressure, humidity and temperature sensors are used in an effort to prevent circumvention. Acceptable limits have been calculated to correspond with average human ranges, and the vehicle cannot be started when the breath samples are outside these parameters. Advances in technology should continue to make it more difficult to circumvent the devices. None of the devices currently has the capability to detect a vehicle idling for an extended period, although development is underway.

While the characteristics mentioned above are common to all current ignition interlock devices, each manufacturer has several unique features and specifications. Commercially available motor vehicle ignition interlock devices were also evaluated for accuracy and ease of circumvention in a NHTSA-sponsored laboratory test (Frank, 1988). The devices consistently registered accurate BAC for persons properly following testing instructions. The circumvention techniques included bogus breath samples and filtered breath samples. Balloons and plastic bags were used to provide bogus breath samples. Water and commercially available absorbent material were used as filtering Simple procedures were designed to heat the materials. bogus air samples in order to circumvent temperature sensing devices. The author states that "even with special features designed to prevent circumvention, it can be concluded that a motivated individual, with preplanning and some knowledge, can fool the devices tested" (p. 18). The devices were rated as being accurate, although they could be circumvented.

### CERTIFICATION STANDARDS AND FIELD TEST RESULTS

There is currently no national or international standard for the ignition interlock device. Each state that authorizes the use of ignition interlocks requires the units meet approved certification standards. Many states have not yet promulgated their rules and regulations for the certification of the devices due to recent passage of their enabling legislation. Certification testing is normally conducted at the vendor's expense by an independent laboratory. Alberta, Canada has stated their certification standards require 12 to 14 days of testing at a cost of approximately \$16,000.

The certification standards that have been established take into consideration the unique characteristics and requirements of the individual state. The severity of Michigan winters and Texas summers necessitates ignition interlock devices function accurately over an extreme range of temperatures. States such as Washington, which have both coastal and mountainous terrain, require ignition interlock devices to maintain correct calibration over a wide spectrum of elevations.

Certification specifications that test for both accuracy and ease of circumvention were the focus of another NHTSA-funded report entitled "Further Laboratory Testing of In-Vehicle Alcohol Testing Device" (Frank, 1988). The Autosense and Guardian devices were among those tested. The report concluded that the limited size and scope of the testing project made it inappropriate to generalize the results with consistent identification of high and low BAC in users who properly followed the operating instructions (p. 17).

As interest in the use of ignition interlocks as a drunken driving countermeasure increased, NHTSA sponsored research and published a report discussing the development of the devices, the current level of technology and the status of legislation (Crompton, 1988). The report included a discussion of psychomotor testing (driver coordination), alcohol sensor technology and test results. The feature/function section concerned the technological and operational aspects of the Autosense and Guardian devices. At the time the NHTSA report was published, only California, Michigan, Oregon and Texas had legislation in place. The report concluded that although ignition interlock devices were technically feasible, there were insufficient data to determine their effectiveness as a drunk driving countermeasure.

The results of the laboratory tests are limited because of the small sample sizes and narrow scope of the studies. The accuracy of the ignition interlock devices in determining threshold BAC is probably sufficient for use by defendants convicted of drunken driving. Additional testing is needed to evaluate the performance of the devices under actual field conditions.

## PART IV IMPLEMENTATION CONSIDERATIONS EQUAL ACCESS

Ignition interlock devices are costlier than license revocations or restriction. Appendix C provides information on purchase and lease costs for three manufacturers. If drivers must pay the added costs, some drivers may be excluded from the program because of their inability to pay. If that occurs, the program is likely to be challenged as a violation of the equal protection guarantee of the Fourteenth Amendment to the U. S. Constitution.

Some states have taken the view that equal access programs must be provided for offenders who are unable to pay. California, Idaho, New York, and Oregon have established funds to make payments for indigents. One source of money for the funds is a portion of the fines assessed for DUI offenses.

In other states the view is expressed that offenders must meet the requirements of their probation. It is argued that ignition interlock devices are a voluntary condition of probation. In addition, ignition interlock devices are not the only alternative to outright license revocation. Courts may choose from other alternatives including restrictions unsupervised by mechanical devices, driver improvement classes, and alcohol treatment sessions (Ruschman, 1979).

#### TORT LIABILITY

The Commonwealth may decide to lessen possible damage awards and settlements by requiring vendors of ignition interlock devices to indemnify the state for all money paid to claimants as a result of litigation concerning the devices. The indemnification provisions would be contained in the contracts of sale or lease.

Some states have avoided liability concerns by inserting provisions into the enabling statutes prohibiting civil or criminal litigation against them in connection with ignition interlock devices.

#### ECONOMIC CONSIDERATIONS

Exact figures for implementation of an ignition interlock program in Virginia cannot be predicted. Virginia is currently committed to substantial expenditures for the arrest, prosecution, sanction and/or treatment of DUI offenders. An ignition interlock program would utilize many of the same resources already committed to the drunken driving problem.

One of the difficulties of predicting the cost of an ignition interlock program is the variety of forms the program may take:

- Mandatory vs. discretionary
- Targeted at particular groups of offenders vs. all drivers convicted of DUI
- Length of time an offender is to use ignition interlock device
- Monitoring requirements

There is minimal likelihood there would need for new facilities or equipment.

Data on program effectiveness would be impossible to collect if only a small number of devices were installed statewide.

It would be difficult for the installation/service centers to exist and be monitored without a sufficient volume of business to justify their costs of operation. Because offenders ordered to use an ignition interlock device would either purchase or lease the device from private vendors, direct involvement by the state in distributing them would not be required. The main activities of the state may be to:

- monitor the service centers to ensure
  - installation and maintenance are properly performed
  - data are accurately collected and reported
  - service and repairs are promptly performed
- promulgate rules and regulations for use
- maintain appropriate driver license notation when the device has been authorized
- and possibly administer a fund for indigent offenders

Whether additional personnel would be needed would depend on both the number of authorized installation centers and the frequency of inspection mandated by the General Assembly.

The record keeping procedures for ignition interlock users would need to be added to existing systems. Training of court clerks and probation officials who maintain these records would be required.

Similarly, if the General Assembly required a notation on the driver's license, then the license and existing procedures and automated systems would have to be modified.

One additional cost the Commonwealth may desire to undertake is a public information effort explaining not only the purpose of the ignition interlock devices but also the penalties for tampering with them or assisting in their circumvention.

One option for Virginia to take is to authorize a pilot program on the use of ignition interlock devices. Sample areas could be selected from the different geographic regions of the state. Other states have inaugurated their programs with pilot projects.

A more desirable option may be for Virginia to delay consideration of legislation authorizing the use of ignition interlock devices until more is known about the effectiveness of the devices in the field.

#### PART V CONCLUSIONS AND RECOMMENDATIONS

Manufacturer's product information indicates the ignition interlock devices on the market would fulfill the needs of an interlock program. However, little is known about their use in actual programs. NHTSA studies indicate performance is good for determining BAC outside the preset level, but additional testing needs to be conducted to ensure reliable devices are available for field use.

A number of states have passed legislation and established in-vehicle ignition interlock programs as a sanction for drunken driving. Very little is known about the operation of these programs, since not all states have begun implementation. Those states with either pilot or ongoing programs appear to be in the "fine tuning" stage.

Although some preliminary data on effectiveness suggests a positive impact, no definitive statement can yet be made concerning whether the programs deter drunken driving. No program evaluations have been completed.

No significant legal impediments appear to exist to prevent Virginia from establishing an ignition interlock program. However, little case law exists in this area as yet.

It is recommended that legislative action concerning ignition interlock devices be postponed. The minimum delay would be until the California report has been published and analyzed. It is anticipated this report will provide a more comprehensive evaluation of the effectiveness of ignition interlock devices under field conditions.

In addition, a study should be conducted to determine the scope and impact of implementing an ignition interlock program. The number of offenders sentenced and placed into such a program, along with the level of administrative complexity imposed, will determine the costs of operation in Virginia.

#### REFERENCES

Baker, E, A. 1989. <u>The Calvert County Study: A program</u> <u>evaluation of DWI probationer use of an in-car alcohol</u> <u>breath analyzer ignition interlock system.</u> Ph. D. diss., University of Maryland, College Park.

Crompton, R. F. 1988. <u>Potential for application of ignition</u> <u>interlock devices to prohibit operation of motor vehicles by</u> <u>intoxicated individuals.</u> NHTSA Report No. DOT HS807281. Washington, DC: National Highway Traffic Safety Administration.

Department of the Solicitor General. No Date. <u>Impaired</u> Driving Program Briefing Paper. Alberta, Canada.

England, R. E. 1988. <u>Ignition interlock: Curbing drunk</u> <u>drivers with modern technology.</u> Boston: Massachusetts Legislation Research Bureau.

Evaluation, Management, and Training Group, Inc. 1988. <u>Evaluation of the California ignition interlock pilot</u> <u>program for DUI offenders (Farr-Davis Driver Safety Act of</u> <u>1986): Interim report.</u> Sacramento, CA: Evaluation, Management and Training Group, Inc.

Frank, J. F. 1988. <u>Further laboratory testing of in-vehicle</u> <u>alcohol test devices.</u> NHTSA Report No. DOT HS807333. Washington, DC: National Highway Traffic Safety Administration.

Morse, B. J., and Elliott, D. S. 1989. <u>Hamilton County</u> <u>interlock evaluation study: Interim report on survival</u> estimates for DUI. Boulder, CO: University of Colorado.

Morse. B. J., and Elliott, D. S. 1989. <u>Hamilton County</u> <u>Drinking and Driving Study Interlock Evaluation: Two Year</u> <u>Findings.</u> Boulder, CO: University of Colorado.

Ruschmann, P. A.; Carroll, H. O.; Greyson, M.; and Joscelyn K. B. 1979. <u>Analysis of the potential legal constraints on</u> <u>the use of mechanical devices to monitor driving</u> <u>restrictions.</u> NHTSA Report No. DOT-HS-805523. Washington, DC: National Highway Traffic Safety Administration.

APPENDIX A

# **GENERAL ASSEMBLY OF VIRGINIA - 1989 SESSION**

HOUSE JOINT RESOLUTION NO. 378

Requesting the Department of Motor Vehicles to study ignition interlock technology.

Agreed to by the House of Delegates, February 6, 1989 Agreed to by the Senate, February 23, 1989

WHEREAS, the 1988 Session of the General Assembly created a commission to study ignition interlock technology; and

WHEREAS, alcoholism and drinking while driving continue to be major problems for the nation and for the Commonwealth of Virginia; and

WHEREAS, alcohol was involved in over forty-four percent of Virginia's 1986 fatal automobile crashes; and

WHEREAS, alcohol-related crashes remain the leading cause of death for Americans under age thirty-five and the nation's number one health and safety problem; and

WHEREAS, the Commonwealth of Virginia has addressed this problem with educational programs and stiffer fines and sentences; and

WHEREAS, the development of new technology through an ignition interlock system will prevent the use of an automobile by a person who is intoxicated and, therefore, could save the lives of hundreds of Virginians; and

WHEREAS, the Commission Studying Ignition Interlock Technology found that field studies are currently being conducted on ignition interlock devices in California and several other states, which results are scheduled to be released in 1989; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Department of Motor Vehicles is requested to evaluate the results of the studies currently underway, the potential benefits to the Commonwealth of ignition interlock technology, and submit fina recommendations to the General Assembly by January 1990 as provided in the procedure of the Division of Legislative Automated Systems for processing legislative documents.

# SUMMARY OF STATE'S REGULATION OF IGNITION INTERLOCK PROGRAMS

	AK	CA	ID	IN	IA	KA	MD	MI	NV	NY	ND	OH	OR	TN	ТХ	WA
APPLICABLE FOR 1ST DUI 2ND DUI	- -	Y Y	Y Y	Y N	Y Y	Y Y	Y Y	Y Y	Y Y	Ү Ү <sup>3</sup>	* *	Y Y	Y Y	Y Y	N Y	Y Y
RESTRICTION NOTED ON LICENSE	-	N	Y	Y	¥*	-	Y	Y	Y	Y	*	Y	Y	Y	-	Y
NOTICE TO DMV	-	Y	Y	Y	Y	-	Y	Y	Y	Y	*	Y	Y	Y	Y	-
STATE'S LIABILITY RESTRICTED	-	N	N	N	N	Y	Y	N	N	N	N	N	N	N	Y	N
VENDOR INSURANCE REQUIRED	-		1MIL 3MIL	*	*	*	Y	*	*	Y	*	Y	Y	*	* 1 3	MIL MIL <sup>4</sup>
INDIGENT FUND	-	Y	Y	*	*	*	*	*	*	Y	*	-	Y	*	*	*
REDUCED FINES	-	Y	N	*	*	Y	N	N	*	*	*	-	-	*	*	*
BAC LIMIT	-	.03	SET BY CT	.02	.04	SET BY CT	.02	.02	.05	.02	*	-	-	.02 TO .05	В	ET Y T
REQUIRED ON WORK VEHICLE <sup>2</sup>	-	N	*	N	Y	-	N	*	N	N	*	N	N	N	N	Y
SVC FREQUENCY (Months)	-	12	4	*	2	-	6	2	3	2	*	3	-	6	6	3

# SUMMARY OF STATE'S REGULATION OF IGNITION INTERLOCK PORGRAMS

·····	AK	CA	ID	IN	IA	KA	MD	MI	NV	NY	ND	OH	OR	TN	ТΧ	WA
SEPARATE OFFENSE FOR:																
WHEN OFFENDER REQUESTS ASSISTANCE	-	Y	Y	Y	Y	Y	Y	*	*	Y	*	Y	Y	У	*	*
WHEN THIRD PARTY PROVIDES ASSISTANCE	-	Y	Y	Y	Y	У	Y	*	*	Y	*	Y	Y	Y	Y	Y
TO RENT OR LOAN A VEHICLE TO AN OFFENDER	-	Y	*	Y	У	*	У	*	*	Y	*	У	Y	У	*	*
<ul> <li>Not specifical?</li> <li>No response red</li> <li>Fines may be red</li> </ul>	ceive	ed.	-				·	-							on	

- 1. Fines may be reduced to offset the cost of the interlock unit at the discretion of the court.
- 2. States not requiring interlock units on work vehicles usually require the following conditions to be met: employer must have notice of restriction, proof of such notice must be in the vehicle, the offender may not own an interest in the business.
- 3. New York anticipates interlock restrictions to be required primarily for multiple offenders.
- 4. \$1 million per occurrence, \$3 million maximum.

# SUMMARY OF IGNITION INTERLOCK COST FACTORS

COMPANY	lease pu	rchase	INSTALLATION	SERVICE CONTRACT*
Autosense	\$35/month	\$390.00	\$65	lyr @ \$200 2yr @ \$100 3yr @ \$100
Breath Test USA, Inc.**	\$40/month (w/o data log) \$65/month (w/ data log)	\$800	•	\$25 per service
Guardian Technologi <b>es</b> Inc.	\$40/month (months 1-12) \$30/month (months 12-24) \$25/month (months 25 +)	N/A	\$50	N/A

\*Service Contracts are required only for purchases. Monthly lease payments include service costs.

\*\*Prices quoted are preliminary and will be finalized at time of product introduction.