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Body/Repair Shop Visits to Determine Distribution of Replacement Parts Sources

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16. Abstract

This study gathered information from a cross section of the auto repair industry to determine the distribution of replacement parts sources. The data gathered is in support of the report to the Congress on the effects of the Motor Vehicle Theft Law Enforcement Act of 1984.

Nine sites were visited located in six states: Maryland, Pennsylvania, New Jersey, New York, Connecticut and Massachusetts. The study found that originial equipment manufacturers (OEM) parts are the most often used where major replacement parts are required. Because of ill fits as reported by the shops visited, aftermarket parts were the least often selected to replace major damaged parts.

There has been no change in the distribution of replacement parts sources before and after the introduction of the parts marking standard. Insurance companies have become more involved in the auto body/repair industry since the standard went into effect - respondants indicated that insurance companies are involved in the repair/replace decisions and put ceilings of the price of replacement parts.

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BODY/REPAIR SHOP VISITS TO DETERMINE DISTRIBUTION OF REPLACEMENT PARTS SOURCES

FINAL REPORT

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EXECUTIVE SUMMARY

The study, Auto Body/Repair Shop Visits to Determine Distribution of Replacement Part Sources, was conducted to assist the National Highway Traffic Safety Administration (NHTSA) in its evaluation of the Motor Vehicle Theft Law Enforcement Act of 1984. The Act mandates a comprehensive program of vehicle theft countermeasures which include:

- inscribing or affixing identification numbers on fourteen major original equipment and replacement parts for designated high-theft passenger car lines;
- broadening federal criminal penalties for motor vehicle theft;
- imposing new laws against tampering with identification markings;
- imposing tighter controls on the import and export of motor vehicles.

In addition to assessing the distribution of types of parts sources auto repair shops use, the study was also to:

- determine the estimated dollar distribution and percentage of the replacement parts market accounted for by type of supplier,
- determine changes in the types of suppliers since the enactment of the Act,
- assess the influence of auto insurer policies and other factors on the selection of suppliers,
- determine auto repair shops awareness of the Act.

The study design entailed face-to-face structured interviews with nine auto repair shop owners/managers in six northeastern states. These states were chosen because they have high auto thefts and low recovery rates. Results were supplemented by respondent comments and interviewer observations. It had been planned that interview results would be supplemented by data abstracted from shop records to obtain actual dollar distributions and percent of the replacement parts market by supplier source. But, no site had time to permit record inspection and abstraction.

The study found that shops use original equipment manufacturers (OEM) parts more often than aftermarket or used parts suppliers, and that this utilization was the same before and after the provisions of the Act were carried out. OEM parts tended to be preferred because, they are available nearly 100 percent of the time compared to aftermarket parts and used parts which are available about 80 percent and 50 percent of the time, respectively. OEM parts are also preferred because, unlike aftermarket parts, they fit without any adjustments. The type of used part selected for replacing a damaged part is restricted primarily to sheet metal components and bumpers.

Insurer policies, however, influence the decision to select used parts. According to all of the respondents, insurance companies are actively involved in determining if a part should be repaired or replaced. Moreover, insurance companies tend to put ceilings on the cost of replacement parts, according to five respondents. The majority of respondents reported that insurance companies are more involved in the auto repair industry since the enactment of the Act.

Verification that a part is not stolen (this is not required by the Act) when it is obtained from a used supplier is not done by auto repair shops. Because, in most instances, they purchase used parts from registered salvage yards, receive an invoice, they assume that the part is not stolen.

Of the nine repair shop managers/owners questioned, five had heard of the parts marking requirements but none was sure of how it affected them, or which cars or parts it covered. The study teams provided each site with a copy of the standard, a list of the automobiles and fourteen major parts covered by the legislation.

1.0 INTRODUCTION

1.1 Background of the Study

On June 8, 1989, NHTSA awarded a contract to Associated Management Services, Inc., (AMSI) to assist in the evaluation of the provisions of the Motor Vehicle Theft Law Enforcement Act of 1984. The Act mandates a comprehensive program of vehicle theft countermeasures which include:

- inscribing or affixing identification numbers on certain major original equipment and replacement parts for designated high-theft passenger car lines; [1]
- broadening federal criminal penalties for motor vehicle theft;
- imposing new laws against tampering with identification markings; and
- imposing tighter controls on the import and export of motor vehicles.

Congress also directed NHTSA to submit a report after five years of the promulgation of the parts marking standard that would provide information on the costs and benefits of the standard and discuss, among other things, the replacement parts market.

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[1]The Theft Prevention Standard requires that the following fourteen auto parts be marked: engine, transmission, right and left front fenders, hood, right and left front doors, right and left rear doors, front and rear bumpers, right and left rear quarter panels, and decklid, tailgate or hatchback.

1.2 Objectives of the Study

The study objectives were to:

- estimate the distribution of replacement parts by supplier source.
- determine changes in the distribution of the replacement parts market by suppliers sources before and after the parts marking standard was issued.
- assess the influence of insurance company policies on the sourcing of parts used in accident repairs.
- determine the degree to which body repair shops are aware of the parts marking standards.

2.0 STUDY APPROACH

The study was designed to provide general information about the replacement and auto crash repair industries before and after October 1986 [2] from interviews with nine (9) auto body shop owners/managers. The owners/managers included representatives of three car dealerships (imported and domestic) and six independent auto body shops. It should be noted that service stations and self-service fleet shops were in the initial universe but the selected service stations included in the study did not perform repairs requiring parts covered under Title VI and there were no self-service fleet shops in the nine sites selected by NHTSA.

2.1 Site Selection

It was decided that the focal point of the study would be major metropolitan areas in six northeastern states that have a high level of auto theft, but low recovery rates. These states were Maryland, Pennsylvania, New Jersey, New York, Connecticut and Massachusetts. Using information from the crime reporting agencies and the yellow

[2]October 1986 was the beginning of the 1987 model year when parts were first required to be marked.

pages in each state, a list of 75 potential sites was compiled. Each shop was then phoned to determine willingness to participate in the study. Of the 22 (29 percent) that were agreeable, nine were selected by NHTSA. A letter, signed by the NHTSA COTR, was sent to each. The letter explained the purpose and nature of the project, introduced AMSI and explained our role in the project. The letter also described the data collection process along with the information being sought in the study, and requested the cooperation of the site personnel during the interviewing process.

2.2 Data Collection and Analysis

The data collection process involved abstracting information from various records, inspecting the site to examine shelf inventory and the method for ordering and receiving parts, and interviewing repair shop owners/managers. A structured data collection instrument with objective and subjective questions was developed by the AMSI project staff which included individuals knowledgeable about the automobile repair industry. These questions were designed to address the following:

- criteria for selecting suppliers of replacement parts;
- relative importance of these criteria since the inception of the parts marking standard;
- identification and role of new factors since the inception of the parts marking standards;

- estimated market share of the replacement parts market by supplier type;
- impact of the parts marking standard on the distribution of the parts market;
- insurers influence on the cost of accident repairs and on the selection of the source of replacement parts;
- procedures for ordering spare (used) parts;
- body/repair shop personnel knowledge of the parts marking standard.

Data were collected by teams that had undergone two days of intensive training.[3] The teams were composed of a team leader and one support person. [4] Both recorded respondent answers, however, if there were recording discrepancies, the team leader's account was accepted.

Each team was supposed to spend at least eight hours at each site. However, no site would allocate more than three hours for the study, and only one would allow inspection of records. Because the manager at this site could not be present as had been stipulated, data were also not abstracted from the records. While questions regarding specific figures were met with hesitation or incomplete answers, questions that asked for estimations or a "yes" or "no" responses were readily answered.

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[3]The training was designed to thoroughly prepare each team in collecting and reporting the requisite information. The areas of training included an overview of the project; complete review of the Act; review of interviewing techniques and site visit protocol; and practice in conducting interviews and abstracting information.

[4]Although the teams were composed of individuals who had owned and operated auto repair shops, conflict of interest was avoided as none was a current owner/manager; involved in site selection; or sent to a site of an acquaintance.

In analyzing these data descriptive and qualitative techniques were used. The qualitative technique includes interviewer observations and respondent comments to subjective questions. The descriptive techniques involve reporting and comparing, where appropriate, raw figures, averages and standardized dollar amounts.

3.0 FINDINGS

3.1 Awareness of the Motor Vehicle Theft Law Enforcement Act

That owners/managers changed their supply purchasing practices after promulgation of the theft prevention standard is not conclusive. While five of the nine shop owners/managers were aware of the parts marking standard, none knew exactly how they were expected to comply with it. Nor were any aware of the automobiles subject

Exhibit 1

Awareness of the Act

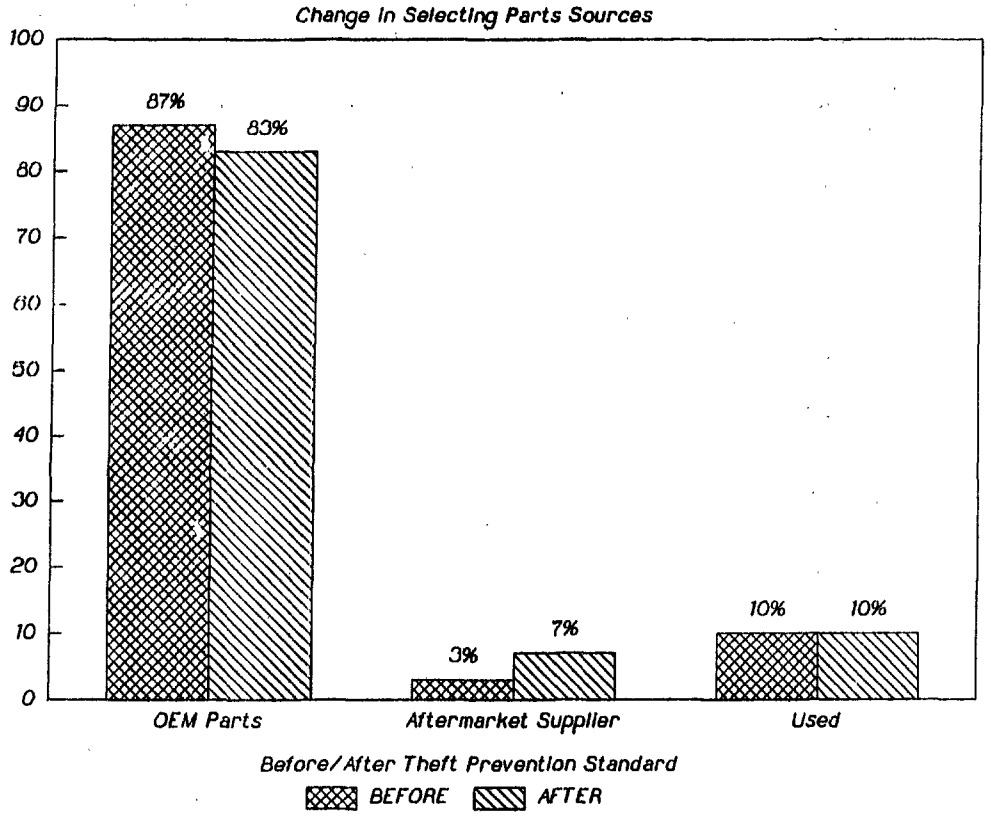
Shop Type	Aware	Unaware	Total
Dealership	1	2	3
Independent	4	2	6
Total	5	4	9

to the theft prevention standard and of the fourteen parts to be marked. As shown in Exhibit 1, one-third of the dealer and two-thirds of the independent repair shops were aware of the standard. Because they may receive information from a central source, an expectation had been that awareness among dealer shops would have been greater.

3.2 Market Share

Repair shop owners/managers were just as likely to select original equipment manufacturers (OEM) as their replacement parts suppliers for marked and unmarked parts before implementation of the standard as they were after. Before 1986, OEM parts were preferred 87 percent of the time, aftermarket and used parts suppliers were preferred 3 percent and 10 percent of the time, respectively. After 1986, use of OEM parts dropped slightly to 83 percent; a drop caused by an increase in aftermarket suppliers, from 3 to 10 percent. Given the limited number of respondents, this change is not significant.

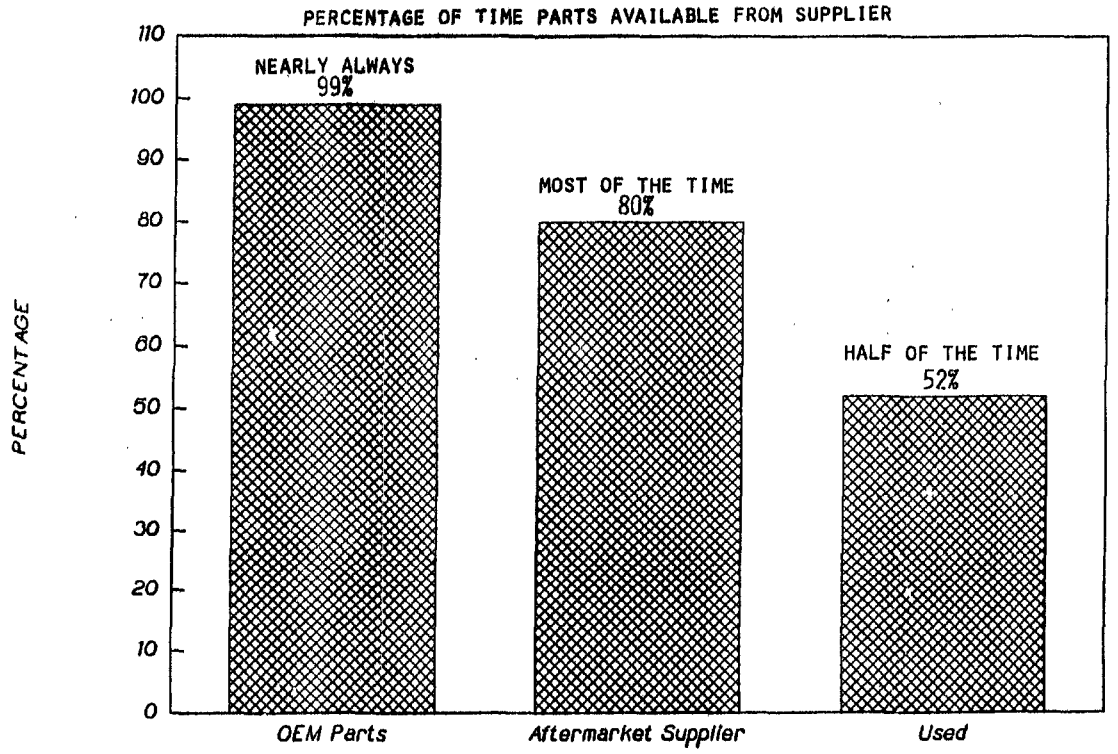
EXHIBIT 2



Although there was no change in the percentage of times suppliers of used parts were the replacement part source, four of eight shops [5] reported shifting from one set of used suppliers to another since 1986.

Preference for OEM parts appears to be related to parts quality and availability. Owners/managers reported that OEM parts are available 99 percent of the time while aftermarket parts are available 80 percent of the time and used parts 52 percent of the time. Consequently, eight of the nine shop owners/managers contact OEM distributors first when looking for parts. As one owner pointed out, in addition to always being available, OEM parts, unlike aftermarket parts, almost always fit. They do not require extensive alterations or extra shop time to make them useable.

EXHIBIT 3



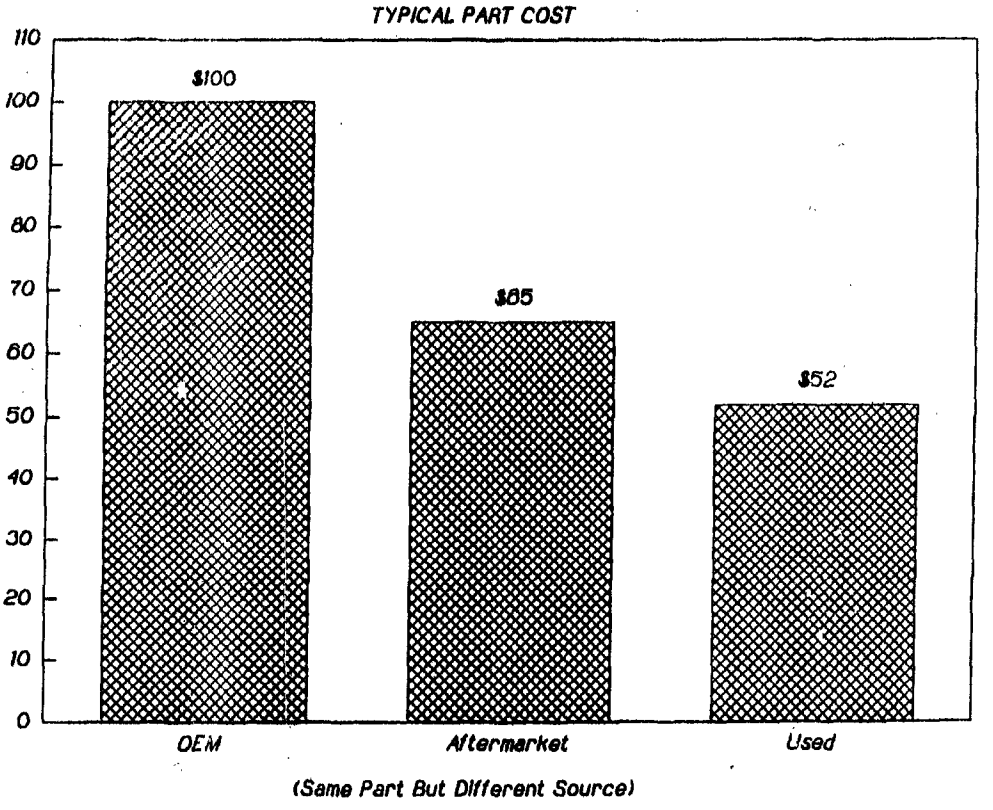
[5]The ninth shop did not respond to these two questions.

Four owners/managers reported that they will use aftermarket parts only when the OEM part is not available. Only two use aftermarket suppliers on a regular basis and only for selected parts such as doors and bumpers. In replacing sheet metal parts and bumpers, used parts are preferred over aftermarket and sometimes over OEM parts. The decision to select used parts, however, is more often not determined by the repair shop but by the insurance company as stated by five of the eight owners/managers.

When dealing with salvage yards, only two shops reported receiving guarantees that the parts were not stolen, they were given invoices at the time of sale. There seems to be the assumption among most, that if the part came off the shelf from a registered junk yard, it has been checked by the junk yard to insure that it is not stolen. However, all of the eight shops that select used parts report that they maintain records of their purchases.

OEM parts cost more. For an OEM part costing $100, $65 would be spent for the same aftermarket part and $52 for the same used part. (Exhibit 4) While owners/dealers are concerned about cost, parts availability is the primary influence in supplier selection.

EXHIBIT 4



Factors which Influence Selection of Suppliers

To assess the most influential factor in selecting supplier sources of replacement parts before and after 1986, shop owners/managers were asked to indicate the level of influence of the following on a scale of 1-3 (3 being the most influential):

- availability of parts
- parts prices
- insurer policies regarding parts sources
- cost and time to repair versus replacing parts
- parts delivery schedule

Parts availability is the most influential. Insurer policies appear to have increased in influence following promulgation of the parts marking standard.

Exhibit 5
Factors Affecting Supplier Selection

Factors	Pre - 1986 Average Rating *	Post - 1986 Average Rating
Parts Availability	2.6	2.7
Parts Price	2.1	2.2
Insurer Policies	1.7	2.2
Repair Cost/Time vs Replacement	1.6	1.9
Delivery Schedule	2.0	2.0

* Factors were rated on a scale of 1 - 3 (3 being the most influential)

3.3 The Role of Insurers

When asked if insurers got actively involved in determining whether a part should be repaired rather than replaced, all nine of the shop owners/managers answered yes. The amount of involvement, according to seven of the nine, has not changed. Owners/

managers also indicated that insurers encourage the selection of used parts for older vehicles, especially where sheet metal parts and bumpers are required. The majority also believe that insurance companies have become more involved in all aspects of the auto body/repair industry since 1986. This involvement is noted especially in determining if a part is repaired or replaced, establishing cost ceilings and encouraging the use of used parts in older cars. The majority also reported that insurance companies put ceilings on the price of replacement parts. Three owners/managers stated that this would affect them in that they would first look for the least expensive, proper fitting part.

4.0 SUMMARY

The small number and location of repair shops visited in this study obviously is not statistically representative of the population of auto repair shops.

The key factor that appears to motivate selection of replacement parts distributors is availability. OEM parts are preferred far more than aftermarket and used parts, although OEM parts cost more. Insurers policies are a second important motivating factor. While insurers are exerting more influence over repairs by determining if a part should be repaired or replaced, establishing price ceilings and encouraging the use of used parts in older cars, they do not tend to monitor parts to ensure that they are marked.

A study involving nine auto body shops, selected from a group of 22 willing to cooperate (one third of those contacted) does limit conclusions about how replacement parts are obtained. One clear lesson learned is the difficulty of gathering substantive data on the value and extent of the stolen parts market. This study did provide insights on auto shop parts procurement practice - probably overstating the proportion of parts bought from OEM sources, and likewise understating used (and possibly stolen) parts purchases (this conclusion comes from the likelihood that the volunteer participants may represent body shops less likely to purchase used-stolen parts). Nonetheless, the study provides an order of magnitude of the distribution of part sources.

APPENDIX A

TOPICAL QUESTIONS

DISTRIBUTION OF REPLACEMENT PARTS SOURCES

FACTORS WHICH INFLUENCE SELECTION OF SUPPLIER SOURCES FOR REPLACEMENT PARTS

1. On a scale of 1 - 3 (3 being the most influential factor) indicate the current level of influence of the following factors in your selection of supplier sources for major replacement parts.

Before 1986			After 1986			
1	2	3	1	2	3	
						Availability of Parts
						Parts Prices
						Insurer policies regarding parts sources
						Cost and time to repair versus replacing parts
						Parts delivery Schedules
						Any other pertinent factors. List any other factors.

2. Since 1986 have any new developments, other than the parts marking standards, changed your selection of sources which you utilize to secure major replacement parts?

3. Where do you usually (a) purchase replacement parts and (b) what makes this source the best for you.

4. Where are you most likely to receive the best\lowest price for the replacement parts that you generally require in your repair business?

5. Do you keep a record of the supplier source/s of your replacement parts?

6. State the steps that you go through when a replacement part is needed?

7. Do you have a regular or standard supplier source for certain parts or do you call and verify that they are the least expensive or can be delivered faster?

8. How do insurance industry requirements affect your selection of supply sources?

9. What impact does the application of these insurance requirements have on how and where your shop obtains parts for repairs?

10. If a part is available, but is more expensive, do you normally buy it from that supplier or do you check with the insurance company to obtain their approval?

11. Do insurance companies ever question the cost of the replacement parts requested by your company?

12. To expedite the repair time, do insurance companies suggest the more costlier replacement part?

13. Does your shop verify the presence of markings on the replacement parts which are required to have markings?

14. Has an insurance company verified or required the presence of markings on those replacements parts which are required to have markings?

15. Have you ever been approached with offers to buy replacement parts from other sources?

16. What criteria do you use when determining whether you will repair or rebuild a part versus using a replacement part?

ESTIMATED DOLLAR DISTRIBUTION AND PERCENTAGE OF THE REPLACEMENT PARTS MARKET ACCOUNTED FOR BY SUPPLIER TYPE.

1.(a) What do you think is the estimated percentage of the replacement parts which your company uses from the following types of suppliers:

(b.) May we sample your records to secure the below information? yes ____ /no ____

2. Do you generally contact only the original equipment manufacturers when looking for replacement parts that are required to have markings?

3. When required to use marked parts, do you seek compatible marked parts from aftermarket suppliers when the original manufactured marked part is not available?

4. Do you primarily use the aftermarket suppliers for selected unmarked parts? If so, why?

5. How do you determine when to use a used part rather than a new replacement part?

6. Do you find wide differences in the cost and availability of replacement parts that are required to be marked from the different types of suppliers?

7. What other supplier source is available for replacement parts (both those requiring markings and selected unmarked parts)?

ROLE OF INSURERS

1. Do insurance companies get actively involved in determining whether a part should be repaired rather than replaced?

2. Describe the specific insurance requirements that govern how and where repair shops obtain parts?

3. Do insurance companies recommend that certain types of suppliers be used?

4. If insurance companies recommend suppliers, are these suppliers generally less expensive?

5. Since 1986, have insurance companies changed their policies regarding Questions 1 & 3.

6. How do insurance companies respond to the use of used parts? (positively/negatively/accept/reject-/discourage use of/encourage use of).

7. Do the insurance companies put a ceiling on the price paid for replacement parts?

8. If there is a ceiling, how does this ceiling affect your choice of suppliers?

9. Since 1986, have you noticed any difference in the requirements by insurance companies regarding the ceiling of prices for repair parts used in repairing cars that have been in accidents?

10. How have specific insurance requirements/involvement changed since the introduction of the parts marking standard?

PROCEDURES USED WHEN ORDERING USED PARTS

1. Where do you generally obtain your used parts? Are they sometimes obtained from out of state?

2. If you use junk or scrap yards, do you remove the part from the car yourself or is the part a shelf item?

3. Do you determine whether the part is a stolen item? How do you determine if it is a stolen item?

4. Do you look for compatible used parts or only those from the original manufacturer?

5. What is the cost savings (percentage) for the use of used replacement parts?

6. Do you have special suppliers of used parts?

7. Is there a list of recommended or approved suppliers of used parts that you use?

8. Do you maintain records of the sources of your used replacement parts?

9. Do the owners of these shops guarantee that the parts are not stolen?

10. Have you noticed any difference in how used replacement parts are purchased since the new parts marking standard has been in effect?

11. What percentage of your replacement parts are used parts?

12. What percentage of your major replacement parts are after market products?

13. What percentage of your major replacement parts are OEM products?

ADMINISTRATIVE

1. What is the number of employees in your firm?

2. What is the number of vehicles repaired per week/month/quarter?

3. What is the average repair cost per vehicle?

4. What is the percentage of rates of repair from the following sources?

   a.) Dealers

   b.) Public
   Insurance
   Cash

   c.) Taxi/Fleet

NOTE TO SURVEY TEAM:

1. Was the respondent aware of the parts marking standard?

2. How was he/she informed?