

National Equipment Register

2003 Equipment Theft Report



January 2004



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INTRODUCTION

Overview

Based on the National Equipment Register's database of over 30,000 thefts, this report is NER's first national analysis of the theft and recovery of heavy equipment. The data includes equipment commonly used in construction, highway maintenance, farming, agriculture and forestry. Similar reports will be published every January to help track trends and utilize the growing volume of data tracked by NER.

Aim

Risk management and investigation is not only about the amount of resources available but also how they are directed. The aim of this study is to provide equipment owners, insurance companies and law enforcement with information to focus theft prevention and investigation resources in the most effective manner. To achieve this, the statistics are put into context through footnotes, analysis and conclusions drawn that relate to both the protection and investigation of heavy equipment.

The report seeks to answer the question:

"Who steals how much of what, from where, how, why and where does it go?"

Data

Since 2001 NER has been developing databases for recording heavy equipment theft and ownership data that now provide a new volume and detail of data to analyze. Through NER's partnership with the Insurance Services Office (ISO) and member insurance companies (full list at <http://www.nerusa.com/MemberIns.asp>), NER is also able to provide an analysis of heavy equipment loss trends within the insurance industry. Some data, such as the underlying reasons for the high level of theft, cannot be gauged statistically, but can be deduced from details of the thousands of theft reports received by NER and the resulting contact with theft victims and law enforcement.

NER member companies may request a more detailed breakdown of data.

Presentation and Analysis

Each set of data is presented either graphically or in tables so that any trends are clearly shown. Notes explain data sources and gathering techniques. The analysis discusses the relative importance of the factors that drive each set of results.

THEFT STATISTICS

Theft statistics indicate the volume and type of equipment stolen as well as the location of the theft itself. Who the thief is and the reason for the theft can be suggested through observation and information gained from informants and through arrests.

Thefts by State - 2003

1. Top 10 states by frequency of theft.

1. TX
2. NC
3. FL
4. CA
5. GA
6. IL
7. TN
8. OH
9. SC
10. IN

**The top 5 states
account for 33%
of thefts.**

2. Although thefts were reported to NER in every state, the top 5 states accounted for 33% of the total number of thefts in 2003.
3. Compared to past years, there is little variation in the top 5 states. The order changes more significantly further down the table.

Note:

Based on over 4,000 theft reports submitted to NER in 2003.

Analysis:

The overriding factor in these statistics is the amount of targets available to thieves. Theft levels closely follow the amount of equipment in a particular area - the states with the highest volume of construction, maintenance and agriculture have the highest number of thefts. This factor is likely to be amplified because areas with high concentrations of equipment attract more thieves, particularly professional theft rings. Theft rates in areas close to land borders seem to be higher as they provide an easy route for thieves who wish to export equipment.

Comment:

Theft rates closely follow equipment volume - where there is more equipment, there is usually more theft. Apart from some 'hotspots', the risk of theft of an individual machine is therefore no greater in one state than any other.

Type of Theft Location

The graph below compares loss location by type of premises:

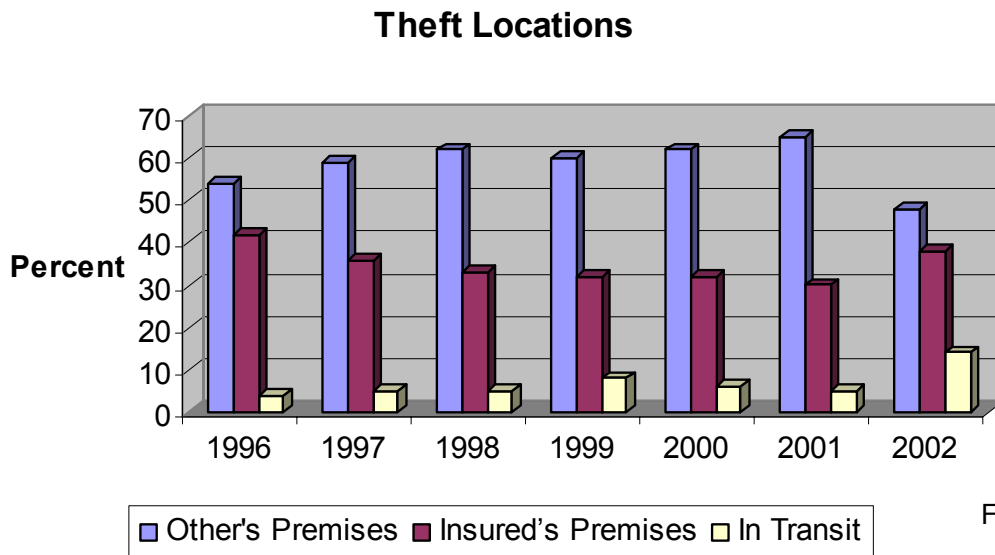


Figure 1

Note:

Based on ISO reports for contractors' equipment.

Analysis:

1. These figures depend upon where the equipment spends most of its time and relative levels of security. Equipment spends most of its time being operated on 'others' premises such as worksites that are likely to have much lower levels of physical security than an 'insured's' storage facility.
2. Equipment thefts in transit are relatively few but on the increase in line with increasing levels of cargo theft. Such thefts usually occur when equipment is being moved long distances and has an enforced night stop, when equipment remaining on the transport offers an easy target.

Comment:

1. It is not enough to focus solely on the security of premises and worksites - in many instances a worksite cannot be adequately secured.
2. When equipment transportation requires a stopover, local storage with protection should be planned in advance wherever possible.

Theft by Type of Equipment - 2003

Most Commonly Stolen Types of Equipment - 2003

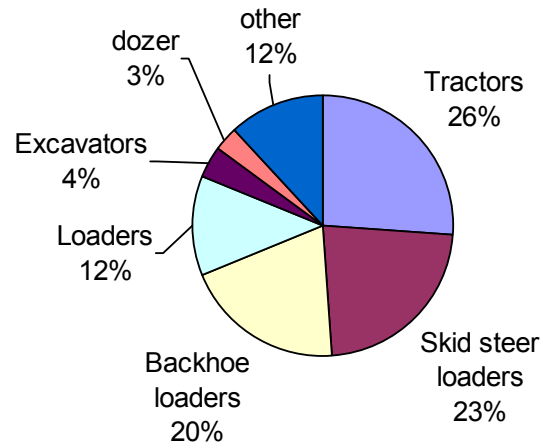


Figure 2

Notes:

1. Based on over 4,000 theft reports submitted to NER in 2003.
2. The top 5 types of equipment account for 85% of all losses.
3. 'Tractor' is a broad category, including compact, utility and agricultural tractors.
4. Skid steer loader is really a subtype of loader but has been broken out here due to the high number of losses in this subtype.

Analysis:

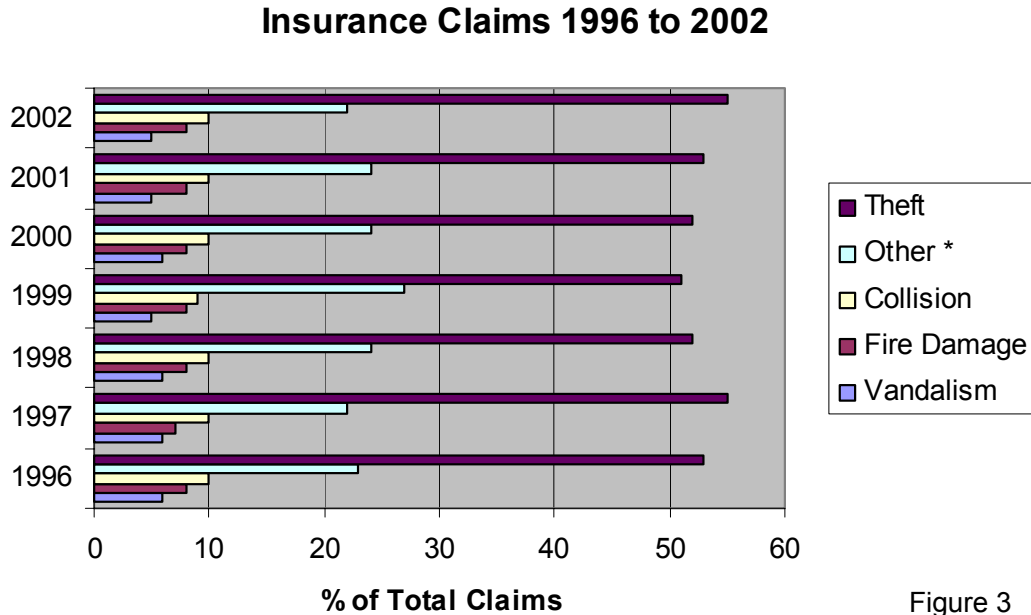
1. Like theft location, the type of equipment that is most often stolen closely reflects the overall volume of equipment that is produced, however there are other important factors in this instance, primarily mobility and value.
2. While excavators and dozers are the most valuable equipment in the top 10, tractors, backhoes and skid steers are the most easily transported. When theft is measured by value rather than frequency, dozers and backhoes move up the table.
3. Of very high value equipment, the only types that are reported stolen with any frequency are wheeled machines such as wheel loaders and mobile cranes.

Comment:

Equipment owners should look at ease of transport as well as value when looking at which equipment to add extra security to.

Theft Compared to Other Perils

When deciding where to concentrate risk management resources, it is useful for owners and insurers to compare losses through different types of risk.



Notes:

1. *Other includes claims involving windstorms, hail, water damage, flood, volcanic action and earthquake.
2. Based on ISO reports for contractors' equipment.

Analysis:

While major equipment losses such as crane collapse gain the attention of engineers and risk managers, the cumulative cost of equipment thefts often outweighs these major losses.

Comment:

There are simple steps that equipment owners can take to reduce the likelihood of theft and improve the chances of recovery. Where such steps are cost effective and can be assessed and measured, insurers and managers can use incentives to encourage risk management.

The Cost of Equipment Theft

At present, there is no single place where every loss is recorded so existing figures must be used to make assumptions and to develop trends. Estimates of the total value of equipment stolen annually range between \$300 million and \$1 billion.

To determine trends it is necessary to use a figure that has been recorded consistently for a number of years such as heavy equipment thefts insured under Inland Marine policies as reported to ISO. These losses increased by 64% between 1995 and 2001.

Note:

These statistics do not include losses from business interruption such as short-term rental costs, project delay penalties and wasted workforce and management time.

Analysis:

The high and increasing incidence of equipment theft is due to:

- the ease with which stolen equipment can be sold for high cash values
- low physical security on equipment and at worksites
- low risk of detection
- low penalties if prosecuted

RECOVERY STATISTICS

While low recovery rates make it difficult to draw concrete conclusions from the analysis of recoveries alone, some idea as to how equipment is stolen, where it goes and who steals it may be drawn from an analysis of recoveries.

Recovery Rates

An analysis of thefts reported to ISO by insurers since 1995 showed 14% marked as recovered. Past losses from over 300 NER member companies reflect results both higher and lower than this but not by any significant margin.

**As little as 10 to 15%
of stolen equipment is
recovered.**

Note:

The true recovery rate may be higher as some pieces of equipment will have been recovered but not reported as such. Conversely, the true recovery rate may be lower as many thefts are never reported *and* those that are reported are more likely to be recovered.

Analysis:

The low recovery rate is due to factors such as:

- the delay in theft discovery and reporting
- the lack of pre-purchase checks in the used equipment market
- the lack of resources that law enforcement can dedicate to equipment investigations
- the difficulty of these investigations due to the complexities in equipment numbering systems
- the lack of information immediately and nationally available to law enforcement on theft and ownership

Recoveries by State - 2003

In 2003 recoveries were made in 25 states by law enforcement with the assistance of NER. The following states were the most active:

1. CA
2. AZ
3. FL
4. SC
5. TN
6. GA
7. NV
8. MO
9. IL
10. TX

**Top 5 states account
for 43% of recovery
locations.**

Notes:

1. Equipment which is exported after the theft is less likely to be recovered.
2. A significant percentage of the equipment recovered was found in a state other than the state in which it was stolen, but few moved beyond the neighboring state. The bigger the state and the more demand for equipment within that state, the lower the chance that the equipment will leave the state. The longer the time from the theft, the more likely it was to have moved out of state and be in the possession of a purchaser who had no knowledge of the theft.

Analysis:

1. While low recovery rates make it impossible to provide a full picture of how and to where stolen equipment is moved, there are strong indications that due to the few checks made in the used equipment market, thieves are confident of not being caught and feel safe selling equipment in neighboring states or even neighboring counties.
2. Recoveries made at ports demonstrate that stolen equipment is exported, however the ease with which stolen equipment can be sold within the US would only make the cost and increased risk of this worthwhile for thieves who can raise significantly higher prices abroad or where a land border makes export low risk.

Comment:

It is important to act both locally (e.g. circulation of theft reports and trend analyses) and nationally (databases) in the fight against equipment theft.

Most Commonly Recovered Equipment - 2003

Recoveries made by law enforcement with the assistance of NER in 2003 were made up of the following types of equipment:

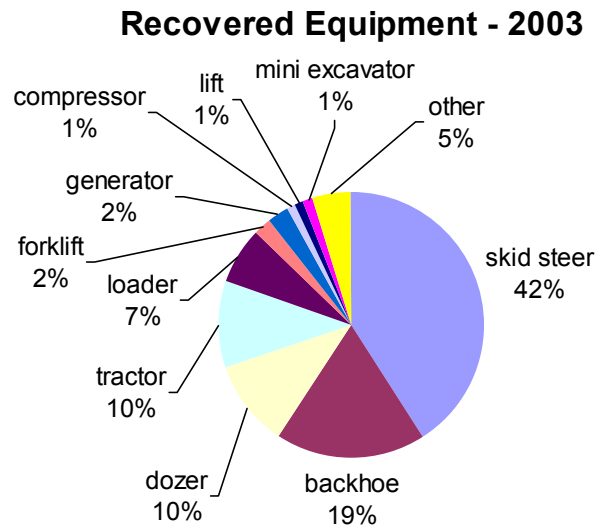


Figure 4

Note:

1. Does not include 'related' recoveries where an NER assisted recovery lead to further recoveries.
2. Every recovery had some kind of indicator such as equipment in an unusual location, type or timing of transport, missing decals, altered paint or missing identification plates.

Analysis:

The most recovered types of equipment closely mirrors the most commonly stolen types of equipment.

Who Steals Equipment?

While there are no statistics available that can be used to analyze this, information from theft victims and from recoveries indicate that thieves have good knowledge of equipment operation and weaknesses in physical security.

In some cases these are criminals who learn about equipment or who pay those in the business for help and information. In other cases the thieves are already familiar with equipment and see an opportunity to make more money in stealing equipment to 'supplement' their existing income. Having stolen and sold one machine and found how easy it is, they continue.

SUMMARY

Although complete statistics do not exist, it is clear from those that do that equipment theft is a serious problem that is getting worse. Estimates of the total value of equipment stolen annually range between \$300 million and \$1 billion. These statistics do not include losses from business interruption such as short-term rental costs, project delay penalties and wasted workforce and management time. By frequency of loss, theft is a greater problem than any other type of equipment risk.

Geographically, equipment theft levels closely follow the amount of equipment in a particular area - the states with the highest volume of construction, maintenance and agriculture have the highest number of thefts.

The type of equipment that is most often stolen closely reflects the overall volume of equipment that is produced although value and ease of transport are important factors. Most thefts are from worksites that may be difficult or impossible to secure.

As little as 10% of stolen equipment is recovered. Recovery locations and types of equipment recovered closely mirror locations and types most often stolen.

CONCLUSION

Equipment owners and insurers should focus risk management efforts on high value equipment that can be easily transported, and note that equipment security and worksite security are both important.

Officers investigating equipment theft should focus on the types most often stolen and look for 'red flags' such as location, type of transport, missing decals, altered paint and particularly, missing identification plates.