

NATIONAL EQUIPMENT REGISTER

2004 Equipment Theft Report



January 2005

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INTRODUCTION

Overview

This report is the National Equipment Register's (NER) second annual report on equipment theft in the US. It is primarily based upon data from NER's database of over 70,000 thefts of construction and farm equipment and information from the Insurance Services Office (ISO). Similar reports will be published every January to help track trends and utilize the growing volume of data recorded by NER.

Aim

The aim of this study is to provide equipment owners, insurance companies and law enforcement with information to help direct 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 an unparalleled volume and detail of data to analyze theft across the US. Through NER's partnership with the Insurance Services Office (ISO) and data from 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 measured numerically, 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 to allow easy comparison and to highlight trends. Notes explain data sources and gathering techniques. The analyses discuss the relative importance of the factors that affect 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 during investigations.

Thefts by State - 2004

1. Top 10 states by frequency of theft.

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

**The top 5 states
account for 38%
of all thefts.**

2003	
1.	TX
2.	NC
3.	FL
4.	CA
5.	GA
6.	IL
7.	TN
8.	OH
9.	SC
10.	IN

2. Although thefts were reported to NER in every state, the top 5 states accounted for 38% of the total number of thefts in 2004. In 2003 the top 5 made up 33% of all thefts.
3. Compared to past years, there is little variation in the top 5 states. The order changes more further down the table.

Note:

The table is based on 4,973 theft reports submitted to NER in 2004.

Analysis:

The overriding factor is the amount of 'targets' available to thieves. Theft levels closely follow the amount of equipment in a particular area – i.e. the states with the highest volume of construction and agriculture have the highest number of thefts. This factor is likely to be increased slightly because areas with high concentrations of equipment also are more likely to attract professional theft rings. Theft rates in areas close to land borders also seem to be higher as they provide an easy route for thieves who wish to export stolen 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.

Theft by Location Type

The graph below compares insured losses by the type of location of the theft:

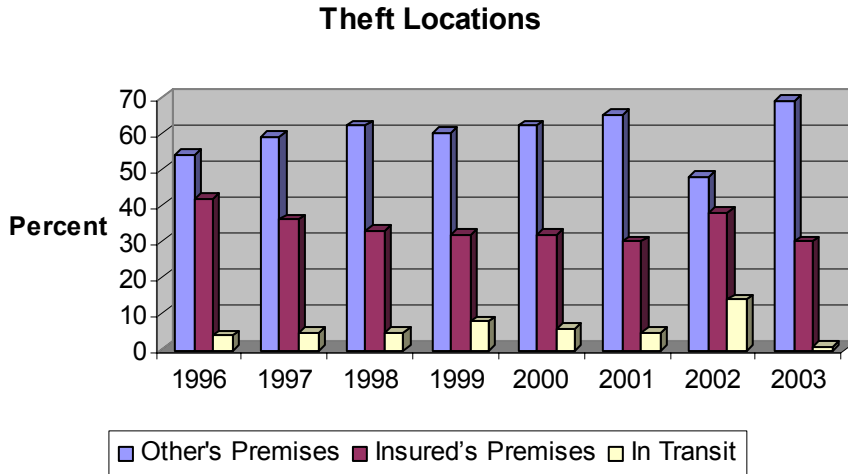


Figure 1

Note:

Based on ISO reports for Contractors' Equipment.

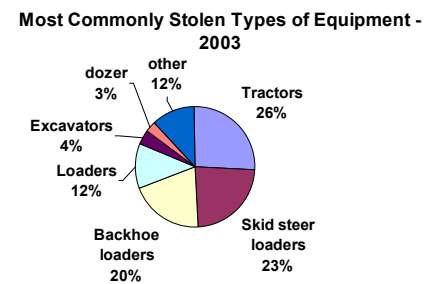
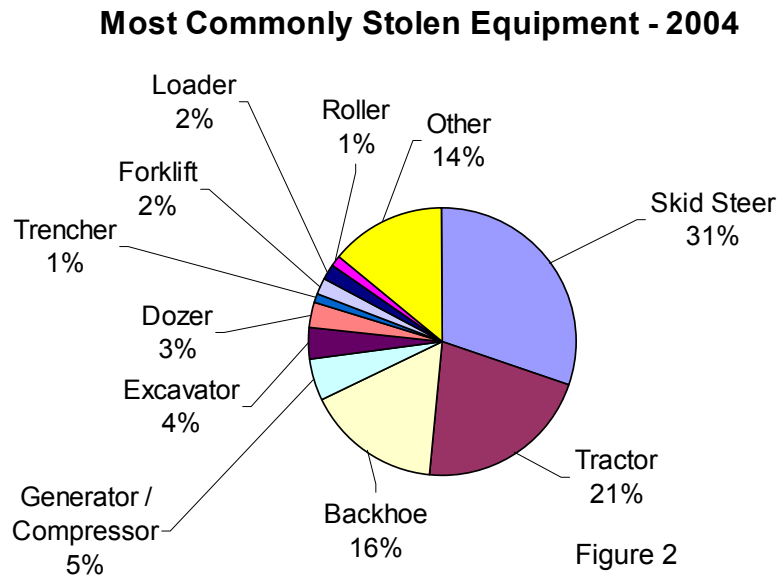
Analysis:

These figures depend upon where the equipment spends most of its time and the different levels of security at each type of location. Equipment spends most of its time being operated on '*Others' Premises*' such as worksites that are also likely to have much lower levels of physical security than an '*Insured's Premises*' such as a fenced storage facility.

Comment:

It is not enough to focus solely on the security of premises and worksites - in many instances a worksite cannot be adequately secured. Equipment should be made more secure, even if it is a temporary measure such as restricting the movement of more mobile items with the strategic positioning of larger equipment out of hours.

Theft by Type of Equipment



Notes:

1. Based on 4,973 theft reports submitted to NER in 2004.
2. The top 5 types of equipment account for 75% of all losses. In 2003 the top 5 represented 85% of all thefts.
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.

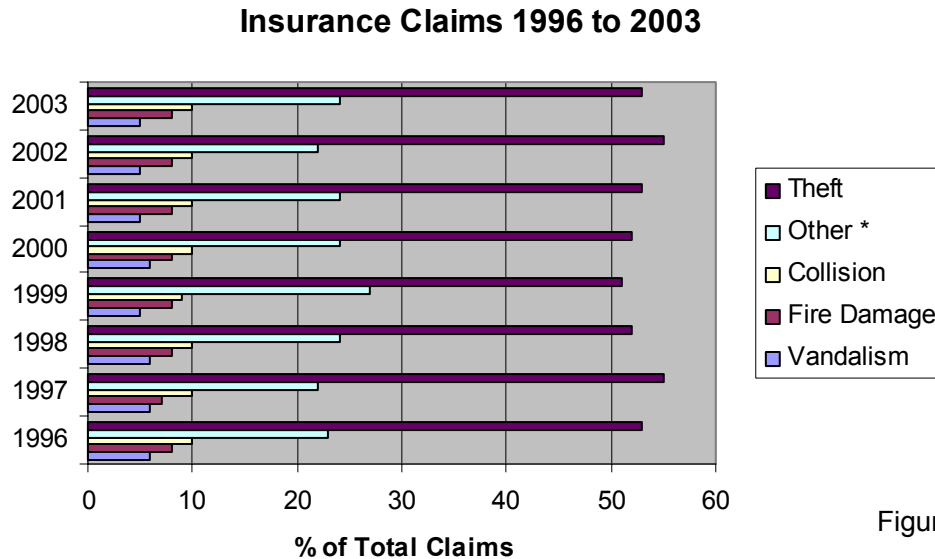
Analysis:

1. The two key factors in the type of equipment most likely to be stolen are value and mobility - the higher the value of an item and the easier it is to transport, the greater the chance of theft. Value is the primary factor until an item becomes too large to move on a small trailer – i.e. mechanical cranes are very valuable but are seldom, if ever, stolen as they are difficult to move.
2. While excavators, dozers and loaders 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, loaders and excavators move above generators.
3. Of very high value equipment, the only types that are reported stolen with any frequency are wheeled machines such as wheel loaders.

Comment:

Equipment owners should look at the mobility of equipment as well as value when looking at which equipment to focus security efforts on.

Theft Compared to Other Types of Loss



Notes:

1. *Other includes claims involving windstorms, hail, water damage, flood, volcanic action and earthquake.
2. These figures are based on frequency, not value. When measured by value theft is still the greatest type of loss but by a lesser margin.
3. Based on ISO reports for contractors' equipment.

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 measured, insurers and managers should use incentives to encourage their use.

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.

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 levels of equipment theft are due to:

- the high value of heavy equipment
- the ease with which equipment can be stolen due to poor security
- the ease with which stolen equipment can be sold in the used equipment market
- low risk of detection and arrest for thieves
- low penalties if prosecuted

RECOVERY STATISTICS

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

Recovery Rates

An analysis of thefts reported to ISO by insurers since 1990 showed 9.5% 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.

Notes:

1. The true recovery rate may be higher as some pieces of equipment will have been recovered but not marked as recovered.
2. The true recovery rate may be lower as many thefts are never reported and these are the losses that are *less* likely to be recovered.

As little as 10% of stolen equipment is recovered.

Analysis:

The low recovery rate is due to factors such as:

- the delay in theft discovery and reporting
- inaccurate or non-existent owner records
- the lack of pre-purchase checks in the used equipment market
- limited resources that law enforcement can dedicate to equipment investigations
- the difficulty of equipment investigations due to the complexities in equipment numbering systems
- the lack of information available to law enforcement

Recoveries by State – 2004

In 2004 recoveries were made in 30 U.S. states by law enforcement with the assistance of NER. The following states were the most active:

2004

1. CA
2. NC
3. TX
4. AZ
5. NY
6. MI
7. TN
8. IN
9. AL
10. FL

**The top 5 states
account for 42 % of
recoveries.**

2003

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

Notes:

1. 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.
2. The bigger the state and the more demand for equipment within that state, the lower the chance that the equipment will leave the state.
3. The longer the time from the theft, the more likely the equipment 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 lower risk.

Comment:

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

Most Frequently Recovered Equipment - 2004

Recoveries made by law enforcement with the assistance of NER in 2004 were made up of the following types of equipment:

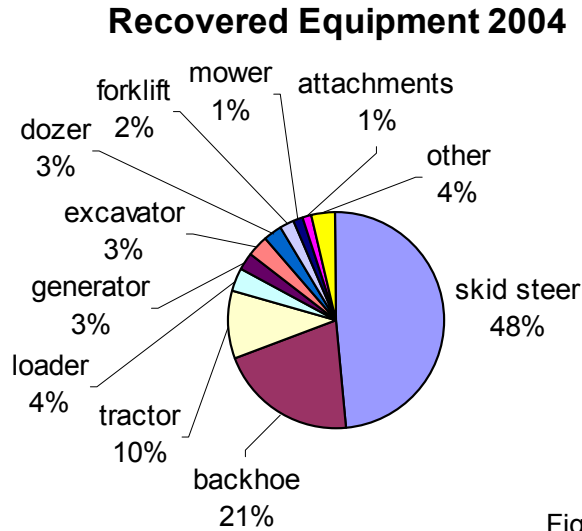


Figure 4

Notes:

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.

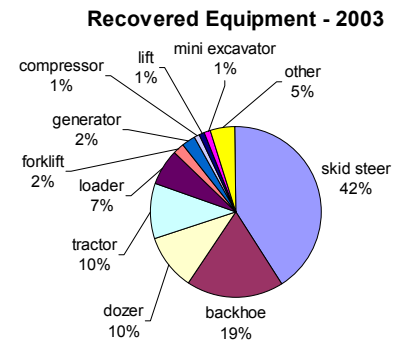
Analysis:

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 investigations indicate that thieves have good knowledge of equipment operation and the weaknesses in physical security and procedures such as inventory management.

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 – most arrests lead to multiple recoveries.



NER STATISTICS

The following numbers give a snapshot of NER's operations:

71,873 – Number of theft reports

11,640,600 – Number of ownership records

2,849 – Number of law enforcement users

314 – Number of recoveries made (see note 1)

\$4,395,463 – Value of recovered items (see note 1)

347 – Number of member insurance companies

28 - Number of police training classes conducted by NER (in 18 states) in 2004

74,350 – Number of NER equipment ID guides distributed to law enforcement

91 – Number of member rental companies

1,646 – Number of rental stores or branches using NER's services

Notes:

1. Does not include 'related' recoveries where an NER assisted recovery lead to further recoveries.
2. Data as of 12.31.04

SUMMARY

Although complete statistics do not exist, it is clear from those that do that equipment theft is a serious problem. 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 and agriculture have the highest number of thefts.

The type of equipment that is most often stolen is linked to the mobility and value of equipment. 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 and needs will vary depending upon the type of equipment and type of worksite.

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.