

RiskTopics

Contractor's equipment – theft and vandalism protection

Zurich Resilience Solutions - Risk Engineering

Equipment is essential to the timely completion of construction projects. Stolen or damaged equipment can jeopardize project timelines and increases the cost of doing business. Take action now to enhance equipment protection and minimize potential impacts to business.

Introduction

Construction equipment theft and vandalism costs a significant amount of money each year worldwide. In the US alone the figures are staggering, with some estimates in the range of \$300 million to \$1 billion annually¹. These estimates also do not take into account additional costs associated with business interruption, project delays or the costs associated with tools and materials that may be part of the theft.

Theft is perceived by criminals to be low risk and profitable because of the ease with which equipment can be stolen and sold. Whether a contractor owns, rents, or borrows equipment, one thing is sure - the equipment must be protected.

Vandalism is often a crime of opportunity. Idle equipment on unattended sites offers attractive targets to those with malicious or mischievous intentions.

This Risk topic outlines some of the protective measures to help decrease the risk associated with equipment theft and reduce the opportunity for vandalism. In general, these are measures that can mitigate exposures to theft and vandalism and in many cases, it is a combination of measures that will be most effective.

Discussion

Many instances of equipment theft result from highly organized criminal elements. Professional thieves may steal based upon specifically ordered/requested parts or types of equipment. Equipment can generally be removed to remote locations within hours of the theft.

On the other hand, theft and vandalism may simply be a condition of opportunity involving amateurs who just happened upon unprotected or idled equipment.

Industry economic cycles and theft

The construction industry, as with most industries, experiences economic cycles.

There is a significant demand surge for equipment when the cycle is near a peak. The demand surge increases the market value of equipment thereby increasing the profitability of theft.

Conversely, near the bottom of a cycle, equipment value drops, construction workload drops, and equipment may sit idle in storage yards. This concentration of equipment can lead to an increased opportunity for vandalism or theft.

Statistics

Typically, thieves will look for easy targets and may examine a jobsite several times looking for opportunities. Equipment thefts and vandalism are much easier when associated with jobsites that are unsecured. It should also be noted that most stolen equipment may never be recovered. The National Equipment Register (NER) and the National Insurance Crime Bureau (NICB) compiled statistics in their 2016 Equipment Theft Report that outlined the top equipment types subjected to theft in the U.S. These statistics are provided below along with the domestic states, and cities that incurred the highest incidences of mobile equipment theft.

According to the NER and NICB 2016 equipment theft report¹, the average estimated value per stolen piece of equipment is \$29,258, with most thefts occurring at construction work sites where the level of physical security is often less than at the equipment owner’s permanent facilities or yards. As noted from the top 10 equipment theft types listed below, thieves generally target high-value equipment that is easily transportable and usually small enough to fit on a trailer.

Top ten equipment theft by type ¹	
1. Riding mowers and garden tractors	6. Forklifts
2. Loaders (skid steer, wheel loader and backhoe)	7. Bulldozers
3. Tractors	8. Generators, compressors, and welders
4. Utility vehicles	9. Trenchers and rollers
5. Excavators	10. All others

Top ten states for equipment theft ¹	
1. Texas	6. South Carolina
2. North Carolina	7. Tennessee
3. Florida	8. Oklahoma
4. California	9. Arkansas
5. Georgia	10. Alabama

Top ten cities for equipment theft ¹	
1. Houston, TX	6. Oklahoma City, OK
2. San Antonio, TX	7. Fort Worth, TX
3. Conroe, TX	8. Tampa, FL
4. Miami, FL	9. Orlando, FL
5. Dallas, TX	10. Liberty City, TX

NER research also shows that theft tends to rise during holiday periods including Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas through New Year’s. Be sure to have extra protocols in place during those time periods such as additional security, placing items in locked areas or removing from the site if possible.

Guidance

Develop and implement a formal, written program to continuously identify equipment that could adversely affect your business if stolen or damaged.

Create an inventory of essential equipment and label the equipment with identification marks (visible and hidden).

Provide both equipment protection and site protection commensurate with theft or vandalism exposure.

No program is effective if not maintained. Include change management elements to keep the program current and effective. Regularly review equipment theft and vandalism incidents, including potential incidents or "near-misses", companywide for trends and lessons learned.

Contact your insurance carrier or broker. Some insurers offer incentives such as reduced or waived deductibles for the use of tracking/recovery systems or registration services.

Additional details on preventive measures are outlined below:

Risk Assessment

Analyze equipment at risk. Consider value, importance, repair/ replacement time and vulnerability to theft. Focus on identified equipment for further protection measures. Recognize that no single protective measure will prevent all losses. Develop contingency plans for the prompt replacement of essential equipment that is stolen or damaged.

Inventory

Inventory all equipment (owned, leased, or loaned) in a list. Include practices to keep the list current as equipment is purchased or sold. Develop the list to include:

- Manufacturer name
- Model number and model year
- Serial/VIN/PIN numbers (if available)
- Appraised value
- Photographs
- Location of equipment
- Custom features or add-ons

Maintain copies of purchase invoices or lease agreements with the inventory list.

Identification

Mark equipment with the owner's name and other details such as an identification number. Consider:

- Marking each part of the equipment that can be disassembled
- Marking several locations on the equipment
- Marking in both visible and non-visible locations

Register equipment serial numbers with contractor associations, theft prevention groups, manufacturers, and insurers.

Equipment Protection

Implement an equipment key control program. In addition, consider:

- Kill switches
- Keyed ignition switches for equipment that can be started with "universal" keys
- For equipment storage or maintenance yards, remove keys from equipment and restrict access to key storage boxes to select employees. Key boxes should be located in secure locations, out of sight from the general public, vendors and suppliers, trade partners, etc.
- Immobilizers
- Various locking mechanisms
- Removal of fuses
- Removal of critical parts or wheels
- Recovery based systems using GPS or other tracking technology

Site Protection

Secure equipment storage areas at sites or in yards. Consider:

- Perimeter fencing with limited points of access
- “No Trespassing” signs
- Lighting
- Alarm systems, including signage indicating your site is monitored or under surveillance
- Private security guard or monitoring service
- Closed-circuit TV cameras with recording capability
- Park smaller equipment like skid steers and ATVs in lockable steel shipping containers or Conex type storage boxes.
- Park equipment in a line to block smaller equipment between very large items that are more difficult to steal
- Take equipment off trailers when in storage or maintenance yards and secure / immobilize all trailers on your site to prevent thieves from using trailers to steal larger items.
- Report all thefts or attempted thefts to law enforcement no matter how minimal the item value. Successful thieves will often revisit sites if they perceive it as an easy target with little or no protective measures. Law enforcement can also provide insight into increased criminal activity affecting other projects or properties in the same neighborhood.

Managing Change

Keep equipment management practices current. Continuously update inventory lists, maintain equipment identifications, and maintain tracking registries.

Expand routine equipment inspection, testing, and maintenance to include security devices.

Equipment in transit is another opportunity for thieves. Plan and coordinate the handling of equipment during movement to and from sites, during site set-up, and during site disassembly. These are periods when manual supervision is applied to supplement reduced levels of protective controls.

Conclusion

Equipment theft and vandalism can increase business costs and threaten the timely completion of jobs. You can reduce these exposures through management practices and protective measures applied based upon regular risk assessments or your equipment fleet.

Give criminals reasons to bypass your jobsite, premises or equipment and look for easier opportunities elsewhere. Reduce opportunities that entice the amateur. Increase the sense of risk that can help ward off the professional thief.

For more information on Zurich’s extensive Risk Engineering and Sustainability services, please contact your Risk Engineer or visit us at [Risk Engineering and Sustainability Services | Zurich Resilience Solutions](#).

References

¹National Equipment Register and National Insurance Crime Bureau: 2016 Annual Report of Equipment Theft.

Equipment Theft Quarterly (Fourth Quarter 2014): National Equipment Register. 2014. Web. 2 Feb. 2019.
https://www.ner.net/wp-content/uploads/2016/02/NER_Newsletter-Q4_2014.pdf

Gwynn, Mike; Engels, Francois; Green, Neville; Henry, Jean-Claude; and Kellow, John. Theft of Construction Plant & Equipment. The International Association of Engineering Insurers (IMIA), 2005. Web. 18 Dec 2012.

The Inland Marine Underwriters Association (IMUA). Contractor’s Equipment Guide to Loss Prevention, Part One: Security. New York, NY: IMUA Loss Prevention & Control/Claims Committee, 2000.

Other resources

- [NER \(National Equipment Registry\)](#)
- [NER Labor Day Heavy Equipment Theft Trends 2019](#)
- [NER Thanksgiving Heavy Equipment Theft Trends](#)

- [NER Winter Holiday Heavy Equipment Trends](#)
- [NER Memorial Day Heavy Equipment Theft Trends 2021](#)
- [NER July 4th Heavy Equipment Theft Trends 2021](#)

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