

## TECHNICAL INFORMATION PAPER SERIES: DETERRING THEFT OF CONTRACTORS' EQUIPMENT



## TIPS TO HELP KEEP YOUR COSTLY EQUIPMENT SAFELY ON-SITE AND AT WORK.

Theft of contractors' equipment continues to be a serious problem for the construction industry. The National Equipment Register (NER) estimates the total value of equipment stolen from construction sites to be between \$300 million and \$1 billion annually and rising. And, these estimates don't include indirect costs from business interruption such as short-term rental costs, project delays and lost production time.

Equipment theft occurs with all types of construction contractors in all geographic areas. The frequency of theft closely follows the amount of construction volume in a particular area. In 2009, the National Crime Information Center (NCIC) received 13,452 theft reports. The five states with the most incidents of heavy-equipment theft were Texas, Florida, North Carolina, Georgia and South Carolina. Together, those five states accounted for 43 percent of total equipment theft. Rounding out the top 10 were Tennessee,

California, Oklahoma, Missouri and Ohio. The top 10 states accounted for 62 percent of all thefts.

Historically, contractors' equipment theft occurrences are divided evenly between organized rings and individual (non-professional) thefts. However, the number and sophistication of professional theft rings concentrating on construction has increased recently. Organized theft rings dismantle the equipment for resale of parts and use the Internet to sell stolen equipment to unsuspecting contractors. Equipment stolen in the U.S. is often exported to Central and South America.

In addition to having a high frequency of theft, the construction industry also experiences very poor equipment recovery rates. In 2008, only 21 percent of heavy equipment stolen was recovered. That compares with a 57.2 percent recovery rate for all other motor vehicles.<sup>1</sup>

## WHY IS THEFT SO COMMON?

To some extent, the high frequency of contractors' equipment theft, and the low recovery rate of stolen equipment, is attributed to conditions that are inherent to the construction industry.

- Construction sites are often in remote, poorly lit areas.
- Security at construction sites is often lacking during construction operations and off-hours.
- Off-road vehicles and equipment don't require titling and registration. Equipment is only identified by product identification numbers, (PIN), not the standard 17-digit vehicle identification (VIN) numbers used for cars and trucks. PIN formats are not standard and their placement is not uniform.
- Many mobile equipment manufacturers use common keying on their equipment – a single key fits both the cab door and the ignition for each model they manufacture.
- Authorized users of equipment aren't always clearly identified.
- Many contractors don't have a good inventory of equipment they own or lease.
- There's a high demand for construction equipment and spare parts, especially when the construction economy is booming.
- Purchases of new equipment often require long lead-time before delivery can be made.
- There's often a delay in theft discovery and reporting (i.e. equipment stolen over the weekend not discovered until Monday morning).
- Lack of pre-purchase checks in the used equipment and spare parts markets.
- Law enforcement has limited resources dedicated to equipment investigations.

All of these factors make the construction industry an attractive theft target. The low recovery rate of stolen equipment means that thefts are successful the majority of the time. Professional theft rings often pay construction employees for information and availability.

## CAN THIEVES BE STOPPED?

### Inventory Control

The first step in effective theft prevention is for contractors to know exactly what equipment they own or lease and where it is at all times. Procedures should be established to maintain an inventory control program which, at a minimum, records the following information on each piece of equipment:

- Equipment manufacturer and model number
- Serial, VIN or PIN number – if none is available, a unique number should be placed on the equipment and recorded
- Date of purchase (information needed in the event of a claim, manufacturers' recall, evaluation of equipment durability and related issues)
- Location of storage and use
- Photograph
- Personnel authorized to operate the equipment

### Mobility vs. Value

Equipment owners should consider the mobility of equipment as well as value to determine where to focus security efforts. Contractors often concentrate only on their highest value equipment neglecting to consider how easily other equipment can be moved. Cranes, for example, are high value items, but are seldom stolen. They are difficult to transport and easy to identify making them hard to resell.

According to the NER 2008 Equipment Theft Report,<sup>2</sup> three types of equipment account for 78 percent of the losses: riding mower/garden tractors, loaders and tractors. Within the loader category, skid steers and backhoes are the predominate target for theft. These types of equipment can be easily transported using a trailer and easily resold since they have few unique characteristics. Other commonly stolen equipment are generators, compressors, welders, pumps and arrow/message boards.

## PREVENTION

No single method or device can eliminate theft. However, there are ways to reduce theft losses:

- Secure the premise/work site
- Secure individual equipment
- Register equipment
- Track equipment

An effective theft prevention program will include more than one approach and be adapted to reflect variations among construction sites. Supervisors should be held accountable for implementing the theft prevention program and job site inspections should be made to verify its effectiveness.

**Secure the Premise/Work Site:** Securing the entire construction work site is a common theft prevention practice used by general contractors. It can be very effective for smaller, well-defined sites, but cost prohibitive for larger, more spread out work sites. Securing the entire premise usually involves one or more of the following:

- Perimeter fencing
- Controlled access points (as few as possible)
- Police patrol or private guard service, particularly during off-hours
- “No Trespassing” signs posted along the perimeter
- Proper illumination throughout the site
- Closed Circuit Television (CCTV)



**Secure Individual Equipment:** This is often the preferred method of theft prevention when the contractor doesn't control the entire site, when the site is large or spread out, or when equipment must be left where it was last used at the end of the day. Many contractors leave equipment on-site each night to avoid the labor and fuel expenses associated with returning equipment to a central location. Securing individual equipment usually involves one or more of the following:

- Lock and key controls specific for each piece of equipment with a written key control program (i.e. use of a sign-out sheet)
- “High security” locks (unique key, pick resistant, case hardened or laminated steel)
- Prohibit the use of combination locks
- Locks, chains and/or cables to secure equipment fitted with towing hitches or are trailer mounted; alternatively, remove the towing hitches or trailer wheels
- Locking fuel caps on all mobile equipment
- Metal grating over windows and doors of office trailers
- Immobilize office and storage trailers to prevent theft of the entire trailer
- Locked gang boxes to secure smaller power and hand tools
- Mechanical tire locking devices (i.e. wheel boot device) to immobilize construction vehicles
- Alarm systems that disable the equipment and/or sound an alarm if a theft attempt is made

**Register Equipment:** NER<sup>2</sup> offers a voluntary registry service that consists of entering a machine's serial number, engine number, transmission number and other selected identification numbers into a database that's available to law enforcement. All registered vehicles are marked with NER decals, which acts as a theft deterrent and increases the likelihood of detection while a thief is moving, storing or selling the equipment.

**Track Equipment:** There are different types of tracking systems on the market. Some are designed to recover stolen construction vehicles and equipment after a theft. When the owner discovers the equipment missing and calls law enforcement to report the theft, the systems are automatically activated.

Others, such as GPS (global positioning system) fleet management systems have the ability to continuously monitor and track construction equipment. Most GPS systems have a “geofence” capability that generates an alert if a vehicle leaves a permitted area or enters a prohibited area. In addition, many systems can define a secure period (i.e. off-hours) and generate an alert if a vehicle moves or is moved during that period. Another capability of a GPS-based system is the use of software to electronically lockdown or disable vehicles so they cannot be moved. With this system, a contractor can remotely disable or enable equipment ignition, monitor vehicle condition, and generate an alarm if the equipment moves outside of predetermined boundaries.

## TRAINING

Effective theft prevention requires both management commitment and operator involvement. Management should establish written procedures for the shut-down, security and storage of construction equipment. Written guidelines should be established on securing equipment during overnight stays or whenever operators are permitted to take equipment home. Superintendents and foremen should be held accountable for administering the company's theft prevention program.

Equipment operators should be involved throughout the process and be trained in the following:

- Secure vehicles and other equipment when leaving it, even for short periods of time
- Park vehicles in well lit, high traffic areas whenever possible
- The company's inventory control program
- Use and maintenance of established theft prevention controls

This training should be included in the orientation program and reinforced during regularly scheduled training sessions. In addition, equipment operators should be consulted to provide input on possible theft control measures for the equipment they use.

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<sup>1</sup> FBI's Uniform Crime Report: [fbi.gov/about-us/cjis/ucr](http://fbi.gov/about-us/cjis/ucr)  
<sup>2</sup> [nerusa.com/index.asp](http://nerusa.com/index.asp)

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