

Industry Moves to Stem the *Theft Tide*

Insurance companies and machine-tracking vendors offer contractors incentives to stop thieves

For years the National Insurance Crime Bureau (a non-profit group dedicated to combating insurance fraud and vehicle theft — www.nicb.org) estimated that \$1 billion worth of construction equipment and tools are stolen each year. But it seemed nobody felt the pinch acutely enough to take decisive action against equipment thieves.

Equipment owners had grown accustomed to the cost of theft. Indeed, *Construction Equipment* readers were so inured that they valued theft losses not much greater than the deductible costs on insurance claims, according to research conducted by the magazine.

It's really no surprise that equipment theft is a problem.

Construction equipment is valuable. Skid-steer loaders — the most mobile construction machines and probably the most commonly stolen — can sell for more than \$50,000.

There's low risk of being caught. The recovery rate for stolen cars is better than 60 percent, but less than 10 percent of stolen construction equipment is recovered.

Equipment is easy to steal. There is very poor security on work sites and machines. Sites are often large spaces in remote areas, or private property (few witnesses). Machine ignition switches don't require unique keys to start.

Equipment is easy to sell. Ownership records of precious few used machines are

checked before sales. With the risk of being caught so low, many people who would normally not be prospects for buying hot iron are enticed, eager to gain bidding advantages.

■ **Fifth Time Stolen Yields Arrest**

Monday morning a construction crew arrived at a work site on I-10 in West Chambers County, Texas, to find that numerous construction tools, generators, and equipment had been stolen, including a 2001 Miller Bobcat welder. The foreman, knowing the welder is LoJack equipped, immediately called the Chambers County Sheriff Department and filed a theft report. The Deputy completed the theft report and entered the welder's product identification number (PIN) in the state and national crime computer. This activated the LoJack device hidden on the welder and it began to transmit a radio signal. Fifteen minutes later, a Texas State Trooper picked up the signal on his LoJack police tracking computer.

After obtaining a complete description of the welder and calling for backup, the signal led officers to a private residence where it appeared to come from



the garage. Officers approached the owner of the residence and questioned him. The suspect stated: "Come on in, I'm sure what I purchased this weekend is stolen." The suspect then opened the garage and showed officers the welder and several other items he had purchased. Officers called the district attorney's office and were advised to file any and all charges related to the theft. Recovered property was identified as that stolen in the burglary of the I-10 site. It is the fifth time this welder has been stolen and recovered with LoJack. (www.lojack.com)

Security-device vendors started to show interest in construction equipment markets during the boom of the late 1990s. Presented with working solutions to the easy theft of construction equipment, insurers supported some of them in an effort to reduce payouts from theft losses.

For example, when stolen-vehicle-recovery firm, LoJack, made its first forays into the construction-equipment industry early in the decade, St. Paul Travelers insurance bought 5,000 LoJack devices. They seeded the fleets of high-risk policy holders with the tracking devices. (LoJack's radio network is currently operating in 26 states and the District of Columbia, as well as in 27 countries throughout Europe, Africa, Latin America and Asia.)

"They're not doing that any more, but they're seeing their original investment returned four to five times because those 5,000 LoJack units keep recovering pieces they're mounted on," says Kathy Kelleher, national manager of LoJack's Commercial division. "And those St. Paul customers are continuing to buy LoJack, adding them to more of their fleets."

Still, the insurance industry seemed to lack the collective will to mount widespread efforts to resist thieves. It seems the pain of paying for equipment theft was diffused too broadly, and

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its severity was too poorly measured for anyone to take on such an intractable problem.

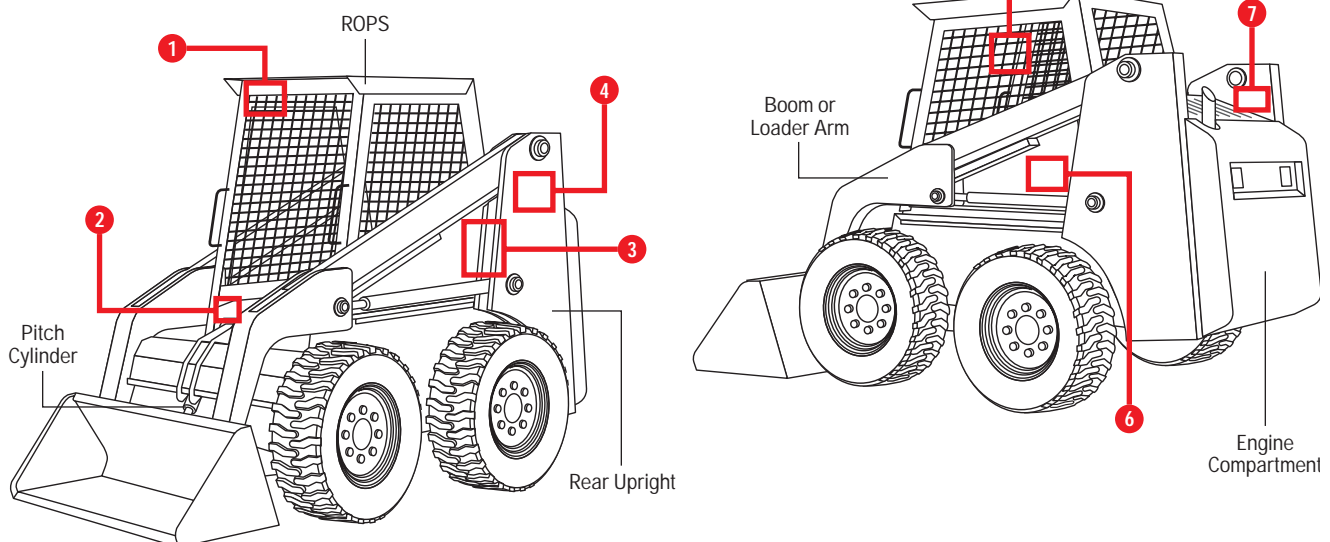
A comparison with car theft illustrates the severity of the challenge in fighting construction-equipment theft. Because current-model cars are so universally insured and/or owned and driven by individuals, most car thefts are reported to the police immediately. Self-insured contractors may not report some machine thefts, particularly those that are not discovered until after the thieves' trails have grown cold. Chances of recovering the machine are too slim to invest man hours filing a report and assisting the investigation.

Auto registration is regulated, and all auto makers supply a standard 17-character vehicle identification number (VIN). The VIN is placed on all cars in a standard location on the dashboard where police officers can easily find it. Ownership of construction equipment is not regulated. Manufacturers can assign machines any product identification number (PIN) they want and place it anywhere on the machine that they want.

The primary advantage of the auto industry's consistent VIN format is that computerized reporting systems for law enforcement and insurance companies can be built to instantly notify the person reporting a theft that they've entered an improper number. Equipment manufacturers agreed to a standard prescribing a 17-character PIN, but compliance is voluntary and not very consistent. As a result, the construction industry lacks accurate reporting of its theft problem.

As construction accelerated into the new millennium, the insurance industry's imperfect statistics took such a turn that insurers started to squirm. Construction theft reports to insurance companies have increased 10 to 20 percent each year since 1996, according to the Insurance Service Office (ISO). And this leading source of all kinds of information about risk (www.iso.com) says theft is the most frequent type of construction-equipment loss by a huge margin over risks such as vandalism, fire and collision. It is the most expensive loss by a smaller margin.

A Skid-Steer's Seven PIN Spots



Source: NER

Precious few police officers are construction-equipment specialists, and multiple locations on machines for product identification number (PIN) plates makes investigating machines in suspicious situations particularly challenging. PINs can be found in at least seven different positions on skid-steers, for example. Inviting police officers to your equipment yard or project site to learn about PIN plates can pay off handsomely if your machines are ever stolen.

Source: NER

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■ **Stolen Backhoe Stopped at Border**

An inspector with United States Customs & Border Protection in Laredo, Texas, was suspicious of the export documentation being submitted for a Case 580 Super L being taken into Mexico. The machine's product-identification number yielded no matches on police computers so the inspector contacted NER for additional information before letting the backhoe cross the border.

NER searched internal databases and found an ownership record for the backhoe. The owner was contacted and confirmed that the backhoe was his, but he said there was no reason it would be headed into Mexico. The owner then checked his yard and confirmed that the backhoe was missing. The unit was seized and returned to the owner. (www.nerusa.com)

David Shillingford and a cadre of experts in law enforcement recognized that lack of proper information is one of the key reasons for proliferating equipment theft. They founded the National Equipment Register (NER), a business dedicated to improving theft data and using it to catch heavy-equipment thieves. Insurers recognized the need for somebody to focus on the issue, and more than 350 of them

now support NER's national databases of equipment ownership records and theft reports. NER specialists coordinate the efforts of equipment owners, insurers and law officers.

NER sells equipment owners what they call the HELPtech service (Heavy Equipment Loss Prevention Technology), which provides secure online equipment registration using correct PINs and complete identification. As a deterrent, NER provides HELPtech decals to post on registered machines that warn

thieves of the increased likelihood of their being stopped and arrested.

Insurance-company members fill another NER database with their records of equipment thefts based on policyholders' reports. Law-enforcement officers can search both NER databases 24 hours a day to find out if equipment discovered in suspicious circumstances has been reported stolen.

More than 175 fleets have registered their fleet inventories with NER, including six of the 10 largest rental firms in the United States. They've supplied more than 13,420,000 ownership records. Member insurers have supplied 77,500 theft reports.

Law officers can contact NER to get help when they encounter a suspicious piece of equipment. If they can find the PIN, NER will help them run it against their databases to see if it has been reported stolen. If they can't identify the machine, NER specialists can guide them to PIN plates and other locations where product numbers might be stamped on the machine.

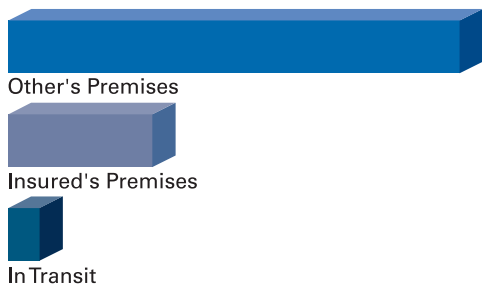
More than 4,000 officers are registered to use NER databases. They've called on NER assistance with more than 5,000 investigations. NER has been involved in 464 equipment recoveries with a total value of \$7,462,507.

The number of investigations NER touches has been increasing by 50 percent per year, and Shillingford expects that growth rate to continue.

The insurance industry is also paying NER to educate law officers about equipment identification and recovery. Last year NER distributed 95,855 equipment-identification guides. The pocket guides describe various PIN formats and point out where PIN plates can be located on the most-stolen pieces of equipment. NER held 27 classes that trained 1,400 officers on identifying equipment and investigating theft.

"As a result, there are now more officers looking at equipment who either didn't have the time before (we've made it easier to do it in real time), or who aren't specialists but who will now look at suspicious equipment because they can get all the information they need to identify it over the phone from us," says Shillingford.

Theft by Location: 2004

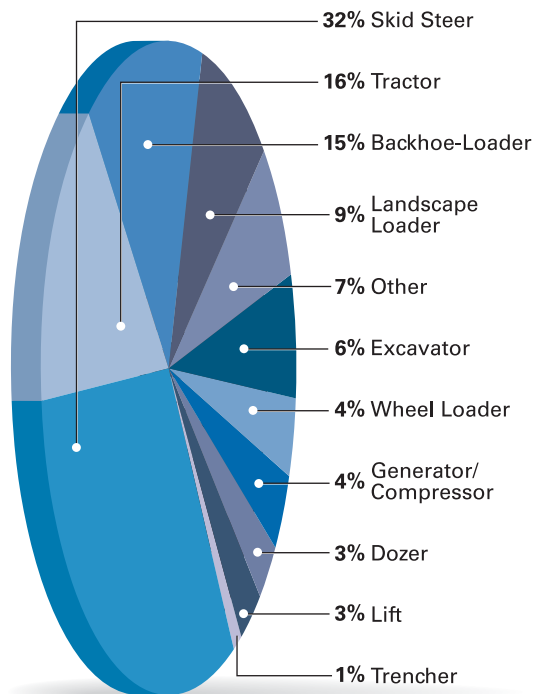


Source: Insurance Services Office, Inland Marine Circular, Contractors Equipment

The percentage of contractors' equipment stolen from others' premises grew 10 points from 2000 to 2004. But work sites are so transitory that it may not be feasible to adequately secure them.

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Theft by Type of Equipment



Source: NER 2005 Heavy Equipment Theft Report

The two keys to determining 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. Dozers and wheel loaders are the most valuable equipment among the 10 most-stolen machines, but skid-steers and backhoe-loaders are easier to transport.

As NER accumulated equipment-theft records from most of the underwriters of inland marine insurance (the type of policy that covers construction equipment), insurers gained a more complete picture of the size of the industry's losses. At the same time, the marketing efforts of telematics providers such as Qualcomm, DPL America, and Longview have been gaining traction among off-road customers.

This coincidence has produced a steady stream of new incentive programs offered by insurance companies over the past year.

Terms can be fairly simple. ARA Insurance Services (the American Rental Association's insurance arm) will pay NER's fees for policy holders to register up to 1,000 pieces of equipment (a \$3,500 value).

Policy holders with the Chubb Group and Fireman's Fund can register 10 pieces of equipment with NER at no cost, and will receive a 20 percent reduction of NER's standard fees on additional machines. Fireman's Fund policy holders get an insurance rate credit of 2 percent. Also, Chubb and Fireman's will waive deductibles up to \$10,000 if registered equipment is stolen and not recovered within 30 days of being reported.

The Hanover is fighting thieves on two fronts. The underwriter will waive \$10,000 of its deductible for NER-registered machines that are stolen if they're not recovered within 60 days. They're also cutting \$100 off insurance costs for each of a policy holder's first 15 vehicles fitted with a LoJack stolen vehicle recovery system, and offering discounted rates for protected machines. The insurer will waive up to \$25,000 in deductibles for LoJack-equipped

machines that are stolen but not recovered.

St. Paul Travelers transitioned from its LoJack giveaway to offering insurance-premium discounts to LoJack customers. They also waive \$10,000 to \$25,000 in deductibles for any LoJack-equipped machine that is stolen and not recovered.

■ GPS Busts New Mexico Theft Ring

Under the protection of night, three thieves crept into a quiet jobsite off US Highway 550. When their target — a John Deere 310SG — didn't start, they suspected a master disconnect switch was the obstacle. They left the jobsite for cables to wire around the disconnect switch, returned and wired across the battery, got the backhoe running and began driving it down the street, with their white GMC truck close behind. Less than a mile from the site, several police cruisers performed a felony stop on the backhoe and truck, catching the thieves red handed. When owner Bill Joiner arrived, the three thieves were handcuffed and lying on the ground.

Joiner has DPL America's Titan system installed on the backhoe-loader. Titan's disabling feature stalled a routine 20-minute theft into an hour and a half effort. During that extended process, a number of silent alarms alerted Joiner employees and the police. Titan's GPS located the machine on a street-level map, making it easy for authorities to intercept the criminals.

Police found a cluster of universal keys for nearly every make of machine as well as burglary tools in the GMC truck. The truck itself was stolen. A scan of the backhoe revealed that the thieves had already painted over all Joiner Construction identifying marks and decals. Fortunately, the leader of this organized crime ring was one of the suspects apprehended. (www.dplamerica.com)

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The Leavitt Group of independent insurance agents offers customers premium reductions of 20 to 50 percent if they use DPL America's Titan system to immobilize equipment and track equipment location.

Qualcomm initiated a unique incentive offer that does not include insurance companies in a move to raise its profile among theft-sensitive customers. The telematics provider will pay NER's fees to register equipment on which it installs GlobalTRACS systems. Qualcomm will actually submit registration information to NER for its customers. (See the accompanying sidebar for more theft-preventing incentives.)

Shillingford predicts a continued flow of insurance companies offering incentives to improve the chances of recovering stolen equipment. He expects three insurers will announce incentives to use NER before year's end. LoJack's Kelleher says her company is working with four insurers to arrange new incentives to use its products.

"There is a driving force affecting real change in how the industry deals with equipment theft," says Shillingford. "And that driving force is the insurance industry."

NER and the wireless-tracking systems apply after the fact — they're aimed at recovering machines after they have been stolen. It's important for raising a thief's risk, but doesn't address construction equipment's virtually nonexistent physical security.

"Equipment manufacturers are going to make the equipment that is going to sell at the best profit margin," Shillingford says. "If security becomes a concern for buyers, they will make equipment that will be harder to steal."

"Critical mass is attained when the first manufacturer says, 'if I can make my machines less likely to be stolen than other machines like it, equipment buyers will prefer my machines,'" he adds. "Then they can put the theft deterrent on the machine at the factory, at little or no cost to the customer."

"We'll probably see this kind of change from a manufacturer sometime toward the end of 2007," Shillingford predicts.

As always, the challenge is to add what some customers want — security, in this case —

without cutting into productivity. Equipment has used universal keys for a long time. For example, one Caterpillar key starts most Cat equipment. Many operators carry sets of universal keys so they can run anything. When a foreman needs work done, there's no time wasted looking for a machine's specific key. The key can protect the machine from use by casual passers by, but a deliberate thief can buy a ring of universal keys on eBay for about \$70 that will start most off-road machines.

Caterpillar's Machine Security System (MSS) disables the starter when somebody attempts to start it using a universal key. Keys embedded with an electronic chip, each with a unique digital identification, fit all existing Cat machines and will start them. But on MSS-equipped machines, the electronic controller checks the key being inserted against its pre-

Companies Paying to Prevent Theft

Insurance companies are beginning to offer incentives in the form of waived deductibles and premium discounts to policy holders if they will take steps to improve law enforcement's chances of recovering stolen equipment. Here are some that can save you money on insurance and theft prevention.

American Resources – www.aric.cc

- 20 percent discount of NER fees
- Waiving \$5,000 of its deductible

AIS – www.ararental.org

- Paying NER fees to register policy holders' equipment
- Registers machines for customers

Chubb Group – www.chubb.com

- Policy holders register 10 machines with NER at no cost, additional units at a 20 percent discount
- Waiving \$10,000 of its deductible

Fireman's Fund – www.the-fund.com

- 20 percent discount of NER fees
- Offering 2 percent rate credit
- Waiving \$10,000 of its deductible

The Hanover – www.hanover.com

- Waiving \$10,000 of its deductible

Leavitt Group – www.leavitt.com

- Policy holders that use DPL America's Titan telematic system get premium reductions of 20 to 50 percent

Rue Insurance – www.rueinsurance.com

- Paying NER fees to register policy holders' equipment
- Registers machines for customers

United States Liability Insurance Group – www.usli.com

- Paying NER fees to register policy holders' equipment
- Registers machines for customers

Qualcomm – www.qualcomm.com

- Paying NER fees to register GlobalTRACS customers' equipment
- Registers machines for customers

Each of the insurers below is discounting premiums for policy holders using LoJack systems (www.lojack.com) on construction equipment, and waiving deductibles if a LoJack-equipped machine is stolen and not recovered:

The Hanover – www.hanover.com

Progressive – www.progressive.com

St. Paul Travelers – www.stpaul.com

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Buying Used: Is It Hot?

Less than 10 percent of stolen equipment is recovered – encouraging thieves with a 90 percent chance of success. Low recovery is due in part to a lack of ownership checks during used-equipment purchases. Here are some places you can go, in addition to local equipment dealers, with a machine's product identification number (PIN) to find out if it has been reported stolen.

National Equipment Register (NER)
(866) NER-TIPS

CatUsed.com
<http://catused.cat.com/en/Equipment/Missing.aspx?ViewAll=all>

Bobcat
(701) 678-6165

Ontario Sewer and Water-main Construction Assoc.
<http://www.stolen-heavyequipment.com/>

approved list of authorized keys. If the key is on the list, the machine will start. MSS is available as a factory-installed option or retrofit for most small and medium Cat equipment with 12- or 24-volt electrical systems.

Bobcat offers a system that requires operators to enter a password using the keypad on the machine monitor. Similar systems from other excavator manufacturers lock out the ignition circuit until the operator is able to punch a registered password into the monitor's keypad. The Bobcat option allows managers to store up to 10 passwords, any of which will allow the user to start the machine.

■ GPS Sees Where People Can't

Two days after a Chicago-area contractor took delivery of a \$42,000 skid-steer loader, it was stolen from his jobsite. The skid-steer carried a Qualcomm GlobalTRACS unit that tracked it using global positioning system (GPS) satellites to a local forest preserve. The police officer on the case walked through the heavily wooded park but couldn't find the loader. He went into a nearby sporting goods store and bought a GPS receiver like the one hikers use. The officer called Qualcomm to get the GlobalTRACS unit's exact latitude and longitude, then walked to those coordinates. There he discovered that the thieves had used the skid-steer loader to dig a large hole, drove the machine into it and camouflaged it with tree branches. (www.qualcomm.com)

Only Komatsu and Pettibone have stepped up to install security devices as standard equipment. Both rely on telematics. Most OEMs feel the need to offer a telematic solution for tracking mobile assets using GPS and wireless communication, not only for its ability to help recover stolen equipment, but also for its fleet management benefits. Caterpillar has its Product Link, and Deere recently signed a deal with Qualcomm to brand a derivative of GlobalTRACS as JD Link. Bobcat is greasing the skids for putting Qualcomm boxes in its equipment

by offering factory wiring and installation.

Komatsu announced early this year that it would equip all new construction machines that get Tier 3 engines with its proprietary Komtrax system. The units will come with five years of free communication services. Pettibone has designated Qualcomm's GlobalTRACS as standard equipment on its telehandlers.

As various efforts to resist construction-equipment theft coalesce, more equipment owners will inevitably be called upon to contribute. An underestimated, free theft deterrent is checking the ownership of used machines before buying. It is seldom done today, largely because there is no universal database where a PIN number can be checked against theft records. Many manufacturers post lists of stolen machines on their secure dealer intranets, though. NER databases are more broad-based, but they're not currently available to the public.

"It's our intent to keep this information out of the hands of thieves," says Shillingford. "We don't want to make it any easier on them to get top dollar for stolen equipment.

"But NER is testing a service that will allow an equipment owner to check ownership of a machine through one of our analysts."

You can threaten thieves' remaining defenses by making equipment harder to steal. Controlling access to machines with systems such as Cat's MSS, or aftermarket products from companies such as Keytroller (www.keytroller.com) keep universal keys from holding the door open for thieves. Unique locks from companies such as The Equipment Lock Co. (www.equipmentlock.com) can disable machines and prevent them even from being winched onto a trailer.

Most contractors in the highest-risk areas are already working to secure their equipment on work sites, but the strategies need to be repeated in more locations. Simply bringing machines together in a highly visible location at the end of each day, and parking larger pieces in a circle, blocking in generators, compressors, skid-steers and other high-theft items can be effective. All elements of the construction industry working together — insurers, OEMs and equipment owners — can make equipment theft a less-attractive career choice. 