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STRATEGIC ANALYSIS REPORT

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National Insurance Crime Bureau

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Heavy Equipment Theft

(Construction & Agricultural Equipment)



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Heavy Equipment Theft

Heavy equipment theft is a significant criminal trend affecting National Insurance Crime Bureau (NICB) members with increasing frequency. Nationally, heavy equipment theft is a \$1 billion a year problem. Hundreds of pieces of construction equipment are stolen in the United States every week. In 2005, NICB was involved in heavy equipment recoveries with an estimated value of over \$5 million.

Heavy equipment can be defined as engineering vehicles specially designed for executing engineering tasks, and are primarily off-road commercial equipment not designed for highway use. Common heavy equipment applications include construction, agriculture, highway maintenance, forestry, earthworks, excavations, and mining.

The majority of heavy equipment is construction and agriculture equipment which can commonly be identified based on the manufacturers' applied colors. Construction equipment is usually orange and yellow. Agriculture equipment, commonly referred to as implements of husbandry, are usually identified by the colors green, red, and blue. However, it should be noted that there are exceptions to the rule, in which a heavy equipment manufacturer can manufacture agriculture equipment and paint it orange or yellow.

Statistics from the Insurance Services Office (ISO) show that equipment theft reports to insurance companies have increased 10 to 20 percent each year since 1996, and over half of all insurance claims involving heavy equipment are thefts. In 2001, approximately 5,500 heavy equipment thefts were reported to the National Crime Information Center (NCIC). By 2005, approximately 17,638 heavy equipment thefts were reported to the NCIC; however, the recovery rate in 2005 was low, as only 4,183 or 24 percent were recovered.

Heavy equipment theft continues to be a local issue. In most states, the stolen equipment is recovered in the same general area. Stolen heavy equipment generally stays intact after the theft; however, some equipment is dismantled at makeshift chop shops for parts. The increased theft problem has caused NICB Special Agents, analysts, Special Investigation Unit professionals, claims representatives, and law enforcement officials to focus more of their attention on heavy equipment theft. The crime's growth can generally be attributed to one simple fact; heavy equipment theft is a relatively easy crime to commit, especially by organized rings of professional thieves enticed by the allure of huge profits. For example, the national average value of a used piece of construction equipment is \$135,000.

Heavy equipment thefts occur most often between five p.m. Friday and eight a.m. Monday, when many sites are left unprotected. There is a high incidence of theft during the months of May through August when more construction projects are in progress. It is estimated that 90 percent of the thefts occur at job sites. Rates of heavy equipment theft and recovery are highest in Texas, California, and Florida, where a rapid growth rate is fueling many construction projects. Hurricanes have a large effect on heavy equipment theft and insurance fraud due to the magnitude of the rebuilding efforts that take place.

This paper, prepared by the NICB Strategic and Tactical Information Department with assistance from NICB investigative and information experts, was created exclusively for NICB members to identify and focus members on the scope of the heavy equipment theft problem. The following paper analyzes key criminal motives for heavy equipment thefts, discusses several identification issues, describes common fraud schemes affecting NICB members, and offers suggestions on how member companies can identify and prevent potential heavy equipment theft.

Criminal Motives

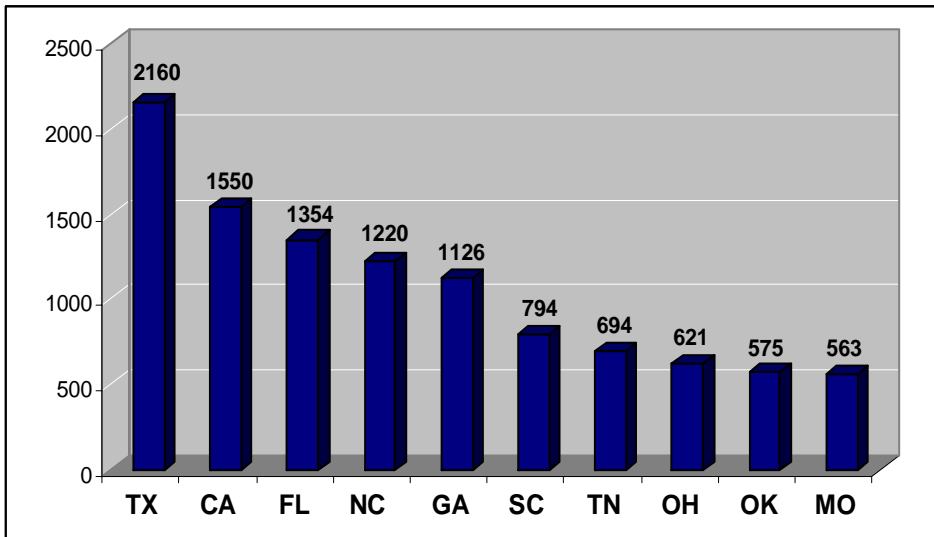
The reward for thieves far outweighs the risk taken. Heavy equipment has a relatively high resale value, making it attractive to criminals who are involved in other types of theft. Heavy equipment seldom has anti-theft devices or adequate jobsite security. Heavy equipment has easy mobility on trailers, are often open cab machines in which a single key may work on a number of pieces of equipment, and can be sold quickly for profit. The chance of the heavy equipment ever being stopped for inspection by law enforcement is minimal. The low recovery rate, less than 25 percent, is a clear indication of the low risk for a thief. Heavy equipment is often recovered without an arrest, as the thief may be difficult to apprehend after the equipment is sold. In the event an arrest is made, the penalty can be as light as a monetary fine.

Heavy equipment theft is driven by supply and demand, and construction equipment is in high demand making this a lucrative business opportunity for thieves. As previously indicated, the national average value of a used piece of construction equipment is \$135,000. For example, if company "X" insures heavy equipment and 10 pieces are reported stolen in a given year, the payout is \$1,350,000 (10 pieces x \$135,000 cost). Remember the recovery rate in 2005 was less than 25 percent, so even if 25 percent is recovered, the loss by company "X" is still \$1,012,500.

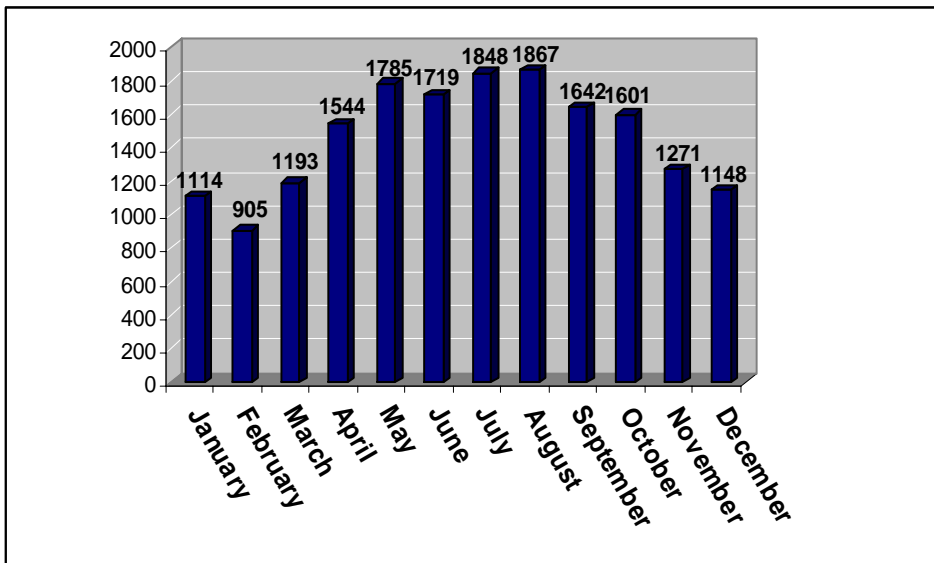
Thieves, from petty criminals to organized rings of professionals, appear to be reselling the equipment to unsuspecting contractors or chopping the equipment into pieces for resale as parts. Reports indicate heavy equipment may be exchanged for drugs or other stolen items, and is sometimes transported to Mexico, South America, or exported overseas.

However, for the most part, construction theft continues to be a local issue. In most cases, when stolen equipment is recovered, it is in the same general area from which it was stolen. It is either recovered from storage or in use on a local jobsite. Unlike auto theft, which has a higher incidence in major cities around the country, construction theft is not confined to city streets and urban areas. Suburban regions where growth is prevalent and where construction vehicles are at work on active jobsites are high-risk areas. Most equipment is taken from construction sites or depots, and company parking areas, but 15 percent of the equipment is reported stolen from the roadside. Once stolen, the heavy equipment is often left in a remote location for a “cooling off” period, or concealed in a garage or warehouse environment.

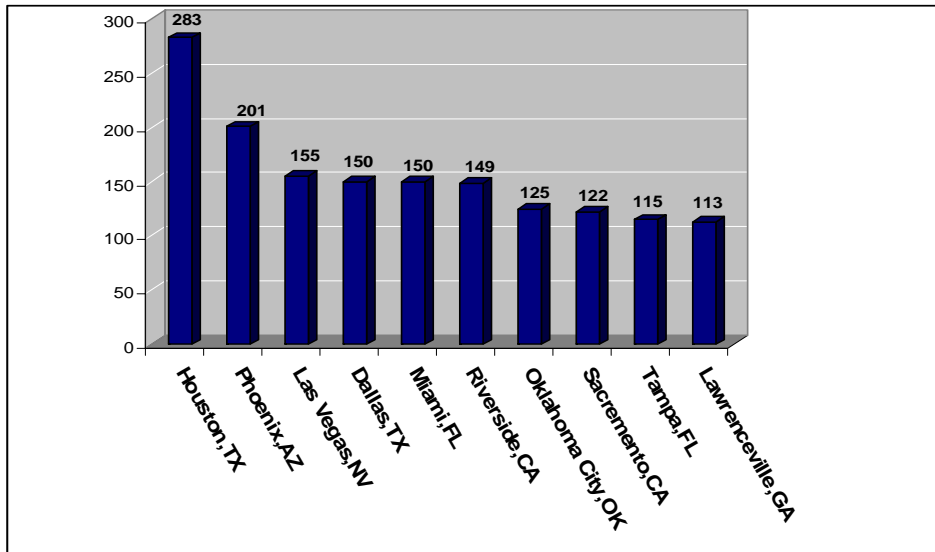
Top 10 Heavy Equipment Theft States – NCIC 2005



Heavy Equipment Thefts Per Month – NCIC 2005



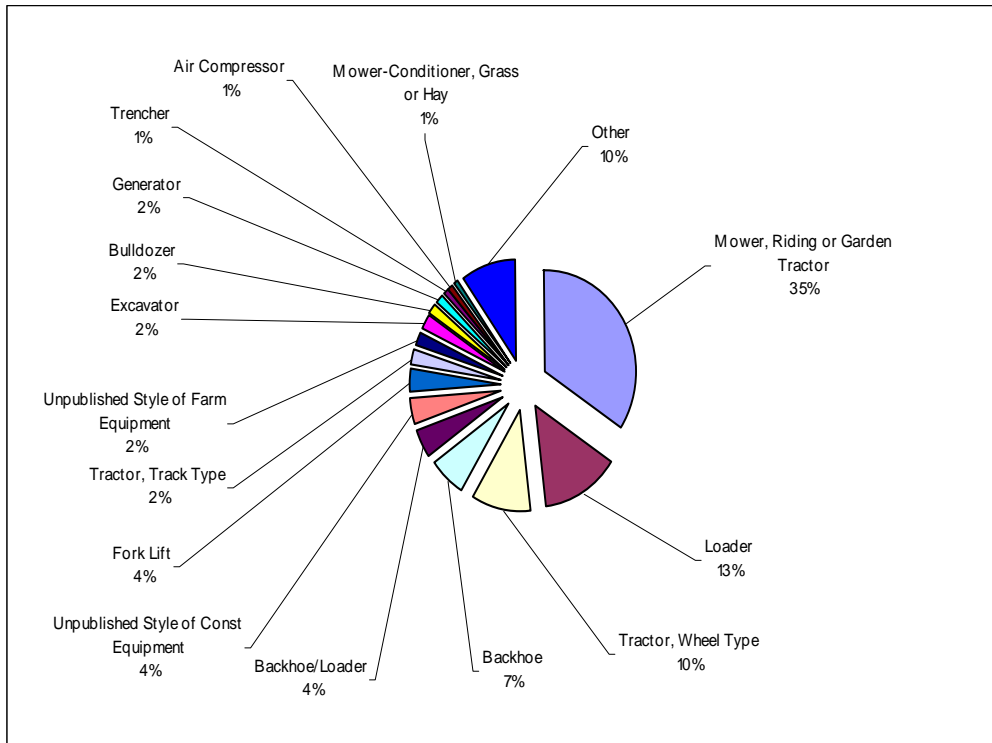
Top 10 Heavy Equipment Theft Cities – NCIC 2005



According to NCIC statistics in 2005, the most commonly reported stolen heavy equipment was the mower, riding, or garden tractor. NCIC categorizes the mower, riding, or garden tractor as farm equipment, although residential and commercial mowers are not always differentiated by the reporter. The second most frequently reported stolen pieces of heavy equipment was the skid steer loader, a versatile piece of equipment that can perform earth-moving, hauling, and other functions. The loader, which costs approximately \$40,000 new, is small enough to be loaded onto a trailer and towed behind a vehicle.

Other commonly reported stolen heavy equipment includes tractors, backhoes, backhoe loaders, crawlers, forklifts, air compressors, excavators, trenchers, and generators. According to police reports, quite a few thefts were perpetrated by workers within the industry which may include people familiar with their employer's security practices, or lack thereof. The high incidence of heavy equipment theft is primarily because the equipment is versatile, multi-functional, and easily transported by trailers.

Top 15 Commonly Stolen Heavy Equipment – NCIC 2005



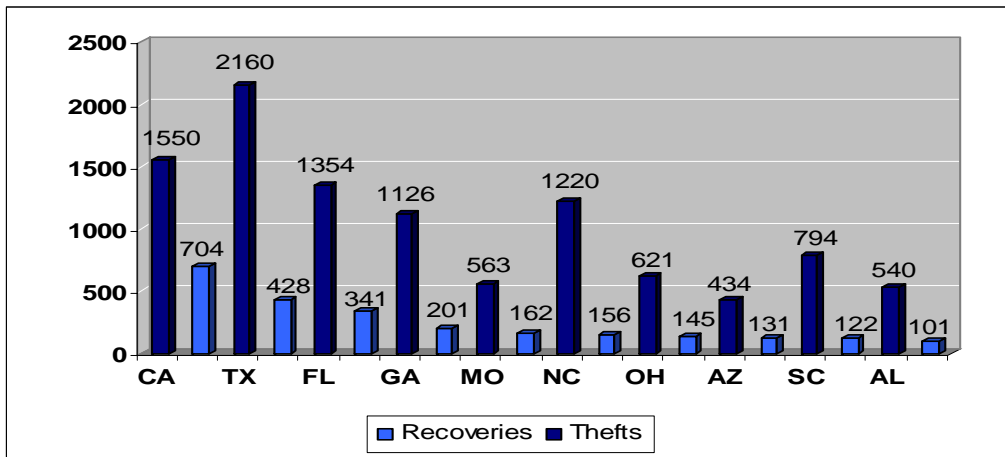
At prices that often reach six figures, backhoes, earthmovers and other big-ticket construction equipment are highly sought after on the black market. Newer models are stolen more often than older models, as the resale value of new equipment is greatest. For example, of the 17,638 NCIC heavy equipment thefts reported in 2005, 12,117 or 69 percent were manufactured from 2000 to 2006.

The theft of heavy equipment causes huge financial losses. Besides the monetary losses resulting from theft, associated indirect costs should also be considered. Costly job delays, downtime for operators, higher insurance premiums, and the possible cancellation of an insurance policy, with the accompanying risk of jeopardizing bonding and borrowing power, make jobsite security practices crucial for commercial construction firms. Because of this, theft can be a major cost component of a construction project. The cost of stolen jobsite equipment is a lot more than the actual replacement value, even if it was covered by insurance.

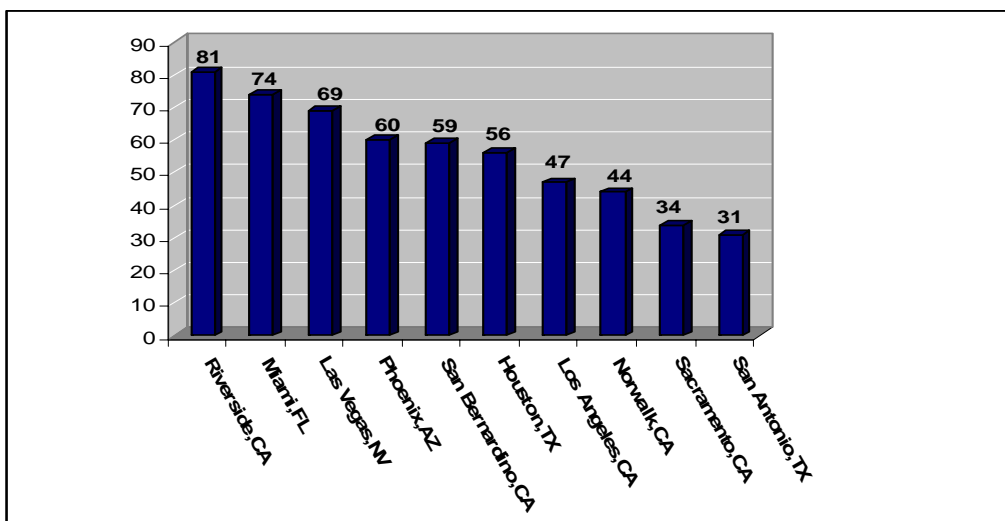
Contractors that have been victims of heavy equipment theft have become very creative in foiling theft attempts. Hidden fuel shutoffs, removal of a fuse or circuit breaker, use of steering locks, locking hydraulic cylinders in a down position, special parking procedures, global positioning satellite tracking devices, and other ideas have emerged.

Despite the theft-prevention systems and immobilizing equipment now on the market, hundreds of pieces of heavy equipment continue to be stolen in the United States each week. The low recovery rate is a result of heavy equipment identification issues. Product Identification Numbers (PIN) and Serial Numbers (SN) are not registered in a national database, and many companies do not leave marks identifying ownership of their machines. However, some owners are beginning to imprint a driver's license number on the equipment, which can be traced by law enforcement. In one proactive effort, the Texas Recovery and Identification Program (T.R.I.P.) has designed for owners of both commercial and agricultural grade equipment the ability to enter specific information regarding their heavy equipment into a database that will be utilized by law enforcement personnel in tracking stolen equipment.

Top 10 Heavy Equipment Recovery States – NCIC 2005



Top 10 Heavy Equipment Recovery Cities – NCIC 2005



Identification Issues

Heavy equipment is often sold without any documentation as long as the sale is agreeable between two people, and can be as simple as a handshake agreement. The items can be sold to private individuals, taken across the border, or may be sold on consignment at an auction. In the used heavy equipment market, stolen equipment can be sold without detection. Since construction equipment does not have to be titled or registered in most states, proving that a piece of equipment being sold has been stolen is difficult. However, in some states heavy equipment may be required to be registered, if primarily driven on the street or roadway in which it is owned by a city or state and is used for repairs in that city. For example, in California, a municipality that owns a piece of heavy equipment will apply to the Motor Vehicle Department (MVD) for registration, and is issued a registration card and a license plate for that specific piece of heavy equipment.

The amount of expertise needed to identify heavy equipment increases with different types of equipment and the degree of concealment by the thief. PIN and SN plates on heavy equipment (in the event they have been stamped by the manufacturer) can range from four to seventeen digits and often lack uniformity in placement. PIN and SN placement is decided by each manufacturer, and is usually driven by the shape of equipment and production technique. To exacerbate the identification problem, the lack of documentation of heavy equipment, as well as limited training, has led to problems with data quality within the NCIC. Without the year, make, and model of the equipment, law enforcement often enters the loss into the NCIC database as a "COEQ" which is a generic code representing any piece of equipment. It also may be the case that the necessary information for a piece of heavy equipment will be reported incorrectly into ISO, further limiting possible identification and recovery. In 2005, NICB Special Agents working with law enforcement identified and recovered 218 pieces of heavy equipment that were reported incorrectly or not reported at all in the ISO ClaimSearch. The identified value for these 218 heavy equipment recoveries by NICB was \$ 4,809,412.

The time lapse from theft to theft discovery creates a window of opportunity for heavy equipment theft and limits law enforcement investigations. For example, heavy equipment stolen on a Friday may not be identified as stolen until Monday. Typically, the longer a piece of heavy equipment is missing, the greater the likelihood it will not be found. Jobsites can be left unattended for weeks at a time, and theft investigations can be hampered by property trespassing legalities.

Agricultural equipment faces many of the same problems as other heavy equipment. According to the American Farm Bureau, states do not require agricultural equipment to be licensed; however, some states do require that the equipment be titled. The definition of agricultural equipment varies from state to state. Some states define anything used to produce or transport agricultural products as agricultural equipment, including the farmer's pickup.

As increased global competition heats up, so does the farmer's need to buy bigger and more expensive heavy equipment just to stay competitive. A tractor can cost more than \$100,000 and is often sold without any paperwork. This makes the tracking of stolen agricultural equipment very difficult. Without a transferred title, it is hard to prove the rightful owner.

Heavy Equipment Fraud Schemes

- The PIN switch scheme occurs when the original PIN plate is removed and a different number is stamped in its place. The PIN can be ground off and replaced with a bogus one, or the PIN may be retagged from a salvaged piece of equipment. The initial dollar investment for this operation is very negligible; a warehouse, a metal-stamping machine, metal plates, a book listing PINs for various types of heavy equipment, and a case of spray paint may be all that is required. As an interesting side note regarding alteration, thieves will simply paint over a piece of construction equipment red, green, or blue, to obscure its identity. Many law enforcement officers are unaware of the different types of heavy equipment and may go by the established color.
- There have also been instances of heavy equipment cloning. Thieves will copy a PIN and SN from a legally owned piece of heavy equipment sitting on a jobsite or dealership. The legitimate PIN and SN is then used to create a counterfeit PIN and SN plates. Thereafter, thieves steal a similar piece of heavy equipment as the legally-owned one from the jobsite or dealership, and replace the stolen heavy equipment's PIN and SN plates with the counterfeit ones. Bearing counterfeit PIN and SN plates, the stolen vehicle is now a "clone" of the legitimate one and can then be sold for huge profits.
- Another scheme involves the selling of non-existent equipment. Unscrupulous people will attempt to sell heavy equipment which does not exist, or they do not possess. The people will create fraudulent documentation about the piece of heavy equipment. For example, a dealer of used heavy equipment is approached by a person, pretending to be a heavy equipment owner, wanting to sell the dealer two heavy-duty cranes. The dealer agrees to the contract without first inspecting the heavy equipment. The pretending heavy equipment owner obtains fraudulent documentation of the heavy-duty cranes. The dealer then meets with the pretending owner at which time he gives him the money, receives the pretending owner's fraudulent documentation and bill of sale, and learns the location of the heavy equipment. When the dealer arrives at the given location, the heavy-duty cranes are not there. The person who sold the pretend equipment has disappeared, and all of the information on the bill of sale is false and the dealer has no way of finding the perpetrator.

- A rental scheme occurs when individuals rent heavy equipment with no intention of returning it. The rental agreement will be for a few days and will be paid for in cash or with a fraudulent credit card. When the rental company goes to the site to pickup the equipment, the site will be vacant. This equipment is often dismantled and sold as separate parts, or exported to other countries for profitable gains.
- The owner give-up scheme involves the purchasing of used heavy equipment which is then fraudulently reported stolen. A bogus theft report and false insurance claim are filed in which the heavy equipment may actually have been sold or hidden. The individual then collects the money from the insurance company. The heavy equipment reported stolen is often still in their possession.

RECOMMENDATIONS

Experts say heavy equipment theft will never be totally eradicated, but documentation, identification, proper reporting, as well as greater site security will improve tracking heavy equipment and will help put a stop to the yearly rising figures. Awareness, education, and training are key components of an overall fraud prevention plan which, if implemented, would yield immediate economic benefits to member companies. NICB urges member companies to consider the following steps:

1. Training – Request the NICB conduct training with member companies and law enforcement on PIN and SN identification and examination regarding heavy equipment.
2. Brochures - Request the NICB provide heavy equipment awareness brochures for distribution to policyholders.
3. Reporting Thefts - Report all thefts to the ISO ClaimSearch so that in the event that the heavy equipment is reported to law enforcement and entered into NCIC and subsequently recovered, you will be promptly notified of the recovery. This will also assist NICB Agents in identifying the insurance company that suffered the loss in recoveries that NICB is involved in.
4. Suspicious Thefts - If the theft is suspicious, refer a questionable claim to the NICB through the NICB Questionable Claim Submission process in order to expedite notification and recovery.
5. Pre-Inspections - Prior to insuring, pre-inspect and photograph the heavy equipment and scrutinize the PIN, SN plates, engine component parts, and bill of sale for any discrepancies.
6. Research Equipment - Research the equipment utilizing a local heavy equipment dealer to see if the equipment was recently serviced in order to confirm the owner, or document the circumstances surrounding the insured's purchase of the equipment.
7. Identification Numbers - Encourage insured owners to apply owner applied numbers, to weld or stamp the PIN, SN, driver's license, or logo decals on parts of the heavy equipment. Also, encourage insured owners to record the PIN and SN in a separate and safe place for future identification.
8. Security - Recommend the increased use of site security, key controls, locks, GPS tracking devices and other anti-theft prevention tools.
9. Communication - Finally, greater communication among NICB Special Agents, member companies, and law enforcement agencies can play a key role in reducing the proliferation of heavy equipment theft. There are many communication resources available to member companies, including the NICB Questionable Claims Submissions, ISO ClaimSearch, and the *ForeWARNsm Alerts* issued by the NICB.

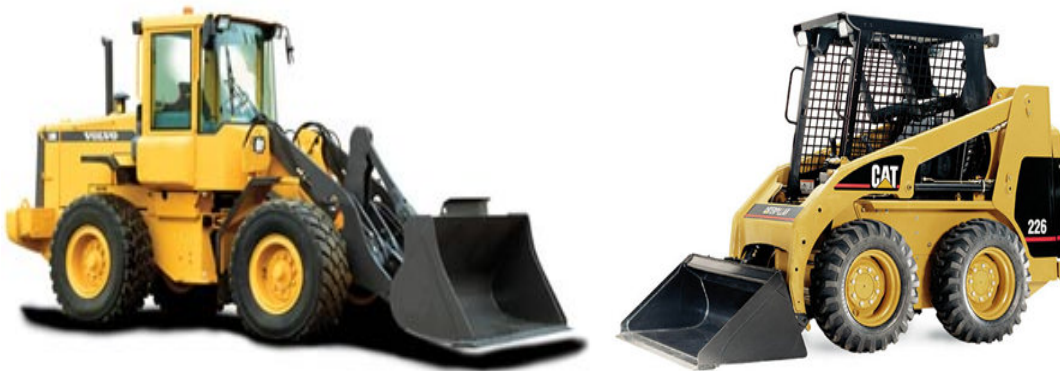
Top 15 Commonly Stolen Heavy Equipment - Identification Guide

1. Mower, Riding or Garden Tractors



2. Loaders

(Skid Steer)



3. Tractors, Wheel Type



4. Backhoes



5. Backhoe/Loaders



6. Unpublished Style of Construction Equipment

7. Fork Lifts



8. Tractors, Track Type



9. Unpublished Style of Farm Equipment

10. Excavators



11. Bulldozers



12. Generators



13. Trenchers



14. Air Compressors



15. Mower-Conditioners, Grass or Hay

