



**American Association of
Motor Vehicle Administrators**

DATA ANALYSIS FOR FRAUD AND THEFT

BEST PRACTICE

**A Product of the
National Motor Vehicle Title Information System**

DRAFT

April 2004

This document was produced by the American Association of Motor Vehicle Administrators (AAMVA).

No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or information storage or retrieval systems, for any purpose other than the intended use by AAMVA, without the express written permission of AAMVA.

2004 American Association of Motor Vehicle Administrators. All rights reserved.

This project was supported by Grant No. 1999-DD-BX-0044, which was awarded by the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice (USDOJ). The Bureau of Justice Assistance is a component of the Office of Justice Programs, which also includes the Bureau of Justice Statistics, National Institute of Justice, Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime. Points of view or opinion in this document are those of the author and do not represent the official position or policies of USDOJ.

Document Ref:

Process Implementation Chart: DSMS# AMV525

L:\AAMVAnet\Vehicle Systems\NMVTIS (NEW)\Law Enforcement Pilot\Working\DAFT Process
DAFT Process 200405v1.doc

Data Analysis for Fraud and Theft Process

1	INTRODUCTION	1
2	DEFINITIONS.....	3
3	VEHICLE THEFT AND TITLE FRAUD	6
4	DAFT PROCESS OVERVIEW	10
5	DATA AND ANALYSIS.....	11
5.1	NICB DATA.....	11
5.2	NMVTIS DATA.....	12
5.3	ANALYZING THE DATA.....	13
6	STATE EXTRACT FILE	14
6.1	EXTRACT FILE REQUEST.....	14
6.2	EXTRACT FILE PROCESSING.....	17
7	ORGANIZE THE DATA.....	19
8	ANALYZE RECORDS AND COLLECT ADDITIONAL INFORMATION	20
8.1	EXPORT FILE RECORDS.....	20
8.2	SALVAGE FILE RECORDS	20
8.3	THEFT FILE RECORDS	21
8.4	INSURANCE THEFT RECORDS.....	21
8.5	NONCONFORMING VIN RECORDS.....	21
8.6	THEFT AFTER EXPORT	23
8.7	DATA FROM THE STATE EXTRACT	23
8.8	REQUESTING ADDITIONAL DATA.....	24
9	PERFORMING AND DOCUMENTING THE SWEEP	25
9.1	SELECT RECORDS FOR THE SWEEP.....	25
9.2	CREATE THE SWEEP LIST	26
9.3	PREPARE THE SWEEP TEAMS	26
9.4	DO THE SWEEP.....	26
9.5	UPDATE CASE DOCUMENTS.....	27
9.6	PREPARE CASES FOR COURT.....	27
9.7	CASE DISPOSITION.....	27
9.8	DOCUMENT RETURN ON INVESTMENT.....	27
10	CONTACT INFORMATION.....	28

Data Analysis for Fraud and Theft Process

1 Introduction

The FBI's Uniform Crime Report shows that about 1.3 million vehicles were stolen within the U.S. in 2002, with only 14% of those resulting in identification of the criminal and/or arrest. Stolen vehicles can be successfully, and profitably, reintroduced into the market if they are renumbered and obtain valid title documentation. Obtaining valid title documentation is key to the ability of the criminal to profit from the crime. The estimated total value of all vehicles stolen in the U.S. is \$8.4 billion per year.

In 1996, the metropolitan Miami area had the highest per capita auto theft rate in the country with approximately 43,000 vehicles reported stolen. Faced with an increasing theft rate but static resources to combat the problem, the Miami-Dade Auto Theft Task Force reexamined its approach to auto theft investigations. The Task Force recognized that while roughly 60% of its stolen vehicles are recovered, a large percentage of stolen vehicles are renumbered and are reintroduced into the market. Renumbering conceals their stolen status and makes them harder to recover. The Task Force developed a program called Operation Clean Sweep to address these stolen and renumbered vehicles and considered the following factors when designing this initiative:

- Stolen vehicles bearing their true Vehicle Identification Numbers (VIN) are of relatively little value because their stolen status is easily detected by law enforcement. Stolen vehicles that have been “renumbered” and have assumed the identity/VIN of non-stolen vehicles are very valuable and can be sold at fair market value.
- Stolen vehicles are renumbered in several ways:
 - with fictitious VINs
 - with VINs from exported vehicles
 - with VINs from salvage vehicles
 - with VINs cloned from vehicles that are registered or titled within the same state or another state. In this situation, multiple vehicles bearing the same VIN are registered at the same time.
- Auto theft is an organized crime activity involving a network of offenders including the thief who steals the vehicle, the subject who crafts the counterfeit public VIN plate and renumbers the vehicle, the subject who obtains or counterfeits a title bearing the non-stolen VIN, the title clerk who knowingly processes the fraudulent title, and the seller of the stolen/renumbered vehicle. Organized auto theft networks primarily deal in newer and high-end luxury vehicles where the margin of profit is greatest.
- An auto theft networks' success is dependent on its ability to obtain “legitimate” titles bearing the altered VINs; the title is the essential element in trafficking in stolen vehicles.

Given the critical role that titles play in legitimizing stolen vehicles, the Task Force focused its attention on both “new” and “dated” fraudulent title issuances. Operation Clean Sweep identifies and recovers stolen vehicles through the detection of title fraud, and allows the Task Force to apprehend and prosecute all parties responsible for the relevant offenses. The Task Force detects

“new” fraudulent titles through a daily physical inspection of title applications and supporting documents submitted to tag agencies. The Task Force identifies dated fraudulent titles by comparing the records of the Division of Motor Vehicles and the National Insurance Crime Bureau (NICB). This comparison produces lists of target vehicles that are currently registered and bear VINs with active theft messages in the National Crime Information Center’s (NCIC) database, VINs from exported vehicles, salvaged vehicles’ VINs, and fictitious/nonconforming VINs. The Task Force used other public and private databases to locate the vehicles after the target list was compiled, but the primary source of the information was the interface of DMV and NICB records.

The Task Force dedicated one investigator and two analysts to review the records and prepare the lists of vehicles to be inspected. On appointed mornings, Task Force members inspected the target vehicles in a “sweep” fashion and recovered those vehicles bearing altered VINs. The results of the “sweeps” are as follows:

- 1999 - 122 vehicles recovered. Cumulative recovery value \$1,704,610.
- 2000 - 94 vehicles recovered. Cumulative recovery value \$1,770,700.
- 2001 - 100 vehicles recovered. Cumulative recovery value \$2,082,800.
 - 41 insurance frauds were detected through the review of title issuances. Twenty-eight of the 41 were detected before claims were satisfied saving insurance companies \$1,129,500.
- 2002 - 81 vehicles recovered. Cumulative recovery value \$2,154,600.
- Miami-Dade auto theft rate has dropped by more than 50% since the introduction of Operation Clean Sweep. From its high in 1996 with 43,000 reported thefts, to a ten-year low in 2002 21,000 reported thefts, Miami-Dade County has seen a commensurate reduction in its national ranking from No. 1 to No. 6.

In 1999, the American Association of Motor Vehicle Administrators (AAMVA) ran a pilot of the National Motor Vehicle Title Information System (NMVTIS). In 2000, the law enforcement committee of the NMVTIS working group discussed ways they could use NMVTIS to enhance their investigation capabilities and to improve the efficiency of their interactions with the state titling agencies. The committee identified four major goals:

- Document the Data Analysis for Fraud and Theft procedure for analyzing data from various sources to reduce vehicle theft and fraud, including developing standardized file transfer formats. The procedure will be made available as a guide to other state agencies that want to initiate sweeps similar to the Miami-Dade Auto Theft Task Force effort.
- Define the interaction between the state titling agency and the law enforcement agency when the titling agency gets notice that a VIN on a title application is reported stolen. Identify best practices, where possible. Create standards for information exchange where feasible.
- Gather data during the pilot of the Prospective Purchaser Inquiry to support a request to the Criminal Justice Information System to release the theft response to consumers.

- Establish means of including import and export data from the Bureau of Customs and Border Protection in the NMVTIS inquiry responses. This information would be used by the state titling agency when processing applications for title.

This procedure responds to the first goal of the NMVTIS law enforcement committee. The goal of the Data Analysis for Fraud and Theft procedure is to provide a model protocol for state titling agencies and law enforcement to format files and exchange the results of the batch runs. In support of the goal, AAMVA is coordinating and promoting use of the procedure and tools among law enforcement agencies. Distribution of this procedure to all state titling and law enforcement agencies is expected to result in a national effort to use existing data sources to identify and recover stolen vehicles, and to apprehend and prosecute individuals who commit theft and fraud.

2 Definitions

actual cash value. The amount of payoff from the insurance company to the insured.

altered title. A true title in which any of the original information on the physical document has been changed, removed, defaced, covered, or destroyed and then submitted to a DMV in an effort to obtain a new title bearing false information.

brand. A permanent marking associated with a vehicle (VIN) that conveys additional information that may affect the value or road-worthiness of the vehicle (e.g. flood damage, salvage, hail damage, etc.). A vehicle may have multiple brands.

CBP. The Department of Homeland Security's Bureau of Customs and Border Protection.

check digit - a single number or the letter X in position nine of the VIN. It is used to verify the accuracy of the transcription of the VIN, based on the VIN standard rules defined by the National Highway Traffic Safety Administration.

cloned registration. Car thieves obtain a duplicate registration card for a non-stolen vehicle, without the knowledge of the true vehicle owner. The duplicate registration is then used to obtain a replacement license tag or specialty tag, which is placed on a stolen vehicle. The stolen vehicle thus assumes the identity of a non-stolen vehicle via a cloned registration.

cloned vehicle. All renumbered vehicles, with the exception of those bearing fictitious VINs, are clones. This term is also used to describe those stolen vehicles that have assumed the identity of non-stolen vehicles having a similar make and model. The non-stolen vehicle is actively registered or titled in the same state, another state, or another country, which creates a situation in which multiple vehicles bearing the same VIN are simultaneously registered and/or titled. While the term typically refers to VINs without salvage or export histories, many cases involving cloned salvage switches and cloned reborns have been detected.

counterfeit title/registration. A fake title or registration document. The counterfeit certificate of title or registration card has not been issued by a state titling or registration agency, but as been created solely by the perpetrator of the fraud.

CPIC. Canadian Police Information Centre. An information system operated by the Royal Canadian Mounted Police, which contains vehicle theft information.

CVIN. Confidential Vehicle Identification Number. A VIN stamped on the vehicle's body or frame in a location known only to the manufacturer and law enforcement inspectors.

duplicate title. A copy of a legitimate title document created by the state titling agency. Some states create true duplicates of the title document, including the original title issue date and title number. Other states create replacement titles, which show new title issue dates and sometimes new title numbers. The duplicate title document is valid and negotiable in the sale of the vehicle.

felony message (vehicle). Information entered into the NCIC stating that a particular vehicle has been involved in a serious (felony) crime. The "felony vehicle" messages can be used to alert law enforcement that the tag queried relates to a vehicle VIN that has been cloned. The Task Force enters the felony message by the fraudulently obtained license plate, not the cloned VIN. Further, it is entered only after the true vehicle whose VIN has been cloned has been inspected and it is determined that its secondary numbers match the public VIN plate. The entering agency provides specific instructions about handling the vehicle in the "remarks" section of the message (e.g., tag fraudulently obtained-issued to vehicle w/ "cloned VIN"-impound vehicle-ID occupants-contact ***).

forged title. A title document that contains forged signatures to show the transfer of the vehicle to a new owner.

gray market vehicles. Vehicles imported into the U.S. that were not originally manufactured for sale in the U.S. Gray market vehicles may not meet safety, emissions, bumper, or theft prevention standards established by U.S. government and their VINs may not conform to NHTSA's standard.

ISO. Information Services Organization. An organization that provides information processing services to NICB.

MCO/MSO. The Manufacturer's Certificate of Origin or Manufacturer's Statement of Origin. This document is created by a vehicle manufacturer when the vehicle is created and is considered the "birth certificate" of the vehicle. The MCO/MSO serves as proof of ownership until the vehicle's first title is issued. The information on the MCO/MSO includes, but is not limited to: the name of the manufacturer, VIN, model, model year, and weight of the vehicle.

NCIC. National Crime Information Center. NCIC is a database operated and maintained by the Federal Bureau of Investigation (FBI) and contains information on stolen vehicles and felony vehicles.

NHTSA - National Highway Traffic Safety Administration, part of the U.S. Department of Transportation.

NICB. National Insurance Crime Bureau. NICB is a not-for-profit membership organization created by the insurance industry to provide solutions to the problems of detecting, preventing, and deterring insurance related crime. NICB serves as the liaison between insurance companies, vehicle manufacturers, and law enforcement. NICB provides information through ISO (Information Services Organization) including:

- Manufacturer's shipping & assembly record
- Insurance claims
- Mirror image of NCIC theft file
- Vehicle export record
- NCIC cancelled and purged thefts
- Vehicle salvage record
- Canadian thefts from CPIC
- Vehicle impounds
- NICB theft files (input X insurance co.)
- Car rental fleet record
- Lien holder and contact numbers
- VINassist, a VIN edit program

NLETS. National Law Enforcement Telecommunications System. A message switching system linking local, state, and federal agencies to provide the capability to exchange criminal justice-related information by electronic means.

NMVTIS. The National Motor Vehicle Title Information System. NMVTIS provides an electronic means for state motor vehicle titling agencies and central file controllers to exchange titling, brand, and theft data with states, law enforcement officials (local, state, federal), prospective purchasers (individuals, auction companies, used car dealers) and insurance carriers. NMVTIS was developed specifically to respond to the requirements of the Anti Car Theft Act of 1992 and generally to the needs of AAMVA titling states. NMVTIS is operated by AAMVA for the Department of Justice.

nonconforming VIN. A VIN that does not decode properly from the standard defined by the National Highway Traffic Safety Administration. Manufacturers assign VINs as mandated by law, and the VIN of each vehicle produced for sale in the U.S. conforms to the NHTSA standard. Decoding of the VIN may be done via software products available from NICB or private vendors.

reborn, or born again. A type of cloned VIN; it is a stolen and renumbered vehicle that bears the VIN of a previously exported vehicle. The stolen vehicle assumes the identity of the exported vehicle through the submission of a forged duplicate title, a counterfeit title or counterfeit MCO/MSO, or through a true title or true MCO/MSO that has been returned from the destination country of the exported vehicle for its reuse on a stolen vehicle.

registration-only (RO) transaction. A vehicle registration transaction for which no companion title has been submitted to the state titling agency. RO transactions often involve fictitious VINs, and are performed for the purpose of obtaining a tag that allows the operation of the vehicle on public roadways. The fraudulent ROs are often issued in the name of large lenders, which when checked, reveal that the company has no record of the vehicle (e.g., Mercedes Benz Credit Corp.).

renumbered or reVIN'd. A vehicle whose public VIN plate, and sometimes its secondary VIN labels and/or confidential VINs, have been altered in an effort to conceal its true identity. The renumbered vehicle is usually a stolen vehicle.

salvage switch - A type of cloned VIN; it is a stolen vehicle bearing the VIN of a “total loss” or salvage vehicle. The public VIN plate placed on the stolen vehicle may or may not be the actual salvaged vehicle’s VIN plate. Often a counterfeit VIN plate bearing the salvage vehicle’s VIN is created and affixed to the stolen vehicle. The salvage vehicle is purchased (usually at auction) and its salvage title or certificate is obtained with the purchase. The stolen vehicle assumes the identity of the salvaged vehicle through the submission of the salvage title with the application for new title or salvage certificate by the new owner. Auto thieves target auctions in states with lax “branding” practices, and attempt to get the salvage brands removed at the same time as they obtain a valid title for the stolen vehicle.

salvage title. An ownership document that shows that the vehicle is salvage. Some states create salvage certificates rather than salvage titles. The salvage status is applied to the vehicle because it has sustained collision damage, flood damage, or damage resulting from the theft and recovery of the vehicle.

salvage vehicle - Any vehicle (1) that has been wrecked, destroyed or damaged, to the extent that the total estimated or actual cost of parts and labor to rebuild or reconstruct the vehicle to its pre-accident condition and for legal operation on roads or highways exceeds a jurisdiction-defined percentage of the retail value of the vehicle, (2) the reporting jurisdiction considers salvage because an insurance company has acquired ownership pursuant to a settlement based on the theft of the vehicle, (3) to which an insurance company acquires ownership pursuant to a damage settlement, (4) the vehicle's owner has designated as a salvage vehicle by obtaining a salvage title, without regard to extent of the vehicle's damage and repairs, or (5) the reporting jurisdiction considers salvage based on jurisdiction-defined criteria, such as abandonment.

title washing. The removal of a brand from a title document through the submission of an altered title in which the brand has been physically erased, defaced, covered, or destroyed, or through the submission of fictitious documentation in support of the brand’s removal (e.g., a letter from the insurance carrier reporting that the vehicle was recovered “intact”), or through the manipulation of the state titling agency system by a corrupt tag clerk. The resulting title is considered “clean” and increases the value of a damaged vehicle. The presentation of a “clean” title leads unsuspecting buyers to conclude that the vehicle is structurally sound when it is not.

VEDTAB. A table containing shipping and assembly data that NICB obtains from manufacturers. Its key is the VIN prefix, which comprises the first 11 characters of the VIN.

3 Vehicle Theft and Title Fraud

Subjects involved in organized auto theft use a myriad of scams to steal, renumber, and title vehicles so they can be reintroduced into the market. Some common ploys and the role each participant plays are noted below:

- ***Reborn Scam*** - Offenders obtain (sometimes purchase) VINs of exported vehicles from several possible sources, including individuals employed in the freight forwarding and shipping industry, and from individuals who gather the VINs at foreign ports and then send the VINs back to the United States. Once in possession of the exported VIN, the subject in the auto theft network who usually handles the paperwork requests from the state titling agency the ownership information (last known owner's name and owner address) reflected on the last title issued. The state titling agency discloses this public registration/title information.

The offender forges the real owner's name on a duplicate or lost title application containing the exported VIN and title information provided by the state titling agency, and submits this to the state titling agency. The real owner does not know someone else is getting a duplicate title to his or her vehicle, which is by now in another country.

The offender who submits the forged duplicate title application requests that the state titling agency send the new duplicate title to an address other than the address shown on the true owner's last title. Sending the new title to the true owner's last known address might alert family members still at the residence of the fraud or it might result in the title's return to the state titling agency because the titleholder no longer resides at the last documented address. Usually, a corrupt tag clerk is responsible both for providing the initial ownership information that was provided on the duplicate title application and for processing the duplicate title application. A corrupt tag clerk can arrange for the duplicate title either being returned to the tag agency where the offender picks it up, or to an address other than that reflected on the true owner's last title. In some cases, offenders provide a counterfeit driver's license bearing the last titled owner's name and a new address, which allows the state titling agency to send the fraudulent Duplicate Title to a different address.

The next step in the scam is for a thief to steal an identical make and model vehicle as that which was exported. The ways in which organized auto theft networks steal vehicles are varied. Law enforcement rarely recovers vehicles anymore that have been stolen by "popping the locks and ignition". Presently, the most common means by which thieves obtain vehicles are through "insurance give-ups", "lease give-ups", identity thefts at dealerships, direct thefts from dealership lots, and car rentals with counterfeit driver's license and credit cards. Once in possession of a vehicle matching the make and model of the exported vehicle, an offender removes the public VIN plate (found on the dashboard) from the reported stolen vehicle (albeit falsely reported by the individuals who knowingly surrender their vehicles to offenders involved in auto theft). A query of the stolen vehicle's VIN through NCIC would reveal its stolen status. The offender, usually an individual who specializes in the production of counterfeit VIN plates, places a false VIN plate bearing the exported vehicle's VIN in the place where the stolen vehicle's VIN plate had been. In addition to the removal of the stolen vehicle's VIN and the placement of the altered/counterfeit VIN plate on the stolen vehicle, the renumbering/reVINing process entails the removal of the stolen vehicle's Federal Safety Standard sticker and anti-theft labels. Both the Federal Safety Standard sticker and the anti-theft labels bear the stolen vehicle's VIN, and like the public VIN plate on the dashboard, a query of the VIN on either would reveal the vehicle's stolen status. The placement of counterfeit Federal Safety Standard sticker and anti-theft labels bearing the exported

vehicle's VIN complete the renumbering process. The Federal Safety sticker and anti-theft labels are usually created on very high-grade home computers and printers. Occasionally, thieves will also alter, deface, or remove the secondary numbers and CVIN of the reported stolen vehicle because the secondary numbers and the CVIN cross reference to the true VIN.

In some "Reborn" investigations the task force has found that offenders avoid the forged duplicate title process and instead submit to the state titling agency counterfeit titles or MCO/MSOs bearing the exported VIN. Like counterfeit Federal Safety stickers and anti-theft labels, these counterfeit titles and MCO/MSOs are usually created on very high-grade home computers and printers. Offenders often use the *N.A.D.A. Title and Registration Text Book* as a guide when preparing the counterfeit titles and MCO/MSOs. Once the stolen vehicle has been renumbered and the offender receives the title from the state titling agency, the vehicle is ready for sale.

- **Salvage Switch** - Offenders buy high-end "total loss" collision vehicles at auctions solely to secure the title; they have no intention of repairing the vehicle. The salvage vehicle, sometimes minus its public VIN plate, is discarded once the offender receives the title from the auction. The value of a vehicle is related to the extent of the damage incurred - the more damage, the lower the sale price at auction. Offenders who specialize in renumbering salvage vehicles purposefully target the most severely damaged vehicles. Once in possession of the salvage vehicle's title, offenders steal vehicles matching the make and model of the salvage vehicle. Then, like the reborn scam, offenders create a public VIN plate, a counterfeit Federal Safety sticker, and anti-theft labels, all bearing the salvage vehicle's VIN. The offender places the counterfeit public VIN plate (occasionally the actual salvage VIN plate), the Federal Safety Standard sticker, and the anti-theft labels on the stolen vehicle and it assumes the identity of the salvage vehicle. The offender then submits the salvage title to a corrupt tag clerk at the state titling agency who (usually for a bribe) removes, or "washes", the salvage brand from the title through a manipulation of the titling agency system. The clerk either fails to enter the brand or in some cases (if the brand is already documented in the titling system), the corrupt clerk will eliminate the brand. The stolen vehicle is then sold as an undamaged vehicle with a "clean" title.
- **Fictitious VIN & Counterfeit Title Scam** - An offender steals a vehicle. Then using the stolen vehicle's VIN as a guide, the offender creates a fictitious VIN (usually one with one or two digits different from the stolen vehicle's VIN). The offender crafts a counterfeit public VIN plate bearing the fictitious VIN and places it on the stolen vehicle. Next, the offender creates a counterfeit Federal Safety Standard sticker and anti-theft labels with a computer and printer and they are applied to the stolen vehicle. Lastly, the offender creates and prints a counterfeit title or counterfeit MCO/MSO bearing the fictitious VIN and submits it to the state titling agency with an application for title. The state titling agency in turn issues a "legitimate" title bearing the VIN of a vehicle that was never produced by any manufacturer. This stolen vehicle now bearing a fictitious VIN is ready for sale. It should be noted that offenders rarely counterfeit the title of the state in which they apply for title. Offenders usually create titles from other states or create their own MCO/MSOs. Fictitious VINs can be detected through the use of software that decodes a VIN and verifies that its "check digit" is correct. Sometimes however,

offenders create a fictitious VIN that does conform to the VIN standard and is not detected with the VIN edit programs.

- ***Replacement Tag / Specialty Tag Scam*** – Offenders randomly copy down the license plates of high-end luxury vehicles and trucks, unbeknownst to the vehicles’ owners. The offenders choose those license plates that have many months remaining before expiration. The offender provides the license plate to a corrupt clerk who queries the tag’s ownership information. The offender then requests a replacement license plate (due to loss) or a “specialty” license plate (theme tags produced to support specific causes, football or baseball teams, universities etc.) from the clerk at the state titling agency, claiming a desire to promote a given cause, team, or school. The corrupt tag clerk cancels the license plate that the offender first provided, and then processes the “specialty” license plate or replacement tag request. This causes the generation of a registration card bearing the new “specialty” license plate number or replacement license plate number and the VIN and ownership information of the vehicle. The offender then steals an identical make and model vehicle and places the “specialty” license plate or replacement plate on the stolen vehicle. From the license plate alone, the stolen vehicle assumes the identity of the non-stolen vehicle whose tag was first copied. A day or two after the replacement or specialty tag’s issuance, the corrupt clerk reinstates the true tag that was cancelled, creating a situation in which multiple tags are issued to the same VIN. This scam is often detected when the clerk fails to reinstate the original tag and then the true owner, stopped by the police, cannot explain why his or her tag is not registered with the state titling agency, although he or she possesses a registration bearing the tag information.

When interviewed, offenders have advised task force detectives that “specialty” license plates are used because the offenders think that law enforcement is disinclined to believe vehicles bearing such tags are stolen. Further, offenders who employ this replacement tag scam rarely renumber the stolen vehicle. The public VIN (on the dashboard) does not match that reflected on the registration card. The public VIN, if queried through NCIC, is a “straight hit”. According to offenders, police almost never compare the public VIN plate with the VIN that is reflected on the registration card when conducting routine traffic stops. When the offender does renumber the stolen vehicle to match the VIN related to the tag that was originally copied, the vehicle is called a “clone”.

- ***Cloned Vehicle that Combines Duplicate w/Transfer of Title Transaction*** – This scam is very similar to the replacement tag scam, but the proof of ownership for the stolen vehicle involves a forged duplicate title and not a replacement or specialty tag. First, offenders steal a vehicle. Offenders then write down the license plate or VIN of a vehicle matching the make and model of the stolen vehicle. Like the replacement tag scam, the offenders choose those license plates that have many months remaining before their expiration.

The offender provides the license plate to a corrupt clerk who queries the tag’s ownership information. The query of the tag yields the true vehicle’s ownership information (and the VIN if not previously copied down by the offender). The offender renumbers the stolen vehicle with a counterfeit VIN plate matching the non-stolen vehicle.

The offender, who may or may not pose as the non-stolen vehicle's owner, then offers the stolen vehicle for sale. When the offender secures a buyer and the buyer provides the offender/seller with his or her personal information (name, address, driver's license number), the offender forges an Application for Duplicate Title with Title Reassignment bearing the vehicle and ownership information obtained from the earlier query of the license plate on the non-stolen vehicle. The Application for Duplicate Title with Title Reassignment is a transfer of title request by an owner of a vehicle who has lost the vehicle's title, desires to sell the vehicle, but does not have the title to give to the purchaser. The Application for Duplicate Title with Title Reassignment serves to inform the state titling agency both that the owner of the vehicle has lost the title and that the owner wishes to sell the vehicle to the second party named on the application. To facilitate the sale of a vehicle without its title, the state titling agency records the request for the duplicate by the vehicle's owner, but issues the title in the name of the purchaser.

The corrupt tag clerk then processes the application, which results in the issuance of a license plate, a companion registration card, and a title. The offender/seller takes the buyer's money, delivers to the buyer the stolen/renumbered vehicle and the license plate with its companion registration bearing the buyer's personal information but the (cloned) non-stolen vehicle's VIN. The seller/offender advises the buyer that the state titling agency will forward the title directly to the buyer's registration address. Unaware of the fraud committed, the titling agency issues the title in the buyer's name and forwards it the buyer.

The fraud is identified when the non-stolen vehicle's owner attempts to sell the true vehicle or attempts to renew the tag and is informed by the titling agency that he or she no longer owns the vehicle. The non-stolen vehicle's owner reports that he or she has been in continuous possession of the vehicle, causing the titling agency to notify law enforcement of the fraud.

Many groups who clone vehicles in this way offer the stolen/renumbered vehicles for sale in states outside the issuing title state. The buyer never appears; instead the offender/seller provides photocopies of the buyers' drivers' licenses to the state titling agency. The stolen vehicle sometimes has a couple of owners by the time law enforcement locates the vehicle.

4 DAFT Process Overview

The Data Analysis for Fraud and Theft process describes how a law enforcement agent can request an extract of title data from a state vehicle titling agency and have the VINs compared to the theft, salvage, and export files maintained by NICB. The process also includes analysis of the VIN to determine which VINs do not conform to the standard format. The DAFT process includes these steps:

- The law enforcement agency requests the state titling agency to create an extract of data from the agency's title file.
- The state titling agency sends the extract to NICB.

- NICB processes the VINs on the extract against the theft, salvage, and export files. Hits are VINs from the extract that match VINs on one or more of the NICB files. NICB also runs the VINs through a VIN decoder to identify potential problems with the VIN. Hits are VINs for which the decoder identifies a potential problem.
- NICB sends hits to the law enforcement agency.
- The law enforcement agent analyzes the hit data, gathers more information, and creates a sweep list of VINs for inspection.
- The law enforcement agent creates the sweep teams.
- The sweep teams inspect the vehicles.
- The law enforcement agent prepares cases for court and tracks final disposition of the case.
- The law enforcement agent reports on project results.

5 Data and Analysis

The DAFT process uses data from the state titling agency for vehicle title and registration data, NICB for data on stolen, exported and salvage vehicles, and from AAMVA's NMVTIS for multi-state VIN searches and title history. The state titling agency's files include information such as title issue date, registration effective date, liens and owners' names and addresses. State data can be used to identify other vehicles owned by the same titleholder or registrant. NICB data provide the critical cross-references to export, insurance salvage and theft events. NMVTIS can be used during the investigation to identify the current titling state and get title history for a VIN as well as brands associated with the VIN collected from all NMVTIS participants.

5.1 NICB Data

NICB generates files of hits that result from matching VINs on a state extract file against NICB files and NICB's VIN decoding procedure. NICB uses the following files to generate data records for analysis as possible theft or fraud cases:

5.1.1 Export File

A compilation of data on vehicles exported from the U.S. CBP provides the data, and NICB and CBP agents located at U.S. ports enter it. In a few cases, the vehicle on the export file may not have been exported yet. The owner schedules the export a couple of days before bringing the vehicle to be shipped. If the person decides not to export the vehicle, if the vehicle is stolen, or if something else comes up to prevent delivery of the vehicle to the shipment site, the vehicle can appear on an export list but not actually be exported.

5.1.2 Salvage File

NICB gathers information from insurance carriers and salvage pools on vehicles damaged to the extent that they are considered "salvage" or "total loss" by their insurers. The vehicles are ones that an insurance company has turned over to a salvage yard. The salvage file contains the

insurance payoff amount and the subsequent auction sale price. In general, only NICB's members report their insurance salvage cases to NICB.

5.1.3 Theft File

NICB maintains a mirror image copy of the active theft file operated by the NCIC. The NCIC file contains theft reports created by local, state, and federal law enforcement agents. The NICB mirror image file is updated automatically and immediately whenever a theft or recovery is reported to NCIC. One difference between the NICB and NCIC files is that NCIC removes aged theft records from its files, but NICB does not. Aged records are those that are more than five years old. NICB retains aged records online, allowing hits on unrecovered, stolen vehicles regardless of the date of theft.

Since 1999 NMVTIS has used NICB's theft file to provide an online theft check for state titling agencies during the titling process. Other NICB users access the theft file for investigative purposes.

Independent studies have shown that about 0.2% of all title applications are submitted for VINs that are considered active stolen vehicles by NCIC and NICB. This indicates that some states are issuing title documents without checking the theft status of the VINs, with the result that stolen vehicles are receiving good titles. NMVTIS includes the theft check in online processing. Before printing the title, the state inquires on NMVTIS, which returns a theft hit/no hit response. Hit responses are passed to law enforcement for investigation, and no title document is printed.

5.1.4 Insurance Theft File

Insurance carriers report VINs for which they have paid theft claims, and NICB maintains these records on an insurance theft file. In general, only NICB's members report their insurance theft vehicles to NICB.

5.1.5 VIN Validation and Decoding

NICB also validates and decodes VINs, identifying those that do not conform to the standard format. Because nonconforming VINs show a relatively high correlation with stolen vehicles, the requesting agent normally analyzes these VINs closely when developing a sweep list.

5.2 *NMVTIS Data*

NMVTIS contains information from manufacturers, state titling agencies and branders. States make their title data available through AAMVA, either in batch or online, directly from state databases. This information is available to law enforcement agencies investigating vehicle theft and document fraud. NMVTIS files include:

5.2.1 VIN Pointer File

In the NMVTIS distributed database environment, detailed titling data is kept on the state's database where it is updated and maintained. The VIN pointer file maintains information to point to the state that issued the current title. The VIN pointer file also maintains information about

previous titles associated with the VIN. The information maintained in the VIN pointer file includes title data (state of title, title number, and title issue date), odometer data (readings at the time of title issuance), and vehicle data (VIN, make, model year).

5.2.2 Brand File

The brand file is a central brand file maintained by AAMVA and contains a permanent history of brand information for vehicles nationwide. The brand file makes this information available electronically, even if it does not appear on the current title document. The brand file is updated any time a participating state records a vehicle brand. In addition, the Anti Car Theft Act requires junkyards, salvage yards, and insurance carriers to submit monthly reports to the system listing all junk or salvage vehicles that have come into their possession in the previous month.

5.2.3 MCO System

Although not part of NMVTIS, the MCO system maintained by AAMVA is accessible via an NMVTIS inquiry. This file contains information on vehicles provided by the manufacturer at the time the vehicle was created. NMVTIS participants use the MCO system to validate the MCO documents that are used as ownership documents when title applications are processed.

5.3 *Analyzing the Data*

Analysis and selection of likely theft and fraud cases is subjective. An agent eliminates and selects records based on local as well as general factors. The recommendations included in this description are necessarily augmented by the agent's knowledge and experience.

Hit data from NICB is transferred to spreadsheets, such as Excel, or databases, such as Access or FileMaker. The agent analyzing the data organizes each file to facilitate analysis and selects the records most likely to be the result of theft or fraud for further analysis. For convenience, the agent may hide or move the less likely records. The agent gathers more information from various sources on the selected hits. Analysis of the additional information results in the VINs either being included in a hit list for a sweep or placed with the less likely hits.

It is expected that hit percentages will vary from state to state. In one extract for Texas, NICB produced the following hit percentages on 2 million extract records:

- 1.4% hits on the export file
- 4.7% hits on the salvage file
- 5% hits on the NCIC theft file
- 1% hits on the insurance theft file

In the analysis some factors, by themselves, do not support inclusion in a sweep list but may lend support to an investigation when combined with other factors. For example, if a vehicle on a hit list has moved from a state known to have a high theft rate, the previous titling state by itself doesn't indicate fraud, but it may support inclusion on a sweep list when combined with other indicators, such as frequent title activity and a salvage hit.

6 State Extract File

The law enforcement agency begins the DAFT process by requesting the state's titling agency to send a file extract to NICB.

6.1 Extract File Request

The process and form for the request vary by jurisdiction. Generally the request is either an electronic or paper document from the law enforcement agent to the individual at the titling agency who approves the work to create the extract.

A sample request form is in appendix A. The request includes this information:

- criteria for selecting title and registration records to be included on the extract
- data elements to include in the extract file
- format of the extract
- file transmission method (CD via mail)
- contact information for the person at NICB who will receive the file

The selection of vehicle title and registration records to include in the extract may be the entire title and registration database or some subset. Depending on the nature of the investigation, the segment may be something like “vehicles with active title and registration, five most recent model years, for vehicles including only passenger vehicles, trucks over 2000 lb. gross vehicle weight, and motorcycles”. A request might include the following:

The Auto Theft Task Force at the [Your Agency Name] Police Department is conducting an investigation that seeks to identify stolen and renumbered vehicles through the detection of fraudulent titles. These fraudulently obtained [State Name] titles are identified by comparing current [State Name] registrations and titles and the National Insurance Crime Bureau's (NICB) export, salvage, and active theft records. To support this investigation, please produce an ASCII file of delimited or fixed-field records on CD reflecting the following information for all automobiles, motorcycles, trucks, trailers and semi-trailers with model year 1998 or later:

[Include the list of requested data elements.]

Data on the titling agency's extract includes a selection of elements that are available on the state's title and registration database(s). The available elements vary by state, and the title agency can help select elements to include. The following list presents types of data that might be included in the state extract:

Minimum Data	Elements
Suggested Minimum Data Needed for Analysis	Vehicle Identification Number Titling Jurisdiction Title Issue Date Title Number Last Transaction Type Agency of Last Transaction

	Clerk ID of Last Transaction Date of Last Activity (most recent date when any of the data was updated) Vehicle Model Year Vehicle Make Vehicle Body / Type / Model Primary Color Odometer Reading Odometer Unit of Measure Registration Issuance Date Plate Number Insurance Carrier Insurance Policy Number Owner Name Owner Address (including county) Owner Driver License Number Owner Date of Birth Registrant Name (if registrant and owner are different) Registrant Address, including county (if registrant and owner are different) Registrant Driver License Number (if registrant and owner are different) Registrant Date of Birth (if registrant and owner are different) Salvage Flag Rebuilt Flag Duplicate Title Flag Lien Count Lienholder Name Date of Lien Lienholder Address Lien Amount
Other Data to Consider	Elements (Fields suggested to help identify and analyze possible fraud.)
Brand Data Note: Brands may be reflected in different ways, such as title types or indicators, e.g., salvage indicator and rebuilt indicator.	Brand Code Brand Description Brand Date Percent of Damage Percent of Damage Type (actual or threshold) Vehicle Make on Brand Vehicle Model Year on Brand Brander Code Brander Name Brander Type Code (e.g., state, insurance company, salvage yard)
Vehicle Data	Vehicle Model Vehicle Model Name Vehicle Type (e.g., automobile, bus, motorcycle, tractor) Vehicle Major Color Vehicle Minor Color Cylinder Count Horsepower Gross Vehicle Weight Gross Vehicle Weight Rating Unladen Weight Vehicle Length Axle Count Fuel Type Door Count Seat Count

	<p>Odometer Reading (if different from title reading) Odometer Unit of Measure (if different from title reading) Odometer Date (if different from title issue date) First Year Sold Vehicle Equipment Number (identifies a vehicle in a fleet) Vehicle Fleet Number (identifies the fleet that includes the vehicle) Vehicle Out of State Indicator (indicates whether a vehicle is registered out of state) Vehicle Purchase Price Vehicle Purchase Date Vehicle Ship Date (date shipped by manufacturer to purchaser) Vehicle Stamped Engine Number (ID number stamped on the engine) Vehicle Status (e.g., stolen, repossessed, sold out of state) Vehicle Status Date State Key For Vehicle (record key for accessing vehicle data)</p>
Title Data	<p>Title Status Title Status Date Title Issued From MCO Indicator Title Type Titled Vehicle Type (e.g., automobile, bus, motorcycle, tractor) State Title Key (record key for accessing title data) Issue Date of Duplicate/Replacement Title Count of Duplicate/Replacement Titles Issued for the Vehicle Duplicate/Replacement Status (e.g., active, stolen, held by garagekeeper) Duplicate/Replacement Title Number</p>
Title History	<p>Jurisdiction of a Previous Title Title Number of Previous Title Title Issue Date of Previous Title Title Cancellation Date of Previous Title Type of Previous Title (e.g., duplicate, replacement, original) VIN Shown on Previous Title for the Vehicle Odometer Reading on Previous Title Vehicle Make on Previous Title Vehicle Model Year on Previous Title</p>
Insurance Data	<p>Insurance Certification Date Insurance Cancellation Date Insurance Policy Effective Date Insurance Policy Expiration Date</p>
Theft Data	<p>Jurisdiction Holding Vehicle Theft Report Law Enforcement Agency Holding Theft Report Vehicle Theft Case Number Theft Multiple Match Indicator (indicates more than one theft hit for the VIN) Theft Purged Indicator (indicates NCIC has purged the theft record) Theft Status Date (date of the theft report or the date the theft was recorded)</p>
Lease Data	<p>Lessee Name Lessee Mailing Address Lessor Name Lessor Mailing Address</p>
Owner/Previous Owner Data	<p>Owner's SSN Owner's Employer Identification Number Owner Identifier Type (e.g., driver license number, SSN, FEIN) Second Owner Address (including county) Owner Change Reason (indicates why the owner name or type was changed) Owner Type Indicator (indicates whether the owner is an organization or individual) Owner's Gender</p>

Registration Data	Registration Effective Date Registration Expiration Date Registration Only Code (indicates if the vehicle is titled in another state or titling is not required) Registration County/Office Registration Plate Type Registration Plate Color Registration Status (e.g., inactive, stolen, suspended) Registration Status Date Registration Type (permanent or temporary) Vehicle Use Class Code (e.g., driver training, military, agriculture, personal) State Registration Key (the record key to access the registration record)
Inspection Data	Safety Inspection Date Safety Inspection Results Safety Inspection Location Safety Inspection Number Emissions Inspection Date Emissions Inspection Results Emissions Inspection Location Emissions Certificate Number Smog Certificate Number Odometer Reading at Time of Inspection Odometer Unit of Measure at Time of Inspection
Other Data	Location of Last Activity (county or office where the activity occurred) Runner Number (third party services identifier) Rental Indicator

The extract file must be in ASCII, and it may be a delimited file (e.g., commas used to delimit fields) or a fixed record file. In addition to the extract file, the CD should include a sample file with one or two records for NICB to use in testing before the final run. The request letter should include a written description of the file layout.

To facilitate analysis of the hits received from NICB, ensure that the individual parts of addresses, e.g., street, city, county, state, ZIP code, appear in separate fields.

The titling agency sends the extract file to:

Dan Abbott
NICB
10330 S. Roberts Rd.
Palos Hills, IL 60465
(708) 237-4410

6.2 Extract File Processing

NICB matches VINs from the titling agency extract against the theft, salvage, and export files. All other data on the extract is ignored during the NICB processing. The extract file is passed back to the law enforcement agency. Data indicating a match is appended to each record for which a match is found. For example, if a match is found on the export file, the following fields are appended to the matching record on the extract: *****field1, field2, field3*****. If the process finds a hit on more than one file, more than one series of fields is appended to the extract record. NICB also returns a file that includes only the extract records for which there was a hit on at

least one of the NICB files or the VIN validation process. If the extract file has more than one record with the same VIN, the hit information is appended to all extract records with a matching VIN.

Including other data on the extract enables the law enforcement agency to perform its analysis and investigation based on the initial extract, without going back to the titling agency for the data. NICB also validates the VINs using the NICB VIN decoder program. The records from the extract that match the VIN on the theft, salvage, or export files, and the records whose VINs do not decode properly are referred to as “hits”.

NICB puts the output from the matching and VIN validation processes on a CD and mails it to the law enforcement agency that requested the run. The output files are normally Access database format. If needed, NICB can produce a text record with fixed field lengths on request.

6.2.1 Export File Processing

NICB compares the VINs on the state extract file to the export file maintained at NICB. When a VIN from the state file matches to a VIN on the export file, NICB writes a record to the export hit file.

6.2.2 Salvage File Processing

NICB compares the VINs on the state extract file to the salvage file maintained at NICB. VINs from the state file that match VINs on the salvage file are written to the hit file and returned to the law enforcement agency.

6.2.3 Theft File Processing

NICB matches the VIN on the state extract to the VIN on the NICB theft file. If the title issue date on the state extract record is on or after the theft date on the theft file, a record is created on the theft hit file.

6.2.4 Insurance Theft File Processing

NICB matches VINs on the state extract to the VIN on the insurance theft file and writes a record to the insurance theft hit file for each match.

6.2.5 VIN Validation and Decoding Process

Manufacturers of passenger cars, multipurpose passenger vehicles, trucks, buses, trailers (including trailer kits), incomplete vehicles, and motorcycles create VINs using a specific format. The VIN contains coded information to identify the manufacturer, describe the make and other attributes of the vehicle, the model year, the plant where the vehicle is manufactured, and the number of vehicles of that type that were built by the manufacturer. The format also includes a “check digit” that is derived by a mathematical formula using data in other parts of the VIN. There is a strong correlation between VINs that do not pass the check digit and vehicles that have been stolen and renumbered.

Most vehicles created for operation on public roads have VINs that conform to the standard. However, there are some that do not have standard VINs. Examples are:

- VINs created by states to replace the original VIN
- VINs for many vehicles manufactured for use outside the U.S.
- VINs for vehicles with model years before 1981

NICB maintains a VIN decoding program, which determines whether the VIN meets the criteria of the standard format. Analysis of VINs that are found to not conform to the standard is one way to find vehicles that have been stolen and given new VINs by the thieves. NICB decodes the VIN for all vehicles manufactured for the U.S., Canada and Mexico.

NICB runs the VINs on the extract file created by the state motor vehicle titling agency through the VIN decoder maintained by NICB. VINs from the state file that do not conform to the standard format for VINs are written to the hit file with a description of how they do not conform.

7 Organize the Data

NICB sends the hit files and the state extract file directly to the law enforcement organization that initiated the request. The agent performing the analysis loads the data into the database or spreadsheet and organizes the hit data. Organizing the hit data first facilitates the analysis and selection of VINs to investigate. Here are some recommendations for organizing the data:

- Add a control number to each record in the hit file. First sort each hit file by VIN, then use the calculation capabilities of the spreadsheet or database software to generate the control numbers. A file identifier can be included in an adjacent column, if needed. For example, if the hit file contains hits on NICB's export file, column A could contain the value "E" and column B could contain serial numbers beginning with 1. The control number should be the key data element that identifies the vehicle and the case being built on it; it remains constant throughout the life of the list or project. All data gathering in the analysis of the VIN, building the case file, doing the sweep, and prosecuting the case should include the control number.
- Sort the data in each hit file by ZIP code in the owner's address. This can help in analyzing the hits if previous investigations have identified certain areas as having high rates of theft, fraud, or other illegal activity. Sorting the data also allows you to provide leads on possible stolen vehicles to other law enforcement agencies when the ZIP codes on the hits are outside your jurisdiction. Finally, sorting the data by ZIP code enables you to group vehicle locations so that each sweep team can hit as many locations as possible in the time available.

8 Analyze Records and Collect Additional Information

After organizing the data, examine the records on each hit file. Some records are retained for further analysis and others are eliminated because they are unlikely to represent cases of theft or fraud.

8.1 *Export File Records*

Suggestions for selecting export file records for further analysis include:

- Compare the date of export to the title issue date, registration date, and last activity date. If any of these dates is later than the date of export, the VIN may be cloned. These records are good candidates for further analysis. If the date of export is more recent than all of these dates, then it is likely that the export of the vehicle was legitimate.
- Review the make and model year of the VINs for models that have high sale value or are known to be popular with car thieves. You may want to eliminate older vehicle models and models with low sale value. The number of VINs on the hit list, and your estimate of your organization's ability to pursue each lead may influence your selection of vehicle models.

Title and registration data may legitimately be updated after the export of a vehicle. This happens if the vehicle is exported then imported again. While this may happen with any person who moves out of the U.S. then back again, it is seen most often with military service members as they are assigned to various U.S. and overseas posts. Reviewing the information provided by the motor vehicle titling agency may show military indicators, or military-type addresses. NICB export data may provide insight, e.g., if the shipping or destination ports are known to be used by the military, or if the shipper is known to do business with the military.

NICB can provide additional information on export records selected for further analysis. Information to request includes:

- Destination country. Look for countries that are known to be ones where stolen vehicles are sent.
- Shipping information, including export and destination port, and ship name. A U.S. port may frequently ship vehicles for military personnel stationed overseas, or it may have a reputation for weaknesses in its procedures. A destination port may have a reputation for receiving specific types of vehicles. A shipper may be suspected of frequently transporting stolen vehicles or assisting criminals in their shipments.

8.2 *Salvage File Records*

Suggestions for selecting salvage file records for further analysis include:

- Title issue date is after the date of salvage. It is possible that a person buys a salvage vehicle and repairs it for use on public roads. Check the information gathered from the titling agency to make sure that a rebuilt brand exists, or inquire on NMVTIS to get brand information associated with the VIN. If the VIN has a rebuilt or similar brand, it is

unlikely that the vehicle has been involved in theft or fraud. If the VIN is not branded, it can be added to the sweep list. Inspection of the vehicle would establish whether the vehicle is roadworthy, and whether title washing is likely to have occurred.

- Look for a lot of title activity over a short time on the VIN. Rapid turnover in ownership may suggest title washing or trading a stolen vehicle.
- Look for a disparity between the actual cash value (ACV) and the auction price. If the disparity is large, e.g., an auction price that is 10% of the ACV, and the vehicle make is one popular with thieves, check it out further. This indicates that the vehicle was heavily damaged, because the auction price was so low. Someone could buy a heavily damaged vehicle for parts, but it also could be bought for its VIN, which is transferred to a stolen vehicle.

An inquiry to NMVTIS can provide brands applied to a vehicle by any state that participates in NMVTIS.

8.3 Theft File Records

A theft file hit shows that a vehicle on the state title database received a title while NICB had an active theft record for the VIN. Analysis of theft file hits generally results in fewer vehicle recoveries than hits on the export, salvage, or VIN decode files. Theft file hits have frequently proven to be recovered vehicles for which the theft case was never closed. The main benefit of this process is that it assists in updating the NCIC files to show vehicle recoveries.

When processing the theft file hits, use the VINs of the hits to query NCIC:

- If the vehicle is still an active theft on NCIC, notify the agency that originated the theft report that the vehicle has an active title in your state, and provide other information (e.g., title issue date), to help determine whether the case should be pursued. If the vehicle was recovered, the ORI can register the recovery on NCIC.
- If the vehicle has been purged from NCIC (because the theft record is more than five years old), notify NICB. NICB will contact the originating agency and either provide the lead on the vehicle, or update the NICB mirror image file to remove the recovered vehicle.

8.4 Insurance Theft Records

Hits on the insurance theft file are similar to hits on the NCIC mirror file. If there is title activity after the theft, determine if the vehicle has been recovered. If it has not been recovered, it may be considered for further analysis.

8.5 Nonconforming VIN Records

For each nonconforming VIN, the VIN decoder program includes text indicating how the VIN fails to conform to the standard. Based on your analysis of the VIN decoding hits and your knowledge of theft operations in your jurisdiction, select records for further analysis.

1. VIN sequence too high. When the manufacturer sends production records to NICB, the information includes a range of valid sequence numbers for the production of that type of vehicle. However, sometimes the manufacturer continues to produce VINs after the sequence information is sent to NICB. The VIN includes the production number of the vehicle (in the last five digits). If the sequence number is too high, it could also be because of an error made by the clerk titling the vehicle or because it is a fake VIN. Possible actions to verify the VIN include:

- Call the manufacturer to verify the production sequence numbers.
- Inspect the vehicle. If the public VINs and stickers look legitimate, it probably is OK.

Over time, the investigator gets a feel for which manufacturers aren't precise in the production numbers provided to NICB.

2. VIN sequence too low. Usually the low end of the production range sent by the manufacturer to NICB is more accurate than the high end. However, this response could also be due to typographical errors introduced during titling. You can verify the VIN by calling the manufacturer to verify the production sequence numbers or inspecting the vehicle.

3. Failed check digit. This response has the highest correlation to stolen vehicles. The cause of this response could be:

- A typographical error made by the state titling clerk when the title was created
- The VIN is on a gray market vehicle, i.e., a vehicle created for use in a country other than the U.S. In the past, some of these vehicles did not contain a check digit in the VIN; however, this does not happen much since the 1980's.
- The VIN is fake.

To investigate further, consider these steps:

Get information from the previous titling state. Using the VIN, query the previous titling state through NLETS. If there is a "not on file" response, contact the state. It is possible that the previous state has purged its title database and the "not on file" response is OK. In this case, the previous state may be able to search its archives to determine whether the previous title was legitimate. It is also possible that the previous state's title document was counterfeited.

- Get more information from the current titling agency. Look for these things:
 - Owner has applied for registration, but not title.
 - Signatures appear forged
 - Data in the documents appears inconsistent.
 - See if the titling agency can provide information on all title surrenders from the previous titling state within the same model year. Do NLETS inquiries on these VINs and see what volume is returned with the "not on file response".

4. Invalid WMI. The WMI identifies the manufacturer. This response virtually always is a result of a typographical error in the VIN recorded on the state's title database.
5. Invalid Year Character. This response is usually the result of a typographical error in the VIN recorded on the state's title database.
6. No Match to VEDTAB. If the VIN prefix does not match a value in the VEDTAB, it returns this information. This response can be the result of a typographical error, the attempted decoding of a state-assigned VIN, or a counterfeit VIN.
7. VIN exempt from edit. This response is based on the model year (position 10) specified in the standard for VIN formats. If the model year is equal to or greater than the current calendar year minus 1, the VIN validation process does not check the sequence number against the sequence number lists provided by manufacturers.
8. VIN too short or VIN too long. These responses indicate that the VIN provided by the titling agency is not 17 characters as required by the standard. This response may be caused by a typographical error, it may be that the VIN provided by the titling agency is one that has been assigned by the state, or it may be one that was created before the standard was established, in 1981.

8.6 Theft After Export

The theft file hits can be compared to the export file hits, to see if any vehicles were reported stolen after being exported.

Compare the VINs on the theft file hits with VINs on the export file hits. For those that match, compare the theft date to the date of export. Take a closer look at those records where the theft date is more recent than the date of export. It is possible that a person exported the vehicle, then imported it, then the vehicle was stolen. If the dates are close together, it may be insurance fraud, where the owner exports the vehicle then reports it stolen in an attempt to get an insurance payoff. Things to consider:

- Contact an agent in the export destination country. Ask for verification that the vehicle entered the destination country, or has been registered in that country, or whether it can be verified that the vehicle is physically in that country.
- Contact the shipper to see if it can verify that the vehicle left the country on a particular ship, via its background paperwork.

8.7 Data from the State Extract

Data from the state extract file can also help you select records for further investigation. Examples of factors to consider from the state extract include:

- Compare the County of Registration with the County of Last Activity. Because most registration and titling transactions are done in a branch office in the county of registration, a different County of Last Activity may indicate fraud. If the County of

Registration and County of Last Activity differ, keep the record on the hit file to consider additional factors.

- If the Previous Titling State is known to have frequent instances of auto theft or title fraud, keep the record on the hit file to consider additional factors.

8.8 Requesting Additional Data

Request more data on the VINs on the hit list from the motor vehicle agency, AAMVA and other organizations.

The motor vehicle agency should provide all original documents they have on file if possible, but microfiche or other copies are acceptable if originals are not available. Original documents are preferable because it is easier to identify counterfeits or modifications to the documents when you are looking at the original.

Documents that are helpful from the motor vehicle agency include documents that are collected by the motor vehicle agency when processing customer transactions:

- MCO with dealer reassignments and first owner information
- Title and registration application forms. These documents show owner name and address along with signatures that can be compared to other documents in the motor vehicle agency package.
- Title document from the previous titling state
- Duplicate title documents
- Motor vehicle use and sales tax forms
- Driver license information, including SSN and picture
- Registration information, including addresses and dates they were in effect
- Telephone and fax numbers

Request information from other data sources. These can provide additional information such as SSNs, addresses, and the dates that the addresses were in effect. Possible sources of information are:

- NMVTIS for title history and brand information
- Data service providers, such as Autotrack, ChoicePoint, etc.
- Utilities, such as the telephone and electric companies
- Insurance companies
- Agencies that issue professional licenses
- Agencies that issue concealed or other weapons permits
- State titling agency for information on VINs of other vehicles possibly housed at the owner's address. If the VIN on the hit list is a likely stolen vehicle, the VINs also residing at that owner's address are run through the NICB files.

9 Performing and Documenting the Sweep

9.1 *Select Records for the Sweep*

After collecting additional data, analyze each record to determine if it is a likely enough theft or fraud case to be included in the sweep. The agent's expertise is critical in this analysis. Here are some suggestions:

- Check the documents for changes in ownership. Change in ownership should be accompanied by documentation of title transfer. Compare signatures on the applications to signatures on the title. The name and signature in the owner name fields should match from document to document. If not, this could be an indicator of fraud.
- Look at duplicate titles for forged signatures.
- Look at the signatures on the applications, titles, registrations, motor vehicle use and sales tax forms. Check to see that the owner names and signatures are consistent from dealer to owner and subsequent owners.
- Check to see that the title issue date is consistent with the sales forms. Legitimate owners usually apply immediately for title once the sale is finalized.
- Check the vehicle color as shown on the MCO. This can be compared to the vehicle showing that VIN during a sweep. If the colors don't match, this could indicate that the VIN from the MCO has been cloned onto a stolen vehicle. It could also indicate that the owner has gotten the vehicle painted, but this is not likely on a new vehicle. When combined with other indicators, the color data can provide support for a more detailed inspection.
- Review the documents provided by the state motor vehicle titling agency to find evidence of altered or counterfeit documents or forged signatures.
- Compare the salvage date to the model year. If close, this indicates a vehicle with a recent model year. These have a higher ACV, which makes it more likely to have had its VIN transferred to a stolen vehicle.
- Look for vehicle makes that are popular with thieves.

If analysis of all the information gathered indicates theft or fraud where the real owner of the vehicle is unaware that his or her title document and VIN has been used, the law enforcement agent may work with the owner to add to the case file. The law enforcement agent describes the investigation to the owner, who reviews the case documentation. The owner signs an affidavit swearing that he or she did not authorize anyone to use the title and VIN and swearing that the title transfer is a forgery. This may allow the owner to provide information to the case without requiring him or her to testify in the court case and also reduces prosecution costs.

VINs remaining on the hit list are prioritized with the ones most likely to result in recovery of stolen property and prosecution of title fraud being placed on the sweep list.

9.2 Create the Sweep List

Based on the analysis described above, the officer selects VINs to include in vehicle theft sweeps. The officer may need to make a final selection of the cases most likely to yield arrests and recovered vehicles if there are not enough investigators to inspect all the vehicles identified in the analysis. Creating the sweep list involves organizing and adding data to the case tracking spreadsheet:

- The spreadsheet provided to the sweep team includes only the vehicles to be inspected in the sweep (other records might be kept in another spreadsheet).
- Identify the addresses where the vehicles are likely to be found.
- Highlight the data needed to identify the vehicle. Include descriptive data for the vehicle such as VIN, make, model year, plate number, color.
- Include names of owners that are likely to be at that address.
- Include other information on the owners and addresses, such as previous law enforcement incidents and known weapons.

9.3 Prepare the Sweep Teams

Organize the sweep list into groups of vehicles to be inspected by each sweep team.

- Sort the records included in the sweep by ZIP code.
- Plot the addresses into clusters. Since each cluster will be visited by a single sweep team, each cluster includes only the number of addresses that can be visited in one night.
- Create the teams. Include at least one individual on each team who knows where to find VINs and CVINs on the vehicles and has significant experience in identifying changed or faked VINs. Each sweep team should include representatives from other agencies who can help investigate and prosecute cases, for example, FBI, CBP, and state, local or neighborhood police departments.

9.4 Do the Sweep

Miami investigators found the best time for sweeps is about 4:00 a.m. on a weeknight, when people are likely to be home asleep. The sweep teams go to each address on their list, find the vehicles, and inspect them to determine whether they are the vehicles being sought. The inspection also verifies whether a vehicle is stolen, renumbered, or is inconsistent with its ownership documentation. Enforcement action may include towing the vehicle and arresting the owner.

The sweeps are done quickly, especially when it is possible that the sweep team could be exposed to danger or risk. Sometimes the sweep results in additional arrests and recoveries. For example, the vehicle on the sweep list can have stolen goods or drugs in the trunk, or, outstanding warrants may exist for individuals at the investigation address.

Sweeps based on salvage file hits are more risky for the sweep teams because the vehicle inspection is more detailed. It takes more time to inspect a salvage vehicle than other vehicles, and the inspector has more exposure to potentially hostile owners.

9.5 Update Case Documents

After the sweep, update the case documents with the results:

- Note the VINs that were found, inspected, and recovered. These cases will get further attention as they are prepared for court action.
- Note the VINs that were found, inspected, and were not recovered because they showed no evidence of theft or fraud, and close the cases, if appropriate. These cases will not be taken to court or get further action.
- Note the cases where the address was checked, but the vehicle was not found. These cases may get further attention, assuming resource availability.
- Note the cases where the address was found to be nonexistent. Notify the state motor vehicle titling agency, which can put a hold on the owner, title, and registration records. Put a felony message on NCIC to impound the vehicle and arrest its occupants.

9.6 Prepare Cases for Court

Assemble all information collected on each theft or fraud case to prepare the case for prosecution. Case information may include information received from the motor vehicle titling agency, NICB, owner affidavits, towing records, recovery reports, arrest affidavits and other data sources.

9.7 Case Disposition

After the case has been addressed in court, update the case documents with the results:

- Note the cases prosecuted successfully and those prosecuted unsuccessfully. Note the reasons for unsuccessful prosecution and the keys to successful prosecution.
- Record the disposition of the vehicle, e.g., returned to the owner, returned to the insurance company, etc.
- Update NCIC theft records, or refer the disposition to the ORI for update.

9.8 Document Return On Investment

Tracking cases and their dispositions enables you to measure and document the success of your auto theft efforts. Document the results of each sweep in terms of such factors as inspections, arrests, prosecutions, convictions, vehicles recovered and total value of vehicles recovered. The information can demonstrate the benefits of the process to decision-makers who set budgets and priorities. Showing the return on investment (ROI) can provide a convincing argument for creating subsequent projects. The Miami-Dade task force's results (see the introduction above) are examples of statistics that can help document the success of the program. To calculate ROI, track costs and benefits. The following item may be considered part of the cost of each sweep:

- People costs = labor category * labor rate * hours worked
- Fringe and overhead = people costs * fringe/overhead rate. If the costs for people don't include fringe and overhead, consider including them in the ROI calculation. Including fringe and overhead or not should be a decision consistent with how costs are calculated for other projects within your organization. The fringe and overhead rate should be the rate used in similar calculations for other projects in your organization.
- Computer processing costs (e.g., cost of processing time, CDs, transmissions, etc.)
- Equipment costs
- Travel costs
- Court costs
- Miscellaneous expenses

Some benefits are measurable in terms of dollars while other benefits are intangible. The measurable benefits can be used to calculate a hard dollar ROI. However, it is also important to recognize the intangible benefits along with the tangible ones. Benefits to consider include:

- Value of vehicles recovered
- Value of illegal property recovered, such as drugs or firearms
- Goodwill created for the organization/city/state in increasing theft recoveries
- Number of successful prosecutions
- Reduction in theft rate

After calculating your ROI on each sweep, provide the information to the NMVTIS law enforcement committee at AAMVA. This information can be used to encourage Congress and DOJ to provide funding to state titling and law enforcement agencies to implement NMVTIS and the DAFT procedure.

10 Contact Information

This document was created by AAMVA based on procedures established by the Miami-Dade Auto Theft Task Force in conjunction with NICB. For more information about the Miami-Dade Auto Theft Task Force and its process for analyzing data and recovering stolen property, contact:

Mary Myerscough
 Miami-Dade Police Dept., Auto Theft Task Force
 7925 NW 12 St., Room 301
 Miami, FL 33126
 (305) 994-1033
mkmyerscough@aol.com

For more information about NICB, its files, and its efforts to reduce vehicle theft and title fraud, contact:

Dan Abbott
NICB
10330 S. Roberts Rd.
Palos Hills, IL 60465
(708) 237-4410
dabbott@nicb.org

For more information about this procedure, NMVTIS, the state titling agency's data and procedures, and how law enforcement agencies can use the information effectively, contact:

Karen Massey
AAMVA
4301 Wilson Blvd., Suite 400
Arlington, VA 22203
(703) 908-8293
kmassey@aamva.org