



Catalytic Converter Theft: Working Towards Effective Solutions

Over the last few years, catalytic converter theft has been on the rise. According to State Farm's auto claims data, catalytic converter theft has increased 293 percent nationwide over the past year.¹ Similarly, over the past year, the New York Police Department (NYPD) and New York State Department of Motor Vehicles has found that there has been a 572 percent increase in catalytic converter thefts.² State Farm's data also shows that catalytic converter theft is not a victimless crime and has paid out more than \$33.7 million in claims associated with catalytic converter theft over the past year alone.^{3,4}

Catalytic converter theft has become a major problem and a major source of property loss due to several general issues, that when taken together, cause catalytic converters to become a prime target for thefts. First, catalytic converter theft has become popular amongst criminals due to the fact that there is an active scrap metal market for detached catalytic converters. Second, criminals can quickly and easily remove catalytic converters from vehicles.⁵ Third, unlike major component parts required by federal law to be marked with a Vehicle Identification Number (VIN) or VIN derivative, catalytic converters are not readily traceable back to the vehicle they were removed from.⁶ Fourth, the sales transactions in the scrap metal market are poorly regulated and poorly tracked. Finally, catalytic converters contain the precious metals of rhodium, platinum, and palladium. All three of these metals, which are referred to as Platinum Group Metals (PGM) have hit record highs in terms of their price with rhodium selling at \$29,800.00 per ounce in March 2021.⁷ These factors make catalytic converters an enticing target for criminals.

Once a criminal has stolen a catalytic converter off of a vehicle, the criminal can quickly sell the stolen property on a secondary market either as an individual piece or in bulk (after having accumulated multiple catalytic converters) with little in the way of transparency. At this point, the stolen catalytic converter or converters are untraceable and can be immediately absorbed back into the supply chain.

Given the current epidemic of catalytic converter theft and the fact that they are being stolen off of standing vehicles and causing millions of dollars in losses to vehicle owners, insurance companies, and automotive dealers, this guide is meant to provide assistance to law enforcement and policymakers. This guide will provide an overview of the normal catalytic converter life cycle and the relevant component entities involved in the industry. Law enforcement agencies and officers can benefit from understanding the basics of legitimate catalytic converter product flow, which will help investigators recognize unreasonable activity and unjustified volumes of product that may be coming from illegitimate sources.

¹ State Farm, *State Farm Auto Claims Data Reveals Explosion in Catalytic Converter Theft*, (July 20, 2021), <https://newsroom.statefarm.com/auto-claims-analysis-reveals-explosion-in-catalytic-converter-theft/>.

² NBC New York, *DMV Issues Warning as NYC Vehicle Thefts Surge in 2021*, (July 13, 2021), <https://www.nbcnewyork.com/news/local/dmv-issues-warning-as-nyc-vehicle-thefts-surge-in-2021/3151954/>.

³ State Farm, *State Farm Auto Claims Data Reveals Explosion in Catalytic Converter Theft*, (July 20, 2021), <https://newsroom.statefarm.com/auto-claims-analysis-reveals-explosion-in-catalytic-converter-theft/>.

⁴ It is important to note that State Farm's data only relates to State Farm's insured and does not encompass the uninsured or those covered by other insurance providers. Therefore, the real scope of the problems associated with catalytic converter theft are in fact many magnitudes larger.

⁵ Erin Marquis, *Watch Thieves Steal a Catalytic Converter in Less than 30 Seconds*, Jalopnik, (June 11, 2021), <https://jalopnik.com/watch-thieves-steal-a-catalytic-converter-in-less-than-1847079696>.

⁶ Federal Parts Marking Requirements can be found in both 49 U.S.C. § 33101 and 49 C.F.R. § 541.5.

⁷ Myra Saefong, *Low-Profile Rhodium is on an historic Run. That's Impressive Since it Doesn't Trade on Exchanges*, Barron's, (April 1, 2021), <https://www.barrons.com/articles/rare-low-profile-rhodium-goes-on-an-historic-run-51617309670>.

The National Salvage Vehicle Reporting Program (NSVRP) is a not-for-profit 501 (C) (3). The organization was founded to support law enforcement and to promote and support efforts to advance the National Motor Vehicle Title Information System (NMVTIS). NSVRP's mission is to support initiatives to control auto-theft and title abuse. NSVRP's Board of Directors consists of representatives of major law enforcement groups. The US Department of Justice has applauded NSVRP for developing reporting standards for NMVTIS reporting and has strongly encouraged the operator to adopt these standards as suggested voluntary compliance standards. NSVRP has been recognized both by the Department of Justice and the FBI for 'Exceptional Service in the Public Interest' for its public policy efforts.



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* These two documents are available for downloading from the IAATI.org website. Inclusion of these IAATI documents in this appendix is provided by NSVRP as a public service and does not constitute an endorsement by IAATI.

The Normal Catalytic Converter Lifecycle

What is a Catalytic Converter and What Does it Do:

According to the United States Environmental Protection Agency (EPA), “The catalytic converter is the most important pollution control device on a vehicle. Catalytic converters have been installed on most 1975 and newer passenger cars and light-duty trucks by the manufacturers to reduce exhaust emissions and allow the vehicles to meet Federal standards.”⁸ Only internal combustion engine vehicles require catalytic converters – electric vehicles and hydrogen powered vehicles do not require these emission control devices. Catalytic converters are an important component part of motor vehicles and have played a significant role in improving air quality throughout the United States by reducing the amount of pollutants from motor vehicles. Catalytic converters work by reducing the amount of pollutants from motor vehicle exhaust systems by converting over 90% of hydrocarbons (HC), carbon monoxide (CO) and nitrogen oxides (NO_x) from the engine into less harmful carbon dioxide (CO₂), nitrogen and water vapor.⁹ The catalytic converter has proven so effective in reducing pollution from motor vehicles that the EPA has called it “one of the great environmental inventions of all time.”¹⁰

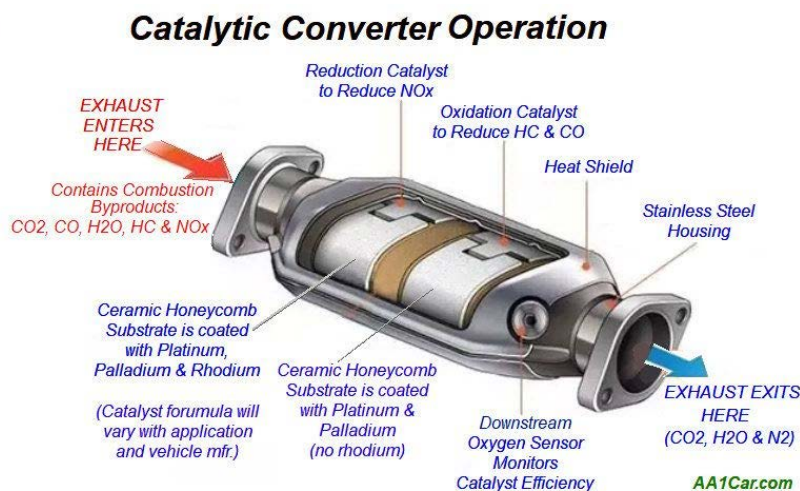


Fig. 1: Catalytic Converter¹¹

Manufacture and Installation:

Catalytic converters are typically manufactured by tier 1 suppliers, which are major companies that directly supply motor vehicle manufacturers (OEMs) with components and parts for installation on newly manufactured vehicles.

⁸ U.S. Environmental Protection Agency, Office of Air and Radiation, EPA-420-F-00-101, *What You Should Know About Using, Installing, Or Buying Aftermarket Catalytic Converters*, 1, (September 2000).

⁹ International Platinum Group Metals Association, *By how much do they reduce pollution?*, <https://ipa-news.com/index/pgm-applications/automotive/catalytic-converters/by-how-much-do-they-reduce-pollution.html?PHPSESSID=1eab3fd396c7cad1bbfe08bca4fae038>.

¹⁰ U.S. Environmental Protection Agency (EPA), *History of Reducing Air Pollution from Transportation in the United States*, <https://www.epa.gov/transportation-air-pollution-and-climate-change/accomplishments-and-success-air-pollution-transportation>.

¹¹ Larry Carley, *What You Should Know About Catalytic Converters*, AA1 Car: Automotive Diagnostic Repair Help, (2021). <https://www.aa1car.com/library/converter.htm>.



Over the last five years, according to the Department of Energy, U.S. light-duty vehicle¹² sales averaged over 16 million per year.¹³ Therefore, because there may be anywhere between one to four different catalytic converters on each vehicle, there is a need to manufacture approximately 50 million catalytic converters per year just to service the initial annual requirements of the U.S. car market.¹⁴ Along with light-duty vehicles, which include passenger and light-duty trucks, there is an additional need for newly manufactured catalytic converters for heavy trucks, tractors, and other specialty applications.

Federal law requires newly manufactured catalytic converters to be warranted by the manufacturer for 8 years or 80,000 miles (whichever occurs first).¹⁵ Newly manufactured catalytic converters can last the lifetime of a vehicle without needing to be replaced. However, in limited cases, catalytic converters need to be replaced and are most commonly replaced due to an event such as a motor vehicle accident, theft, or failing a state or local emissions test.¹⁶

Catalytic Converter Repair Market:

Depending on the jurisdiction and based upon federal and state air quality laws, vehicle owners are limited in the types of catalytic converters they can purchase as replacement parts. There are four types of catalytic converters: (1) New OEM; (2) EPA Compliant Used OEM;¹⁷ (3) California Air Resources Board (CARB) Certified Aftermarket;¹⁸ (4) Aftermarket. Four states prohibit the use of EPA compliant used catalytic converters in vehicle repairs and only permit CARB Aftermarket or New OEM catalytic converters to be used as replacement parts. Note that OEMs are obligated to service the catalytic converters of their customers throughout the 8 year or 80,000-mile warranty period.¹⁹ Therefore, the other types of catalytic converters discussed may not be relevant until the warranty period ends. Additionally, other countries do not place restrictions on what catalytic converter type can be used as a replacement.

Current federal law permits used OEM catalytic converters to be used as vehicle repair parts so long as they comply with the EPA's 1986 enforcement policy.²⁰ The policy goal behind the creation of the EPA's 1986 enforcement policy was to allow consumers to have access to "less expensive yet still effective aftermarket converters [which would] give owners more incentive to replace their worn-out converters, [thus] keeping our air cleaner."²¹ Currently, EPA Compliant Used OEM catalytic converters are not a significant portion of the replacement parts market.²²

¹² Under the National Motor Vehicle Title Information System (NMVTIS) Light duty vehicles are classified as vehicles under 10,000 lbs. G.V.W.

¹³ U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, *FOTW #1116, January 13, 2020: U.S. Light-Duty Vehicle Sales in 2019 Were Nearly 17 Million Vehicles*, (January 13, 2020) <https://www.energy.gov/eere/vehicles/articles/fotw-1116-january-13-2020-us-light-duty-vehicle-sales-2019-were-nearly-17>.

¹⁴ Catalytic converters can vary in size and value depending upon the vehicle but on average, a minimum of two catalytic converters will be prime targets for theft. In some cases, criminals target vehicles and catalytic converters based upon the amount of precious metals in the catalytic converters and the ease of access to remove the converters with minimum effort and quickly.

¹⁵ 42 U.S.C. § 7541(i)(2).

¹⁶ Approximately half of U.S. states do not have emissions testing requirements.

¹⁷ Sale and Use of Aftermarket Catalytic Converters, 51 Fed. Register 28114 (August 5, 1986).

¹⁸ Cal. Code Regs. tit. 13 § 2222; N.Y. Comp. Codes R. & Regs. tit. 6 § 218-7.2; 5 Colo. Code Regs. § 1001-24-B-VIII; Maine Department of Environmental Protection, Maine's Catalytic Converter Standards, <https://www.maine.gov/dep/air/mobile/catconverter.html>.

¹⁹ 42 U.S.C. § 7541

²⁰ EPA Compliant Used OEM Catalytic Converters must undergo the following performance tests: (1) container mechanical integrity check; (2) substrate mechanical integrity check; and (3) a performance test. Sale and Use of Aftermarket Catalytic Converters, 51 Fed. Register 28118 (August 5, 1986).

²¹ U.S. Environmental Protection Agency, Office of Air and Radiation, EPA-420-F-00-101, *What You Should Know About Using, Installing, Or Buying Aftermarket Catalytic Converters* (September 2000).

²² The need for EPA Compliant Used OEM catalytic converters serving as replacement parts has historically been limited. However, with the epidemic of catalytic converter thefts, there is a substantial demand for replacement catalytic converters to service the existing vehicle population.

Catalytic Converters, a Circular Economy:

In order to acquire the vast amounts of PGMs needed in the manufacture of new catalytic converters, catalytic converter manufacturers source these metals either from newly mined metals or from recycled metals. According to a leading online publication for the materials science community, 80 percent of the total rhodium, 74 percent of the total palladium, and 40 percent of the total platinum are consumed by the automotive catalyst industry.²³ Therefore, there is a massive need for the PGMs used in catalytic converters to supply manufacturers with the resources needed in the production of new catalytic converters to meet the demand of the OEMs newly manufactured vehicles. Additionally, OEMs and aftermarket catalytic converter manufacturers create even greater demand due to the fact that catalytic converters need to be manufactured to service the existing vehicle fleet.²⁴ Demand for PGMs and replacement catalytic converters has increased due to the increase in theft.

Besides obtaining PGMs from new mining, catalytic converter manufacturers can obtain PGMs through the recycling and reclamation of PGMs contained in used catalytic converters. Recycling PGMs is estimated to be significantly cheaper than new mining. For example, the cost to recover 1 ounce of platinum from recycled catalytic converters is more than 10 times less expensive than mining virgin platinum.²⁵ PGMs are reclaimed from end-of-life vehicles and are eventually reused in the manufacture of new catalytic converters. As a result, there is continuous demand and a marketplace for recycled catalytic converters. These recycled catalytic converters and the PGMs they contain are returned upstream and eventually flow back into the manufacturing process for new OEM catalytic converters.²⁶

The Normal Detached Catalytic Converter Lifecycle:

The normal lifecycle of a catalytic converter starts with the manufacture of a new catalytic converter to be installed in a newly manufactured vehicle and ends by being smelted and refined into a form that can be reused in the remanufacture of new catalytic converters. The normal flow of a catalytic converter that has reached the end of its useful life starts with: (1) used/end-of-life vehicles; (2) collectors or automobile recyclers; (3) processors; (4) smelters; (5) refiners. While this is an overview of the process a catalytic converter goes through from removal from a vehicle to the refining of the PGMs contained within the catalytic converter, steps may vary depending upon the businesses involved and the variations in business models. These variations can be the result of business decisions based upon economies of scale or other reasons.^{27,28}

²³ AZoM Materials, *Determining Platinum, Palladium, and Rhodium in Automotive Catalytic Converters Using ICP Analysis*, January 8, 2015, <https://www.azom.com/article.aspx?ArticleID=11593>.

²⁴ Servicing the existing vehicle fleet is referring to catalytic converters needing to be replaced due to an event such as a motor vehicle accident, theft, or failing a state or local emissions test.

²⁵ Cliff Hope, *Revved Up Demand: Demand for PGMs from recycled catalytic converters is strong heading into 2018*. Recycling Today, (January 2018). <https://www.recyclingtoday.com/article/pgms-scrap-demand/>.

²⁶ *Id.*

²⁷ One example of where the normal lifecycle differs from the normal detached catalytic converter lifecycle takes place when vehicle collectors/recyclers rely upon intermediary parties (referred to as core buyers) that purchase and collect detached catalytic converters in small quantities. Core buyers will then aggregate their smaller quantities and sell detached catalytic converters up the chain.

²⁸ Another example of where the normal lifecycle differs from the normal detached catalytic converter lifecycle occurs when vehicle collectors/recyclers generate a high enough volume of detached catalytic converters that they operate multiple steps higher on the normal detached catalytic converter lifecycle.

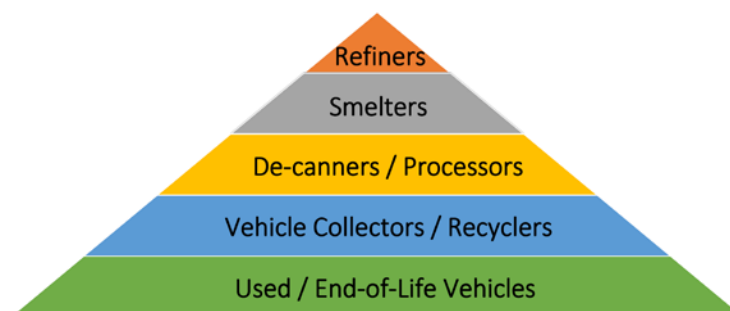


Fig. 2: The Normal Detached Catalytic Converter Lifecycle

Used/End-of-Life Vehicles:

The flow of the catalytic converter recycling market generally begins with used cars and end-of-life vehicles. Catalytic converters on these vehicles are eventually removed and enter the stream of commerce that eventually ends with the PGMs contained in the used catalytic converters being removed and repurposed for the manufacture of new catalytic converters.

Vehicle Collectors/Recyclers:

There are three major classes of entities that handle end-of-life vehicles: (1) automotive recyclers; (2) scrap metal recyclers; and (3) abandoned vehicle programs. Automotive recyclers typically purchase vehicles for the purpose of reselling used automotive parts and extracting as much value out of the vehicle prior to selling the remaining hulk of the vehicle to a scrap metal recycler and shredder. Scrap metal recyclers and shredders collect many lower-quality vehicles from various sources such as automotive recyclers, towing companies, or abandoned vehicle programs. Unlike automotive recyclers whose priority is on selling used automotive parts, scrap metal recyclers place an emphasis on shredding and selling recycled metals to be later used in new manufacturing applications. Abandoned vehicle programs are typically run by jurisdictions and localities that collect cars which were presumed to be abandoned and are eventually disposed of. When one of these classes of entities acquire vehicles, the catalytic converters on a vehicle are removed and begin the process of being transferred up the chain until they are refined to a quality capable of being used in the remanufacture of catalytic converters.

De-Canners/Processors:

After having been removed from a vehicle, detached catalytic converters can be sold to a de-canner/processor. It's important to note that scrap metal recyclers and shredders can also serve as a de-canner/processor. What differentiates a processor from a vehicle collector/recycler is that they amass large quantities of detached catalytic converters and subsequently remove the catalyst/honeycomb, which contains the valuable PGMs from the catalytic converter's housing (this process is also referred to as de-canning). De-canners/processers then sell the removed catalysts containing the PGMs to smelters.

Smelters:

Smelters purchase and, in some cases, process catalytic converters and their catalysts/honeycombs and extract the valuable PGMs from the catalysts/honeycombs. Smelters buy catalysts/honeycombs and catalytic converters and pay sellers based upon the weight of the metals generated once they process the catalysts/honeycombs. The smelting



process typically involves heating the catalyst material and extracting the PGM metals as a melted mixture of material. The process of smelters paying sellers of catalysts/honeycombs and catalytic converters based upon the weight of the metals recovered in the smelting process is called an assay-based payment. Smelters paying catalytic converter suppliers must ensure that each shipment of catalytic converters arriving from a supplier is kept separate from one another during processing. This ensures that each supplier is paid properly. The PGMs recovered by smelters is not in a form usable for manufacturing purposes. Therefore, smelters must sell the recovered PGMs to a refiner.

Refiners:

Refiners are the last stop before the recovered PGMs can be used for manufacturing of new catalytic converters. Refiners purchase or acquire smelted PGMs that need to be processed in order to separate the smelted metal into the pure individual metals of rhodium, palladium, and platinum. The refining process involves chemical separation of the smelted material into the individual pure PGM metals. Once the PGMs have been refined, they are then sold to the catalytic converter manufacturers.

Catalytic Converters and Why They Provide Such an Appealing Target for Criminals

Catalytic converter theft is on the rise with data indicating that there has been a 293 percent increase in catalytic converter this past year alone.²⁹ There are six factors that have directly fueled the dramatic increase in catalytic converter theft: (1) there is demand within the scrap metal market for the valuable PGMs contained within catalytic converters; (2) criminals can quickly and easily remove catalytic converters from vehicles and unlike other types of vehicle theft, criminals do not need to gain access to the motor vehicle to commit catalytic converter theft;³⁰ (3) unlike major component parts required by federal law to be marked with a Vehicle Identification Number (VIN) or VIN derivative, catalytic converters are not readily traceable back to the vehicle they were removed from;³¹ (4) catalytic converters can be de-canned, which removes any ability for law enforcement to identify where they originated from;³² (5) catalytic converters can be sold in bulk without the need to advertise them for sale; (6) there are many buyers that can purchase detached catalytic converters and accept bulk shipments with very limited scrutiny. These six factors create an ideal environment where lone criminals and organized theft rings can commit catalytic converter thefts with ease and little chance of being caught because illegally obtained catalytic converters can be laundered into established business operations.

²⁹ State Farm, *State Farm Auto Claims Data Reveals Explosion in Catalytic Converter Theft*, (July 20, 2021), <https://newsroom.statefarm.com/auto-claims-analysis-reveals-explosion-in-catalytic-converter-theft/>.

³⁰ Erin Marquis, *Watch Thieves Steal a Catalytic Converter in Less than 30 Seconds*, Jalopnik, (June 11, 2021), <https://jalopnik.com/watch-thieves-steal-a-catalytic-converter-in-less-than-1847079696>.

³¹ Federal Parts Marking Requirements can be found in both 49 U.S.C. § 33101 and 49 C.F.R. § 541.5.

³² De-canning is a major risk factor that allows for the “washing” of stolen catalytic converters. While there are economic benefits to de-canning catalytic converters prior to selling and transporting bulk quantities to a de-canner/processor and or smelter, by de-canning a catalytic converter, the ability to track the material back to its origin becomes impossible. Also, law enforcement should be aware that it only makes sense for a seller to de-can their catalytic converters prior to selling when the purchaser is a smelter paying on assay.

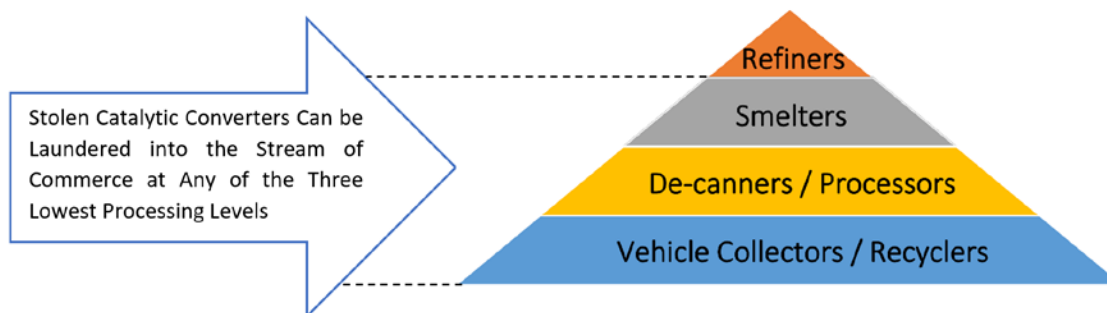


Fig. 3: The Normal Detached Catalytic Converter Lifecycle Can be Leveraged to Launder Stolen Catalytic Converters

Demand for Valuable PGMs in the Scrap Metal Market:

From a historical perspective, catalytic converter theft has not been a significant issue for law enforcement. Catalytic converters have been a vehicle component installed on internal combustion engine vehicles since 1975 – they are not a new vehicle part.”³³ However, catalytic converter theft has become a leading type of vehicle parts related thefts over the past several years. While the reason why catalytic converter theft has become so prevalent is due to the high prices paid for rhodium, palladium, and platinum (Platinum Group Metals or PGMs), it is important to understand the reason why PGMs have become so valuable. Law enforcement and policymakers need to recognize why the price of PGMs have increased so dramatically in recent years for two reasons: (1) because it is directly tied to the catalytic converter lifecycle; and (2) to avoid misleading claims that misdirect the problem of catalytic converter theft that hamper law enforcement and legislative efforts to combat the problem. PGMs for use in catalytic converters can either be mined or recovered from detached catalytic converters.

As explained earlier in the section entitled, “*Catalytic Converters, a Circular Economy,*” there is a high demand for the PGMs contained in catalytic converters driven by the need to manufacture new catalytic converters for newly manufactured vehicles. The prices of PGMs has increased over recent years due to increased demand for new catalytic converters. The increased demand for new catalytic converters is directly attributed to greater expansion of major markets (such as China and India) that did not previously regulate vehicle emissions in a strict manner. For example, vehicle emissions have been identified as one of the most significant contributors to air pollution in China and over the last two decades.³⁴ As a result of poor air quality, China has implemented enhanced inspection requirements for key emission control components such as catalytic converters.³⁵ Due in part to the increased demand for newly manufactured catalytic converters in countries such as China and India, the price of PGMs has increased.

In addition to increased demand for newly manufactured catalytic converters raising the price of PGMs, the price of PGMs in catalytic converters is increasing partly due to the need to replace converters on vehicles due to theft. The demand for new catalytic converters (and thus PGMs) for replacement on new and especially for older vehicles has increased due to thefts, putting pressure on car manufacturers to produce larger quantities of replacement catalytic converters due to federally mandated warranty obligations.³⁶ The large volume of catalytic converters being stolen off of existing U.S. vehicles deforms the market by increasing demand and thus price for PGMs due to the need for

³³ U.S. Environmental Protection Agency, Office of Air and Radiation, EPA-420-F-00-101, *What You Should Know About Using, Installing, Or Buying Aftermarket Catalytic Converters*, 1, (September 2000).

³⁴ Gong et al. (2017) Gong MM, Yin SS, Gu XK, Xu YQ, Jiang N, Zhang RQ. Refined 2013-based vehicle emission inventory and its spatial and temporal characteristics in Zhengzhou, China. *Science of the Total Environment*. 2017;599:1149–1159. doi: 10.1016/j.scitotenv.2017.03.299

³⁵ Wang et al., *Vehicle emission and atmospheric pollution in China: problems, progress, and prospects*, Peer J, (May 16, 2019). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6526014/>.

³⁶ 42 U.S.C. § 7541.

newly manufactured catalysts to replace stolen catalytic converters. The result of widespread catalytic converter theft also results in the need for vehicle owners to pay for expensive repairs, which can cost anywhere between \$1,000.00 to \$8,000.00 to replace each stolen catalytic converter (vehicles contain anywhere between one to four catalytic converters). There is an additional cost to widespread catalytic converter theft because there are now many vehicles that are no longer operating in a manner that effectively reduces pollutants from vehicle emissions.

Overall, increased demand for newly manufactured catalytic converters has caused the price of PGMs to skyrocket, which in turn has caused catalytic converters to become a major target for theft, which also contributes to higher PGMs prices.

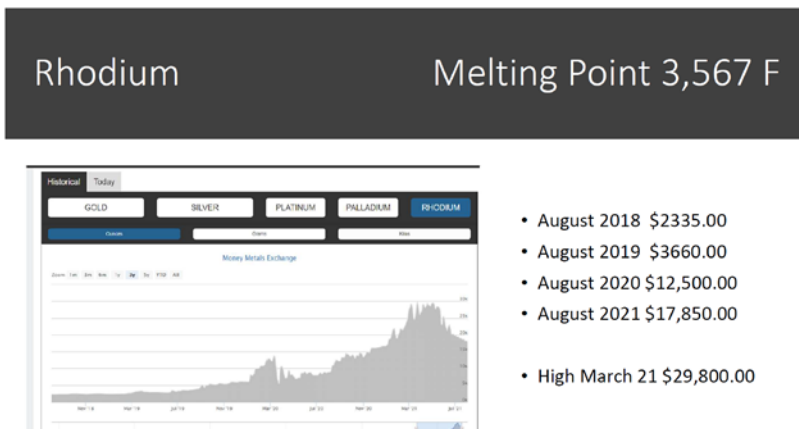


Fig. 4: The Price of Rhodium Per Ounce

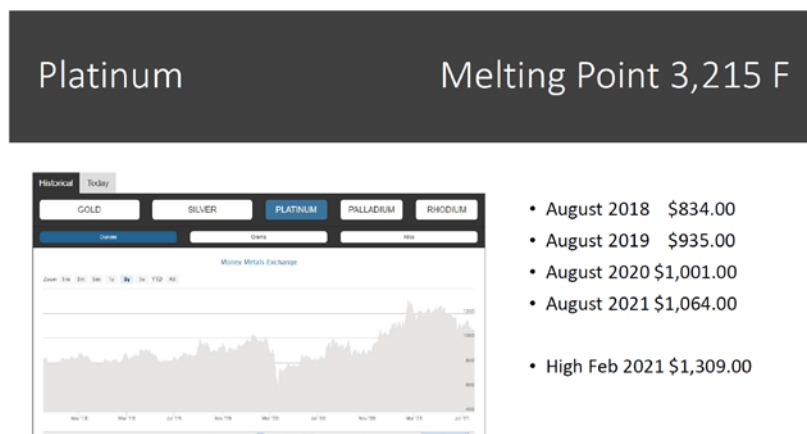


Fig. 5: The Price of Platinum Per Ounce

Palladium Melting Point 2,831 F



- August 2018 \$918.00
- August 2019 \$1,485.00
- August 2020 \$2,236.00
- August 2021 \$2,693.00
- High May 2021 \$2,983.00

Fig. 6: The Price of Palladium Per Ounce

Criminals Can Quickly and Easily Remove Catalytic Converters from Vehicles:

Catalytic Converter theft has become a preferred type of property crime due to the fact that thieves can quickly and easily remove a catalytic converter from a vehicle. To steal a catalytic converter, all that is needed is one person and a reciprocating saw (sometimes called a “Sawzall”) which can cost under one hundred dollars³⁷. For higher volume or more enterprising theft rings, portable shears are also available which can remove a converter from a vehicle even more quickly and quietly that can be done with a Sawzall tool. It is not difficult to learn how to identify and remove a catalytic converter from a vehicle due to the many resources and videos online that demonstrate the process. Along with being a cheap crime to commit, thieves do not need to bother entering the target vehicle and can remove a catalytic converter from a vehicle in less than 30 seconds.³⁸ This process can be done so quickly that in many cases the theft does not even disturb the vehicle enough to set off a car alarm. The relative ease of committing catalytic converter theft makes it appealing to criminals.

Catalytic Converters are Not Marked with Vehicle Identification Numbers:

Current federal law requires 11 classes of vehicles parts and 18 distinct vehicle parts to have identifying numbers affixed or inscribed on them as part of a vehicle theft prevention standard.³⁹ Congress and the National Highway Traffic Safety Administration (NHTSA) established laws and regulations requiring individual motor vehicle parts to include Vehicle Identification Numbers (VINs) for the purpose of reducing motor vehicle theft and motor vehicle parts theft.⁴⁰ As a result of requiring VIN marking on major vehicle parts likely to be the target for theft, law enforcement authorities have been able to trace and recover stolen vehicle parts.⁴¹ Parts marking has been a useful

³⁷ The advent and popularity of inexpensive battery-operated power tools has a made these thefts substantially easier to commit. Prior to the availability of these tools, the preferred method of removing a catalytic converter was with a cutting torch, not the type of equipment a would-be thief would use in the field.

³⁸ Erin Marquis, *Watch Thieves Steal a Catalytic Converter in Less than 30 Seconds*, Jalopnik, (June 11, 2021), <https://jalopnik.com/watch-thieves-steal-a-catalytic-converter-in-less-than-1847079696>.

³⁹ 49 U.S.C. § 33101 and 49 C.F.R. § 541.5.

⁴⁰ National Highway Traffic Safety Administration, Office of International Vehicle, Fuel Economy and Consumer Standards, *Parts-Marking Quick Reference Guide for the Law Enforcement Community*, 40, (2006). https://www.nhtsa.gov/sites/nhtsa.gov/files/2006_partsmarking_guide.pdf

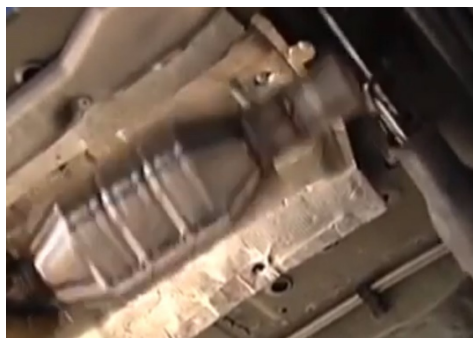
⁴¹ *Id.*

tool in deterring vehicle parts thefts because it has allowed law enforcement to trace stolen vehicle parts in a more transparent marketplace.

Unfortunately, when Congress passed the law requiring 11 classes of vehicle parts to be marked with VINs, catalytic converters were not anticipated to be a major target for thefts.⁴² Therefore, catalytic converters are not required to be marked with VINs or VIN derivatives, which makes it very difficult for law enforcement to track and investigate catalytic converter theft. Law enforcement efforts to combat catalytic converter theft are frustrated because there is no clear way to identify the vehicle a detached catalytic converter came from and there is no central database that lists stolen catalytic converters. While OEMs are not required to mark catalytic converters with VINs or VIN derivatives, there are current efforts being undertaken to voluntarily mark catalytic converters with VINs or VIN derivatives or numbers traceable back to a VIN.⁴³ These voluntary marking programs can allow law enforcement authorities to confirm the identity of the original vehicle from which the catalytic converter was removed from.

De-canning of Detached Catalytic Converters:

Another factor that corresponds with law enforcement's difficulties in identifying, tracing, and recovering stolen catalytic converters is the fact that the valuable PGMs in a catalytic converter can be removed from the part's metal housing. When a de-canner/processor or smelter removes the catalyst/honeycomb (which contains the valuable PGMs), they destroy the catalytic converter's housing. Prior to the smelting process, a catalytic converter's catalyst/honeycomb must be removed from the catalytic converter's metal housing. Once the housing of the catalytic converter containing the catalyst/ honeycomb is destroyed, it subsequently eliminates any ability for law enforcement or prosecutors to tie evidence of stolen property back to a crime⁴⁴. By not being able to identify and trace stolen property, the job of law enforcement authorities and prosecutors is made even more difficult⁴⁵.



Removing a catalytic converter with a Sawzall



Removing a catalytic converter with a portable shear in 23 seconds



Cutting open a detached converter to remove the PGM coated honeycomb

There are benefits of de-canning catalytic converters prior to arriving at a smelter (some smelters will buy catalytic converters that have not been de-canned and will de-can purchased catalytic converters prior to smelting). De-canning

⁴² NHTSA does not have authority to add catalytic converters to the list of vehicle parts required to be marked with VINs. Any change to require OEMs to mark catalytic converters with VINs must come from the United States Congress.

⁴³ Joseph K. Boche & Brady J. Mills, *Press Release: Combat Catalytic Converter Theft Prevention Marking*, International Association of Auto Theft Investigators (IAATI) & Institute of Scrap Recycling Industries, Inc. (ISRI), (March 16, 2021). <https://www.iaati.org/catalytic>.

⁴⁴ Due to the lack of identifying markings on catalytic converters is it almost impossible to law enforcement to identify the vehicle a converter was removed from event before the decanning process.

⁴⁵ Law enforcement have learned some thieves are decanning stolen catalytic converters in order to hamper law enforcement investigations.



reduces the amount of space needed to store high volumes of catalysts/honeycombs that contain the valuable PGMs. De-canning also substantially reduces the cost of transporting large quantities of catalytic converters. Finally, de-canning enhances the price received because the seller is getting paid on assay, which is a calculation of the smelted PGMs. However, the benefits of selling de-canned catalytic converters only apply when there is significant volume of catalytic converters involved. Also, a seller of de-canned catalytic converters selling on an assay arrangement will only get paid at the end of the process once the de-canned catalytic converters are smelted and the PGMs have been evaluated.

De-canning is intrinsic in the normal detached catalytic converter lifecycle. This normal practice creates a beneficial opportunity for criminals because de-canning a stolen catalytic converter retains the value of the catalytic converter while reducing its physical footprint. By reducing the size and retaining the value of the catalytic converter, it allows criminals to acquire much larger volumes of stolen material that can be stored discretely. De-canning also eliminates law enforcement's ability to trace a stolen catalytic converter back to the vehicle of origin and a crime, which facilitates the ability of criminals to launder stolen product into the normal catalytic converter market.

Catalytic Converters Can be Sold in Bulk Without the Need to Advertise Them for Sale:

Catalytic converter pricing is not a mystery. There is pricing transparency in the market for catalytic converters, catalysts/honeycombs, smelted metals, and individual refined metals (rhodium, palladium, and platinum). Individuals and entities generating and selling detached catalytic converters (whether legally or otherwise) have easy access to published pricing lists and online exchanges. Anyone looking to sell or purchase detached catalytic converters have access to current market pricing. Sellers of detached catalytic converters know how much they should be paid for their catalytic converters and buyers know how much they need to pay. Unlike many commodities markets, there is no limit on the need for the PGMs contained in catalytic converters. There is always a demand due to the supply needs of OEMs to supply new catalytic converters on vehicles and reclamation of the PGMs used in new catalytic converters is cheaper than mining for PGMs.

Sellers of catalytic converters do not have to advertise their product to find ready buyers for catalytic converters. There is a robust online presence of ready buyers that advertise themselves as ready purchasers for catalytic converters. Anybody with an available supply of catalytic converters can go online and instantly find a buyer willing to purchase any volume of detached catalytic converters. In fact, there are even online auction/marketplaces where sellers can auction off their catalytic converter supply.⁴⁶ Catalytic converter sellers can also find thousands of listings of businesses that offer to buy product directly. Therefore, it is easy to find ready buyers for catalytic converters and sellers do not have to advertise in order to sell and dispose of their product. This is attractive to catalytic converter thieves and larger criminal enterprises because they can operate relatively anonymously and quickly sell any quantity of product into the legitimate stream of commerce.

⁴⁶ ScrapCatapp.com, is the premier online auction marketplace for scrap catalytic converters and has over \$106 million in sales to date. (August 28, 2021). <https://www.scrapcatapp.com>.

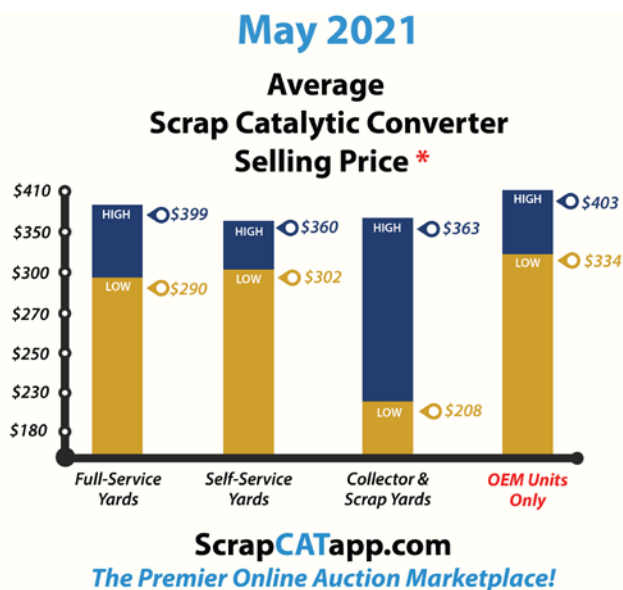


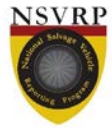
Fig. 7: Average Scrap Catalytic Converter Selling Price Based Upon Business Type

Catalytic Converters		(August 21st, 2021, 8:00 am)
Metal/Material		Current Price
Small Foreign Cat		\$108.00/each
Medium Foreign Cat		\$130.00/each
Large Foreign Cat		\$200.00/each
XL Foreign Cat		\$350.00/each
Foreign Pre-Cat		\$48.00/each
Exotic Cat		\$500.00/each
High Grade Domestic Cat		\$145.00/each
Pre-Domestic Cat		\$27.00/each
Torpedo Cat		\$200.00/each
Small GM Cat		\$85.00/each
Large GM Cat		\$165.00/each
Small Breadloaf Cat		\$125.00/each
Large Breadloaf Cat		\$105.00/each
Small Domestic Cat		\$53.00/each
Foreign Lite		\$48.00/each
Large Chrysler Cat		\$100.00/each

Fig. 8: Advertised Prices for Catalytic Converters⁴⁷

There are Many Buyers that Can Purchase Detached Catalytic Converters and Accept Bulk Shipments with Very Limited Scrutiny:

⁴⁷ <https://index.scrapcatdepot.com/api/show-index-documents?date=2021-07&download>



The existing legislative and regulatory environment throughout United States have been ineffective at addressing catalytic converter theft. Current laws do not give law enforcement effective tools to combat the epidemic of catalytic converter. Some laws even exacerbate catalytic converter theft in that they obscure efforts to identify and investigate transactions involving stolen catalytic converters. Particularly of issue, are state laws that create full exemptions on recording and reporting transactions. These exemptions make catalytic converter theft easier because it does not even allow for the possibility of law enforcement to investigate crimes. For law enforcement authorities to effectively combat the epidemic of catalytic converter theft, new legislation is needed to create a transparent process for identifying catalytic converter commerce.

Why is catalytic converter theft so prevalent?

It is very easy to remove a catalytic converter from a vehicle. It can be done quickly and can be done without any need to break into the vehicle.

The detached stolen converters are not normally marked and cannot be tied back with certainty to the original vehicle for apprehension or prosecution.

The contents of the converter can be removed and the housing can be crushed and discarded eliminating any means of identification.

There is no need to stock, warehouse or advertise stolen catalytic converters in order to sell them There is an unlimited ability to sell these converters or their removed contents to the scrap metal and smelting markets immediately including for cash payments. Consequently, while some parties mistakenly represent that the major market is the resale of detached catalytic converters advertised for repair purposes is the source of theft problem, in fact the bulk of the flow of stolen converters are actually going directly and immediately to the scrap metal and smelting of these stolen converters to feed into the metal refining of platinum group metals (PGM). This same misunderstanding of the problem can be understanding that the theft problem is recognized by all parties as based upon the high PGM prices, yet the value of the PGMs is applicable to the sales value of detached converters being melted down for the raw metals while the prices for catalytic converters used in repairs has been relatively constant. Furthermore, very few catalytic converters are needed to be replaced in normal use for repairs, which also indicates that the claim that stolen detached catalytic converters are being stolen for resale on the internet as the main outlet for profiting on the sale of stolen converter.

The existing scrap metal laws have many built in exemptions that eliminate recordkeeping requirements for most business to business transactions in many states. These loopholes in the laws enable parties to operate with limited reporting and record keeping requirements.



A Definition of Terms:

- **Catalytic Converter** – A device installed in the exhaust path of an internal combustion automobile to convert noxious exhaust gases into non-poisonous byproducts of carbon dioxide, nitrogen and water vapor.
- **Catalyst** – the active component material in a catalytic converter.
- **Platinum Group Metals (PGM)** – Platinum, Palladium and Rhodium which are the precious metals making up the active catalyst materials in a catalytic converter.
- **De-canner/processor** – a person or entity who removes the outside housing of a catalytic converter in order to extract the internal honeycomb matrix or the pellets in a catalytic converter as a pre-set in recovering the PGM materials in a catalytic converter.
- **Smelter** – a person or entity engaged in the first step in the PGM recovery process. A smelter takes the material extracted from a detached converter and uses heat to extract the mixture of PGM metals off of the substrate structure that is coated with PGMs inside the catalytic converter.
- **Refiner** – a person or entity that takes the mixture of melted PGMs extracted by a smelting process, and uses chemical extraction processes to separate the PGM material into pure Platinum, Palladium and Rhodium metals.
- **Vehicle collector** – a person or entity who collects vehicles as an intermediary or for their own processing. This will include independent towing companies or subsidiary operations for shredders, vehicle dismantlers/recyclers or auction pools.
- **Vehicle dismantler/recycler** – A party who takes a complete End-of-Life vehicle and acquires it for resale primarily for parts and secondarily for residual scrap and core sales. The bulk of the sales value for these parties most typically comes from individual parts sales of needed parts off of the individual vehicles.
- **Scrap** – These are the residual hulk that depending upon the scrap metal market values represents \$100 - \$200+ dollars in residual value on a salvage vehicle when sold to a shredder.
- **Core** – These are individual parts including catalytic converters that can be sold to a secondary market for reprocessing or refurbishment or for smelting independent of needing to identify a vehicle needing repair. They can be sold to bulk buyers who have standing open order price lists for these parts.
- **Pick-a-Part/Self-service yard** – A type of automobile recycler that takes in primarily older vehicles and markets to the do-it-yourself public. These operations tend to handle large flows of vehicles, and the scrap and core value of the vehicles is a very significant component of the total revenue for these operations.
- **Shredder** – A party who acquires vehicles and car bodies for processing into shredded scrap metal for resale.
- **End-of-life vehicle** – A vehicle that is being permanently removed out of service for sale for parts/scrap or final export.
- **Original Equipment Manufacturer/OEM** – A manufacturer of motor vehicles or major vehicle components.
- **California Air Resources Board/CARB** – The air quality regulatory authority in California. The CARB sets rules for vehicle requirements for emissions that are also followed by approximately a dozen other states. Additionally, Colorado, New York and Maine follow CARB guidelines governing rules for use of replacement catalytic converters.
- **Environmental Protection Agency/EPA** – The EPA is the federal agency governing federal emissions and pollution rules and enforcement.
- **EPA compliant used catalytic converter** – The Federal EPA has set guidelines for the testing and reuse of used OEM catalytic converters and are recognized as serving an important need as a matter of stated policy. Catalytic converters meeting these testing and recording protocols are called EPA compliant used catalytic converters and are legal for installation in most states. California and Colorado do not allow the use of EPA compliant used catalytic converters while New York and Maine have limited the use of EPA compliant used OEM catalytic converters to older model year vehicles.
- **Core Exchange** – When a seller supplies either a new OEM replacement converter, a new aftermarket non-OEM converter or an EPA compliant used catalytic converter for use in a repair, if the buyer has the original defective or damaged converter available, then the seller may take in exchange the defective unit and apply a



discount on the purchase transaction by giving a partial credit on the sale for the returned damaged or defective converter. This returned non-functioning item is credited on the invoice as a core exchange and can help reduce the overall repair cost for the buyer.

Characteristics of the Catalytic Converter Marketplace

- The catalytic converter lifecycle starts with a newly manufactured catalytic converter that is subsequently recycled in order to reclaim the precious metals needed for the manufacture of new catalytic converters. Throughout the normal detached catalytic converter lifecycle, catalytic converters pass through four physical stages: (1) detached catalytic converter; (2) catalysts/honeycombs; (3) smelted metal; (4) and refined individual metals.
- For each part of the normal detached catalytic converter lifecycle (as shown in Fig. 2), there is pricing transparency because there are readily available price lists. This applies for detached catalytic converters, catalysts/honeycombs, smelted metal, and refined individual metals (rhodium, palladium, and platinum).
- At each stage in the normal detached catalytic converter lifecycle, each upstream buyer should be paying more than seller had paid for the catalytic converter. Every stage of the process allows for profit to be made based upon differences in value of the product and the costs associated with processing.
- It is not normally economically justified for an entity to acquire product at one stage in the normal detached catalytic converter lifecycle and subsequently sell product in the same physical stage. Otherwise, there does not appear to be a way to make a profit unless the original material was acquired below market price or resold above market price.
- As an entity generates larger volumes of catalytic converters, it becomes more economically attractive for that entity to engage in multiple stages of the normal detached catalytic converter lifecycle. It is expensive to smelt and/or refine at a small scale.
- For vehicle collectors/recyclers that handle very large amounts of used/end-of-life vehicles, it becomes more economically attractive to consider engaging in multiple stages of the normal detached catalytic converter lifecycle. By bringing multiple stages in-house, vehicle collectors/recyclers can extract more profit than if they sell their product to an entity engaged in stages further upstream.
- Throughout the normal detached catalytic converter lifecycle, detached catalytic converters can be purchased or sold to every party other than a refiner (unless the refiner also operates as a smelter).
- As a detached catalytic converter passes through the three subsequent physical stages in the normal detached catalytic converter lifecycle, the property loses its identity and becomes harder for law enforcement to trace back to a crime. Also, as the detached catalytic converter passes through subsequent physical stages, its value density increases. A detached catalytic converter may be worth several hundred dollars and its volume equals approximately one cubic foot. As the physical size of a catalytic converter is reduced in the course of the normal detached catalytic converter lifecycle, its value relative to its physical footprint increases dramatically. At the end of the process, refined rhodium can be worth several hundreds of thousands of dollars per cubic inch.



- As converters are de-canned, strict batch controls and strict internal security controls need to exist to protect from criminal activity and internal thefts. The higher up the processing chain the more internal controls are necessary as the product value density increases.
- Stolen catalytic converters are more likely to be laundered into the normal detached catalytic converter lifecycle at the lower levels of the product stream. At the highest levels of the normal detached catalytic converter lifecycle (smelters and/or refiners), the primary threats are internal theft and trade-based money laundering.

Law Enforcement Groups Have Been Working on a Policy to Effectively Combat Catalytic Converter Theft

Catalytic Theft Prevention:

Both NSVRP and other groups including the International Association of Auto Theft Investigators (IAATI) have been working diligently to find solutions to assist law enforcement and policymakers with combatting catalytic converter theft. These groups made combatting catalytic converter theft a priority and IAATI in particular has established a Subcommittee on Catalytic Converter Theft Prevention.⁴⁸ The Committee's membership includes law enforcement, prosecutors, vehicle manufacturers, vehicle security companies, automotive recyclers, and scrap metal dealers. As a result of the Subcommittee's hard work and dedicated leadership, the Subcommittee developed a policy document to raise awareness and promote measures to reduce the theft of catalytic converters.

NSVRP independently shares development of the same six-point framework to assist legislators and policymakers with developing effective catalytic converter anti-theft legislation. These six points form the basis for coming up with real and practical solutions to catalytic converter theft. The six points also form the backbone for model legislative language, which will help legislators and policymakers pass laws that provide law enforcement with the tools needed to investigate and prosecute catalytic converter theft. NSVRP has included model legislative language that when adopted, will provide law enforcement with the necessary tools to investigate and prosecute catalytic converter theft⁴⁹.

NSVRP's six policy points for effective catalytic converter anti-theft legislation are as follows:

1. *Identify with certainty the person selling the Catalytic Converter;*
2. *Identify with certainty the vehicle from which the Catalytic Converter was removed;*
3. *Require a traceable payment and prohibit cash transactions;*
4. *Require records of Catalytic Converter transactions be maintained and made accessible to Law Enforcement upon request;*
5. *The penalty for not meeting the above requirements needs to be a sufficient deterrent.*

⁴⁸ International Association of Auto Theft Investigators, *ATPA Subcommittee – Catalytic Theft Prevention Committee*. <https://www.iaati.org/about/committees/atpa-sub-committee-catalytic-theft-prevention-committee>.

⁴⁹ International Association of Auto Theft Investigators (IAATI), *Resolution 2021—2: Raise Awareness and Promote Measures to Reduce the Theft of Catalytic Converters*, (April 29, 2021), <https://www.vehiclecrimes.org/documents/articles/IAATIRes2021-2.pdf>.



6. *The Environmental Protection Agency (or an equivalent official entity with appropriate jurisdiction) governs what specific Catalytic Converters can be sold in that market. If requirements 1 – 4 above are satisfied, theft is not considered an issue.*

Problems with the Existing Legal and Regulatory Framework Governing the Scrap Metal Market

It is clear that the current patchwork of state laws and regulations are not effective at controlling the surge in catalytic converter thefts. Stolen detached catalytic converters are making it through the various levels of the scrap metal processing chain, which eventually lead to PGMs being smelted, refined, and used in remanufacturing. There is a very limited demand for detached catalytic converters to be used as direct replacement parts and most stolen detached catalytic converters can only be fenced quickly and in quantity through the scrap metal processing chain.⁵⁰ The scrap metal market and the laws that regulate sales transactions and recordkeeping are inadequate and enable large scale sales of stolen catalytic converters into the scrap market. For scrap metal laws to adequately provide a solution to catalytic converter theft, they need to fit within NSVRP’s six-point framework.

What follows are some examples of state law that substantially fail to conform to the six-point framework for effective catalytic converter anti-theft solutions. These examples show that current law can actually exacerbate the catalytic converter theft problem. Of particular concern, are exemptions that obscure transactions and inhibit efforts to create a transparent market.⁵¹ Note that none of the laws meet the requirement that the catalytic converter is traceable back to the vehicle from which it was removed from.

Note that the following statutory examples are for illustrative policy purposes and reflect the statutory language that was in place in each of these jurisdictions as of the 2021 legislative session. Please review the current legislative history and judicial interpretations in any jurisdiction before making representations regarding the specific current statutes that are presently in force in any jurisdiction.

Georgia⁵²:

The Official Code of Georgia Annotated (O.C.G.A.) sections 10-1-350 through 10-1-359.5 regulate secondary metals recyclers.⁵³ The Rules and Regulations of the State of Georgia Chapter 92-6 regulates the Secondary Metals Recyclers Database.

- **Ga. Code § 10-1-358:**

Law

⁵⁰ Because of the nature of the scrap metal market and the role that parties such as core buyers or special purpose front companies play in purchasing and reselling product, any theft ring can resell product to any level of the scrap metal market without little risk of exposure.

⁵¹ States with exemptions are: GA, KA, KY, LA, ME, MD, MN, MS, MO, NE, NV, NM, NC, ND.

⁵² Note that the following statutory examples are for illustrative policy purposes and reflect the statutory language that was in place in each of these jurisdictions as of the 2021 legislative session. Please review the current legislative history and judicial interpretations in any jurisdiction before making representations regarding the specific current statutes that are presently in force in any jurisdiction.

⁵³ Laws regulating secondary metals recyclers can be found in Title 10(Chapter 1) (Article 14).



“This Article shall not apply to purchases of regulated metal property from: ... (6) A manufacturing, industrial, or other commercial vendor that generates or sells regulated metal property in the ordinary course of its business, provided that such vendor is not a secondary metals recycler.”

Why this statute fails to conform with IAATI’s six-point framework:

This existing section of Georgia law does not conform with the six-point framework because it entirely exempts purchases of regulated metal property (catalytic converters fall under the definition of regulated metal property)⁵⁴ from any reporting and recording requirements⁵⁵ so long as the purchased regulated metal property/catalytic converter came from a “commercial vendor that generates or sells regulated metal property in the ordinary course of its business.” This broad exemption ensures that a scrap metal recycler does not need to record transactions with businesses that they buy from (so long as it is not a secondary metal recycler). This law exacerbates catalytic converter theft because it shields illegal activity from being identifiable.

For example, a criminal organization operating a muffler shop that is actively engaged in purchasing or stealing stolen catalytic converters is aware that when they sell large quantities of stolen catalytic converters to a scrap metal processor, those transactions are exempted from reporting.

- **Ga. Code § 10-1-355:**

“(a) A secondary metals recycler shall pay only by check, electronic funds transfer, or voucher for regulated metal property.....(e) The provisions of this Code section shall not apply to any transaction between business entities.”

Why this statute fails to conform with the six-point framework:

This existing section of Georgia law does not conform with the six-point framework because it entirely exempts business to business transactions from having to be conducted using traceable forms of payment. Scrap metal purchases including catalytic converter purchases need to be conducted using traceable forms of payment such as check or electronic funds transfers. Traceable forms of payment help to create a transparent marketplace and allows for law enforcement to investigate transactions involving stolen material – including catalytic converters. Under the current law, a business can sell enormous quantities of stolen catalytic converters without any risk of discovery due to the exemptions in Ga. Code § 10-1-358(6) and Ga. Code § 10-1-355(e). So long as a business is selling to a scrap metal recycler, traceable forms of payment do not need to be used. This law raises concerns relating to trade-based money laundering.

- **Ga. Comp. R. & Regs. 92-6-.01:**

“O.C.G.A. § 10-1-359.5 requires the Georgia Bureau of Investigation (GBI) or its Designee to establish and maintain a database of purchase transaction information from Secondary Metals Recyclers (SMRs). The Database will be accessible and searchable by law enforcement agencies and employees of electric suppliers and telecommunications companies (that meet requirements) in this state to track metal sales. This system is intended to deter the theft of metals.”

Why this regulation fails to conform with the six-point framework:

⁵⁴ O.C.G.A. § 10-1-350(13).

⁵⁵ O.C.G.A. § 10-1-351(c).



This existing regulation in Georgia does not conform with the six-point framework because it does not make records of catalytic converter transactions accessible to law enforcement. The regulation only permits Georgia law enforcement to access the purchase transaction database⁵⁶ for secondary metals recyclers. This regulation does not allow out-of-state law enforcement to use this database in the course of their investigations. Additionally, due to the exemption in Ga. Code § 10-1-358, the data available in the database does not include most data involving catalytic converter sales.

Missouri⁵⁷:

The Missouri Revisor of Statutes Sections 407.300 to 407.305 govern scrap metal dealers.

- Mo. Rev. Stat. § 407.300:

“1. Every purchaser or collector of, or dealer in, junk, scrap metal, or any secondhand property who obtains items for resale or profit shall keep a register containing a written or electronic record for each purchase or trade in which each type of material subject to the provisions of this section is obtained for value. There shall be a separate record for each transaction involving any: ... (4) Detached catalytic converter... 6. This section shall not apply to either of the following transactions: (1) Any transaction for which the seller has an existing business relationship with the scrap metal dealer and is known to the scrap metal dealer making the purchase to be an established business or political subdivision that operates a business with a fixed location that can be reasonably expected to generate regulated scrap metal and can be reasonably identified as such a business, and for which the seller is paid by check or by electronic funds transfer, or the seller produces an acceptable identification, which shall be a copy of the driver’s license or photo identification issued by the state or by the United States government or agency thereof, and a copy is retained by the purchaser.”

Why this statute fails to conform with the six-point framework:

This existing section of Missouri law does not conform with the six-point framework because it exempts scrap metal dealers from needing to keep a record for each purchase transaction of catalytic converters so long as the seller is a business that has previously conducted business with the scrap metal dealer, has a fixed location, and can be reasonably expected to generate scrap metal. This broad exemption ensures that a scrap metal dealer does not need to record transactions with businesses that they buy from. This law exacerbates catalytic converter theft because it shields illegal activity from being identifiable.

For example, a criminal organization operating a muffler shop that is actively engaged in purchasing or stealing stolen catalytic converters is aware that when they sell large quantities of stolen catalytic converters to a scrap metal dealer, those transactions are exempted from reporting if they have done any business prior and have a fixed location.

Missouri’s laws regarding scrap reporting are very similar to Georgia’s and a variety of other state’s scrap laws. The laws in Missouri (and other states)⁵⁸ tend to create reporting requirements and proceed to subsequently exempt the

⁵⁶ O.C.G.A. § 10-1-359.1(b).

⁵⁷ Note that the following statutory examples are for illustrative policy purposes and reflect the statutory language that was in place in each of these jurisdictions as of the 2021 legislative session. Please review the current legislative history and judicial interpretations in any jurisdiction before making representations regarding the specific current statutes that are presently in force in any jurisdiction.

⁵⁸ Similar exemptions exist in Colorado and other states. Under Colorado Title 18 criminal code 18-13-111(3)(C) all transactions between dealers are exempted from reporting. This exemption effectively shields the transfer of product from a fencing or hybrid operation to a buyer at another level in the catalytic converter pyramid from tracking. Under 18-13-111 (1)(c)(2), the reporting - when it is required - is limited to description and quantity. That level of detail is neither enough to



major parties in the scrap market from any oversight. This in turn, creates a legal framework that exacerbates catalytic converter theft because it eliminates the ability for law enforcement to trace transactions involving stolen goods.

- **Mo. Rev. Stat. § 407.303(2):**

“Any scrap metal dealer that purchases scrap metal from a seller and pays in the form of cash is required to obtain a copy of the seller’s driver’s license or nondriver’s license if the metal is copper or a catalytic converter. This section shall not apply to any transaction for which the seller has an existing business relationship with the scrap metal dealer and is known to the scrap metal dealer making the purchase to be an established business or political subdivision that operates a business with a fixed location that can be reasonably expected to generate regulated scrap metal and can be reasonably identified as such a business.”

Why this statute fails to conform with the six-point framework:

This existing section of Missouri law does not conform with IAATI’s six-point framework because it permits scrap metal dealers to pay cash up to \$500⁵⁹ for a catalytic converter so long as they obtain a copy of the seller’s license and meet the requirements of § 407.300. Scrap metal purchases including catalytic converter purchases need to be conducted using traceable forms of payment such as check or electronic funds transfers. Traceable forms of payment help to create a transparent marketplace and allows for law enforcement to investigate transactions involving stolen material – including catalytic converters. This law raises concerns relating to trade-based money laundering.

Minnesota⁶⁰:

The Minnesota Statutes governing scrap metal dealers can be found in Sections 325.E.21 to 325E.21-10.

Minn. Stat. § 325E.21:

Subd. 1b. Purchase or acquisition record required.

“(b) Every scrap metal dealer, including an agent, employee, or representative of the dealer, shall create permanent record written in English, using an electronic record program at the time of each purchase or acquisition of scrap metal....(d) No record is required for property purchased from merchants, manufacturers, salvage pools, insurance companies, rental car companies, financial institutions, charities, dealers licensed under section 168.27, or wholesale

document a transaction for investigation purposes and is certainly useless to meet evidentiary standards for prosecution of theft. Under 18-13-111 (1)(e)(1.3)(a)(I) signing up with a scrap alert system where there is only generic descriptions even when reporting is required is of very limited value as a deterrent. Under 18-13-111 (1)(e)(1.3)(b)(1.5)(a) transactions at or below \$300 can be paid for in cash. Since the street rate for stolen catalytic converters is reportedly at 50% of the published unit price market rate, the average stolen used catalytic converter street price is at about \$150. This allows a dealer to accept a converter along with an affidavit from the thief and be protected under Colorado statute. Since the recording itself is limited to a generic description the activity is untraceable absent a sting operation. Even if investigated, the transaction may not be easy to violate as it may conform to law. Under 18-13-111 (1)(e)(1.3)(b)(1.5)(b) even if the commodity is purchased for more than \$300 the payment can be made in cash if the seller is ‘paid by means of any process in which a picture of the seller is taken when the money is paid’. Since the specific items are not documented to the payment at the VIN level, there is little investigation or prosecutorial benefit to the process. This the scope of the payment does not seem to be restricted in size, this is also poor policy to control trade-based money laundering.

⁵⁹ Mo. Rev. Stat. § 407.303(1).

⁶⁰ Note that the following statutory examples are for illustrative policy purposes and reflect the statutory language that was in place in each of these jurisdictions as of the 2021 legislative session. Please review the current legislative history and judicial interpretations in any jurisdiction before making representations regarding the specific current statutes that are presently in force in any jurisdiction.



dealers, having an established place of business, or of any goods purchased at open sale from any bankrupt stock, but a receipt as required under paragraph (b), clause (7), shall be obtained and kept by the person, which must be shown upon demand to any properly identified law enforcement officer.”

Why this statute fails to conform with the six-point framework:

This existing section of Minnesota law does not conform with IAATI’s six-point framework because it exempts recordkeeping requirements, which make records unavailable to law enforcement. This law exacerbates catalytic converter theft because it shields illegal activity from being identifiable.

South Dakota⁶¹:

The South Dakota Statutes governing scrap metal dealers can be found in Sections §§ 34A-6-108 to 34A-6-112.

SD. Stat. §§ 34A-6-109:

34A-6-109. Each scrap metal business shall keep records of each transaction involving the purchase of nonferrous metal property that exceeds one hundred dollars, provided that records of any transaction involving a detached catalytic converter must be kept regardless of purchase price. The scrap metal business shall be able to produce an accurate and legible record of each transaction involving nonferrous metal property at the location where the scrap metal is purchased. The records shall contain the following:

- (1) Date, location, and value of the transaction;
- (2) Signature of the person selling the nonferrous metal property;
- (3) Name, street address, city, and state of the seller;
- (4) Photocopy of the seller's current driver license or other government issued picture identification card;
- (5) A description of the predominant types of nonferrous metal property involved in the transaction, including the weight, quantity, or volume of the scrap nonferrous metal; and
- (6) Name of the employee representing the scrap metal business in the transaction.

Section 3. Chapter 34A-6 as recently amended with a NEW SECTION:

Only a scrap metal business with a valid state sales tax license may purchase a detached catalytic converter.

A person may not purchase, trade for, or pledge to buy a detached catalytic converter, or offer or advertise to purchase, trade for, or pledge to buy a detached catalytic converter, unless the person follows the requirements under §§ 34A-6-108 to 34A-6-112, inclusive.

⁶¹ Note that the following statutory examples are for illustrative policy purposes and reflect the statutory language that was in place in each of these jurisdictions as of the 2021 legislative session. Please review the current legislative history and judicial interpretations in any jurisdiction before making representations regarding the specific current statutes that are presently in force in any jurisdiction.



Why this statute fails to conform with the six-point framework:

This section 34A-6-109 does not meet the policy point that requires identifying with certainty the source vehicle from which the converter was removed. The required information in the list of six required data elements does not include the identity of the source vehicle from which the converter has been recovered. By not requiring the source vehicle identification number (VIN) to be provided by the seller, nor recorded by the buyer as part of the transaction, the statute eliminates any ability for law enforcement to confirm if the converter was from a stolen vehicle or if the converter itself was reported as stolen and that the property was in fact stolen property. Additionally, by not requiring the VIN to be included in the information, the statute eliminates any requirement or mechanism for the scrap dealer to check the reported VIN and confirm that the source vehicle was not a stolen vehicle. This is a critical loophole in the chain of custody process as well as to deter commerce in stolen converters.

This section 34A-6-109 does not meet one of the policy points that all transactions be made with traceable forms of payment. Many theft transactions involve the sale of individual converters for cash at below market prices. Additionally, once cash payments are allowed they become untraceable and un-auditable. This allows the opportunity for unscrupulous parties to make larger cash payments and treating them as multiple smaller exempted payments without any means to recognize the legitimacy of the business records being inspected.

This updated 34A-6 (3) of South Dakota law also does not conform with the six-point framework because eliminates the ability of the public to purchase EPA compliant retested OEM used converters for a repair. As a result, when the public suffers the economic cost associated with a catalytic converter theft, they are further economically harmed by losing the benefit of using pretested EPA compliant used OEM converters that have come from legally obtained and traceable OEM converters that have come from licensed recycler businesses, These particular converters would come from source vehicles that have been purchased by licensed automobile recyclers, recorded in the National Motor Vehicle Title Information System (NMVTIS), recorded in a national anti-theft registration system that is accessible to law enforcement and tested by an EPA compliant testing lab, and reported to the EPA as part of the registration process.

A summary of major loopholes in existing scrap laws

It is clear from the examples of existing statutes referenced above that the current patchwork of state laws and regulations are not effectively controlling the surge in catalytic converter thefts. Stolen detached catalytic converters are making it through the various levels of the scrap metal processing chain, which eventually lead to PGMs being smelted, refined, and used in remanufacturing. There is a very limited demand for detached catalytic converters to be used as direct replacement parts and most stolen detached catalytic converters can only be fenced quickly and in quantity through the scrap metal processing chain.¹ The scrap metal market and the laws that regulate sales transactions and recordkeeping are inadequate and enable large scale sales of stolen catalytic converters into the scrap market. For scrap metal laws to adequately provide a solution to catalytic converter theft, they need to fit within the six-point framework.

What follows is a summary discussion of some of the more common examples of how existing state laws fall short of the six policy points and the affect they can have. These failures summarize the examples of problematic state legislation covered in the legislative section above.

Failure to identify the vehicle from which a catalytic converter has been removed from.

As discussed herein, catalytic converters do not have a serial number associated with the VIN, which makes it almost impossible for law enforcement to prove a converter is stolen and particularly easy to possess and sell without fear of getting caught. A simple alternative is to require that a number, such as the VIN or stock number immediately associated with the VIN be inscribed on all catalytic converters immediately upon their removal. This simple method allows for law enforcement to quickly verify if a person in possession of a converter does so lawfully.



Failure to gather adequate documentation regarding transactions and realistically making the transaction information accessible to law enforcement.

While many states require some information regarding who make a sale, what they sold, the amount they were paid and event state the records shall be available to law enforcement upon request, in practice, purchasers of catalytic converters, particularly if they may have concerns regarding the material they purchased, gather the bare minimum information. For example, law enforcement reports it is common for transaction records identification information to be incomplete or unverified, lacking a copy of a government issued identification, for the description of the material purchased to be vague, such a “three long cats and one short cat.” Moreover, with hundreds of such purchasers in a state, unless the information is uploaded into an electronic database accessible remotely without a subpoena or search warrant by all law enforcement, the information is for practical purposes not accessible.

Prohibiting non-traceable payments

Simply put, legitimate transactions do not need to be hidden or disguised. Payments made in cash or via gift cards provide immediate rewards to the person selling stolen property and frustrate law enforcement investigations. Traceable payments are unattractive to criminals and serve to discourage the criminal from working with parties who only pay for contraband with traceable forms of payment. As such, these prohibitions on non-traceable forms of payment help reduce criminal behavior – especially street crime.

When a law allows for cash payments in any amount regardless of how tight a declared limit is set on that amount that entitles the business to make cash payments and to justify the basis for engaging in cash transactions. Since these transactions are being made under the control of the business itself without any method to effectively monitor or audit the conduct, the effect of these exemptions is to provide a legal defense to a business in engaging in cash transactions and claim that all such transactions were allowed under law. *When these types of cash transaction enabling language are coupled with other reporting exemptions the net effect is to provide the ability for these businesses to operate large scale commerce in stolen catalytic converter transactions with cash payments, lack of effective record keeping, and with broad immunity from investigation and effective prosecution.*

Excluding Business Transactions

Business to Business Sales

Many states laws have provisions which exclude “commercial transactions” from reporting and record keeping requirements. Unfortunately, a “commercial transaction” is often not defined, and when defined often include anyone the entity has done or regularly does business with. Moreover, allowing for this exclusion creates the largest loophole to be exploited by would be criminal. It is extremely easy and common for criminal enterprises to form a business organization such as an llc. Once incorporated they would no longer have to comply with the laws. Thus, once a criminal enterprise sells a batch of converters to another business, there would be no way for a law enforcement officer inspecting the converters at the secondary business to determine where they were purchased from.

Exclusions for Entities likely to Generate Detached Converters

Some laws exclude entities likely to generate detached converters from their requirements. Unfortunately, this creates often the argument for disposing of such requirements is that it is too burdensome to track all of their inventory, this argument isn't logical however, given the varying value of different catalytic converter, most such businesses would want to property identify and account for catalytic converters in their possession to ensure they receive fair value upon resale. These business-to-business exclusions are problematic to law enforcement in that they allow a “fence” to be disguised within any auto shop or metal recycler related business.

Some Recent Major Indictments Highlight the Problem

Two examples of how ineffective scrap laws help shield criminal enterprises from local discovery and prosecution
 Here is a link to a federal indictment of a group that is claimed to have handled in excess of \$11 million dollars' worth of catalytic converters over roughly a 4-year period. The converters were washed through a shell company which was exempted from reporting under state law as a result of business to business exemptions on reporting. Sales included large amounts of cash transactions which were also allowed under that state's laws. Sellers of converters were not required to have proof of ownership, and titles were not required as a form of proof under a recent modification to existing state laws. [Man has been indicted by a federal grand jury for selling millions of dollars in stolen catalytic converters to companies in Missouri, Texas, and Louisiana-conspiracy-sell-stolen-catalytic-0](#)

A second link is to another group that also operated out of the same state taking advantage of these same loopholes in state law. Again, the indictments were issued at the federal level where prosecutors were able to take advantage of the stronger federal laws that were not compromised with loopholes. [Thousands of Catalytic Converters Stolen as Part of a Multi-Million-Dollar Business](#)

Seven Area Residents Indicted for Conspiracy to Transport Stolen Catalytic Converters Across State Lines

Thousands of Catalytic Converters Stolen as Part of a Multi-Million-Dollar Business

SPRINGFIELD, Mo. – Seven residents of Missouri and Springfield, Mo., residents have been indicted by a federal grand jury for their role in a conspiracy to transport thousands of stolen catalytic converters across state lines as part of a multi-million-dollar business.

"A conspiracy of catalytic converter thefts on a breathtaking scale had a significant impact on the Springfield community over the past two years," said U.S. Attorney Teresa Brown. "Not only were numerous individual car owners, but also, had several nonprofit organizations and churches, some also victimized. We worked closely with our law enforcement partners to shut down this criminal conspiracy and bring those responsible to justice."

Erin Marshall, 41, and Ceasar Davis, 21, both of Boggsville, and Cody Brown, 36, Leslie Lee, 37, John White, Donald Lee, 34, Mike Kabbalah, 37, and Dan Kibbeba, 34, all of Springfield, were charged at a four-count conspiracy indictment returned earlier this month by a federal grand jury in Springfield on Tuesday, Jan. 24. The conspiracy, which caused millions in damages returned against Marshall on Nov. 12, 2010, and includes child and drug charges and felonies. The conspiracy indictment was unsealed and made public today.

"The Springfield Police Department is pleased to be on the end result of a two-year investigation into a series of crimes that has troubled every aspect of our community," said Chief Paul Williams. "Our citizens have not only suffered the inconvenience of all things associated with being a victim of these crimes, but also suffered significant financial losses. The federal prosecutors who worked tirelessly on behalf of the many citizens and organizations impacted by the theft of catalytic converters are so be commended."

"Organized criminal activity, such as this, is extremely costly to victims, taxpayers and the economy as a whole," said Homeland Security Investigations Special Agent in Charge Kathleen Green. "Offenders, like this type of crime, find legal ways to operate, circumvent concepts that put the community at a greater risk, BSI, and our law enforcement partners, are working every day to disrupt these criminal organizations and bring those who seek to profit from these crimes back to justice."

"This case is an example of what can be accomplished when local, state, and federal law enforcement agencies work together and I am thankful for our partnership with the Springfield Police Department and the United States Attorney's Office," said Greene County Prosecuting Attorney Chris Patterson.

The federal indictment charges all seven defendants with participating in a conspiracy to transport stolen property across state lines from Dec. 10, 2008, to Oct. 10, 2012.

Catalytic converters, which are exhaust emission control devices mandated by all new state trucks, contain metals like platinum, palladium, and rhodium that can be recycled. According to the indictment, Marshall bought stolen catalytic converters from state to several states prior to 2008, when he started a company, identified as Company U, to provide the appearance of a legitimate business for his purchase, transportation, and sale of stolen catalytic converters.

In the fall of 2009, one co-owner of a firm identified in the indictment as Company U, located in Missouri

Large Scale Fencing Operation Reselling Converters to a Scrap Processor

Independence Man Indicted for Multi-million Dollar Conspiracy to Sell Stolen Catalytic Converters

Thousands of Catalytic Converters Stolen as Part of a Multi-Million-Dollar Business

KANSAS CITY, Mo. – An Independence, Missouri, man has been indicted by a federal grand jury for selling millions of dollars in stolen catalytic converters to companies in Missouri, Texas, and Louisiana.

James Spick, 26, was charged in a two-count indictment returned under seal by a federal grand jury in Kansas City on Tuesday, Feb. 8. The indictment was unsealed and made public today upon Spick's arrest and initial court appearance.

Spick, the owner of the recycling in Independence, is charged with one count of conspiracy to transport stolen property across state lines from Jan. 1, 2008, and 36 counts of transporting stolen property across state lines.

In his salvage business, Spick primarily buys and resells catalytic converters rather than other automotive parts or recyclable items. Catalytic converters convert toxic gases and pollutants from internal combustion engines into less toxic pollutants. Catalytic converters contain precious metals such as platinum, rhodium, and palladium. Stolen catalytic converters have value because of the precious metals, which can be extracted from the converters.

Beginning in at least 2004, Spick bought catalytic converters of his business from individuals whom he paid in cash. The cash payments returned to him, the indictment says, particularly drug dealers. Spick would then sell the catalytic converters to companies in Missouri, Texas, and Louisiana. The Texas and Louisiana companies processed the catalytic converters to extract the precious metals.

Over a four-year period from Jan. 1, 2008, through Dec. 31, 2012, the indictment says Spick received over \$11 million from the sale of catalytic converters.

According to the indictment, Spick withdrew almost \$2.5 million in cash from his bank accounts to buy catalytic converters from 2008 to 2012. From Jan. 1, 2008, through Dec. 31, 2012, Spick allegedly sold catalytic converters, including stolen catalytic converters, to a Kansas City, Mo., waste recycler for an approximate total of \$1,624,704, and to a Los's Summit, Mo., scrap company for an approximate total of \$606,681.

The charges contained in this indictment are merely accusatory, and not evidence of guilt. Evidence supporting the charges must be presented by a federal trial jury, whose duty it is to determine guilt or innocence.

This case is being prosecuted by Assistant U.S. Attorneys Kay Mahoney and Nicholas Heberle. It was investigated by the Law's Summit, Mo., Police Department, the Kansas City, Mo., Police Department, and the Missouri State Highway Patrol.

Component(s):
 WSD - Missouri, Western

Child Released by: 2012

Large Scale Operation Involving Multiple Businesses Including Core Buyers, Scrap Processors and Smelters

A Major Compliance Action Highlighting the Failure to Follow Laws and Fraudulent Recordkeeping in the Shredder Industry⁶²

Central to an effective regulatory process to control catalytic converter theft is transparency in reporting as well as an adherence to following the law. In a recent complaint ([US v. Schnitzer Steel 1:22-cv-10604](#)), the Environmental Protection Agency has identified the largest public company operating 40 shredder facilities throughout the United States with ignoring the requirements of the Clean Air Act for accepting contaminated items at all their locations; by failing to have the mandatory pollution removal equipment installed for handling product that they acquire in disregard of the law; and for falsifying records and failing to maintain records on material acquired. These are similar to behaviors that the white paper identifies as the key requirements for effective catalytic converter theft prevention legislation. Based upon these serious and wide-spread violations by significant parties it would not be unreasonable to have concerns for similar improper conduct by these same parties and other parties when dealing with the acquisition and reporting on detached catalytic converters.



The screenshot shows the EPA website's news release page. The title is "Federal Settlement with Recycling Company Will Reduce Release of Ozone Depleting Refrigerants That Contribute to Climate Change". The sub-headline reads "Company Will Implement Refrigerant Recovery Management Programs at 40 Facilities Across the United States and Pay a Civil Penalty". The date is April 22, 2022. The text includes a "WASHINGTON (April 22, 2022)" dateline and a "Contact Information" section with the EPA Press Office email. The main body of the text states that the settlement requires the company to pay a civil penalty of \$1,200,000, implement compliance measures worth over \$2,700,000 to prevent the release of ozone-depleting refrigerants, and complete an environmental mitigation project. It also mentions that the settlement will help protect the climate by ensuring that these chemicals are managed properly at all recycling facilities across the country. The settlement also requires the company to perform an environmental mitigation project involving the destruction of all R-12 refrigerant in scrap appliances and automobiles received at its facilities. Today's action was filed by the United States, on behalf of the Environmental Protection Agency.

Conclusion

Effectively addressing the epidemic of catalytic converter theft requires a fundamental change in the way we currently are operating to manage this problem. Catalytic converter theft has become a profitable and accessible venture for low level criminals and organized crime groups. The theft issue also has a trade-based money laundering component. The only solution to catalytic converter theft needs to be based upon our current understandings of vehicle title transfer laws and parts marking (via VINs). Therefore, NSVRP's policy guidelines and model legislation are needed to address this problem effectively.

⁶² A key risk factor is allowing for exemptions in recording of commercial transactions, payments in cash and assuming that self-recording and recordkeeping will protect from undocumented commerce in stolen detached converters. A recent action United States of America v. Schnitzer Steel Industries, Inc Defendant, [Civil Action No. 1:22-cv-10604](#) highlights the concerns with this type of approach. Schnitzer Steel operates roughly 40 shredder locations throughout the United States and is reportedly one of the largest scrap processors in the country. Schnitzer Steel is very active in efforts to promote the legislative interests of the shredder industry and a Schnitzer Steel senior executive is the 2022 Chair Elect of the Institute of Scrap Recycling Industries (ISRI). ISRI identifies itself as the 'Voice of the Recycling Industry'.



Policies to Promote the Reduction in Catalytic Converter Theft

Raise Awareness and Promote Measures to Reduce the Theft of Catalytic Converters

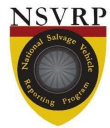
Support legislative efforts to implement laws and regulations to deter catalytic converter theft and to promote transparency to enable prosecutions of offenders

Educate the public on the importance of measures to help prevent the theft of vehicles for the purpose of removing their Catalytic Converters and the theft of Catalytic Converters from unattended vehicles, and promote the permanent marking of previously unmarked Catalytic Converters with owner-applied numbers or after-market labels, such that the Catalytic Converter is traceable to the VIN.

- (1) Promote the voluntary and permanent marking by vehicle manufacturers of Catalytic Converters on newly assembled vehicles, such that these Catalytic Converters are traceable to the VIN.*
- (2) Recommend that the Federal Vehicle Theft Prevention Title 49 USC 33101 (6) list of major theft parts (or the equivalent document within your jurisdiction) be amended to include Catalytic Converters as a “major part” under the Act (and thus required to be permanently marked and identified as a component of the specific vehicle upon which it is installed by the manufacturer).*
- (3) Support legislation to make the theft, possession, purchase, or sale of any stolen Catalytic Converter or the altering of any permanent identification number on a Catalytic Converter illegal.*
- (4) Promote legislation that includes the following requirements for all persons or entities that deal in the purchase and/or sale of Catalytic Converters:*
 - 1. Identify with certainty the person selling the Catalytic Converter;*
 - 2. Identify with certainty the vehicle from which the Catalytic Converter was removed;*
 - 3. Require a traceable payment and prohibit cash transactions;*
 - 4. Require records of Catalytic Converter transactions be maintained and made accessible to Law Enforcement upon request;*
 - 5. The penalty for not meeting the above requirements needs to be a sufficient deterrent.*
 - 6. The Environmental Protection Agency (or an equivalent official entity with appropriate jurisdiction) governs what specific Catalytic Converters can be sold in that market. If requirements 1 – 4 above are satisfied, theft is not considered an issue.*

NSVRP also calls upon Law Enforcement executives, crime prevention officers, and public information officers to emphasize that Catalytic Converter thefts have become an epidemic problem and promote theft prevention measures and programs that include the permanent marking of Catalytic Converters with permanent owner - applied identification numbers or after- market identification labels traceable to the VIN.

NSVRP also calls upon vehicle manufacturers to voluntarily take Catalytic Converter theft deterrence measures to make Catalytic Converters more difficult to remove from an unattended motor vehicle and to permanently mark the Catalytic Converter with the VIN or a serial number traceable to the VIN to allow the Catalytic Converter to be identified and entered into an appropriate theft database.



Minimizing Catalytic Converter Theft - Model Legislative Language

Included is NSVRP's model legislative language that meets all six points of NSVRP's framework for effective catalytic converter anti-theft legislation. This model language can be used as a basis for drafting legislation in individual jurisdictions that will be consistent with the NSVRP recommended program to help reduce the stolen catalytic converter theft problem.

Purpose

The intent of this document is to promote legislation for theft prevention that includes five requirements for all persons or entities that deal in the possession, purchase and/or sale of Detached Catalytic Converters.

Definitions

"Detached Catalytic Converter means a catalytic converter that was previously installed on a motor vehicle and subsequently removed unless it is a used original equipment manufacturer catalytic converter being sold as a motor vehicle repair part in compliance with United States Environmental Protection agency policy and meets the requirements of Section 2.

"Proof of Identification" means a driver's license, identification card, or other identification document issued for identification purposes by any state, federal, or foreign government if the document includes the person's photograph, full name, birth date, address, and signature.

Five Essential Components

1. Identify with certainty the person selling the Detached Catalytic Converter;

Upon purchasing a detached catalytic converter, the purchaser shall identify the seller by:

- A. Making a photocopy or electronic scan of the seller's proof of identification and taking a photograph of the person that clearly shows the person's face or obtaining a fingerprint and,
- B. Recording the license plate number and description of the vehicle used by the person when delivering the detached catalytic converter, including the vehicle make and model, and any identifying marks on the vehicle, such as a business name, decals, or markings, if applicable;

2. Identify with certainty the vehicle from which the Detached Catalytic Converter was removed;

- A. It is unlawful for any person to possess a Detached Catalytic Converter that is not attached to a motor vehicle except when:
 - (i) the Detached Catalytic Converter has been marked with the date it was removed from the vehicle; and
 - (ii) the Detached Catalytic Converter has been marked with the vehicle identification number of the vehicle from which it was removed; or
 - (iii) the Detached Catalytic Converter has been marked with a unique alternative number that can be readily linked to the vehicle identification number by law enforcement at any time.



- (iv) The markings required above may be made in any permanent manner, including but not limited to an engraving or use of permanent ink.

B. It is unlawful to purchase a Detached Catalytic Converter unless it is marked as required under Paragraph A and the seller provides a copy of the donor vehicle's title or registration to demonstrate the seller's ownership interest in said vehicle by comparing the information on the seller's proof of identification with the proof of ownership. In cases when a Detached Catalytic Converter was removed from a vehicle that no longer has an associated title and is no longer registered in any state, the seller must provide the purchaser with an affidavit from the local law enforcement agency that establishes that the agency has verified the seller's ownership of the donor vehicle. Such affidavit must include the donor vehicle's identification number. The requirements of this section, paragraph B, apply except when:

- (i) The seller of detached catalytic converters is a licensed business engaged in vehicle dismantling, vehicle demolishing, scrap metal recycling, automotive repair services, new or used motor vehicle dealer, motor vehicle manufacturing, or distributing catalytic converters.
- (ii) A seller that meets the requirements of (B)(i) must provide the purchaser of detached catalytic converters with a transaction record that includes:
 - i. the identity of the seller's business and a written or electronic signature of the seller;
 - ii. the identity of the purchaser and a written or electronic signature of the purchaser;
 - iii. an itemized list of each Detached Catalytic Converter being sold that includes the donor vehicle identification number or a unique alternative number that can be readily linked to the vehicle identification number by law enforcement; and
 - iv. the date of the transaction.

C. It is unlawful to possess, sell, or purchase a detached catalytic converter that is unmarked or has a manufacturer's, aftermarket, or owner applied vehicle or parts identification number that has been removed, obliterated, or altered.

3. Require a traceable payment and prohibit cash transactions;

- A. A purchaser of a Detached Catalytic Converter may not pay a seller until at least five days after the sale.
- B. A purchaser of a Detached Catalytic Converter must pay the seller by check and payment must be sent to the seller's address as listed on the seller's proof of identification or wired to an account in the seller's name or business name.

4. Require records of Detached Catalytic Converter transactions be maintained and made accessible to Law Enforcement upon request;

- A. The purchaser of a Detached Catalytic Converter must create a permanent record written in English using an electronic record program at the time of purchase or acquisition. The purchaser of a Detached Catalytic Converter must include the following information within the permanent electronic record:



- (1) A complete and accurate account or description of the Detached Catalytic Converter including any markings such as the donor vehicle identification number, serial number, and date of removal;
 - (2) the year, make, model, and vehicle identification number as obtained from the title, registration or law enforcement report provided by the seller;
 - (3) the date, time, and place of the receipt of the Detached Catalytic Converter purchased or acquired and a unique transaction identifier;
 - (4) a complete photocopy or electronic scan of the seller's proof of identification;
 - (5) a copy of the title or registration document provided by the seller;
 - (6) the amount paid and the number of the check or electronic transfer used to purchase the Detached Catalytic Converter;
 - (7) the license plate number and description of the vehicle used by the person when delivering the Detached Catalytic Converter, including the vehicle make and model, and any identifying marks on the vehicle, such as a business name, decals, or markings, if applicable;
 - (8) a copy of the receipt, which must include at least the following information: the name and address of the purchaser and seller, the date and time the Detached Catalytic Converter was received, an accurate description of the converter, including any identification numbers, and the amount paid for the Detached Catalytic Converter; and
 - (9) the identity of the employee or party processing the transaction.
- B. The aforementioned records must be entered into an electronic database approved by and available to a law enforcement agency to access remotely. Records shall be entered within 24 hours of a transaction.
The data entered into the electronic database shall be confidential for law enforcement use only.
- C. A purchaser is prohibited from selling, dismantling, or removing a Detached Catalytic Converter from the dealer's premises for at least seven days after its acquisition.
- D. Entities engaged in the purchase of detached catalytic converters shall ensure employees engaged in these transactions are trained and familiar with the requirements of this Act.

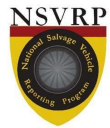
5. The penalty for not meeting the above requirements needs to be a sufficient deterrent.

Violations for possessing a Detached Catalytic Converter not marked as required by paragraph 2A, or a Detached Catalytic Converter in violation of paragraph 2C, shall be based on either the number of detached converters in possession or value of the detached converters as follows:

1 in possession is a misdemeanor, 2-3 in possession is a gross misdemeanor, 4-10 in possession is a felony, 10-100 in possession is a higher felony, 100 or more in possession is a major felony.

Any other violations of this Act shall be a misdemeanor for the first offense and a gross misdemeanor for subsequent offenses in a 12-month period.

This Act does not prohibit a person from being charged with, convicted of, or sentenced for any violation of law arising out of the same criminal transaction that violates this Act.



COMMENTS

Identifiers 1 – 5 are taken from the 6 points developed by NSVRP and other law enforcement support groups.

§ Definitions

“Detached Catalytic Converter” The reference to detached catalytic converters that have been recertified for use by EPA standards only relates to the possession of detached catalytic converters for the purpose of deterring theft, and is not intended to allow for the sale or use of these catalytic converters where existing law provides for stricter emissions requirements.

“Proof of Identification” The identification document should be such that it is government issued, containing at least photograph, full legal name, date of birth, address of issue or residence, and signature.

§2 B(i) Since a licensed business may vary by state to state, the filing of a document with the Secretary of State to form a business in itself is not sufficient, but rather a license that demonstrates bona fide business activity having a fixed location is required.

§2 B(ii)iii “unique alternative number” may include a unique stock number that allows the business to look up the VIN of the donor vehicle, for example a label “ABC Auto Parts #0001”.

§4 B Regardless of the electronic system chosen by law enforcement for entry of records, steps shall be taken so that the data entered into the system cannot be sold or used by a private vendor operating the system, nor should the records be accessible through a freedom of information or data practices request. The records should be accessible to all law enforcement and admissible in a court of law.

§5 Jurisdictions vary considerably regarding sentencing provisions. The above illustrates that a penalty may be easier to enforce based on the number of converters, rather than value and that the penalty should be more severe based upon the number in possession.

Catalytic Converter Marking Alternatives - What works best?

There are a number of possible parts marking alternatives – some work better than others at reducing catalytic converter theft. However, no marking process will work to identify the source vehicle of a converter once a converter has been de-canned and the outside converter shell has been discarded.

The ideal marking process is where the converter has been marked by the manufacturer at the time the vehicle is built. Even in this situation, one must recognize that a vehicle can have multiple converters – in some cases multiple identical converters. As a result, if the marking is limited to just a VIN, the marking is not sufficient to track the individual converters because as many as three different converters can have the same VIN. If one converter is recorded as stolen, it is possible that another one – that was not stolen – could end up being flagged incorrectly as a stolen converter during an investigation. Since at the present time catalytic converters are not covered under the federal parts marking requirements the marking of converters by OEMs is very limited and is only done on a voluntary basis. Also note, that even if catalytic converter parts marking becomes mandatory, this will not retroactively mark the many tens of million converters that are already installed on the current vehicle population.

The next best marking protocol is for a non-removable pre-registered catalytic converter label that contains a preassigned unique serial number along with a QR code to be placed on the converter and etched into the converter when the label is installed⁶³. With these programs the converter label is pre-recorded in an international law enforcement registry and when applied by the issuing agency to a vehicle the agency updates the secure record with the VIN and the original date and owner of the vehicle. If a converter is stolen off of that vehicle, the registry is updated to recognize that the converter is stolen, and if the converter is ever recovered the police can immediately determine the theft and history of the converter and vehicle. Because the labels are pre-recorded in a controlling database, counterfeit labels cannot be used to broadly hide the identity of stolen converters. If a single serial number is counterfeited, each time it is scanned by the police either the serial number will come up as a non-assigned serial number and therefore a fraud, or else the activity will be displayed and the bogus label will be uncovered through the multiple inquiry history of use or as a result of conflicting information between the physical converter and the original registration information stored in the master record.

Less desirable is recording of the full VIN or partial VIN on the converter housing. Unlike the secure label under the control of an issuing authority, anyone can mark a VIN on a converter⁶⁴. Once a converter is stolen it is not identifiable as to which vehicle it came from, and consequently any VIN can be placed on the converter and will show the appearance of complying with the law – but it provides little security for theft prevention. The main benefit of this type of a law, is that if a theft ring or a lone operator steals a

⁶³ There are a number of public service catalytic converter marking programs established by police departments, insurers and other parties that will provide anti-theft labels which are registered in law enforcement accessible databases to help control catalytic converter theft. Here is a public service message from a local police department that is working under a state program grant in Minnesota. <https://www.youtube.com/watch?v=hO8rhsWGFRl> Here is a link to another joint effort by NYSDMV and NYPD that uses this same anti-theft marking program. <https://dmv.ny.gov/press-release/press-release-05-05-2022-2>

⁶⁴ Manually etching a 17-character VIN onto a catalytic converter housing in an industrial setting will generate significant numbers of transcription errors resulting in defective VINs etched on converter housings. These errors will result in VINs that may suffer from a range of issues including: VINs that fail the check digit test for mathematically valid VINs; VINs that were never manufactured by any manufacturer; or VINs that are for vehicles other than the one declared as the donor vehicle associated reported to be associated with the converter. These errors could either be innocent or intentional, and cannot easily be distinguished by intention upon inspection. Furthermore, an unintended transcription error made in the marking process may be treated as a violation under the law, and any attempt to correct the defectively transcribed VIN may be classified as a defaced VIN and also be treated as a violation under the law.

number of converters and is caught red-handed before they had the opportunity to either etch VINs on the housing or decan the converters and discard the housing, then this provision will allow for arrest and prosecution. As a result, requiring any kind of marking is still a helpful anti-theft provision by making the possession of bulk quantities of unmarked detached catalytic converters a crime.

The least desirable marking is no marking at all. With no requirement for marking, the burden of proof falls heavily upon the authorities and when operating in a jurisdiction with lax laws with many exemptions on reporting, allowing for cash transactions and allowing for transactions without proof of vehicle ownership is unfortunately the situation that presently is a significant enabling factor for catalytic converter theft.



EPA Compliant Anti-theft Catalytic Converter Program

It is possible to have a process that meets the anti-theft guidelines for commerce in catalytic converters.

NSVRP Supervised Program Objectives:

Reduce catalytic converter theft by supporting the 6 policy points for effective catalytic converter control*

1. *Identify with certainty the person/business selling the Catalytic Converter (Confirmed that the supplying business was a vetted licensed recycling business registered with NMVTIS, a member organization of ARA, licensed as a recycling business for 5 or more years operating from a known fixed location, and vetted by NSVRP before approval);*
2. *Identify with certainty the vehicle from which the Catalytic Converter was removed (Confirmed that the vehicle was reported into NMVTIS by the entity as the owner of the vehicle as a dismantled vehicle and was not reported as a stolen vehicle);*
3. *Require a traceable payment and prohibit cash transactions;*
4. *Require records of Catalytic Converter transactions be maintained and made accessible to Law Enforcement upon request (The converter is labeled with a unique ID and is pre-registered in an anti-theft database accessible to law enforcement. This protects from counterfeiting of labels or for the creation of unregistered bogus security labeling.);*
5. *The penalty for not meeting the above requirements needs to be a sufficient deterrent.*
6. *The Environmental Protection Agency (or an equivalent official entity with appropriate jurisdiction) governs what specific Catalytic Converters can be sold in that market. If requirements 1 – 4 above are satisfied, theft is not considered an issue. (All converters included in the program must also be tested by a recognized EPA compliant testing lab and permanently labeled with a non-destructive welded on label with a unique serial number, with the results reported back to the EPA as required under the EPA guidelines).*

*Policy point #5 is a legislative initiative rather than an operational directive.

All aspects of this program are monitored by NSVRP and each step (1-4) are subject to oversight approval by NSVRP. Step 6 is under the control of an existing EPA compliant testing lab that reports its results to the EPA.

The EPA compliant testing is under the control of the EPA registered compliant testing lab, but only approved suppliers and converters pre-vetted by NSVRP are eligible for testing and approval under this program.

CATETCH

EPA Compliant Replacement Catalytic Converter Anti-Theft Marking and Registration Instructions

Retainagroup Limited
 Unit 2, Highpoint Business Village, Henwood,
 Ashford, Kent, TN24 8DH
 Tel: +44(0)1233 333 000 Fax: +44(0)1233 333 124
 Email: general.sales@retainagroup.com
 Form: IST0002 Created December 2021

This Catalytic Converter has been tested and passes the required regulations to allow for fitting to a victim of crimes vehicle or for repairs as authorized by your Insurance Company.

HOW DOES THE SYSTEM WORK?

This catalytic converter has already been marked with a unique code and the web address of ISRCODECHECK. The ultra-destruct material of the label adhered to your catalytic converter will break up into small pieces if an attempt is made to remove a label, making it impossible for a thief to re-use it. In addition, if a label is removed, the laser-cut message will still be clearly readable within the metal surface.



Example Label

WARNING LABELS

Within your pack are 2 warning decals that should be prominently positioned on the two front side windows. Ensure the glass on the inside of the vehicle where the decals are being placed are clean, dry and grease free. Remove the decal from the backing paper and rub firmly into place

REGISTRATION

It is very important that details of the vehicle and the owner's name and contact information are recorded on the ISR. To register go to www.theisr.org "ISR Forms" select "Catalytic Converter" then select "Registration - Catalytic Converter" or scan the QR code below.



INFORMATION UPDATING

If you change address or the marked item is stolen, it should be reported online at www.theisr.org

For any questions concerning registration procedures, please email: register@retainagroup.com

VERIFICATION

The security marking and registration system provides an all-year-round, immediate verification service. This means that stealing a marked and registered item is very risky for thieves as checks on marked and registered items can be carried out online at www.ISRCODECHECK.COM or via the QR code on the labels, at any time of the day or night.


EPA COMPLIANT USED OEM CONVERTER

The vehicle identified as the source for this converter has been confirmed to be under the control of the presenting entity and is not reported to be a stolen vehicle. This converter has been tested to meet the EPA guidelines for reuse when installed under the guidelines of the accompanying installation information sheet. The laboratory test results have been recorded by the testing lab and have been reported back to the EPA. This program is designed to comply with the NSVRP catalytic converter anti-theft program policy guidelines. All transactions have been recorded into an international law enforcement anti-theft database to minimize future thefts of these converters.

COMPLIANCE DOES NOT CONSTITUTE ENDORSEMENT

Use of an EPA-compliant testing lab which is testing catalytic converters to EPA standards and is reporting results to the EPA does not imply formal endorsement by the EPA of this or any other program. Compliance with NSVRP catalytic converter anti-theft policy guidelines does not imply formal endorsement by NSVRP of this or any other program.

EPA Compliant Replacement Program with Testing, Anti-theft Labeling and Registration in Law Enforcement Accessible Database



reCatalitico, Inc.
 7505 Ridgewood Road
 St Cloud MN 56303
www.reCatalitico.com

Converter Test Results

Container Physical Integrity Check : Passed
 Substrate Integrity Check : Passed
 Conversion Efficiency Test : Passed
 Maximum CO Conversion Value : 100.0 %
 Maximum HC Conversion Value : 88.2 %
 Converter Serial Number : 4115308
 Vehicle VIN : 1C6RD7GT9CS283597

Test Notes :

Please see attached sheet for EPA mandated installation and record keeping requirements.

Converter is approved for these applications

RAM1500 09 5.7L ENG Federal Emission
 RAM1500 10-12 5.7L ENG Federal Emission
 RAM2500 10-12 5.7L ENG Federal Emission
 RAM3500 11-12 5.7L ENG Federal Emission

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EPA Compliant Lab Test Results Recorded

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Catalytic Converter

Application:

RAM1500 09 5.7L ENG Federal Emission
 RAM1500 10-12 5.7L ENG Federal Emission
 RAM2500 10-12 5.7L ENG Federal Emission
 RAM3500 11-12 5.7L ENG Federal Emission

EMAIL THIS PRODUCT TO A FRIEND



Stock Number: DD0212
 Details: RECERTIFIED OEM - IN STOCK, 5.7L
 Mileage: 129,423 miles
 This part is: Used

OE Number(s):
 68039563AB

View car pics
 Watch car video



EPA Compliant Converter Tested and Available for Use in Repairs

Detail of EPA Compliant Converter with EPA Compliant Test Certificate Label and Attached Anti-Theft Label

RETAINAGROUP
ISR CODECHECK

OWNER REGISTRATION

Block Code checked:

Code Check Result:

Status of vehicle or other flag:

POLICE OFFICER

If you are an ISR authorized police officer and wish to receive more information about this lookup, please submit your email to meet OPA and Home Office requirements.

To check if the owner's surname matches our records please enter owner's surname as well.

If you require further information call us on +44 (0) 1203 333000 or click here.

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Law Enforcement Registration Portal Showing Converter in Database and Available for Installation on a Vehicle. Once Installed on a Vehicle Database Record is Updated to Include New Vehicle and Owner Information for Recovery in Case of Subsequent Theft.

Appendix

IAATI Policy Resolution 2021-2 Raising Awareness and Promote Measures to Reduce the Theft of Catalytic Converters*

IAATI Model Legislation Related to the Possession, Purchase and/or Sale of Detached Catalytic Converters*

- * These two documents in the appendix are taken from the IAATI.org website. Inclusion of these IAATI documents in this appendix is provided by NSVRP as a public service and does not represent an endorsement by IAATI.

For A More Technical Overview of Smelting and Refining Processes

Recovery of platinum group metals from spent automotive catalysts: [A review. Cleaner Energy and Technology Volume 3, July 2021, 100112.](#)