



Manufacturers of Emission Controls Association

2101 Wilson Boulevard
Suite 530
Arlington, VA 22201
(202) 296-4797
www.meca.org



Auto Care Association

7101 Wisconsin Ave.
Suite 1300
Bethesda, MD 20814
(301) 654-6664
www.autocare.org

February 4, 2022

Steve McCannon
Mobile Sources Program Director
Air Pollution Control Division
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South, Denver, CO 80246

Re: MECA and Auto Care Support of the Colorado Department of Public Health and Environment Air Quality Control Commission Regulation 20 - Colorado Low Emission Automobile Regulation Part C: Aftermarket Exhaust Treatment Devices

The Manufacturers of Emission Controls Association (MECA) and the Auto Care Association (Auto Care) wish to express our continued support for the Air Quality Commission Regulation 20, Part C- Aftermarket Exhaust Treatment Devices. In particular, we wish to reinforce that recent supply chain disruptions of aftermarket catalytic converters are not related to the implementation of Regulation 20 but rather to the continued impacts of the current and past waves of the COVID pandemic.

Like many automotive component manufacturers, the manufacturers of catalytic converters have experienced interruptions in the supply of components such as substrates, mounting mats and stainless steel at various times throughout the pandemic which have impacted the supply of catalytic converters used in original equipment (OE), OE replacement and aftermarket applications in states following Federal and California aftermarket requirements.

We wish to provide clarification on the current performance differences in aftermarket converters produced for Federal and California compliance requirements. CARB aftermarket converter emissions performance and consumer warranty requirements (5 years or 50,000 miles) require that the vehicle meet the same level of emission performance as the original certification and therefore are more extensive than federal standards. They employ enhanced combinations of washcoats and higher precious metal loadings, while still offering cost savings over OE replacement converters. Furthermore, a CARB-compliant converter will also have an Executive Order (EO) number/stamped onto its body that corresponds to a list of vehicle years, makes, and models that testing has confirmed for correct application. The use of a CARB compliant catalytic converter ensures that a vehicle's NOx emissions will be reduced to the

same level as the original emissions standard the vehicle was certified to. This compares to the less stringent Federal minimum performance requirement of 30% NO_x emissions reductions for 5 years or 25,000 miles.

Since 2009, federal aftermarket and OE converters have incorporated more advanced washcoat technologies to address on-board diagnostic (OBD-II) requirements of newer vehicles. However, aftermarket converter manufacturers do not typically dedicate resources to improving existing federal converters, as that would require going through the costly and time-consuming testing and re-submission process; rather they focus their resources on expanding their vehicle list for broader application on new engine families. Therefore, there remains a significant performance difference between aftermarket converters designed to meet US EPA and CARB requirements as discussed previously.

In 2013, MECA authored a paper titled “Emission Performance of California and Federal Aftermarket TWC Converters”, which was published by the Society of Automotive Engineers (SAE)¹ which examines the performance of aftermarket converters to meet EPA and CARB minimum performance and durability standards. In this study, MECA selected five test vehicles to represent the most common engines and exhaust configurations (4, 6, and 8-cylinder passenger cars, SUVs and light trucks) in the U.S. fleet. Commercial aftermarket converters designed to meet Federal and CARB emission requirements were aged out to 25,000 and 50,000 equivalent miles. The aged converters were installed on vehicles and tested over the aftermarket converter certification cycle. The average emissions benefit of using the latest CARB compliant aftermarket converter technologies for the five vehicles was found to be 77% lower NO_x, 60% lower HC, and 63% lower CO emissions as compared to a federal compliant aftermarket converter. As an example, Figure 1 presents the non-methane hydrocarbon (NMHC) and nitrogen oxides (NO_x) results for two popular light duty trucks.

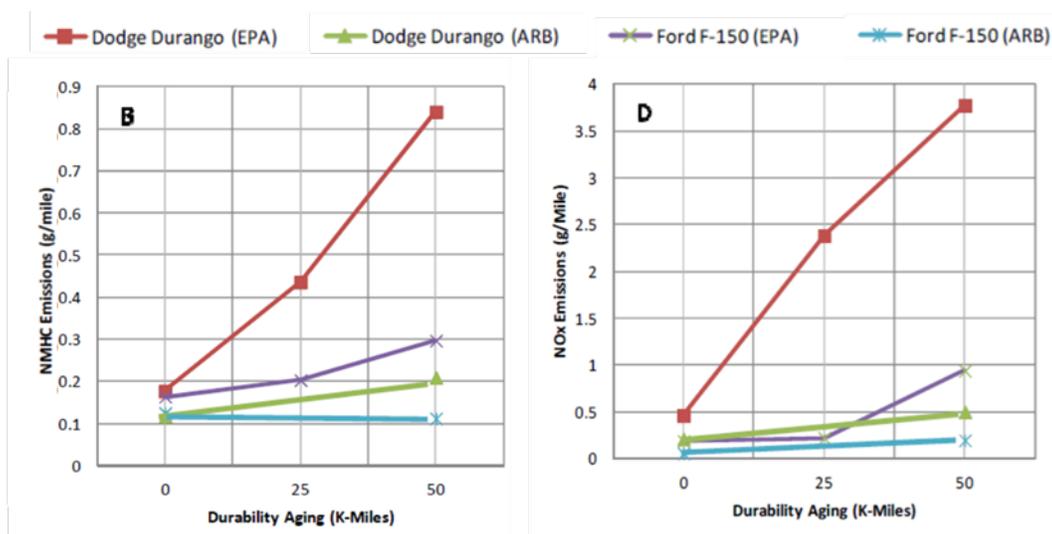


Figure 1. NMHC and NO_x Emissions in weighted g/mile for two light trucks equipped EPA and CARB (ARB) compliant catalytic converters¹.

¹ Emission Performance of California and Federal Aftermarket TWC Converters, Rasto Brezny and Joseph Kubsh, SAE 2013-01-1298, <https://theicct.org/sites/default/files/MECA%20Aftermarket%20SAE%20Paper.pdf>.

The improved emissions reduction performance of the more expensive CARB compliant converters still represents an extremely cost-effective way to improve criteria pollutant related air quality, especially in communities living adjacent to highly traveled roadways.

California vs. Unique Colorado Certification Procedure

MECA and Auto Care strongly endorse the current CDPHE carryover methodology of California aftermarket certifications (formally referred to as exemption in California). Other Section 177 states including New York and Maine have also recognized the benefits of adopting California exempted converters as being the most efficient way for states with limited resources to gain access to the best available aftermarket converter technology. The carryover of California aftermarket converters serves to immediately provide smaller market states such as Colorado with an immediate supply of superior performance aftermarket converters without incurring the delays and additional costs to the state and consumers of creating and managing their own unique procedures. Furthermore, it is highly unlikely that an aftermarket converter manufacturer will be able to incur the costs of individual state aftermarket programs, and maintain additional unique inventory and parts list for a limited state market.

Catalytic Converter Theft

Original equipment (OE) catalytic converters employ higher precious metal loading levels to ensure performance to the tightening requirements of EPA Tier 2 / CARB LEVII and EPA Tier 3 / CARB LEVIII emissions standards and increasing mandated manufacturer emissions warranties ranging from 80,000 to 150,000 miles depending upon the model year. Concurrently, emissions standards throughout the major automotive economies in the world have been tightening in parallel leading to increasing global precious metal demand. Furthermore, the pandemic has resulted in production interruptions at mines and metals refiners. As a result, original equipment catalytic converter theft has been driven by the increasing valuations of precious metals contained in OE converters and the ability to sell them quickly into the reclamation industry channel.



Figure 2. Platinum (Pt), Palladium (Pd) and Rhodium (Rh) Prices from 2017 to 2022².

² From Johnson Matthey at <http://www.platinum.matthey.com/prices/price-charts>

MECA and Auto Care believe that the best way to deter catalytic converter theft is to enact legislation allowing only registered businesses to buy and sell legally salvaged catalytic converters from auto repair and wrecking yards as well as require these businesses to maintain customer and vehicle identification records for each converter transaction.

Please don't hesitate to contact us for clarification or questions regarding our comments.

Sincerely,



Dr. Rasto Brezny
Executive Director
Phone: (202) 296-4797 x106
Mobile: 301-717-3628
Email: rbrezny@meca.org



Aaron Lowe
SVP, Regulatory and Government Affairs
Phone : (301) 654-6664
Mobile : (240) 333-1021
Email : aaron.lowe@autocare.org