WRITTEN COMMENTS OF THE MANUFACTURERS OF EMISSION CONTROLS ASSOCIATION ON THE NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION PROPOSED PART 218 TO ADOPT CALIFORNIA'S CLEAN CARS PROGRAM FOR THE MODEL YEARS 2017 TO 2028 AND AFTERMARKET CONVERTER STANDARDS FOR LIGHT-DUTY VEHICLES

September 27, 2012

The Manufacturers of Emission Controls Association (MECA) is pleased to provide comments in support of the New York Department of Environmental Compliance proposal to adopt 6 NYCRR part 218 that includes California's LEV III emission standards, 2017-2025 GHG requirements, ZEV mandates and aftermarket converter requirements for light-duty vehicles. These amendments, when adopted, will reset the bar for state-of-the-art exhaust and evaporative emission controls for light-duty vehicles through 2028. MECA applauds NY-DEC for bringing forward a comprehensive and largely harmonized set of proposals covering light-duty vehicle greenhouse gas emissions and criteria emissions for future vehicles while also requiring the best technology for cleaning up the existing fleet of gasoline passenger vehicles in the state.

MECA is a non-profit association of the world's leading manufacturers of emission control technology for mobile sources. Our members have over 40 years of experience and a proven track record in developing and manufacturing emission control technology for a wide variety of on-road and off-road vehicles and equipment, including extensive experience in developing exhaust and evaporative emission controls for gasoline and diesel light-duty vehicles in all world markets. This includes supplying reliable aftermarket replacement converters in California and across the country. A number of our members that supply aftermarket catalysts have extensive experience in the development, manufacture, and application of three- way catalyst technologies to help enable motor vehicles to meet existing LEV II and Tier 2 emission standards for new vehicles. Our industry has played an important role in the emissions success story associated with light-duty vehicles around the world, and has continually supported efforts to develop innovative, technology-forcing, emissions programs to deal with unique air quality problems.

MECA supported CARB's LEV III, 2017-2025 greenhouse gas emission standards for light-duty vehicles and revision to the ZEV requirements adopted by the Board on January 25th, 2012. MECA provided detailed comments in support of this proposal a copy of which can be found here: (http://www.meca.org/galleries/default-file/MECA%20comments%20on%20ARB%20LEV%20III,%20post-2016%20GHG%20012512.pdf) . There are significant opportunities to reduce both criteria pollutant and greenhouse gas emissions from the transportation sector through the design of fuel efficient powertrains that include advanced exhaust emission controls for meeting even the most stringent criteria pollutant standards that are included in California's LEV III program. MECA believes that advanced emission control systems have a critically important role in future policies that aim to reduce mobile source criteria pollutant and greenhouse gas emissions. Emission control manufacturers are working with their auto manufacturer partners to further optimize these emission control technologies to be more effective at reducing criteria pollutants and play a

role in reducing vehicle greenhouse gas emissions. These advanced exhaust and evaporative emission control technologies will allow all current and future high efficiency powertrain options to comply with LEV III criteria pollutant standards, thus enabling these powertrains to be viable options for complying with California and EPA greenhouse gas pollutant standards. In nearly all cases, these fuel-efficient powertrain designs, combined with appropriate emission controls, can be optimized to either minimize fuel consumption impacts associated with the emission control technology, or, in some cases, improve overall fuel consumption of the vehicle. This optimization extends beyond carbon dioxide emissions to include other significant greenhouse gases such as methane and nitrous oxide.

MECA has supported ARB's aftermarket regulation developments for over 20 years dating back to the original regulations for replacement converter certification in California in August of 1988. MECA and our members actively participated in the regulatory process leading up to California's most recent revision of their aftermarket converter standards implemented in 2009 including providing staff with comments regarding the capabilities of advanced aftermarket converter technologies. MECA members have provided converter samples to CARB staff to facilitate their understanding of the performance and durability of aftermarket converter technologies in support of their regulation.

We commend NY-DEC for recognizing the opportunity to significantly reduce emissions from the existing light-duty passenger car and truck fleet by applying the types of advanced catalyst technologies that are being used on all new vehicles sold since 2004 under CARB's LEV II light-duty vehicle programs to aftermarket converters. Our members have invested and continue to invest significant resources in developing, optimizing and commercializing advanced emission control technologies to enable new and in-use motor vehicles to meet the most stringent standards for emissions. The additional requirements outlined in this proposal would insure that aftermarket converters sold in New York are fully compliant with the diagnostic systems on 1996 and newer model year vehicles. Furthermore, the proposed amendments will extend these advanced catalysts to pre-1996, non-OBD II vehicles so that they may benefit from the same advanced catalyst technologies used on vehicles equipped with OBD II systems and significantly reduce emissions of hydrocarbons and NOx that contribute to ozone and secondary PM formation.

To meet the durability requirements for new aftermarket converter catalysts of 50,000 miles, catalyst manufacturers have developed technologies based on more thermally durable materials. To insure that catalysts are compatible with the OBD II system and do not cause the vehicle's MIL to illuminate when the catalyst is functioning properly, manufacturers have developed advanced catalyst coating practices and implemented tight quality control procedures in their processes. These advances result in catalysts that can survive high temperature exposure and deliver the required performance over a longer useful life. MECA member companies have certified and continue to obtain CARB approval for new technologies to broaden the availability of aftermarket converters that comply with the latest requirements.

The benefit of applying the most advanced aftermarket converters on non-OBD vehicles was demonstrated by ARB staff through vehicle tests and presented in their staff report. After approximately 8000 miles of mileage accumulation, the advanced catalysts resulted in 50-75%

lower emissions of all three criteria pollutants compared to the aftermarket catalyst technology sold previously in California and currently sold in New York. Furthermore the advanced catalysts demonstrated far better durability resulting in 60% less deterioration in HC emissions and 75% less deterioration in NOx emissions after mileage accumulation relative to today's aftermarket converters sold for pre-OBD vehicles in New York. MECA members have recently completed their own test program that compared the emission reduction benefit of fully aged California and federal aftermarket converters. After only 25,000 miles of equivalent aging the CARB converters emitted 77% less NOx, 60% less HC and 63% less CO than the equivalently aged EPA converter. The emission benefits of the CARB aftermarket converters were even more dramatic after 50,000 miles of aging. The results of this study have been submitted to the Society of Automotive Engineers for publication in April of next year.

NY-DEC has estimated that the level of emission reductions provided by the advanced aftermarket converters represents 3.66 tons/day of HC and NOx in the state in 2012. These reductions will make a significant contribution towards the state meeting its ozone air quality commitments. As demonstrated by emissions tests conducted by CARB, an essential component of meeting these estimated emission reductions is the phase-out of used or remanufactured aftermarket converters. Although the used converters must pass an initial emission screening test before they are sold, because the operating history of the used converter is not known, there is no way to tell how long the converter will last in service. It has been proposed to allow the OBD system on OBD equipped vehicles to notify the driver if a used converter has failed. This approach would not be applicable to pre-OBD vehicles. Furthermore, the emissions threshold for OBD systems is 1.75 times higher than the certification limit that new aftermarket converters must meet. And finally, the higher exhaust emissions caused by operating a vehicle with the engine light illuminated would continue until the operator takes action or the next emissions inspection period. The stringent guidelines being proposed under part 218 of 6 NYCRR are important to insure that only aftermarket technologies capable of achieving the highest standards of quality and performance are sold in New York. These are the same converter technologies that have been sold in California for the past three years.

MECA commends NY-DEC for taking important steps to reduce criteria pollutant emissions, greenhouse gas emissions, and improve fuel economy from light-duty vehicles. Furthermore we applaud the agency for their leadership in taking the additional steps to apply the best aftermarket converter technology to the state's existing light-duty vehicle fleet. Our industry is prepared to do its part to deliver the most advanced and cost-effective emission control technologies to the state of New York.

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