February 26, 2016

Chairman Michael C. Burgess
Energy and Commerce Committee, Commerce, Manufacturing, and Trade Subcommittee
United State House of Representatives
2336 Rayburn House Office Building
Washington, DC 20515

The Honorable Jan Schakowsky, Ranking Member
Energy and Commerce Committee, Commerce, Manufacturing, and Trade Subcommittee
United State House of Representatives
2367 Rayburn House Office Building
Washington, DC 20515

Re: February 26, 2016 Hearing: "Disrupter Series: 3D Printing"

Dear Chairman Burgess and Ranking Member Schakowsky:

Thank you for organizing a Subcommittee hearing on how three-dimensional (3D) printing is revolutionizing the way in which U.S. companies manufacture products in the 21st century. Please accept this letter as the Specialty Equipment Market Association's (SEMA) statement for the record regarding the role that 3D printing plays in the specialty auto parts sector.

SEMA represents the $36 billion specialty automotive aftermarket. Our trade association is made up of about 6,800 mostly small businesses nationwide that design, manufacture, distribute and retail specialty parts and accessories for motor vehicles. The industry employs over 1 million Americans and produces performance, functional, restoration and styling enhancement parts for use on passenger cars, trucks, collector vehicles and off-highway vehicles.

3D printing represents the future for manufacturing specialty auto parts, prototypes and tools. In support of this new technology, SEMA offers access to 3D printing through its "SEMA Garage," which helps companies bring products to market faster and at a fraction of what it would cost elsewhere.

Encompassing 15,000 square-feet, the SEMA Garage meets industry demand for a user-friendly resource for testing products to current Clean Air Act emissions standards. The facility also serves as a one-stop shop for product development. Services offered include custom 3D scanning, rapid prototyping via 3D printing, product installation center, photo studios and a product presentation room. Auto parts can be developed, printed, photographed and displayed in one building. Additionally, in partnership with the automakers, companies have access to technical information and measurements allowing 3D printed specialty parts to fit perfectly on the host vehicle.

Using the Garage's state-of-the-art Stratasys Fortus 450mc 3D printer, companies can create a physical prototype that you can see, touch and test, helping eliminate costly changes before the product has gone to production. By utilizing the printer's Fused Deposition Modeling (FDM)

Specialty Equipment Market Association (SEMA)
1317 F Street, NW; Suite 500; Washington, DC 20004
Telephone: 202/783-6007; Fax: 202/783-6024

technology, the printer is able to build products that can endure heat, humidity and chemicals. This cutting-edge technology can accommodate up to a 16" x 14" x 16" part with print accuracy down to plus or minus 5 one-thousandths (+/- .005) of an inch. Printing a product takes a fraction of the time it takes to fabricate the same product through more traditional methods. For instance, an entire intake manifold can be printed in as little as six hours. It's also quite easy.

3D printers are most frequently used for product development rather than mass production. Nevertheless, the technology is becoming more affordable and expanding in capabilities. While polymers are the preferred materials for strength and flexibility, metals may also be available to address higher temperature and pressure needs, among other considerations.

Beyond parts, it is possible to create an entire car using a 3D printer. Local Motors unveiled its second 3D build, the "LM3D Swim," at the 2015 SEMA Show in Las Vegas. "In the past few months our engineers have moved from only a rendering to the car you see in front of you today," Local Motors CEO Jay Rogers told the crowd at SEMA. "We are using the power of direct digital manufacturing to create new vehicles at a pace unparalleled in the auto industry, and we're thrilled to begin taking orders on 3D-printed cars next year." The targeted base price is MSRP $53,000 with a 2017 delivery date. While different formulations and blends are being tested, their current blend for additive manufacturing for the car is 80% ABS plastic and 20% carbon fiber material. Local Motors has plans to open 100 microfactories in the next 10 years, including a location at the National Harbor in Prince George's County, Maryland.

The federal government has played a crucial role in developing the new technology. As a means of showcasing those efforts, the Department of Energy's Manufacturing Demonstration Facility at Oak Ridge National Laboratory in Tennessee printed a 3D Shelby Cobra using the Big Area Additive Manufacturing (BAAM) machine. The car was built with a team of six people in just six weeks. It incorporated advanced composites that cut the vehicle weight in half while improving performance and safety.

In Fort Worth, TX, Painless Performance is producing wiring harnesses for vintage automobiles and off-road vehicles. One of the company founders, Dennis Overholser, remembers selling his first wiring harness at the 1990 Pate swap meet in Cresson, TX. Less than 30 years later, Painless Performance is a multi-faceted company that manufactures over 500 products for show cars, dragsters, rock crawlers and everything in between. Long a SEMA member, Painless Performance, is one of many companies that has taken advantage of the SEMA garage's 3D printing service, which allows them to produce product models they plan to bring to market.

SEMA and its members thank the Subcommittee for its interest in learning more about 3D manufacturing, and the opportunities it offers to improve productivity. Please feel free to contact me at 202/783-6007, ext. 31 or stevem@sema.org if you have any questions.

Sincerely,

Stephen B. McDonald
Vice President, Government Affairs