



May 14, 2020

LVO Produces 3D Printed Face Shields for Donation to Healthcare Providers

Mack Trucks recently began producing 3D printed face shields at its Lehigh Valley Operations (LVO) manufacturing facility in Macungie, Pa. Some of the face shields are used by LVO employees in line with CDC guidelines for maintaining workplace health and safety during the COVID-19 pandemic. At the same time, several hundred are also being donated to healthcare providers both locally and regionally to help bridge the gap, as high demand has made personal protective equipment (PPE) items hard to come by.

On Friday, May 8, LVO made its first donations of 3D face shields produced on site to Lehigh Valley Health Network (LVHN), the local area's largest hospital and health care services network; and Lehigh Center, a skilled nursing facility located in Macungie and managed by Genesis Healthcare, Inc.



LVO employees William Kulnis and Karan Arora presented face shields to LVHN representative Adam Selmasska. Employee Richi Ramlal presented face shields to Lehigh Center representative Glenn Trunk. William, Karan and Richi are members of the LVO team which designed and produced the face shields.

Adam and Glenn both expressed their deepest appreciation for the face shields. Each cited the extremely high need for PPE as healthcare providers face challenges in procuring adequate supplies to protect both their employees and the patients they serve.



When the demand for PPE created by the COVID-19 pandemic put these much-needed items in short supply, many companies and individuals with access to 3D printers stepped up and started using the technology to help supplement depleted PPE inventories at healthcare organizations.

Members of LVO's Manufacturing Engineering team wanted to find a way to use the company's 3D printing capability to help our healthcare community. The team investigated and tested numerous designs for a variety of items including door openers and face masks, before deciding on face shields. Through their initial research, they found certain designs required a higher volume of model material and some required longer print time – which would reduce daily output.

The team took advantage of Volvo's global network and collaborated with several of the group's manufacturing facilities in Europe to develop a more efficient design. The option selected uses less material and enables the team to produce nearly 60 pieces per day. To generate that volume, LVO's Maintenance Supervisors keep the 3D printer running non-stop on all three shifts. They manually start a new job every hour and seven minutes – the time needed to produce three face shield headbands.



Once the headband pieces are printed, LVO volunteers assemble the face shields by adhering foam strips on the inside of the headbands for the wearer's comfort, attaching the pre-cut and hole-punched clear shields, and adding the adjustable bands to provide a custom-fit for each end user.



"We extend our thanks to the LVO Manufacturing Engineering and Maintenance team members responsible for designing and producing the 3D printed face shields," said LVO VP and General Manager Rickard Lundberg. "Their efforts will truly make a difference for many healthcare providers in our community."

LVO Face Shield Design and Production Team Members

Jason Albright
Karan Arora
Tyrone Behler
James Crudden

Tom Gombos
Scott Highland
Mike Kelly
William Kulnis

Manas Kumar
Richi Ramlal
David Sodl
John Truax

Our design and production team continues to print and assemble face shields, and LVO continues to reach out to healthcare providers to offer donations.

We are proud to support healthcare efforts in our community through in-kind donations of PPE items given to those providing medical care during the COVID-19 pandemic. Over the past two months LVO has also donated goggles, safety glasses, face masks, heavy nitrile gloves, Tyvek suits, and a high-powered air-purifying respirator to local healthcare providers.

We Are Mack. We Are Safety. We Are People.