

Ford to Produce Powered Air-Purifying Respirators, Masks for COVID-19 Protection in Two Michigan Facilities; Scaling Up Production of Gowns and Testing Collection Kits

- Ford, with design and testing consultation from 3M, has developed a new powered air-purifying respirator (PAPR). Production of this PAPR starts Tuesday, April 14 at Ford's Vreeland facility near Flat Rock, Mich., with paid UAW volunteers, with the ability to make 100,000 or more
- Ford, in collaboration with the UAW, is now producing face masks at Ford's Van Dyke Transmission Plant for internal use globally and pursuing certification for medical use
- To help further protect health care workers, Ford is leading efforts to manufacture reusable gowns from airbag materials with supplier Joysen Safety Systems
- Ford is lending its manufacturing support to help Thermo Fisher Scientific quickly expand production of COVID-19 collection kits for patient testing

DEARBORN, Mich., April 13, 2020 – Ford is expanding its efforts to design and produce urgently needed medical equipment and supplies for health care workers, first responders and patients fighting coronavirus.

In addition to the current production of more than 3 million face shields in Plymouth, Mich., Ford-designed powered air-purifying respirator production begins Tuesday, April 14. Ford also is now producing face masks and leading an effort to scale production of reusable gowns for health care workers. Lastly, Ford started providing manufacturing expertise to help scientific instrument provider Thermo Fisher Scientific quickly expand production of COVID-19 collection kits to test for the virus.

"We knew that to play our part helping combat coronavirus, we had to go like hell and join forces with experts like 3M to expand production of urgently needed medical equipment and supplies, said Jim Baumbick, vice president, Ford Enterprise Product Line Management. "In just three weeks under Project Apollo, we've unleashed our world-class manufacturing, purchasing and design talent to get scrappy and start making personal protection equipment and help increase the availability and production of ventilators."

Ford and 3M Collaboration Leads to New PAPR

Since late March, Ford manufacturing, purchasing and supply chain experts have been embedded at 3M manufacturing facilities to help increase production of urgently needed products.

With this additional help, 3M and Ford were able to increase the output of PAPRs and N95 respirators at 3M's U.S.-based manufacturing facilities.

"3M is dedicated to helping to protect our heroic health care workers and first responders globally, including sharing our scientific expertise to increase supply of needed PPE," said

Bernard Cicut, vice president, 3M Personal Safety Division. “We are proud to stand together with Ford in this effort, as they have helped us increase manufacturing of existing 3M PPE products and, together, we have rapidly designed a new PAPR to help protect these heroes.”

Ford will start producing an all-new PAPR design to help protect health care professionals on the front lines fighting COVID-19. Rapidly designing components and prototyping in accordance with federal guidelines and with 3M expert support and guidance, Ford teams reduced PAPR development time to less than four weeks.

“By working collaboratively with 3M to quickly combine more than 100 years of Ford manufacturing and engineering expertise with personal protection equipment design and expertise, we’re getting much-needed technology into the hands of frontline medical workers to help when they need it most,” said Marcy Fisher, Ford director, Global Body Exterior and Interior Engineering.

Approximately 90 paid UAW volunteers will assemble PAPRs at Ford’s Vreeland facility near Flat Rock, Mich., with the ability to make 100,000 or more.

The newly designed PAPR includes a hood and face shield to cover health care professionals’ heads and shoulders, while a high-efficiency (HEPA) filter system provides a supply of filtered air for up to 8 hours. The air blower system – similar to the fan found in F-150’s ventilated seats – is powered by a rechargeable, portable battery, helping keep the respirator in constant use by first-line defenders.

The development team expects the respirator design will meet the pending National Institute for Occupational Safety and Health (NIOSH) limited-use protocol to respond to the COVID-19 public health emergency, with approval anticipated by the end of April.

Pending approval, 3M will distribute the newly designed PAPRs through its U.S. network to help bring these technologies quickly and efficiently to health care workers who urgently need them. 3M and Ford will donate any profits they earn from the sale of the PAPR to COVID-19 related nonprofit organizations.

Face Mask Production

Meanwhile, Ford is now manufacturing face masks for internal use globally and pursuing certification for medical use its Van Dyke Transmission Plant. Face masks can help slow the spread of the virus and help people who may have the virus and do not know it from transmitting it to others.

The CDC is now encouraging all U.S. residents to use masks to curb the spread of the virus.

Ford’s global manufacturing and purchasing teams quickly sourced the necessary materials and equipment from its network of equipment manufacturers around the world. Production began earlier this week.

Approximately 30 UAW paid volunteers will start making masks in the plant’s ISO Class 8 cleanroom, which is a controlled environment with extremely low levels of pollutants, enabling the safe production of face masks for medical use. Eventually, approximately 80 UAW paid volunteers will make masks as production increases.

“UAW Ford members continue to step up and volunteer to work during this difficult time as we expand at the facility across from Flat Rock to make respirators and at the Van Dyke Transmission Plant to make face masks for medical use,” said Gerald Kariem, vice president, UAW Ford Department. “The UAW also continues to work with Ford to follow stringent CDC guidelines and go above and beyond protections for these members who are so proudly volunteering to serve their communities and their nation.”

Gown Production

To help further protect health care workers, Ford is leading efforts to manufacture reusable gowns with airbag supplier Joyson Safety Systems. The go-fast project has created re-usable gowns manufactured from material used to make airbags in Ford vehicles.

Production of gowns will reach 75,000 gowns a week by Sunday and scale up to 100,000 gowns for the week of April 19 and beyond. By July 4, Ford-supplier Joyson Safety Systems will cut and sew 1.3 million gowns, which are self-tested to federal standards and are washable up to 50 times.

Ford worked with Beaumont Health in Metro Detroit to quickly design the gown pattern and test for sizing during fit and function trials. More than 5,000 gowns have already been delivered to the hospital.

“The need to protect our medical teams is heightened – Ford’s gown production could not come at a better time during this crisis,” said David Claeys, president of Beaumont Health hospitals in Dearborn and Farmington Hills. “Our front line health care workers are working around the clock to treat COVID-19 patients and we need the necessary supplies to support them.”

Collection Kits for COVID-19 Tests

Ford is helping scale production of collection kits for COVID-19 tests at Thermo Fisher Scientific.

Thermo Fisher’s engineering team at the company’s site in Lenexa, Kansas, realized their expertise, combined with the manufacturing expertise of Ford’s nearby Kansas City Assembly Plant engineering team, could help set up additional collection kit production machinery. The Ford team also helped Thermo Fisher adapt machinery that currently runs glass vials for other products to run plastic vials required in drive-through coronavirus test collection.

“Ford’s engineers brought a fresh perspective to production expansion, and together, we’ll more than triple the number of collection kits we can deliver each week starting April 20,” said John Reuss, senior director, microbiology business for Thermo Fisher. “It’s great to see different industries coming together to solve a common problem.”

Additional Efforts

“We are doing all we can to expand production and availability of personal protective equipment to help keep the true heroes – medical personnel – and our communities safe in the fight against COVID-19,” said Adrian Price, director, Global Core Engineering for Vehicle Manufacturing.

Ford also is continuing to manufacture transparent full-face shields for medical workers. As of April 13, Ford had produced more than 3 million face shields for medical personnel and first responders. Besides the U.S., face shield production also has started globally at Ford facilities in Canada and Thailand and with Ford joint venture partner Mahindra & Mahindra in India.

Work at Rawsonville (Mich.) Components Plant is underway to transform a portion of the plant to manufacture a third-party ventilator, in collaboration with GE Healthcare, with production expected to start the week of April 20. Built by paid UAW volunteers, the goal is to produce 50,000 Model A-E ventilators by July 4 to help COVID-19 patients.

Ventilator pre-production activities are also underway in the U.K., where Ford and an industry consortium are preparing to make ventilators from Penlon. Ford is providing manufacturing engineering capability, project leadership, purchasing support and assembly of the ventilators at its Dagenham engine plant. This production will help meet demand for 15,000 ventilators ordered by the U.K. government.

Additional companies and individuals who are interested in contributing to this effort can submit their information here at www.fordnewideas.com.

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