Ford Quick to Transform Warehouse Operation to Manufacture Ventilators for UK's National Health Service

- Ford creates a production facility in Dagenham to help make ventilators for COVID19 patients; set-up that would usually take 12 months is achieved in just three weeks
- The initiative is part of VentilatorChallengeUK, a consortium of tech and engineering companies that are supporting the UK's National Health Service
- Hundreds of Ford volunteers produce components boxes and display screens that form part of the fully assembled units. Virtual reality enables collaboration with consortium
- Assembling 15,000 Penlon Prima ES02 ventilators for COVID-19 patients

Ford is making ventilator sub-assemblies for the National Health Service (NHS) in the UK after transforming an empty warehouse into a manufacturing facility in record time.

Employees worked ceaselessly for three weeks to get the high-tech production line up and running – a feat that would usually take a full year. The facility is part of the VentilatorChallengeUK Consortium – a collaboration between leading tech and engineering companies to deliver 15,000 much-needed Penlon Prima ES02 ventilators that the NHS will use for critically ill COVID-19 patients.

"It took many late nights and a lot of hard work, but the ingenuity and commitment of our people has been just remarkable, and it shows how a crisis can bring out the best in us," said Graham Hoare, chairman, Ford of Britain. "The way they have sacrificed time with family and also been so willing to learn something new to help build these life-saving devices is full testimony to their desire to deliver, and it makes me very proud to be part of this team."

Converting a warehouse at the company's Dagenham Engine Plant estate into an ISO9001 accredited facility required the team to repurpose existing equipment and quickly establish a production line for components boxes and 8.4-inch remote display screens that form a key part of the fully assembled units.

3D printing processes were employed to make key components for 200 workstations – which adhere to social distancing requirements – for the Ford volunteers that include operators, product coaches, technicians and engineers from a range of departments. In total, at full production, more than 650 people will be working in three shifts at the facility.

Ford is part of the Consortium Executive that includes Airbus, McLaren, Penlon and Siemens. To collaborate day-to-day with Penlon, located in Oxford, U.K., the Ford team is using HoloLens 2 virtual reality headsets, which enable remote technicians and specialists to view the perspective of the HoloLens wearer on a computer screen and provide real-time guidance and information, seen as holograms in the wearer's field of view.

"There's no hierarchy in a time of crisis. People just work together for a common goal. By working closely with Penlon and medical practitioners, we quickly bridged the gap to go from making engines to making ventilators, and together with our partners in the consortium we're now producing a device by the thousands that's normally made in small quantities," said Martin Everitt, plant manager, Dagenham Engine Plant, Ford of Britain.

Project Apollo

Ford is also helping to reduce the spread of COVID-19 with Project Apollo, the company's global effort to produce personal protection equipment, assist with local and national initiatives, and increase the availability of ventilators and respirators.

Ford's Research and Innovation Center in Aachen, Germany, recently assisted with the development of a new powered air-purifying respirator (PAPR), being produced at the company's Vreeland facility near Flat Rock, Michigan, in the US.

For healthcare professionals, the PAPR includes a hood and face shield, while a battery operated ventilator and a high-efficiency filter system provides a supply of 99.97 per cent filtered air for up to eight hours.The engineers who worked on Ford's Interior Air Advanced Filtration System provided expertise in the filter design and testing to develop the clinical grade filter used in the PAPR.

Ford is also producing protective face masks and shields as part of initiatives to deliver a safe working environment for employees performing essential roles at Ford facilities during the COVID-19 crisis.

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