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Shifting Gears - Ford's story of combating COVID-19



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OVERVIEW

Automakers across the globe are hit by corona virus recession. Almost every country's economy is in free fall and industries are shrinking at an unfathomed pace. Amidst such a slower recovery trend, Ford made a conscious decision to shift its gears with the aim of helping countries in the fight against COVID-19. **PROJECT APOLLO**, the code name given by Ford is dedicated to support and protect healthcare workers fighting the current crisis that has taken the world into a full swing.

Ford Motor Company is seen as an exemplary example showcasing 'with great legacy comes greater responsibility'. The 117-year-old automaker is trying to define collaboration and teamwork by coming together with various initiatives to make a real difference for people in need and for those on the front line of this crisis. Ford's Project Apollo is one of them inspired by NASA's Apollo 13 lunar mission.



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***Auto industry employs
59 million people
worldwide and
contributes an
estimated \$5.5 trillion
to the global economy***

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Project Apollo is an amazing fleet of engineering through which Ford led the entire conceptualization to delivery model of its production of respirators, face masks, medical gowns, and collection kits for COVID-19 tests. The project came under various media headlines highlighting the power of innovative thinking by the great automaker. In the wake of the current recession, President Donald Trump cited the need to stay united and named Ford and its workers as 'National Treasure'. He also praised their efforts to produce the much needed Powered Air Purifying Respirators (PAPRs) for medical workers across the US.

PAPR PRODUCTION

A powered air-purifying respirator (PAPR) in general term is known to be a type of respirator that is used for protecting people against contaminated air. This consists of a hood that takes the ambient air contaminated with one or more type of pathogen or pollutant. It then actively filters and removes a sufficient proportion of the pollutants and delivers the clean air to the user's mouth or face. PAPRs have a higher assigned protection factor and sometimes are also called blowers or positive-pressure masks or blower units.



Switching gears to supply PAPRs, amidst the growing surge in demand for Personal Protective Equipments (PPEs), Ford decided to help and support its people and the country wholeheartedly. The automaker collaborated with 3M and managed to create PAPR from the ideation stage to a working prototype on the assembly line in less than 40 days.

More than 10,000 PAPRs had been assembled by around 90 paid volunteers at Ford's Vreeland facility in early May itself. This included a hood and face shield to cover health care professionals' heads and shoulders, while a high-efficiency (HEPA) filter system provided a supply of filtered



air for as long as 8 hours.

The first customer to order and receive delivery of the Ford-built PAPRs was Seattle's Virginia Mason Medical Center.

Currently PAPRs are available in the US through 3M authorized distributors and both the companies have decided to donate any profits they earn from the sale of these PAPRs to COVID-19 related nonprofit organizations.



FACE SHIELDS

For addressing another critical area of need, Ford began its plan to produce and supply more than 12 million face shields in collaboration with GE Healthcare.

A simplified design was developed in its Brazil and Argentina plants with initial production plan of 50,000 face shields. Ford has already produced more than 3 million face shields in Plymouth.

Besides these two countries, face shield production has begun globally at Ford facilities in Canada and Thailand.

In India, Ford along with its joint venture partner Mahindra & Mahindra is currently producing face shields for frontline staff in plants at Chennai and Sanand.



GOWNS AND MASKS

Medical masks for workforce and washable gowns for hospitals are high on the priority list for Ford.

Ford has begun manufacturing reusable gowns with airbag supplier Joyson Safety Systems.

Around 500,000 orders of reusable gowns for health care workers have been placed to Ford by the State of New Jersey. With an estimated weekly production of 200,000 per week; more than 400,000 gowns have been shipped around the United States post self testing as per federal standards. These gowns are washable up to 50 times and are manufactured from material used to make airbags in Ford vehicles.



INTRODUCING THE INVENTIVE NEW HEAT TRACKER

Apart from Project Apollo, Ford is piloting a new heated sanitization software solution for its 2013 to 2019 models of Police Interceptor Utility hybrid SUVs. The company worked with Ohio State to determine the temperature range needed to reduce the spread of corona virus and is using the heat tool for police interceptor vehicles to combat the virus.

According to Ford and the research team, a temperature in excess of 133 degrees Fahrenheit can reduce or eliminate SARS-CoV-2; the virus that causes COVID-19 up to a good percent. It introduced a software patch that monitors the temperature and temporarily heats the interior of these police vehicles by activating the vehicle's powertrain and climate control systems. The software update helps sterilization of Ford Police SUVs.

During the activation of the sterilization mode, the user exits the car and the doors remain closed. Within 15 minutes, the light starts to flash as a warning signal and the brake light is engaged to signal the end of the process. The user can then enter and use the vehicle.

With no greasy elbow required, the patch is currently being installed on NYC police vehicles. While finding newer ways to bring this software capability to additional Ford police vehicles, it is planned to offer to police officers nationwide through dealers of Ford.

Apart from SUVs, Ford claims that it can also work in any car with the right retrofitting and this process can help reduce virus concentrations by more than 99% on surfaces and in the air.



**ACTIVATING
HEATER FROM
MOBILE APP**

**CAR TEMPERATURE
INCREASES TO 133
DEGREE
FAHRENHEIT**



**CAR LIGHT FLASHES
AS A SIGNAL OF
PROCESS
COMPLETION**

**SAFE TO ENTER
THE CAR AND
DRIVE THROUGH**



VEHICLE SUPPORT SYSTEM

Ford has been communicating with officials from all levels of government to ensure that the automaker remain aware of areas of need to support its citizens. In order to help and support people during the pandemic, it had launched its mobile testing program in April 2020. Ford brought the first Mobile COVID-19 Testing vehicles capable of testing as many as 100 people a day with test results declaration between 24 to 36 hours.

Ford has also launched another new initiative of lending vehicles to the Red Cross in several countries like Chile, Colombia, Peru, Brazil and Argentina to assist with transportation of required supplies. The fleet includes EcoSport, Ranger Transit, Fusion, and other models, as well as an ambulance in order to provide a full fledged Vehicle Support system.



Photo: Ford

CONCLUSION

Countries around the world have raised concerns about potential shortages of PAPRs, ventilators, gowns, masks, face shields and other necessary measures to treat critically ill patients suffering from COVID-19. In the fight against the outbreak, it is great to see the way Ford has shifted gears through its ingenious range of initiatives. As per Ford's CEO Jim Hackett, Ford will continue to serve and contribute through its various measures to combat the current crisis of COVID-19 looming across all countries. This will always be remembered as a great case example on how the company has come forward to solve a much bigger challenge that has never been experienced before.



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