# **Detroit Auto Scene** Tech Center News - Online

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We Put a Face on the American Auto Industry

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# **Some OEMs Target April 14 as Production Start**

Chrysler, Honda and Toyota took steps March 26 to restart North American factories that have been closed to protect workers from the coronavirus.

The plants would reopen in early or mid-April, restoring the largest source of cash for automakers that generally book revenue when they ship vehicles to dealerships.

Auto companies, like other businesses, are trying to manage their way through the coronavirus crisis, which has forced factories to close amid employee concerns that they could catch the virus while working close to others at factory work stations.

Ford said it wants to reopen five North American assembly plants, starting with one in Mexico on April 6 and continuing with four in the U.S. on April 14. The move was immediately met with skepticism by the United Auto Workers union, which represents 56,000 Ford factory workers.

"The UAW continues to review with great caution and concern decisions being made about restarting workplaces, especially at advanced dates," union President Rory Gamble said in a statement.

Honda wants to reopen U.S. and Canadian factories on April 7, a week later than originally

DETROIT (AP) - Ford, Fiat planned, while Toyota plans to restart North American plants on April 20. Fiat Chrysler intends to reopen U.S. and Canadian factories April 14 depending on state restrictions and plant readiness. General Motors says it hasn't decided yet when factories would restart. Most automakers said they would monitor the virus and adjust decisions if needed.

The factory decisions contrast with Italy, which on March 26 expanded a nationwide lockdown to include most heavy industry. Auto plants in Italy, which leads the world in virus deaths, already had been closed voluntari-Iy.

The automakers' moves in the U.S. come as new auto sales are expected to fall dramatically for the month of March. Edmunds.com expects March sales to fall nearly 36 percent from a vear earlier.

Ford, in a release before the markets opened Thursday, said it's aiming to reopen its factory in Hermosillo, Mexico, followed by its Dearborn, Michigan, truck plant, Kentucky truck plant in Louisville, the Ohio Assembly Plant near Cleveland, and the Transit van line at the Kansas City plant. The company also wants to reopen some parts-making plants on the same day, including four in Michigan, which is among the states hardest hit by the virus.

The Dearborn automaker says it will introduce additional safety measures to protect workers, but said it would give details later. Ford wants to reopen five North American assembly plants in April that were closed due to the threat of coronavirus.

All three Detroit automakers suspended production at U.S. factories in mid-March under pressure from the United Auto Workers union, which had concerns about worker safety.

MARCH 30, 2020

The Ford decision comes as the number of people infected by the virus spikes in Michigan. On March 25 the state reported at

least 2,294 infections and that the number of deaths nearly doubled from 24 to 43.

Two Detroit-area hospital systems said they are caring for more than 1,000 COVID-19 patients at 13 hospitals. At Beaumont Health and Henry Ford

#### **CONTINUED ON PAGE 2**



Ford's Dearborn Stamping Plant is one of several facilities the company wants to start up by mid-April.

### FCA Ups Efforts to Help Public During Crisis

As the United States copes with COVID-19 virus, FCA is moving ahead with programs to help fight the disease and aid communities affected by the outbreak.

FCA spokesman Kevin Frazier said that on March 23, the company's employees received a communication from Fiat Chrysler Automobiles (FCA) CEO Mike Manley saying the company is in the process of converting its first plant to produce face masks for donation to first responders and health care workers.

The first machinery to make the personal protection equipment (PPE) has been delivered and installed, so with supplies and donations will be coming out in the coming weeks, Frazier said.

And FCA is also expanding its programs to support Coronavirus relief efforts, Frazier said. The company's efforts are focused on two principal areas: charities providing food services to children and support for a range of technical, logistical and manufacturing programs, such as face mask production. "There has never been a more important moment to help children and their families with vital needs in our communities than during this time of great uncertainty," said FCA CEO Mike Manlev.

tended nationwide in the U.S. and to Canada and Mexico, supporting similar relief efforts for kids who would normally access school meal services.

Following the first actions taken to start face mask production, the company is now investing

The program will then be ex- technical, logistical and manufacturing resources at medical equipment and PPE.

With the donation of face masks produced by the company starting in the coming weeks, the company will invest to extend

**CONTINUED ON PAGE 2** 



the Co

Schulte demonstrates his robot hand sanitizer dispenser.

LTU Student Uses Learning **To Design Sanitary Device** In a time of national emerfun home activity for any aspirgency caused by the spread of ing roboteer. the COVID-19 virus, some people Schulte, graduate of а Northville High School, also volare thinking outside the box by creating a robot to help fight the unteers at LTU's Robofest worldspread of the Coronavirus. wide robotics competition, which It's certainly hard to find any was created by Chung and is held fun in the many precautions deannually throughout the year. manded by the Coronavirus pan-"I like to do projects that help demic, but a computer science kids learn robotics," Schulte said. "That's my primary goal in student at Lawrence Technological University (LTU) has manhelping out with Robofest, helpaged to come up with one for ing kids solve problems. With youthful robot builders, said LTU this project, it was a way to tie in robotics with everything else spokesman Matt Roush. Joe Schulte has designed a that's going on." robot that automatically dis-Schulte said he progressed penses hand sanitizer, said through three theoretical de-Roush. He said the robot took signs and two practical designs him about two days to design before achieving success. The roand build after a suggestion bot uses an infrared distance sensor to know when to provide by LTU computer science professor CJ Chung. It's a do-it-yourself home version of the aua squirt of hand sanitizer. "The sensor waits to detect tomatic dispensers found in CONTINUED ON PAGE 2 many commercial settings, and a

FCA will work in partnership with non-profit organizations and foundations that are providing food to children until schools return to session, Manley said.

Starting immediately, FCA will help provide more than one million meals to school-age children in the communities around FCA's principal manufacturing plants in Illinois, Indiana, Michigan and



FCA will help provide meals to students in its production communities.

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# Ford Motor Co. Using Expertise to Make New Medical Gear

It's official. All three of Detroit's automakers are using their resources to manufacture equipment to fight the COVID-19 virus outbreak.

Ford Motor Company announced its plans on March 24. The company is joining forces with firms, including 3M and GE Healthcare, to lend its manufacturing and engineering expertise to quickly expand production of urgently needed medical equipment and supplies for healthcare workers, first responders and patients fighting coronavirus.

In addition, Ford plans to assemble more than 100,000 face shields per week and use its inhouse 3D printing capability to produce components for use in personal protective equipment, Levine said.

This is such a critical time for America and the world," said Ford's Executive Chairman Bill Ford. "It is a time for action and cooperation. By coming together across multiple industries, we can make a real difference for people in need and for those on the front lines of this crisis

"At Ford, we feel a deep obligation to step up and contribute in times of need, just as we always have through the 117-year history of our company."

Ford team members are working with 3M to increase the manufacturing capacity of their powered air-purifying respirator (PA-PR) designs and working jointly to develop a new design leveraging parts from both companies to meet the surge demand for first responders and health care workers.

This new respirator could be produced in a Ford facility by UAW workers, Levine said.

To go as fast as possible, the Ford and 3M teams have been resourcefully locating off-the-shelf

parts like fans from the Ford F-150's cooled seats for airflow, 3M HEPA air filters to filter airborne contaminants such as droplets that carry virus particles and portable tool battery packs to power these respirators for up to eight hours.

Ford is looking at how it might produce these new-generation PAPRs in one of its Michigan manufacturing facilities, helping 3M boost production potentially tenfold, said Levine.

Working with 3M and GE, we have empowered our teams of engineers and designers to be scrappy and creative to quickly help scale up production of this vital equipment," said Jim Hackett, Ford's president and CEO. "We've been in regular dialogue with federal, state and local officials to understand the areas of greatest needs. We are focusing our efforts to help increase the supply of respirators, face shields and ventilators that can help assist health care workers, first responders, critical workers, as well as those who have been infected by the virus.

We're exploring all available opportunities," said Mike Roman, 3M chairman of the board and chief executive officer, "to further expand 3M's capacity and get healthcare supplies as quickly as possible to where they're needed most - which includes partnering with other great companies like Ford.

"It's crucial that we mobilize all resources to protect lives and defeat this disease, and I'm incredibly grateful to Ford and their employees for this partnership."

In addition, Ford and GE Healthcare are working together to expand production of a simplified version of GE Healthcare's existing ventilator design to support patients with respiratory



Dave Jacek wears a 3D-printed medical face shield printed at Ford's Advanced Manufacturing Center.

failure or difficulty breathing caused by COVID-19. These ventilators could be produced at a Ford manufacturing site in addition to a GE location.

"We are encouraged by how quickly companies from across industries have mobilized to address the growing challenge we collectively face from COVID-19," said GE Healthcare President & CEO Kieran Murphy. "We are proud to bring our clinical and technical expertise to this collaboration with Ford, working together to serve unprecedented demand for this life-saving technology and urgently support customers as they meet patient needs.'

Work on this initiative ties to a request for help from U.S. government officials, Levine said.

Meanwhile, Ford's U.S. design team also is quickly creating and starting to test transparent fullface shields for medical workers and first responders. The face shields fully block the face and eyes from accidental contact with liquids and when paired with N95 respirators can be a more effective way to limit potential exposure to coronavirus than N95 respirators alone.

The first 1,000 face shields will be tested this week at Detroit Mercy, Henry Ford Health Systems and Detroit Medical Center Sinai-Grace Hospitals, Levine said.

Roughly 75,000 of these

shields are expected to be finished this week and more than 100,000 face shields per week will be produced at Ford subsidiary Troy Design and Manufacturing's facilities in Plymouth.

Ford is leveraging its Ad-vanced Manufacturing Center in Redford, and in-house 3D printing capabilities to manufacture components and subassemblies for use in personal protective equipment.

Ford is currently evaluating a separate effort not involving GE Healthcare with the U.K. government to produce additional ventilators.



#### LTU Student Robot Cleans Up **CONTINUED FROM PAGE 1**

something within a certain threshold to trigger, and then it waits for that thing to leave a certain threshold before resetting to trigger again," Schulte said.

The robot was built out of parts found in Lego's Mindstorm EV3 robot kit, Schulte said.

"It might use a few more pieces than are in the base EV3 kit, but it's all EV3 pieces," Schulte said. "Since we are using Lego pieces, it's easy to adjust the cage in the robot to hold any size of sanitizer bottle.'

Roush said Schulte is on track to earn to Bachelor of Science degrees from LTU - one in mathematics and one in computer science - in December 2020, and then a Master of Science in computer science in December 2021.

Lawrence Tech eliminated all in-person courses the week of its spring break March 9-13, extended its spring break a week, and then began teaching all courses online March 23, Roush said. It will continue teaching online through the end of its spring semester May 15, and has postponed its scheduled May 9 Commencement to December.

## Virus Closing Marelli Down

The list of businesses suspend- with the overall duration to be ing operations in Michigan evaluated every few days. In thanks to the Coronavirus just got a little bit longer. Marelli tinue on a reduced scale to align North America in Auburn Hills with customer needs. has joined that list.

some cases, operations may con-

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Over the last two weeks. Marelli has closely monitored the spread of the coronavirus, followed the recommendations of country, state and local authorities, and implemented a series of precautions to protect the health and safety of its employees, said Marelli spokeswoman Lisa Van Giesen. In North America, the company has implemented a critical visitor only policy, virtual meetings, social distancing and work from home practices wherever possible.

Many OEM customers have announced temporary plant closures due to rising concerns over the spread of the coronavirus. These closures will have a significant affect on the business, driving down demand for product, Van Giesen said.

Marelli leadership has made the difficult decision to temporarily suspend manufacturing operations in many of its North American plants. Closures will happen in a staggered fashion,

#### **FCA Starts New Efforts to Fight COVID-19 Virus** CONTINUED FROM PAGE 1

that production capacity to other plants and ultimately donate masks to first responders and

health care workers across the world, Frazier said.

Drawing on experience from the company's engineering and logistics team in Italy who are assisting a local ventilator manufacturer, Manley said FCA is engaged with other companies producing ventilators and other much needed medical equipment and PPE.

"In this time of need, we've focused our resources on those actions we can implement quickly and that will have the greatest impact, as we did in Italy as soon as the emergency started," said Manley.

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Deadline: Thursday 5:00 p.m. for the next edition of Monday

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# **GM Opens Shuttered Warren Plant for Masks**

GM's efforts to help fight the the VOCSN, in large quantities. COVID-19 virus outbreak just entered into its second stage.

The first revealed its alliance to build VOCSN critical care ventilators with Ventect on March 20. On March 27. GM unveiled more detailed plans on how the work will get done.

Ventec Life Systems and General Motors will build VOCSN critical care ventilators at GM's Kokomo. Ind., manufacturing facility with FDA-cleared ventilators scheduled to ship as soon as next month, said GM spokesman Dan Flores. This effort is in addition to Ventec taking aggressive steps to ramp up production at their manufacturing facility in Bothell, Washington.

Across all manufacturers, there is a global backorder of critical care ventilators capable of supporting patients fighting COVID-19, Flores said. The companies are adding thousands of units of new capacity with a significantly expanded supply chain capable of supporting high volume production. GM is donating its resources at cost.

GM will also begin manufacturing FDA-cleared Level 1 surgical masks at its Warren manufacturing facility, Flores said. Production will begin next week and within two weeks ramp up to 50,000 masks per day, with the potential to increase to 100,000 per day.

This unique partnership combines Ventec's respiratory care expertise with GM's manufacturing might to produce sophisticated and high-quality critical care ventilators," said Chris Kiple, CEO of Ventec Life Systems. "This pandemic is unprecedented and so is the response, with incredible support from GM and their suppliers. Healthcare professionals on the front lines deserve the best tools to treat patients and precision critical care ventilators like VOCSN are what is necessary to save lives."

Ventec and GM are working around the clock to meet the urgent need for more ventilators, Flores said. Efforts to set up tooling and manufacturing capacity at the GM Kokomo facility are already underway to produce Ventec's critical care ventilator, call ventilator, oxygen concentrator,

Depending on the needs of the federal government, Ventec and GM are poised to deliver the first ventilators next month and ramp up to a manufacturing capacity of more than 10,000 critical care ventilators per month with the infrastructure and capability to scale further.

"We are proud to stand with other American companies and our skilled employees to meet the needs of this global pandemic," said Mary Barra, GM chairman and CEO. "This partnership has rallied the GM enterprise and our global supply base to support Ventec, and the teams are working together with incredible passion and commitment. I am proud of this partnership as we work together to address urgent and life-saving needs."

GM will deploy an estimated 1,000 American workers to scale production of critical care ventilators immediately, Flores said. Working with the UAW, GM has brought back employees from GM's Kokomo and Marion facilities

Since March 20, Ventec and GM teams across manufacturing, engineering, purchasing, legal and others have been tirelessly and seamlessly working together to create and implement a plan for immediate, scaled production of critical care ventilators. Flores said. The Ventec and GM global supply base developed sourcing plans for the more than 700 individual parts that are needed to build up to 200,000 VOCSN.

"GM is in the position to help build more ventilators because of the remarkable performance of GM and Ventec's global supply base," added Barra. "Our joint teams have moved mountains to find real solutions to save lives and fight the pandemic."

The Ventec Life Systems team has a history of patient-centric design which includes more than 18 care-changing respiratory devices and more than 40 patents. Ventec's leading product, VOC-SN, is the first and only Multi-Function Ventilator and was FDA cleared in 2017. VOCSN seamlessly integrates five separate devices including a critical care

cough assist, suction and nebulizer into a single portable de-VOCSN provides invasive vice. non-invasive ventilation and across a comprehensive set of modes and settings throughout the care continuum from the hospital to the home.

GM's Kokomo facility supports the production of precision electrical components and is approximately 2.6 million square feet, located on more than 270 acres.

This partnership combines global expertise in manufacturing quality and a joint commitment to safety to give medical professionals and patients access to life-saving technology as rapidly as possible.

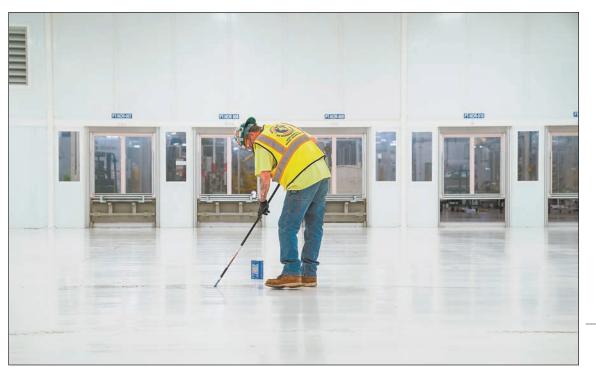
In a separate effort, GM is expanding its support of medical equipment production by temporarily converting its Warren Transmission plant that was closed last to build Level 1 surgical masks, Flores said. Production will begin next week and within two weeks ramp up to 50,000 masks per day, with the potential to increase to 100,000 per day. Daily mask production will be influenced by the availability of materials to build the masks.

The necessary machinery will was delivered to the Warren plant March 27 and production of masks will begin sometime this week.

This employee-led initiative was created, planned and approved in about 48 hours and involves GM's traditional supply base as well as new partnerships specific to the medical device industry. GM will be collaborating with governments and local suppliers to distribute the masks.

GM is not the only Detroit automobile manufacturer to work with other companies to develop and make medical equipment and supplies.

Both Ford and FCA have also dedicated resources to manufacture face masks and surgical masks. Their production should be up and running within the next couple of week.



Brad Page cleans a room at Warren Transmission site to begin making FDA-cleared Level 1 surgical masks.

### Some OEMs Targeting Mid-April to Open

CONTINUED FROM PAGE 1

Health System, operating rooms were being converted into intensive care units and clinics had been turned into rooms for patients needing other medical care.

President Donald Trump said March 25 that he is hoping the United States will be reopened by Easter as he weighs how to relax nationwide social-distancing guidelines to put some workers back on the job during the coronavirus outbreak.

Dr. Amesh Adalja, an infectious disease specialist and senior scholar at the Center for Health Security at Johns Hopkins, said by April 14, experts will have a better idea what the trajectory is for new coronavirus cases and whether factories can be run with appropriate social distancing. It's important, he said, to find was to operate factories safely. "I would say we have to think about what the path forward is going to be," he said. The decisions on whether to reopen factories should be based on local virus transmissions and infections, he said, adding that the number of people infected is going to rise because of additional testing that is now being done. Cole Stevenson, a worker who installs steering wheels at Ford's huge pickup truck plant in Dearborn, said a reopening three weeks into the future is probably long enough to protect workers. "If they've researched up enough on how long the virus lives on surfaces and things like that, and they're doing their part to keep that at a minimum, I guess I'm not too inclined to worry," he said.

Stevenson said other workers may be more apprehensive about the virus, but he says he keeps his distance to guard against the coronavirus.

The UAW's Gamble, though, suggested that Ford keep worker safety at the top of its list before restarting operations.

"The only guideline in a boardroom should be management asking themselves, 'Would I send my family – my own son or daughter - into that plant and be 100 percent certain they are safe?" Gamble said.

The Ford Motor factories, which largely make highly profitable pickup trucks, commercial vans and big SUVs, are key to Ford's financial health. The Ford F-150 pickup made at the Dearborn Truck plant is the top-selling vehicle in America that's responsible for much of the company's profit.

closed until March 30. Combined, the Detroit automakers have about 150,000 unionized factory workers.

Two union workers from Fiat Chrysler plants in the Detroit area and Kokomo, Ind., have died this week from complications due to the virus, but it's not clear whether they got it at the factories or elsewhere.

For most people, the coronavirus causes mild or moderate symptoms, such as fever and cough that clear up in two to three weeks. For some, especially older adults and people with existing health problems, it can cause more severe illness, including pneumonia, or death.

**Impact on World Industry** (AP) - The outbreak of the also stop production for two

Virus Outbreak Has Further

coronavirus that emerged in China in December has dealt an unprecedented shock to the global economy as it continues to spread across the world. Here is a look at some of the latest developments Wednesday:

AUTO IMPACT: Japanese automaker Nissan Motor Co. says it is closing factories in Africa, India and the Middle East and having office staff in those regions work from home.

The moves are in line with advice and "guidance" of governments and are intended to safeguard staff, customers and the public, the company said in a statement to the media.

It said production at its Alliance plant in Chennai, India (Renault Nissan Automotive India Private, Ltd) stopped on March 23 and will not reopen until further notice.

Operations will be suspended at Nissan's Rosslyn plant in Pretoria, South Africa, and the company's facility in Giza, Egypt will

weeks, it said.

CHINA BUSINESS: One in five companies surveyed by the American Chamber of Commerce in China expects delays in resuming normal business to last through the second half of this vear.

About one-fifth of the 199 companies surveyed March 13-18 said they are back to normal after the Communist Party declared victory over the coronavirus and began easing travel and other controls.

Three-fifths expect to resume normal operations by the end of April.

About 45 percent of companies in technology and services expect a "moderate to strong additional impact" in China due to the virus spreading further worldwide.

Some 14 percent of companies said they are losing up to 500,000 yuan (\$70,000) per day due to delay in reopening or restoring full operations.

The Ford factories were to be tial.

The effort to reopen the plants comes as Amazon and other operators of large warehouses continue operations, although some of the goods they're distributing are considered essen-



