Semiconductor shortage continues to roil global auto industry, fueling geopolitical tensions

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An ongoing shortage of semiconductor chips is continuing to reverberate throughout the global economy, particularly impacting the auto industry and disrupting production at virtually every major automaker in recent months.

General Motors and Ford Motor Company both announced new temporary plant shutdowns on Thursday. GM is halting production at six of its North American factories, including the Spring Hill Assembly plant in Tennessee, the Lansing Delta Township and Lansing Grand River plants in Michigan, and the Ramos Arizpe Assembly plant in Mexico. In addition, previously announced shutdowns at the Fairfax Assembly plant in Kansas and the CAMI Ingersoll plant in Ontario, Canada, will both be extended until at least May 10.

Production will resume next week at GM's Wentzville Assembly plant near St. Louis, Missouri, after being idled since March 29. The plant has roughly 3,500 workers, who build the profitable Canyon and Colorado mid-size pickup trucks.

Ford said Thursday that it would be idling production at three plants next week—Chicago Assembly, Flat Rock Assembly in Michigan, and the Transit van side of its Kansas City Assembly complex—and that Ohio Assembly would run on a reduced basis. Previously, the company had announced that its Dearborn Truck plant in Michigan, the Louisville Assembly plant in Kentucky, and the Oakville Assembly complex in Canada would be down for parts of April.

The automakers have sought to shift scarce chip supplies to their more profitable pickup and SUV segments, and when those run short, they plan to go as far as producing them without certain electronic modules.

Ford has said it will build the F-150 truck, the linchpin to its profits, without some electronic components and will store them until there is an adequate supply of semiconductors. The F-150 is built by 4,400 workers at the Michigan Dearborn Truck plant, and the nearly 10,000 hourly employees at the Kansas City Assembly plant in Missouri. The F-150 has been the best-selling vehicle in the US for the past 40 years.

There have been previous shutdowns at Ford's Louisville Assembly Plant (LAP) with 4,000 workers this year and last. Last month it was announced that the company's other plant in Louisville, Kentucky Truck Plant (KTP), with nearly 9,000 workers who produce the Super Duty pickup trucks, Lincoln Navigators and Expeditions, will remain open for the time being, but has dropped one production shift.

Ford also announced that it was planning to cancel its annual summer shutdowns at a number of plants, which is a time when many autoworkers plan family vacations.

For its part, Stellantis (formed from the merger of Fiat Chrysler and France's PSA Group earlier this year) stated in late March that it would be idling five North American plants, including Warren Truck in Michigan, Belvidere Assembly in Illinois, Windsor and Brampton Assembly in Canada and Toluca Assembly in Mexico. The company's new Mack Avenue plant is also running on short shifts, and the shutdown at Warren Truck has recently been extended to six weeks, according to unconfirmed reports from workers.

Autoworkers on temporary layoff at the Detroit Three will only receive roughly 75 percent of their pay through unemployment aid and supplementary benefits, known as sub pay. Temporary workers—a category vastly expanded through the sellout contracts negotiated by the UAW in 2019—will receive no supplementary benefits and will be forced to rely solely on miserly state unemployment aid.

The chip shortage threatens to significantly undermine the temporary recovery in auto sales which began in the latter half of 2020. The global auto industry could see a $61 billion drop in revenue in 2021, according to industry analysts AlixPartners. Ford is expecting that the impact of the shutdowns would cut profits by $1 billion from $2.5 billion expected in the first half of the year, while GM has said its pre-tax profits could be hit by as much as $2 billion.

Nearly every major global automaker has announced temporary shutdowns or slowed production in recent months, including Volkswagen, Toyota, Nissan, Honda and Volvo. Honda and Nissan are facing plant shutdowns in the US both due to port congestion and the microchip shortage. US electric vehicle maker Tesla and China's Nio have both also been impacted.

Automotive industry analyst IHS Markit has stated that there would be 700,000 fewer vehicles produced in the first quarter of the year as a result of the chip shortage, while other trade groups expect a shortfall of 1.28 million vehicles produced in the US in 2021. The timeline for a "return to normal" continues to be pushed back, with analysts reporting that shortages may not be resolved until the third quarter.

Tom Caulfield, the CEO of the world's third largest chip foundry, GlobalFoundries near Albany in Malta, New York, commented to CNBC that the semiconductor shortage could last into 2022. "Right now all our fabs are not only more than 100 percent utilized, we are adding capacity as fast as we can." Caulfield continued, "The semi industry going into COVID was projecting a five percent annual growth rate for five years. We're projecting that to almost double now."

Behind the chip shortage

There are a number of factors that are exacerbating the shortfall in semiconductors, which is straining not only the global automotive supply chain but also other high industrial sectors. The auto industry accounts for

only 10 percent of the annual production of microchips, although this share has been growing in recent years as touchscreens and other advanced electronic systems are adopted in new models.

The immediate cause of the shortage is the disequilibrium in supply chains and economic activity triggered by the pandemic. In March 2020, as the threat posed by COVID-19 first became clear, workers forced auto plants to shut down through a wave of wildcat strikes in Europe and North America, in an effort to protect themselves and their families from infection. As limited shutdowns of daily activity followed and demand for vehicles plummeted, orders for microchips by automakers slowed precipitously.

However, a relative uptick in demand arose for chips used in consumer electronic goods, such as laptops, tablets, and smartphones, as many schools quickly transitioned to remote learning and some workplaces to remote operations.

The auto industry began to reopen in May—prematurely and before it was safe—and demand for vehicles began to rebound, with many of those buying cars seeking to avoid exposure to the virus on public transportation systems. But automakers found themselves suddenly flatfooted, now competing for semiconductor supplies with transnational electronics giants.

Additionally, small quantities of chips to none had been stockpiled by many auto companies or their Tier 1 suppliers, who have increasingly adopted just-in-time supply chain models in order to reduce warehousing and other costs.

In mid-March, the Renesas Electronics Naka semiconductor factory fire in northeast Japan worsened the shortage. Renesas has warned that it could take up to a month to restart production at the plant. Sixty-six percent of its production is for the automotive industry, and it has a 30 percent share of the automotive microcontroller units (MCU) produced worldwide.

Smartphones and other electronics manufacturers are experiencing their own difficulties. Samsung, both one of the world's largest smartphone producers and a semiconductor maker, encountered a significant setback with the February 16 shutdown of its Austin, Texas, chip plant caused by the deadly winter storm that knocked out power across the state. Samsung is projecting a mid-April restart for the factory. The company is considering Austin as a site for a new $17 billion chip manufacturing plant.

The impact on the auto industry has not been uniform. Toyota announced the semiconductor shortage was not having as adverse an impact as on other companies due to measures to secure its supply chain after disruptions caused by the 2011 Tohoku earthquake and tsunami. But there is also a plastics shortfall that is causing delays in production at their plants in the US and Mexico, and a chief cause of the problem was the winter freeze in Texas this February.

Semiconductors, globalization and geopolitical tensions

The truly global nature of production and the need for systematic, scientific planning of international economic activity are exemplified in the intensifying global supply chain squeeze. Again and again, the working class and humanity's productive forces are running up against the limits imposed by capitalism, namely, the nation-state system and private ownership of the means of production.

Both the blocking of the Suez Canal and the semiconductor shortage have underscored in the recent period the reality of the world economy and its globally integrated character. The production of microchips and the vehicles and electronic devices which rely on them are the result of an international division of labor, with workers on several continents designing the devices, extracting the raw materials for them, building the machines to manufacture them, and shipping them around the world for assembly into their final products.

These international connections in the productive process are a potential reservoir of colossal strength for the international working class, holding the possibility for it to exert its power worldwide. Thus, they are simultaneously viewed by the ruling classes with growing fear and as a threat to their national interests.

The Biden administration is expected to meet with chip manufacturers next week to discuss "what might be done" to alleviate the shortages facing the auto industry. The White House also announced at the end of March a proposed $50 billion subsidy for the domestic semiconductor industry in an attempt to "onshore" production, as part of the administration's infrastructure spending bill. While the funding, even if approved, would come too late to have any impact on the current shortages, it is aimed at securing the US supply chain at the expense of China.

Biden's Secretary of Commerce Gina Raimondo bluntly told CNBC, "This is about out-competing China. If we act now, we will compete with China."

For its part, China also views its semiconductor supply chains as vulnerable, and recently announced that it would enact tax breaks for its domestic industry, allowing them to import machinery and raw materials tax-free until 2030.

Taiwan has emerged as a chief flashpoint in the US war drive against China, with relentless propaganda pumped out day after day by the US media and government over the country. Taiwan Semiconductor Manufacturing Company (TSMC), with a dominant 54 percent market share, and United Microelectronics, also in Taiwan, are not the least factors in this campaign.

Throughout the shutdowns caused by the microchip shortage, the UAW bureaucracy, which has integrated itself ever more deeply into corporate management over the last 40 years, has stated that it would take measures to lessen the hit to the auto manufacturers' profits, while ratcheting up its promotion of poisonous nationalist sentiment.

In January, UAW spokesman Brian Rothenberg told the *Detroit News*, "This is an issue that demonstrates the need not to offshore American jobs and to bring back production of semiconductors and other auto supply parts to U.S. workers where as a nation we have more ability to respond to these demand issues."

The UAW's call to bring back semiconductor production has absolutely nothing to do with protecting the interests of its members, which the bribed and corrupt union bureaucracy has repeatedly demonstrated it has nothing but contempt for. Rather, it is aimed at handcuffing workers to the national interests of their exploiters, the capitalist ruling class and its political representatives in both the Democratic and Republican parties.

The relentless promotion of nationalism, anti-Asian and anti-Chinese sentiment by the trade unions, the corporate media and the Democrats and Republicans has the dual objective of dividing workers in the US from their class brothers and sisters in other countries, and lining American workers up behind the war drive of US imperialism against its rivals.

Control of semiconductor production, particularly the most cutting-edge technologies used in missile guidance and detection systems and artificial intelligence, are critical to US military dominance. Thus, the American ruling class, with the loyal support of the union apparatus, is dead set on preventing China, whom it views as its chief economic competitor, from gaining any technological advantage, and is willing to risk provoking a war with unfathomably catastrophic nuclear implications, sooner rather than later.

Crisis after crisis is laying bare the fundamental contradictions of capitalism threatening humanity: on the one hand, between globalized

production and the nation-state system, and on the other, between social production by the working class and the private ownership of the means of production by the capitalists. The nationalist policies pursued by the ruling class have led to a situation where human lives and mankind’s resources are being criminally squandered.

The alternative is an international movement of the working class, consciously setting as its political aim the overturn of the outmoded capitalist profit system and its replacement with socialism, a democratically controlled, scientifically guided, globally coordinated system to meet human needs.