Chapter 736 Newsletter for November 2020

EAA Partners With Microsoft For Scholarships, Education

The Experimental Aircraft Association (EAA) has announced that it is teaming up with Microsoft to offer flight training scholarships and educational resources for young people interested in aviation. The partnership has committed to providing three Microsoft Flight Simulator Scholarships for "young aviation enthusiasts" each year for the next three years. In addition, copies of the latest edition of the Microsoft Flight Simulator software will also be given to current EAA youth flight training scholarship recipients over the same time period.

"Microsoft Flight Simulator has given countless people the experience of virtual flight over the past four decades, and we know many pilots today got their starts with Microsoft Flight Simulator and have used it to keep their skills sharp when they can't be in the cockpit themselves," said Rick Larsen, EAA vice president of communities and member programming. "Teaming with Microsoft to provide the newest version of Microsoft Flight Simulator to our EAA community opens wonderful possibilities, especially when it's teamed with actual flight training scholarships for young people."

Through the partnership, a limited number of Microsoft Flight Simulator copies will be provided to EAA chapters for use as a pilot training and proficiency tool. EAA members will also be able to purchase the software at a discount. EAA and Microsoft have previously collaborated on projects including software that re-created the Wright brothers' early flights.

Even With 737 MAX Clearance, Covid-19 May Cause Overnight Closures In Aerospace Supply Chain

Most of the handwringing around global aviation has been about the plight of the airlines in recent months. Those are the companies that saw an *en masse* exit of passengers as

Covid-19 numbers spiked this spring, and those are the companies that benefitted most from the first round of government bailouts.

As it turns out, those are not the only aviation companies that face the possibility of bankruptcy and liquidation. Parts of the aerospace supply chain also face rising risks, especially as the pandemic picks up speed again in several key regions.

Aerospace suppliers, who sit at the beginning of aviation's food chain, are looking at a decimation of demand — even more dramatic perhaps than the drop-off facing global carriers. Over the next decade, as many as 4,700 aircraft that had been on the production schedule at the beginning of 2020 will no longer be built. That is the equivalent of 2.5 years' worth of production vanishing almost overnight.

While this will be painful for the larger airframe and engine manufacturers, the real carnage is expected to take place a step or two down the chain — including midsize and larger parts suppliers and special processing houses. Part of the problem stems from the debt taken on when demand for air travel looked poised to break records over the next decade. Most suppliers expanded capacity rapidly in 2018 and 2019 to support the overflowing order books of leading aerospace manufacturers, with many adding as much as 15% to 20% — and in a few cases, even more. Now they find themselves with idled capacity and unable to service the debt from that investment.

Over the last few weeks, top-tier manufacturers have begun to field calls from erstwhile healthy suppliers warning that they may be forced to close their doors because 40% to 50% of their business has evaporated. For them, Covid-related aircraft cancellations and deferrals are catching up with production schedules: In 2020, 1,800 scheduled deliveries, or 55% of the number expected to be made, won't end up happening.

Many of these suppliers have been hesitant to reveal their financial situation to their aerospace customers for fear they would be replaced by suppliers with healthier balance sheets. Original equipment manufacturers (OEMs) may also take the opportunity to create or buy in-house capabilities, especially given their own need to keep their workforces busy. What this means is that a lot of bankruptcies and liquidations may happen overnight — even though problems have been festering for months under the surface.

Some degree of consolidation seems inevitable, but how much is too much? Once the pandemic subsides, it's hard to gauge how fast air travel demand will return, given the anticipated depressed state of most economies. There are also some single-sourced casting and forging capabilities that are in jeopardy that will not be easily replaced and could disrupt any attempts to revive aircraft production.

Protecting the indispensable

Even as production restarts, it will be at suboptimal levels because of crisis measures taken earlier in the pandemic. What this all means: the industry and governments need to be cautious about which parts of the aerospace supply chain they let die. Some OEMs are already warning about the lack of visibility into the supply chain and the potential for surprises that creates.

Diversified suppliers that provide systems to other industries besides aviation have an advantage over those tethered to aircraft manufacturing. Ironically, another group in less

dire financial shape includes suppliers that dragged their feet on ramp-ups and now find themselves less heavily leveraged.

Those with military business also are often better off as defense spending, particularly in the United States, has not been cut back because of Covid-19, and governments will sometimes step in if their suppliers falter. For instance, the US government has been pre-paying for some contracted work and extending contract terms to provide financial support. Of course, that didn't help Impresa Aerospace, which filed for Chapter 11 in September because of lost business connected to the grounding of the 737 MAX.

But the Pentagon was already well aware of the fragility of smaller and specialized manufacturers, warning in a 2018 report of the potential "domestic extinction" of critical industrial parts suppliers in the advent of an economic downturn.

Last in line

Based on its place in the food chain, aerospace will have to wait for air travel demand and airline financial health to recover before it can begin to right itself and even hope to regain momentum. We don't anticipate the fleet to recover to its January 2020 size of 27,800 aircraft until the beginning of 2023.

This year will not be the end of bad news. The slowdown will persist into 2021 when production will be 30 percent lower and deliveries down around 20 percent from pre-Covid projections. By 2021, the fleet will be 18% smaller than it was at the beginning of 2020. By 2030 — almost a decade from now — the fleet at about 34,300 aircraft will be 12% below pre-Covid projections for that year.

Based on existing order books, we expect 60% of narrowbody and widebody orders to be canceled or deferred between 2020 and 2022. Adding to that backlog is likely to be the grounded 737. That narrowbody model got the all-clear from the U.S. Federal Aviation Administration today — 20 months after the order to stop flying. While it's hard to estimate how many 737s will be delivered in 2020, we expect approximately 500 could be delivered next year. That's still down from the almost 700 that originally planned to make it to airlines by the end of 2021. Some of the built, but undelivered 737s have become what the industry calls "white tails"— planes without a buyer.

To help its floundering industry, France has designed an $8 billion fund for aerospace that consists of monies from the government and OEMs. This vehicle, which will be administered by a private equity firm, is expected to orchestrate a controlled consolidation in the nation's aerospace sector — one that will preserve strategic capabilities that help ensure a smooth economic recovery. Given aerospace's outlook, it's an approach that other nations with sizable aerospace production might want to consider protecting at least the essential parts of the industry.

pandemic has been delayed again until November 2021, organizer Jana Filip confirmed. Instead, a one-day event will take place in January.

Filip said it became clear during a recent meeting with Florida state and local officials that a "predicted third wave of COVID-19 infections" could coincide with the event set for January 28 to 30. "Additional factors" affected the latest postponement decision to an as-yet determined weekend in November 2021.

However, Filip said the city approved "a much more scaled down" one-day-only fly-in and drive-in at **DeLand Municipal Airport-Sidney H Taylor Field** on January 30 that promised to bring airplanes, cars, and food together in the Sunshine State.

She encouraged Central Florida pilots and aviation enthusiasts to visit Aerolite, Seamax Aircraft, Pipistrel, and other manufacturers' ramp displays; test drive a Tesla electric automobile; and experience a pancake breakfast sponsored by the local Experimental Aircraft Association chapter.

Filip added that Pipistrel would bring the new four-seat **Pipistrel Panthera** that is drawing praise from aviation aficionados.

The event provides an economic boost to the area, bringing in $2 million "in sales and services" at DeLand Municipal Airport, officials said, adding that the economic impact to DeLand was more than $1.5 million.

"I really just wanted to thank people who helped put the show together," she added. "We're all trying to get through this."

Stay healthy everyone. We'll get through this pandemic eventually.