



FAA APPROVES NEXTANT AEROSPACE CHALLENGER 604 FUSION SOFTWARE VERSION 2 UPGRADE

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Nextant Aerospace announced that it has received Federal Aviation Administration approval of an upgraded software Supplemental Type Certificate for Challenger 604 aircraft with Pro Line Fusion Avionics. The long-awaited software upgrade provides added avionics capabilities to enhance safety and awareness while also helping pilots and operators save time. Nextant is making the upgrade available at no charge for current Challenger 604 Pro Line Fusion operators.

“The FAA approval of the upgraded software STC for Challenger 604 aircraft will improve flight crew safety and awareness, and is consistent with our commitment to meeting the needs of our customers,” said Nextant Aerospace Director of Engineering and Certification Kevin Himelright. “We look forward to partnering with our customers, Collins Aerospace and the FAA to ensure these aircraft are provided suitable paths to operate well into the

future and to continue to meet the industry's growing safety and operational mandate challenges.”

This software addresses the fact that the Pro Line Fusion software as originally certified did not include features such as Flight Management System (FMS)-predicted performance and calculated thrust and V-speeds, which already existed on the Challenger 604 Pro Line IV aircraft. Operators selecting the initial Pro Line Fusion installation were required to revert to manually calculating thrust, V-speeds and performance numbers, which consumes the pilots' time and attention.

The software upgrade provides the Challenger 604 with FMS-calculated thrust and V-speed functionality as well as FMS-predicted performance, similar to the Precision Plus mode that existed on the earlier Pro Line IV avionics. The software update also includes a new FMS Vertical Situation Display (VSD) for enhanced situational awareness, European Aeronautical Telecommunication Network Baseline 1 (ATN B1) Controller Pilot Data Link Communications (CPDLC) functionality to meet European and overseas mandates, and RNP AR .3 approach functionality which further improves the aircraft's safety and operational capabilities.

The Nextant STC software upgrade was certified by the FAA. Validations by the European Union Aviation Safety Agency, Transport Canada and other non-US agencies are in progress, which will expand the STC to non-US operators.

Nextant certification engineers have been working with both Collins Aerospace and the FAA during the past two years to test and certify this Fusion software upgrade. Nextant also is executing an FAA Flight Standardization Board (FSB) Operational Evaluation for training requirements to support Part 135 operators upgrading to the Fusion Version 2 software.

FAA approval of the software upgrade was received on July 29, 2021, and the free upgrade for existing Challenger 604 Fusion operators was released as an optional Service Bulletin on August 2. Instructions for ordering and installing the software upgrade are available for those with a valid operator login at <https://nextantaerospace.webmanuals.aero/login>. Operators can request a login subscription by completing the application located at <https://www.nextantaerospace.com/technical-publications/>.

Additionally, on August 5, Nextant received FAA approval of the Fusion Integrated AutoThrottle Compatibility with the upgraded Fusion software. This FAA approval ensures that the optionally installed Nextant AutoThrottle system on many of these Challenger 604 aircraft integrated with the Pro Line Fusion remain operational after the aircraft is upgraded with the new Fusion software. The FAA-approved Airplane Flight Manual Supplement document required for these operations also is available on the Nextant Aerospace Technical Publications website (above).

The software upgrade also remains compatible with existing Fusion Integrated AutoThrottle systems, since Nextant received FAA approval for a new Airplane Flight Manual Supplement applicable to aircraft specifically with the Fusion Integrated AutoThrottles with the upgraded Fusion software.

“This is a perfect solution for all Challenger 604 owners and operators. Existing Challenger 604 Fusion operators have been awaiting this upgrade for years and can now upgrade their Fusion software free of charge,” said Himelright. “Challenger 604 operators still using Pro Line IV Avionics now have a suitable upgrade path to address issues of obsolescence in their flight deck without compromising the functionality of their aircraft. The ability for their pilots to operate the aircraft is now drastically improved.”

Constant Aviation is the industry leader in Challenger 604 modernization, having completed 80 percent of the avionics modernizations to the aircraft industrywide. Its expertise with the Challenger 604 is just as important as its experience: Nextant, as a Constant Aviation division, designed, engineered, certified and owns the STC for the Collins Aerospace Pro Line Fusion® flight deck overall. Constant Aviation is an expert in the maintenance and modifications of the aircraft and is authorized to complete the Fusion software upgrades as well as other optional upgrades at its facilities.

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