

North Atlantic Operations Evolving

BUSINESS AVIATION

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Reduced longitudinal and latitudinal separation is just one of numerous changes in transatlantic operations.

International navigation experts say the sheer number of new bulletins and document revisions regarding North Atlantic Track (NAT) operations are a clear indication of how much changed in this area recently, leaving some operators unaware of and unable to adapt to the changes.

“The 2019 changes had more to do with avionics than with airspace,” said Guy Gribble, general manager of International Flight Resources, LLC. “The better the avionics, the more airplanes we can get into the same airspace safely with less separation.”

However, one of the most significant changes to NAT operations in 2019 was reduced longitudinal and latitudinal separation through Advanced Surveillance – Enhanced Procedural Separation using space-based ADS-B. The trial, which began in early 2019, reduced separation by providing real-time surveillance in the North Atlantic airspace for the first time, but it also resulted in changes to contingency procedures.

“The changes to contingency procedures caught a lot of operators by surprise,” said Mitch Launius, owner and instructor pilot at 30 West IP. He suggests that operators should verify that their checklists and operations manuals reflect those changes.

Another 2019 change was increased “operations without an assigned fixed speed.” Although these operations are more common for airline traffic, the information released caused confusion for some business aircraft operators, according to Launius.

Finally, 2019 saw the adoption of “Micro SLOP” (Strategic Lateral Offset Procedure), which allows an aircraft to fly up to two nautical miles right of a track at 0.1-nautical-mile increments on self-selected lateral offsets.

NEW THIS YEAR

Beginning on Jan. 30, the datalink requirement for FANS 1-A expanded to FL290 to FL410 (inclusive) for NAT airspace.

“This will have a significant impact on GA operators if you don’t have datalink, or if datalink is currently inoperative,” said Launius.

“In 2020, pilots can expect to see fundamental changes in how they cross the North Atlantic,” said Gribble. “The year will essentially be the beginning of the dissolution of the organized track system.”

Current technology enables near-instantaneous communications between the pilot and the controller, which allows reduced separation between aircraft, but it requires each airplane to comply with a very narrow navigation specification.

One side effect of this reduced separation is the issuance of conditional clearances. A conditional clearance might be issued so that an aircraft can remain at a particular flight level until it reaches a defined location, then the pilot must climb or descend to a different flight level.

Experts caution that these conditional clearances increase a pilot's risk of committing an error and – potentially – a violation, or reducing safety margins.

Further, pilots might not receive oceanic clearances for NAT airspace in the future. The routing and clearance will come from the original flight plan. Upon entering oceanic airspace, the pilot will be asked to verify altitude and airspace. This will be similar to the procedures in place for NAT clearances when passing through New York Oceanic airspace.

A trial of this procedure is planned for this fall. Trials like these typically involve specific air-lines, enabling a small group of operators to test the procedure before implementing the change for all users.

Tom Young – who represents the International Business Aviation Council (IBAC) on the NAT Procedures Operations Group and is a former controller at Gander, Newfoundland, specializing in oceanic navigation – said the clearance procedure currently under consideration makes perfect sense for pilots and controllers.

“You don't get a new clearance when you fly from the U.S. to Canada, so why should you get a new clearance to fly over the ocean? This will reduce workload and improve efficiencies for both pilots and controllers,” said Young.

While some of these changes make it more difficult for business aircraft that only cross the Atlantic once or twice a year and may not be fully equipped to operate under these new requirements, those aircraft aren't prohibited from crossing. They can still fly on the less-efficient northern Blue Spruce routes, as long as they have a letter of authorization and expanded ADS-B surveillance.

HOW TO KEEP UP

Most operators, especially Part 91 operators, only require international operations training every few years, or don't require international training at all.

Experts suggest that these operators consider increasing the frequency of international operations training or, to minimize costs, rotate pilots through international training each year, then require the pilot who attended training to formally share any updates or changes with the pilots who didn't attend. Also, whenever possible, use good crew pairing policies to ensure at least one pilot on each crossing has received international operations training within the last year.

"If you haven't attended international operations training since 2018 or even early 2019, you're behind," said Launius.

Of course, be sure to review your international operations manual before conducting international operations, and keep that document current. If you use a vendor for international operations manuals and procedures, make sure you receive updates in a timely manner, and then get that information in the hands of the pilots. Sometimes it can be helpful to talk with operators of the same aircraft type who have crossed recently.

Finally, avoid overconfidence.

"If you're completely comfortable with a North Atlantic crossing, that tells you how far off track you are," said Gribble, who has hundreds of North Atlantic crossings under his belt.

"Do your research and review your procedures once, twice, three times. The margin for error is decreasing."

MORE CHANGES EXPECTED

In general, the North Atlantic flight operations are getting tighter, with more aircraft conducting operations in the same airspace. Better aircraft equipage – including RNP-2, space-based ADS-B, CPDLC and PBCS – basically allow for random routes across the Atlantic and eliminate the need for defined tracks. With 1,400-1,500 flights a day crossing the Atlantic, it makes sense for regulators, controllers and operators to look for improvements that result in cost savings and fuel and time efficiencies.

As part of those efforts, Young explained IBAC's goal is to ensure suitable flight levels and routes for business aviation, especially since business aircraft flights tend to run opposite the traditional flow of traffic; that is, airlines tend to fly west to east over-night, while business aircraft tend to fly east to west overnight. This could result in less capacity for business aircraft and others operating against the flow.

“The changes in the North Atlantic are designed to assist all operators in achieving a more efficient, safe operation. So far, we have proven that expectation to be the result achieved. Expect these lessons learned to be applied to other major airspaces soon,” predicted Shawn Scott, owner and instructor at Scott IPC.

KEEPING APPRISED OF NAT CHANGES

North Atlantic operational updates are generally provided to operators and pilots through two documents: North Atlantic (NAT) Operations Bulletins and the North Atlantic Operations Manual (NAT Doc 007). These documents are managed by the North Atlantic System Planning Group (NAT SPG).

In 2019, the NAT SPG published eight NAT Operations Bulletins – two simply informational in nature and six that had direct effects on operations. In addition, three changes were made in 2019 to NAT Document 007.

It takes some effort to keep up with these relevant North Atlantic operations documents. However, the NAT SPG publishes a NAT Ops Bulletin Checklist that identifies each current operations bulletin by subject and effective date. This checklist can help operators and pilots know which bulletins are currently in effect.

For more information, visit the ICAO website (icao.int) and search for “NAT Ops Bulletin Checklist.”

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