U.S. Department
of Transportation
Federal Aviation
Administration

SAFO

Safety Alert for Operators

SAFO 16014
DATE: 10/26/16

Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

Subject: Accuracy of Time Estimates in Oceanic Control Areas (CTA) Position Reports

Purpose: This SAFO alerts pilots and operators to separation issues caused by Flight Management System (FMS) management techniques and procedures.

Background: The Federal Aviation Administration (FAA) has recently determined that time estimates provided by pilots in oceanic CTAs are less accurate than expected, particularly when adverse weather causes pilots to deviate from the planned course. These inaccurate estimates can compromise the separation of aircraft.

ICAO Annex 2, incorporated by reference in Title 14 of the Code of Federal Regulations (14 CFR) part 91 § 91.703 and valid over the high seas, states that when a time estimate is found to be in error in excess of the time prescribed by the appropriate ATS authority, a revised estimated time shall be sent as soon as possible to the appropriate air traffic services unit. This prescribed time may vary by region. In the North Atlantic, for example, the standard is "3 minutes or more."

Discussion: Air traffic control (ATC) in oceanic CTAs uses a computerized system to maintain air traffic separation. An important part of the computerized process is a flight's estimated time of arrival (ETA) over each waypoint. In the case of an aircraft equipped with Automatic Dependent Surveillance-Contract (ADS-C), the ETA is calculated by the FMS and downlinked automatically to ATC, but with non- ADS-C aircraft, a pilot position report is required. When avoiding weather, if a pilot deviates from the FMS course, the FMS ETAs may no longer be valid. If inaccurate ETAs are relayed to oceanic ATC, the controller's calculations will be invalid, and traffic separation cannot be assured.

When deviating for weather in oceanic CTAs, a reliable way to maintain an accurate ETA in the FMS is to create a parallel offset consistent with the cleared deviation, and then maintain that course. If heading mode is used without regard to the FMS course, the flightcrew needs to be aware of the greater possibility of an error in the FMS ETA. In either event, pilot position report ETAs need to be compared with the original operational flight plan ETA and other operational parameters, such as distance to waypoint, airspeed and winds, to ensure timing accuracy.

Recommended Action: Operators and pilots should familiarize themselves with the information contained in this SAFO and ensure their training and procedures reflect the requirements of § 91.703.

Contact: Questions or comments regarding this SAFO should be directed to the Air Transportation division, Part 121 Air Carrier Operations Branch, AFS-220 at (202) 267-8166.