



SUBJ: Step-Down Fixes

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts airframe manufacturers, navigation equipment manufacturers, and navigation database suppliers of a step-down fix labeling issue on RNAV (GPS) instrument approach procedures.

At this time, the airworthiness concern is not an unsafe condition that would warrant airworthiness directive (AD) action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Background

The Federal Aviation Administration (FAA) publishes RNAV (GPS) instrument approach procedures that have step-down fix waypoints on the final approach segment. Currently, some navigation equipment or aircraft installations cannot properly support step-down fixes on instrument approach procedures. In these cases, AC 20-138D Change 1 section 12-8, permits removing step-down fixes from the aircraft navigation database. Airframe or navigation equipment manufacturers typically have their database supplier remove all step-down fixes from the packed data.

Recently, in the ARINC 424 data supplied by the FAA, some published RNAV (GPS) instrument approaches had waypoints prior to the final approach fix randomly designated as step-down fixes instead of altitude constraints. Although not prohibited by ARINC 424, this designation is contrary to the equipment design requirements. Designating these waypoints as step-down fixes causes their removal from the navigation database for equipment or installations that cannot support step-down fixes.

FAA procedure designers have stopped the practice of designating waypoints prior to the final approach fix as step-down fixes. However, it will take time to correct all the existing procedures.

Recommendation

The FAA recommends airframe and navigation equipment manufacturers with navigation equipment which cannot support step-down fixes change their navigation database supplier instructions for step-down fix removal. Database suppliers should be instructed to delete the

ARINC 424 step-down fix designation from the waypoint description field of the terminal procedure sequence coding (i.e., PF Record) and waypoint record (i.e., PC Record). This action helps ensure waypoints prior to the final approach fix are not inadvertently deleted along with step-down fixes on the final approach segment.

For Further Information Contact

Kevin J. Bridges, General Engineer, Systems and Equipment Standards Branch; 470 L'Enfant Plaza, Suite 4102, Washington DC, 20024; phone: (202) 267-8526; e-mail: kevin.bridges@faa.gov.