

12/2/2025

**FOR YOUR INFORMATION**

2025-297/10-24

To: Boeing Commercial Airplane Company

2288127

Info: FAA (AVP-1, AVP-200, AFS-200, AFS-900, AFS-260, AJV-A, AFS-100, AIR-720, AIR-780, AIR-360, SEA-AEG), A4A, ALPA, AMFA, ASAP, ATSG, CAPA, IAM, IBT, ICAO, ICASS, IFALPA, IPA, NTSB, PAMA, RAA, SWAPA, TWU, Jeppesen Sanderson Inc.

From: Becky L. Hooey, Director  
NASA Aviation Safety Reporting System

Re: B787 FMS Anomalies

We recently received ASRS reports describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the enclosed deidentified report.

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dr. Becky Hooey at (408) 541-2854 or email at [becky.l.hooey@nasa.gov](mailto:becky.l.hooey@nasa.gov).



Aviation Safety Reporting System  
P.O. Box 189 | Moffett Field, CA | 94035-0189



**ACN 2288127****DATE / TIME**

Date of Occurrence 202509  
Local Time Of Day 1201 to 1800

**PLACE**

Locale SFO.Airport  
State CA  
Altitude - MSL 19000

**ENVIRONMENT**

Flight Conditions VMC

**AIRCRAFT / EQUIPMENT X**

ATC / Advisory - TRACON NCT  
Make Model Name B787 Dreamliner Undifferentiated or Other Model  
Operating Under FAR Part 121

**COMPONENT 1**

Aircraft Component FMS/FMC

**COMPONENT 2**

Aircraft Component Navigation Database

**PERSON 1**

Function - Flight Crew Captain  
Function - Flight Crew Pilot Flying  
ASRS Report Number 2288127

**PERSON 2**

Function - Flight Crew Captain  
Function - Flight Crew Pilot Not Flying  
ASRS Report Number 2288129

**EVENTS**

Anomaly Aircraft Equipment Problem - Less Severe  
Anomaly Deviation - Track / Heading - All Types  
Anomaly Deviation / Discrepancy - Procedural - Clearance  
Anomaly Deviation / Discrepancy - Procedural - Published  
Material / Policy  
Detector - Automation Aircraft Other Automation  
Detector - Person Flight Crew  
Result - Flight Crew Became Reoriented  
Result - Flight Crew FLC Override Automation  
Result - Flight Crew Overcame Equipment Problem

**NARRATIVE 1**

Due to two prior incidents noted above involving runway changes resulting in temporary loss of LNAV guidance, the CA (as PF) tested several combinations of runway and approach changes from the BDEGA4 STAR arrival while enroute. With the FMS initially loaded with the ILS 28L approach, no anomalies were noted on the loaded route. The first change was to insert the FMS Bridge Visual 28R with the GAROW transition selected. The first attempt at this revealed an anomaly in the FMC, specifically that the 140° vector from BRIXX remained, but the FMC had inserted a second segment from BRIXX with a teardrop turn north of GAROW to

intercept the 278 inbound course. Attempts to manually insert a discontinuity did not delete the teardrop entry, and the change was erased. Later in the flight, the PF reattempted to load various combinations of the FMS Bridge Visual 28R, ILS 28R and ILS 28L with all available transitions, and could not duplicate the anomaly above, or any other issues regarding duplication or drop-out of STAR waypoints; in each instance, the FMS accepted the selections without issue. In preparation for arrival, PF loaded the FMS Bridge Visual 28R approach, GAROW transition, with the BRIXX and 140 vector deleted in anticipation of a right downwind vector from CORKK. While established on the BDEGA4 between BGGLO and LOZIT, the flight was switched to NORCAL Approach, and upon initial contact the flight was assigned to the visual to 28L. As the PM changed the approach from FMS Bridge Visual 28R to ILS 28L, the FMC Legs page was verified as correct, yet upon execution of the change the FMC again deleted the active route segment, leaving the flight in HDG HOLD. Anticipating this condition, the PM completed a rapid resequencing of the FMC and the PF was able to re-engage LNAV and VNAV to continue the arrival without any appreciable deviation from course. The remainder of the flight was completed without incident. In summary: During my last three arrivals via the BDEGA4 STAR with a runway change assigned after being established the arrival, in each case the FMC deleted the active route segment, the next waypoint and the following leg segment, which placed the aircraft in an undesired aircraft state with the immediate loss of LNAV and VNAV guidance. At first, I thought this was due to an unknown coding error involving the FMS Bridge Visual 28R approach; however, in seeing this issue with the often-used ILS 28L approach, it appears that the error involves the coding of the BDEGA4 STAR and any change of runway. I have discussed this with other crews, and all have reported similar issues. This is a growing problem!

## **NARRATIVE 2**

Flight was cleared for the BDEGA4 STAR arrival. ATIS noted charted visual approaches in use for runways 28L and 28R. FMS had the BDEGA4 STAR and the ILS 28L, expecting a left downwind to a visual approach to 28L. Upon check-in with NORCAL Approach, the flight was directed to proceed on the BDEGA arrival. Approaching LOZIT, NORCAL advised the flight to depart CORKK on a heading of 115 for vectors to the FMS Bridge Visual to 28R. Further inquiry with NORCAL said to expect an intercept of the FMS Bridge outside of JANYY. With all three pilots verifying the FMS data entries, the runway and approach was changed to the RNV 28R, with no change to the STAR. The FMS Legs page was observed prior to execution of the changes, with only the new approach highlighted. However, as the change was executed, the FMS reinserted the entire BDEGA STAR, while deleting the active leg, the next waypoint on the STAR (LOZIT) and the subsequent inbound leg to the next following waypoint (BRIXX), while leaving the remainder of the first BDEGA STAR. This action placed the autoflight into Heading Hold and Vertical Speed modes, with no LNAV or VNAV path available until the FMC Legs pages were resequenced. As the FMC Legs page was corrected by the PM, the aircraft had proceeded past LOZIT on the inbound heading (heading) and had deviated .6 NM right of course. The PF proceeded to use HDG SEL to intercept the correct inbound course to BRIXX. There was no note of the deviation made by NORCAL.

## **SYNOPSIS**

Air carrier flight crew reported while on the SFO BDEGA4 star and given a runway change, the FMS drops the active leg and leaves the aircraft in heading and altitude hold. Reporters cited a possible FMS coding error as contributing.