7/28/2022 **FOR YOUR INFORMATION** 2022-69/10-5

1906855

To: FAA (ATM SCT TRACON, AAS-1), Boeing Commercial Airplane Company

Info: FAA (AAS-300, AVP-1, AVP-200, AJI-144, AWP-600, AFS-260, AFS-200, Director of Air Traffic Operations WSA), A4A, AAAE, ALPA, AOPA, APA, ASAP, CAPA, ATSAP, ATSG, IATA, IBT, ICAO, ICASS, IFALPA, IPA, NATCA, NBAA, NTSB, RAA, SWAPA

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

Re: LAX ANGLL4 RNAV/CRCUS Fix Autoflight 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.

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

| ACN 1906855 | |
|---|---|
| **DATE / TIME** | |
| Date of Occurrence | 202206 |
| Local Time Of Day | 1801 to 2400 |
| **PLACE** | |
| Locale | SCT.TRACON |
| State | CA |
| Altitude - MSL | 11700 |
| **ENVIRONMENT** | |
| Flight Conditions | IMC |
| **AIRCRAFT / EQUIPMENT X** | |
| ATC / Advisory - TRACON | SCT |
| Make Model Name | Boeing Company Undifferentiated or Other Model |
| Operating Under FAR Part | 121 |
| **COMPONENT 1** | |
| Aircraft Component | Autopilot |
| **PERSON 1** | |
| Function - Flight Crew | Captain |
| Function - Flight Crew | Pilot Not Flying |
| ASRS Report Number | 1906855 |
| **EVENTS** | |
| Anomaly | Aircraft Equipment Problem - Less Severe |
| Anomaly | Deviation - Altitude - Crossing Restriction Not Met |
| Anomaly | Deviation / Discrepancy - Procedural - Clearance |
| Detector - Person | Flight Crew |
| Result - Flight Crew | Overcame Equipment Problem |
| Result - Flight Crew | Requested ATC Assistance / Clarification |
| Result - Air Traffic Control | Provided Assistance |
| **NARRATIVE 1** | |

Approaching the CRCUS fix, the aircraft suddenly began a rather aggressive descent of over 4,000 fpm. Crew recognized and noted this. The aircraft was showing on path with no other anomalies noted which raised some confusion with the Crew as the aircraft was not showing off path or high. The closer we got to the fix we realized the aircraft was going to go below the 12,000 [ft.] MSL limit at CRCUS. At about the time the F/O (First Officer) began to intervene, the aircraft disconnected VNAV and went into control wheel pitch mode. VNAV Disconnect was not displayed in the scratchpad and no other indications were noted, it simply reverted modes unannounced and without warning. The F/O corrected the rate of descent smoothly, which led to a 300 [ft.] low excursion over CRCUS. The altitude was quickly corrected and the flight proceeded normally. ATC did call and ask about the deviation. We responded and explained the anomaly, no separation problems were noted and ATC did not seem to concerned. As an important note. The aircraft ahead of us was (other carrier) Aircraft Y [Same Aircraft Model]. When he heard our situation, he also communicated to ATC that the exact same thing happened to them. Their VNAV erroneously disconnected over CRCUS and they were forced to intervene with Vertical Speed mode.

It appears due to two aircraft experiencing the same problem at the same time there may be a programming or database problem near CRCUS.

## SYNOPSIS

Air Carrier pilot reported autopilot changed from VNAV to Control Wheel Pitch and increased their descent rate, descending below the published crossing altitude at CRCUS on the ANGLL4 RNAV Arrival to LAX. The reporter stated the same issue occurred with the preceding aircraft on the same STAR.