

7/14/2020

FOR YOUR INFORMATION

2020-60/10-7

1745378

To: Universal Avionics Systems Corporation

Info: FAA (AVP-1, AVP-200, AFS-300, AFS-280, AFS-800, AFS-900, AFS-200, MKC-AEG, SEA-AEG, LGB-AEG, AIR-720, AQS-230), AMFA, AOPA, ALPA, ASAP, ATSG, GAMA, IAM, IBT, ICASS, NBAA, NTSB, RAA, PAMA, TWU

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

Re: Universal UNS-1E FMS Anomalies

We recently received an ASRS report 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: 1745378

Time

Date: 202006

Local Time Of Day: 0601-1200

Place

Locale Reference.Airport: APF.Airport

State Reference: FL

Altitude.MSL.Single Value: 2800

Environment

Flight Conditions: VMC

Aircraft 1

ATC / Advisory.TRACON: RSW

Make Model Name: Light Transport

Component 1

Aircraft Component: FMS/FMC

Person 1

Function.Flight Crew: Pilot Not Flying

Function.Flight Crew: Captain

ASRS Report Number: 1745378

Events

Anomaly.Aircraft Equipment Problem: Less Severe

Anomaly.Deviation - Track / Heading: All Types

Anomaly.Deviation - Procedural: Clearance

Detector.Person: Flight Crew

Result.Flight Crew: Became Reoriented

Result.Flight Crew: Executed Go Around / Missed Approach

Result.Air Traffic Control: Issued New Clearance

Narrative 1

Enroute from ZZZ to APF, we were cleared direct to UGYOW to descend to 2,100 feet, and we were cleared for the RNAV 23 approach at APF. About 4 NM from UGYOW, the FMS dropped UGYOW from our route completely, and the final approach course with a line to infinity was redrawn on our MFD with OFDOY still in view. The FMS commanded a turn to intercept the final approach course at a 45 degree angle, inside OFDOY.

Here's what's so strange about this. We had the same anomaly happen to us on the same routing several months ago. I was ready for it today, but the airplane still turned and there was a minute of confusion and discussion because our next fix UGYOW was no longer in view, and dropped from the FMS. We had no guidance anymore to UGYOW. Having had this happen twice now, I have to say with confidence, there is an issue with the Universal UNS-1E FMS we have on board to provide this guidance. I realize the turns necessary to get us on the final approach course are significant in this procedure, but the FMS should not drop the IAF fix from view and redraw the final approach course as it is doing. Someone at Universal and the FAA need to look into this, and they need to publish that this procedure can't be used when coming from the SW so that others don't have this bad experience. There was no conflict with traffic, but the controller got a little excited when we first made the turn, and he canceled our approach

clearance, and turned out back out to the NE and he gave us radar vectors to the final approach course, which worked out perfectly. My copilot on this flight had been an instructor on the Aircraft X at [the] simulator training center for years, and he agreed the FMS shouldn't have done that and its guidance is wrong when this happens. I will contact Universal to discuss it with them, and I plan to try this approach in the simulator when I go back for recurrent training.

Synopsis

Corporate pilot reported that while on an RNAV approach, the Universal UNS-1E FMA dropped the IAF and redrew the final approach course. Reporter stated this had happened previously on the same routing.