

12/30/2024

FOR YOUR INFORMATION

2024-233/10-34

To: Airport Manager, Lester B Pearson Int'l Airport (CYYZ), Canada,
Honeywell Aerospace

2186055

Info: FAA (AVP-1, AVP-200, AFS-260, AFS-200), A4A, AAAE, ALPA, AOPA, APA,
ASAP, CAPA, ATSAP, ATSG, IATA, IBT, ICAO, ICASS, IFALPA, IPA, NATCA,
NBAA, NTSB, RAA, Transport Canada

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

Re: CYYZ Final Approach Fix VEPNA Crossing Altitude Error in FMS

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 2186055

DATE / TIME

Date of Occurrence 202411
Local Time Of Day 1201 to 1800

PLACE

Locale CYYZ.TRACON
State ON
Altitude - MSL 2800

ENVIRONMENT

Flight Conditions IMC

AIRCRAFT / EQUIPMENT X

Make Model Name Commercial Fixed Wing
Operating Under FAR Part 121

COMPONENT 1

Aircraft Component Navigation Database

PERSON 1

Function - Flight Crew First Officer
Function - Flight Crew Pilot Flying
ASRS Report Number 2186055

PERSON 2

Function - Flight Crew Captain
Function - Flight Crew Pilot Not Flying
ASRS Report Number 2185727

EVENTS

Anomaly Aircraft Equipment Problem - Less Severe
Anomaly Deviation - Altitude - Crossing Restriction Not Met
Anomaly Deviation - Altitude - Undershoot
Anomaly Deviation / Discrepancy - Procedural - Clearance
Anomaly Deviation / Discrepancy - Procedural - Published
Material / Policy
Anomaly Inflight Event / Encounter - Unstabilized Approach
Detector - Person Flight Crew
Result - Flight Crew Became Reoriented
Result - Flight Crew Overcame Equipment Problem
Result - Flight Crew Requested ATC Assistance / Clarification

NARRATIVE 1

Database Error: Glideslope Intercept at fix VEPNA displays incorrectly as 3000A. Fix should be 2010 ft (Glideslope). Crew was operating into YYZ and noted a FMS Database Error which led to the crew remaining high on Final Approach into YYZ.

ATC vectored us onto the approach with a maintain 3000 ft until established. As I set the heading for the localizer intercept I noted the 3000 ft at the FAF VEPNA on the FMS. We set configuration and completed the before landing checklist. After we immediately both noted that we were above glide slope. The pilot

monitoring (PM) brought up the concern of a false glide-slope as the FMS showed 3000 ft at VEPNA. I noted our distance to the runway and noted we were high. The PM cross referenced the plate and found that the correct GS intercept was 2100 ft. I initiated a decent down to 2000 ft. During this time, ATC asked if we could see the preceding aircraft in sight. Having just broken out at 2800 ft we were both eyes outside looking for the aircraft. As soon as we broke out with runway and preceding aircraft in sight I turned the Autopilot off and went Visual. I had a 1800 FPM decent initially as I was on the beginning of the visual approach. Then ATC asked us if we could extend approach. This is a phrase that neither the pilot flying (PF) or PM was familiar with. ATC asked if we had the proceeding aircraft or runway in sight. My PM radioed aircraft and runway in sight and the Tower cleared us to land. As my PM was communicating with ATC I was flying the visual and reducing the decent rate and watching the preceding aircraft ahead. The 1000 ft call may have happened late. As we are unsure exactly when we reached the 1000 foot call we thought it best to complete a report and share our experience with the pilot group.

We experienced a momentary loss of situational awareness due to workload during a critical phase of flight, compounded with a high approach due to FMS error. Chart is correct. Once at the gate we debriefed the approach and discussed what led to the undesirable aircraft state and what we can do to mitigate such a state in the future. Both pilots agreed that we should file a report due to the FMS Database error, and since we were unsure of when we reached 1000 ft AGL.

Submit correction for the FMS to be corrected to match the approach plate. Better diligence to confirm ALL altitudes on the approach segment match the FMS and make corrections if needed. The Captain and I agreed we hadn't realized once an approach had been set up how much we rely on the FMS display for immediate approach data as compared to the approach plate. When I questioned the PM about the final altitude being high vs the distance to the runway threshold I should be more assertive with my assessment and Initiate go-around once the error was discovered.

NARRATIVE 2

Database Error: Glideslope Intercept at fix VEPNA displays incorrectly as 3000A. Fix should be 2010' (Glideslope).

Crew was operating into YYZ and noted a FMS Database Error which led to the crew remaining high on Final Approach into YYZ.

ATC assigned a heading and advised maintain 3000 ft til established. Localizer was captured and we were above Glideslope, as the Pilot Monitoring (PM) I had advised we need to descend to capture glideslope, however due to an FMS database error I believed we were looking at a false glideslope. I referred to the approach plate and discovered the database error, I entered a lower altitude 2000 ft for the Pilot Flying (PF) to descend to join attempt to capture the glideslope. At 2700 ft we broke out of the overcast layer, noting we were high we elected to disconnect the Autopilot and fly a visual approach to the runway. We were now on a visual approach and did have the runway in sight. We were descending at approximately 1800 FPM to regain visual glide path to the runway. As we neared the 1000 foot call, I advised the Pilot Flying to reduce the descent rate to maintain a stable approach, ATC then transmitted "Extend Approach, aircraft on runway" this radio terminology was/is unfamiliar to me, which I interpreted as "continue." We did have both the runway and aircraft in sight so we continued the approach to Runway 06L. ATC then cleared us to land. As Pilot Monitoring during the phase of flight I was visually outside the aircraft as I scanned the runway, monitored the visual approach and confirmed aircraft in sight with ATC, along with our landing clearance. As we approached

the 1000 foot call both pilots were task saturated, the PF was correcting descent rates, and managing airspeed while I (PM) was confirming landing clearance and watching for separation from aircraft on runway. As we are unsure exactly when we reached the 1000 foot call we thought it best to complete a report and share our experience with the pilot group.

We experienced a momentary loss of situational awareness due to workload during a critical phase of flight, compounded with a high approach due to FMS error. Chart is correct. Once at the gate we debriefed the approach and discussed what led to the undesirable aircraft state and what we can do to mitigate such a state in the future. Both pilots agreed that we should file a report due to the FMS Database error, and since we were unsure of when we reached 1000 ft AGL.

SYNOPSIS

Air carrier flight crew reported they descended on approach using a glideslope that may have been false, resulting in a temporarily unstabilized approach. Flight crew determined the FMS database crossing restriction of 3000 feet at the CYYZ final approach fix, VEPNA, is incorrect and should be 2100 feet.