ASRS Database Report Set

RNAV Arrival Reports

Report Set Description.....A sampling of reports that reference RNAV Arrival related incidents.

Update Number.....11.0

Date of Update.....December 6, 2023

Number of Records in Report Set.....50

Records within this Report Set have been screened to assure their relevance to the topic.

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, CA 94035-1000

TH: 262-7

MEMORANDUM FOR: Recipients of Aviation Safety Reporting System Data

SUBJECT: Data Derived from ASRS Reports

The attached material is furnished pursuant to a request for data from the NASA Aviation Safety Reporting System (ASRS). Recipients of this material are reminded when evaluating these data of the following points.

ASRS reports are submitted voluntarily. Such incidents are independently submitted and are not corroborated by NASA, the FAA or NTSB. The existence in the ASRS database of reports concerning a specific topic cannot, therefore, be used to infer the prevalence of that problem within the National Airspace System.

Information contained in reports submitted to ASRS may be clarified by further contact with the individual who submitted them, but the information provided by the reporter is not investigated further. Such information represents the perspective of the specific individual who is describing their experience and perception of a safety related event.

After preliminary processing, all ASRS reports are de-identified and the identity of the individual who submitted the report is permanently eliminated. All ASRS report processing systems are designed to protect identifying information submitted by reporters; including names, company affiliations, and specific times of incident occurrence. After a report has been de-identified, any verification of information submitted to ASRS would be limited.

The National Aeronautics and Space Administration and its ASRS current contractor, Booz Allen Hamilton, specifically disclaim any responsibility for any interpretation which may be made by others of any material or data furnished by NASA in response to queries of the ASRS database and related materials.

B Hooey

Becky L. Hooey, Director
NASA Aviation Safety Reporting System

CAVEAT REGARDING USE OF ASRS DATA

Certain caveats apply to the use of ASRS data. All ASRS reports are voluntarily submitted, and thus cannot be considered a measured random sample of the full population of like events. For example, we receive several thousand altitude deviation reports each year. This number may comprise over half of all the altitude deviations that occur, or it may be just a small fraction of total occurrences.

Moreover, not all pilots, controllers, mechanics, flight attendants, dispatchers or other participants in the aviation system are equally aware of the ASRS or may be equally willing to report. Thus, the data can reflect **reporting biases**. These biases, which are not fully known or measurable, may influence ASRS information. A safety problem such as near midair collisions (NMACs) may appear to be more highly concentrated in area "A" than area "B" simply because the airmen who operate in area "A" are more aware of the ASRS program and more inclined to report should an NMAC occur. Any type of subjective, voluntary reporting will have these limitations related to quantitative statistical analysis.

One thing that can be known from ASRS data is that the number of reports received concerning specific event types represents the **lower measure** of the true number of such events that are occurring. For example, if ASRS receives 881 reports of track deviations in 2010 (this number is purely hypothetical), then it can be known with some certainty that at least 881 such events have occurred in 2010. With these statistical limitations in mind, we believe that the **real power** of ASRS data is the **qualitative information** contained in **report narratives**. The pilots, controllers, and others who report tell us about aviation safety incidents and situations in detail – explaining what happened, and more importantly, **why** it happened. Using report narratives effectively requires an extra measure of study, but the knowledge derived is well worth the added effort.

Report Synopses

ACN: 2015250 *(1 of 50)*

Synopsis

PC-12 Captain reported a NMAC at an airport after the tower was closed. The slower aircraft was not communicating their intentions until final approach. The crew executed a 360 degree turn with the concurrence of ATC, then landed.

ACN: 2014798 *(2 of 50)*

Synopsis

Air carrier crew reported an altitude deviation and ATC low altitude alert while on approach to a foreign airport over terrain in moderate rain conditions. The pilot flying incorrectly determined and set a lower altitude than assigned from the approach chart while the pilot monitoring was distracted, and ATC alerted the crew of the deviation. The flight crew quickly corrected the altitude deviation and completed the approach and landing safely.

ACN: 2014045 *(3 of 50)*

Synopsis

SR-20 pilot reported a ground conflict while on approach due to another aircraft on the runway. Pilot executed an ATC-directed go around and returned to land.

ACN: 2011966 *(4 of 50)*

Synopsis

C172 Instructor Pilot reported wake turbulence from a military tanker overflying their aircraft resulted in an upset.

ACN: 2011565 *(5 of 50)*

Synopsis

Pilot flying reported a GPS malfunction or failure at the IAF, ZAMUV on the RNAV 23. ATC told the pilot that previous aircraft had experienced exactly the same issue at the same location.

ACN: 2011432 *(6 of 50)*

Synopsis

An Air Carrier pilot reported GEG TRACON vectored them to base leg for a Visual Approach to MSO at a position and altitude that prevented them from flying a stabilized approach. Reporter states this is a recurring issue at this airport.

ACN: 2010745 *(7 of 50)*

Synopsis

A TRACON Controller reported an aircraft descended below their assigned altitude at the Initial Approach Fix and flew below the Minimum Vectoring Altitude.

ACN: 2009903 *(8 of 50)*

Synopsis

Air carrier Captain reported similar sounding fixes on the AMA RNP Z 22 approach, PULBE and TELVE, which caused a clearance and heading deviation.

ACN: 2009800 *(9 of 50)*

Synopsis

EMB-505 flight crew reported receiving a low altitude alert on approach and confusion regarding an approach clearance.

ACN: 2009309 *(10 of 50)*

Synopsis

Flight instructor with student reported taking evasive action to avoid a near midair collision in the traffic pattern at a non-towered airport.

ACN: 2009152 *(11 of 50)*

Synopsis

Air carrier flight crew reported a momentary loss of speed resulting in a stick shaker event. The pilots stated there was a heavy workload at the time and an unfamiliar FMC required programming change for the First Officer.

ACN: 2008891 *(12 of 50)*

Synopsis

A319 flight crew reported a CFIT advisory from ATC. The pilots reported they were given a late runway change, in a mountainous area, turbulent conditions, encountering a tailwind and given a ninety degree turn to final. The approach became unstable and the crew stated they executed a missed approach.

ACN: 2008088 *(13 of 50)*

Synopsis

Air carrier Captain reported descending below a minimum altitude during arrival to DEN after ATC issued a last minute change of landing runways.

ACN: 2007673 *(14 of 50)*

Synopsis

Air carrier Captain reported the aircraft overshot final as it tracked the inbound course lined up almost halfway in between SFO runways 28L and 28R during the RNAV approach. This led to a potential NMAC with the aircraft ahead.

ACN: 2007504 *(15 of 50)*

Synopsis

B737 flight crew reported an unstabilized approach resulted in a go-around as the aircraft touched down on the runway. As the aircraft performed the go around, the First Officer felt a bump indicative of a tail strike. The aircraft landed and upon post flight inspection damage was discovered to the tail stinger.

ACN: 2006592 *(16 of 50)*

Synopsis

Flight Instructor reported a NMAC during landing training when an aircraft flew across the landing path. The Instructor took evasive action to avoid a collision.

ACN: 2006118 *(17 of 50)*

Synopsis

Air carrier flight crew reported an altitude alert from ATC while on approach to AMA airport.

ACN: 2005520 *(18 of 50)*

Synopsis

Air carrier Captain received a TCAS RA on a visual approach from another air carrier maneuvering on a RNAV approach to the parallel runway. The Captain determined that he had the conflicting traffic in sight and did not follow the TCAS RA solution and continued the approach to landing.

ACN: 2004426 *(19 of 50)*

Synopsis

Captain reported a conflict between the published altitude crossing restrictions and the aircraft's FMC database on the DARAN2A STAR into MMMX airport.

ACN: 2003890 *(20 of 50)*

Synopsis

B737 flight crew reported trailing edge flaps failed to extend on final approach. The flight crew performed a go-around to troubleshoot and use alternate method for flap extension. The flaps then suffered a flap asymmetry condition, resulting in the flight crew receiving vector and making a precautionary landing at destination airport.

ACN: 2003684 *(21 of 50)*

Synopsis

CRJ Captain reported a CFIT event during an unstable approach which was followed by a safe approach and landing. The Captain added that the approach for aircraft type should be modified for the specific model.

ACN: 2003557 *(22 of 50)*

Synopsis

Air carrier Captain reported the First Officer saw a UAS while they were on approach.

ACN: 2002089 *(23 of 50)*

Synopsis

Light aircraft pilot reported descending below Minimum Vectoring Altitude on approach to 3GM, citing clearance confusion and weather conditions as contributing.

ACN: 2002040 *(24 of 50)*

Synopsis

C560 Captain reported an unstable approach condition due to a late ATC approach clearance. ATC directed a go-around and provided vectors for a subsequent approach which resulted in a safe landing.

ACN: 2001644 *(25 of 50)*

Synopsis

EMB-170/175 Captain reported becoming distracted by reported traffic and losing command of the RNAV RNP approach sequence. The conditions were VMC. The crew then asked for and was given a visual approach by ATC. Later the pilots realized they had busted the Minimum Vector Altitude.

ACN: 2001233 *(26 of 50)*

Synopsis

PA28 pilot reported descending below the approach minimums during final approach due to night conditions, fatigue, and complacency, as well as not wanting to overshoot the airport.

ACN: 2000459 *(27 of 50)*

Synopsis

Flight crew reported erratic oil pressure and quantity indications on number 2 engine during descent which had previously been reported and deferred per MEL. The flight crew continued to the destination after coordinating with ATC for an expedited arrival.

ACN: 2000236 *(28 of 50)*

Synopsis

Air carrier flight crew reported Low Altitude Alert from ATC on approach.

ACN: 1999866 *(29 of 50)*

Synopsis

C182 pilot reported they used the wrong approach minimums and went below minimum altitude on approach in IMC. Pilot continued to landing.

ACN: 1999417 *(30 of 50)*

Synopsis

CE-560XLS flight crew reported descending below minimum altitude on approach. The flight crew followed ATC instructions and climbed back above minimum altitude and continued the approach to land uneventfully.

ACN: 1997277 *(31 of 50)*

Synopsis

SR-22 pilot reported momentary loss of aircraft control in IMC conditions after inadvertently turning off the autopilot. The pilot was dealing with nausea at the time of the event.

ACN: 1996431 *(32 of 50)*

Synopsis

Small transport pilot reported an altitude deviation occurred while trying to reprogram the aircraft's autopilot that may have been potentially caused by a GPS anomaly. The aircraft's autopilot, which was set up for an RNAV approach, initiated a turn off course. As the pilot disconnected the autopilot and tried to determine the cause of the issue, the aircraft descended below the assigned altitude and the pilot was admonished by ATC. After landing, ATC stated that there had been numerous cases of GPS issues on the approach as of recent and asked if the pilot may have also experienced a GPS anomaly.

ACN: 1996278 *(33 of 50)*

Synopsis

Flight crew reported Low Altitude Alert from ATC following go-around due to high winds on approach to SUN airport.

ACN: 1995287 *(34 of 50)*

Synopsis

Airbus flight crew reported encountering wake turbulence on approach to PHX in trail of a Boeing commercial jet that contributed to flight stability issues and a momentary flap overspeed.

ACN: 1994650 *(35 of 50)*

Synopsis

Flight crew reported Low Altitude Alert from ATC during approach procedure to OMA airport.

ACN: 1994282 *(36 of 50)*

Synopsis

Air carrier Captain reported encountering gusty winds and wake turbulence from preceding aircraft on approach to LAS, resulting in a low altitude GPWS "Don't Sink" annunciation. Pilot continued to a normal landing.

ACN: 1994114 *(37 of 50)*

Synopsis

Corporate Jet Flight Crew reported receiving a GPWS terrain alert and a low altitude warning from ATC on approach to DWH airport following unintended autopilot disconnect.

ACN: 1993952 *(38 of 50)*

Synopsis

Air carrier Captain reported GPS jamming occurred while on an RNAV arrival into LTFM, Istanbul, Turkey. ATC gave the carrier vectors to a successful ILS landing.

ACN: 1993646 *(39 of 50)*

Synopsis

A321 Captain reported engine thrust malfunctions caused an unstable approach. The flight crew elected to go-around and troubleshoot the issues. Both windscreens were observed

to be clouded with an unknown material. Post flight revealed very fine sand was on the wind screens and the "AOA was not moving freely."

ACN: 1993416 *(40 of 50)*

Synopsis

Center Controller reported an aircraft conducting an RNAV approach flew off course and began to descend to an altitude while not on a published segment of the approach. The controller issued a low altitude alert and then climbed the aircraft to be above the minimum IFR altitude.

ACN: 1993285 *(41 of 50)*

Synopsis

Flight Crew reported the Flight Director commanded them to level off while conducting an RNAV approach due to failure to set the missed approach altitude. The crew continued the approach visually and became unstable resulting in a low altitude alert from the tower.

ACN: 1993174 *(42 of 50)*

Synopsis

A320 flight crew reported receiving an EGPWS terrain warning while on an RNAV approach in windy conditions. The First Officer, per the Captain, was inexperienced and the aircraft briefly went below the glide-path. A normal landing was accomplished.

ACN: 1992100 *(43 of 50)*

Synopsis

Small aircraft pilot flying reported losing TAWS and other navigational aids while descending into the clouds in solid IMC while landing at the destination airport. As the aircraft broke out of the clouds slightly south of intended position the navigational aids returned. The pilot decided to continue the approach and landing instead of performing a go-around.

ACN: 1990756 *(44 of 50)*

Synopsis

B737 flight crew reported an unstable approach at night with no vertical or ground guidance resulting in an unusual attitude situation. Flight crew regained aircraft control with upset recovery procedures.

ACN: 1990147 *(45 of 50)*

Synopsis

Flight Instructor with student reported a NMAC in the traffic pattern at a towered airport when another aircraft turned in front of them on final approach. The instructor took evasive action to avoid the other aircraft.

ACN: 1989621 *(46 of 50)*

Synopsis

A TRACON Controller reported they accepted a handoff of an aircraft that descended to an altitude below the Minimum Vectoring Altitude.

ACN: 1989525 *(47 of 50)*

Synopsis

Flight Instructor reported a NMAC that required evasive action to avoid a collision while in the traffic pattern at a non-towered airport.

ACN: 1987305 *(48 of 50)*

Synopsis

Air carrier flight crew reported receiving a low altitude alert from RNO Tower while stable on approach procedure. Captain reported the Controller stated this is a known problem and believed it to be an erroneous alert.

ACN: 1984687 *(49 of 50)*

Synopsis

Flight Instructor with student reported a NMAC that required evasive action to avoid collision with an aircraft at a non-towered airport. The Instructor stated this is not the first encounter at this location due to no communication from the aircraft with other aircraft in the traffic pattern.

ACN: 1982744 *(50 of 50)*

Synopsis

A319 Captain reported the improper usage of the Multi-Function Control and Display Unit and a strong crosswind led to an altitude and course deviation while flying an RNAV RNP approach. The Captain disconnected the autopilot and hand-flew to re-intercept the lateral path and remain in the protected airspace.

Report Narratives

ACN: 2015250 *(1 of 50)*

Time / Day

Date : 202307
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 117
Relative Position.Distance.Nautical Miles : 3
Altitude.MSL.Single Value : 1800

Environment

Weather Elements / Visibility : Haze / Smoke
Weather Elements / Visibility.Visibility : 8

Aircraft : 1

Reference : X
ATC / Advisory.CTAF : ZZZ
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Taxi
Make Model Name : PC-12
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 135
Flight Plan : IFR
Mission : Passenger
Nav In Use : GPS
Nav In Use : FMS Or FMC
Flight Phase : Final Approach
Route In Use : Visual Approach
Airspace.Class G : ZZZ

Aircraft : 2

Reference : Y
ATC / Advisory.CTAF : ZZZ
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Airspace.Class G : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Taxi
Function.Flight Crew : Captain
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 2600
Experience.Flight Crew.Last 90 Days : 165
Experience.Flight Crew.Type : 330

ASRS Report Number.Accession Number : 2015250
Human Factors : Communication Breakdown
Human Factors : Distraction
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Other / Unknown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Conflict : NMAC
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Automation : Aircraft TA
Detector.Person : Flight Crew
Miss Distance.Horizontal : 0
Miss Distance.Vertical : 400
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Took Evasive Action
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Airport
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

We were arriving into ZZZ, RNAV Z Runway XX. Conditions were VMC. The First Officer (FO) was Pilot Flying (PF). I was Pilot Monitoring (PM). Approximately 15 miles from the airport outside ZZZZZ (IF) I noticed ADS-B traffic paralleling the final approach course. The tower was closed and I was monitoring CTAF while communicating with ZZZ Approach. We were cleared for the approach after which ATC issued their first traffic alert. We continued the approach while scanning for traffic. We were unable to establish visual contact with the other aircraft but continued to monitor their position on TCAS. The other aircraft did not make any announcement on CTAF. ATC issued additional traffic alerts (2 or 3 more times) each time with closing proximity. Once established on final, ATC asked us if we could accept a VISUAL approach so that we could maneuver to avoid the traffic. We accepted the VISUAL. It became clear that we were on the same course with the other airplane and as we began to gain and close on them, we decided to maintain our current altitude to avoid descending into them. ATC had kept us with them longer than usual and I decided to ask for a frequency change so I could attempt to communicate with the other aircraft. As I changed frequency we realized we were directly over the other aircraft approximately 400 feet above. We were also close to the airport and unable to make a normal descent for a landing. I returned to ATC requested a left 360. As we circled, I broadcasted on CTAF directly to the other aircraft at which time he made his first transmission stating that he was about to land. He landed and failed to report clear of the runway until queried by me. This type of VFR NORAD operation is increasingly common under the class Bravo shelf. It is not in violation of any regulation but is not safe. The

presence of a class D airspace at least mandates two-way radio communication. After landing we informed the passengers that the circling maneuver was executed to allow another aircraft to land before us. They were all aware of this unusual maneuver and appreciated the explanation. There was never an immediate danger during this incident but there certainly could have been. It is clear to me that the potential for a disaster exists. These occurrences at ZZZ have become more frequent and are happening more than occasionally. It is not an exaggeration to say that the frequency of these occurrences combined with the potential outcome being catastrophic make continued operation into ZZZ a significant safety risk, especially with the tower closed and no regulation requiring two-way communication.

Synopsis

PC-12 Captain reported a NMAC at an airport after the tower was closed. The slower aircraft was not communicating their intentions until final approach. The crew executed a 360 degree turn with the concurrence of ATC, then landed.

ACN: 2014798 *(2 of 50)*

Time / Day

Date : 202307
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZZ.TRACON
State Reference : FO
Altitude.AGL.Single Value : 4200

Environment

Weather Elements / Visibility : Thunderstorm
Weather Elements / Visibility : Rain

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZZ
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Nav In Use.Localizer/Glideslope/ILS : ILSXXR
Flight Phase : Initial Approach
Route In Use.Other

Component

Aircraft Component : MCP
Aircraft Reference : X
Problem : Improperly Operated

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Air Traffic Control : Approach
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 14000
Experience.Flight Crew.Last 90 Days : 120
ASRS Report Number.Accession Number : 2014798
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Human Factors : Confusion
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : ATC

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2014805
Human Factors : Distraction
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Result.Flight Crew : Regained Aircraft Control
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Weather
Primary Problem : Procedure

Narrative: 1

The ZZZZZXX Arrival, RNAV Transition to ILS Runway XXR & the ILS XXR approach were programmed and briefed prior to TOD (top of descent) and weather at the field was deteriorating due to TSTMs (thunderstorms). On descent we received an amended release advising us that our destination alternate had changed to ZZZZ1 from ZZZZ2 due to TSTMS and deteriorating weather conditions there as well. We determined that we would only have one attempt at landing at our destination before we would have to proceed to our new alternate in Country due to the new increased fuel burn. While on the ZZZZZXX arrival, our radar was indicating cells with moderate to heavy precipitation along the arrival and approach corridors to the airfield. We began to receive multiple radar vectors and airspeed assignments from ATC as we heard the controller state to our preceding traffic that previous flights had landed successfully but that heavy winds were reported over the airfield. Although I had previously briefed that my preferred method of descent was using VNAV, I decided to use V/S mode to comply with the altitudes assigned by ATC to better position the aircraft for a successful approach and landing and avoid being too high from shortened vectors and rapidly changing weather conditions. This had happened to me on my previous approach some weeks before under similar, but somewhat worse weather conditions in to ZZZZ. While complying with multiple radar vectors and speed assignments, and approximately 20nm from the field, we were given an altitude assignment of 4,500 feet then switched to ZZZZ director. After another speed assignment

and radar vector, we were cleared to proceed direct to ZZZZZ1 and descend via the RNAV Transition to ILS Runway XXR. Even though I had previously briefed the transition and approach, I was not certain of the final descent altitude on the RNAV transition chart although the FO (First Officer) and relief pilot confirmed that it was 1700 feet. I selected the altitude in the ALT window on the MCP (Mode Control Panel), but then toggled between the ILS approach plate and RNAV Transition plate on my EFK to verify that I was looking at the correct altitude myself which was not obvious to me since both plates shared two common waypoints on the ILS approach. As I looked back up, the aircraft was just about to enter one of the smaller cells on the arrival and I then realized that I was still in V/S mode. The FO pointed out almost simultaneously that I should be at 4500 ft. until ZZZZZ1 and I was at 4200 ft. I immediately began to correct the altitude and while climbing at approximately 4300 ft., ZZZZ director issued a low altitude alert and advised us to check our altitude to which we replied correcting. Regrettably, I had allowed myself as PF (pilot flying) to become distracted by an unfamiliar approach and the deteriorating weather conditions just long enough to violate the altitude assignment. Had I more thoroughly reviewed and briefed the handling section of the somewhat unique RNAV Transition to ILS Runway XXR approach plate, I may have been better prepared for the clearance to descend via and may have avoided taking my eyes off the altitude until I was back in the VNAV mode to assure altitude compliance. The weather and internal imposed pressure of desiring to descend to the assigned altitude of 4500 ft. quickly to foster a more successful approach and landing should have been better managed by me. Even though I am aware of the many pitfalls of using the V/S mode in this situation, I will endeavor to be more vigilant of its use in the future and always reaffirm the vertical mode when changing the altitude in the altitude window.

Narrative: 2

We were conducting the ZZZZZ XX Arrival RNAV transition to ILS XXR. The Captain was PF (pilot flying) and I was PM (pilot monitoring). We were notified on initial decent of our alternate changing from ZZZZ2 to ZZZZ1, which would drive us having to proceed to our alternate if we went missed based on fuel for the further alternate. Prior to TD (Top of descent) we began getting vectors and speed changes taking us off the arrival. There was moderate to heavy rain along the arrival and approach corridor. Following vectors we were cleared direct ZZZZZ1 and descend via the RNAV to ILS XXR, so we put that in the FMS and 1,700 in the altitude window. PF then elected to join path using V/S. Then I looked at the weather ahead on the corridor and was checking to see if we might need to request alternate missed approach instructions due to potential weather in the missed corridor. I then noticed we were at 4,300 feet which was below the 4,500 foot altitude constraint at ZZZZZ1. I stated to PF we needed to be at 4,500 here and you need to climb back up now. During the transition back to climb I noticed a lowest altitude of 4,200 feet. Climbing back through 4,300 feet. ATC called us with a low altitude alert. We leveled at 4,500 feet and flew the rest of the arrival, approach and landing normally. Instead of the other tasks I was attending to as PM I should have been more actively making sure the PF was on the correct path earlier in the sequence, which would have trapped this earlier than I did.

Synopsis

Air carrier crew reported an altitude deviation and ATC low altitude alert while on approach to a foreign airport over terrain in moderate rain conditions. The pilot flying incorrectly determined and set a lower altitude than assigned from the approach chart while the pilot monitoring was distracted, and ATC alerted the crew of the deviation. The flight crew quickly corrected the altitude deviation and completed the approach and landing safely.

ACN: 2014045 *(3 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Relative Position.Distance.Nautical Miles : 1
Altitude.MSL.Single Value : 500

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Personal
Make Model Name : SR20
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Final Approach
Route In Use : Vectors
Airspace.Class D : ZZZ

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Personal
Make Model Name : DA40 Diamond Star
Operating Under FAR Part : Part 91
Flight Phase : Taxi
Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Private
Experience.Flight Crew.Total : 440
Experience.Flight Crew.Last 90 Days : 19
ASRS Report Number.Accession Number : 2014045
Human Factors : Situational Awareness

Events

Anomaly.Conflict : Ground Conflict, Critical
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Ground Incursion : Runway
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
Miss Distance.Horizontal : 0
Miss Distance.Vertical : 500
When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

I was flying from ZZZ to ZZZ1 on an IFR flight plan. I was inbound on the RNAV XX in visual meteorological conditions (VMC) at this point and was cleared for landing. While on short final (within a mile or so of the threshold) a Diamond Star took the runway after being issued a Hold Short instruction from Tower. The Tower tried to raise the pilot but having no joy, issued me a go-around. I had previously completed my missed approach procedure briefing and the airplane was configured with the missed approach (MA) altitude bugged and repeating the mantra in my head of how to execute the missed even though I had no reason to believe I would have to do one based upon the visual meteorological conditions (VMC); I try to be consistent for safety reasons. I saw the Diamond Star pull onto the runway when the Tower told me to execute a go-around. At this point, I started my missed approach procedure of applying full power, simultaneously hitting my takeoff/go around (TOGA) button for flight director (FD) pitch visual clues, and began my climb on runway heading to 1400 feet while anticipating a turn direct ZZZ Vortac at 3000. ATC then asked if I wanted to execute the missed approach or go visual. Unfortunately, I chose visual which, in retrospect, was a mistake on my part. At this point I was in a nose up attitude and was not paying attention to the ground traffic as I *assumed* the Diamond Star had just blown his Hold Short instruction and it was a "standard" runway incursion incident. My passenger was seated next to me and was leaning over the dash to see out over the cowling when she said "He's rolling!". I called Tower as they had not mentioned anything yet to confirm what my passenger was seeing. Tower confirmed and immediately approved a right cross-wind turn. I immediately executed while simultaneously registering my dissatisfaction with the Diamond to ATC. I then turned downwind but had not correctly monitored my reciprocal runway heading for right traffic and was extended out further from the pattern than I should have been. ATC gave me a heads-up and I told them I was not entirely familiar with the airspace; i.e. visual reference points and local customs. They were great and tucked me back in and the subsequent landing was uneventful. The ground controller suggested I call them to register a complaint. After shutting down, I spoke with the ground controller on the phone (who was actually the supervisor in the Tower that day) and he told me that in his 10 years at ZZZ1, this was by *far* the most dangerous pilot deviation he had seen. My Takeaways: What I think I did wrong: anticipating the unexpected and then not keeping to my plan in unfamiliar airspace. I learned to fly vast majority of my time at ZZZ3, which is just south of ZZZ4 Bravo [airspace]. Thus, I am very comfortable on the radios and in highly complex airspace. Prior to our trip, I studied the charts of the airspace in and around ZZZ1

and *thought* I was good with it. Whelp... that can go right out the window when the unexpected happens. In this case, my first error was accepting the visual in an unfamiliar area. What I should have done was execute the missed approach as that was what was in my mind and what I was preparing for. Deviating from that in a highly dynamic, high stress, unfamiliar environment is a recipe for mistakes as evidenced by my non-standard pattern. I will make sure to also brief a visual go-around in anticipation of similar, future events. Letting my emotions potentially cloud judgment. I'm not gonna lie; I was pissed off. I looked at the ADS-B data and it shows my altitude somewhere between "surface/near surface" to 575 feet at the time I executed the go-around. Needless to say, that's concerning and I unfortunately let my reaction spill over to comms when I asked Tower "Tell me you're taking a number on this guy?!" to which they answered in the affirmative. While I don't *think* my heightened emotional state translated into unsafe airmanship, as we all know, it is the *cumulative* effect of x-factors (here a Black Swan event of a guy taking off without a clearance at a busy controlled airfield, unfamiliarity with the airspace and heightened emotions) that is the problem. At a minimum, it was a net-neutral but also as likely a net-negative. One can't control how their mind and body instinctively reacts emotionally to a highly stressful situation, but one can control how they act once realizing the heightened emotional state they are in. I teach college and I constantly harp on my students that it is *never* a sign of weakness to admit when you don't know something or ask for help. Here, although uncomfortable to ask considering I had studied the space earlier, I told ATC I was unfamiliar with the airspace and, as expected, they were tremendously helpful. I did fully concentrate on flying the airplane first and foremost and never felt like I was not in control of the aircraft. My initial missed approach routine was spot on just as I've practiced a million times. Even after deviating by going visual and doing a wider-than-I-should pattern, I had a smooth remainder of the flight evidenced by my not-generally-thrilled-to-fly passenger saying that she was never nervous.

Synopsis

SR-20 pilot reported a ground conflict while on approach due to another aircraft on the runway. Pilot executed an ATC-directed go around and returned to land.

ACN: 2011966 *(4 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : IWA.Airport
State Reference : AZ
Relative Position.Angle.Radial : 125
Relative Position.Distance.Nautical Miles : 5
Altitude.MSL.Single Value : 3000

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.Tower : IWA
Aircraft Operator : Personal
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Training
Flight Phase : Final Approach
Route In Use.Other
Airspace.Class D : IWA

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : IWA
Aircraft Operator : Military
Make Model Name : Large Transport, Low Wing, 3 Turbojet Eng
Airspace.Class D : IWA

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Instructor
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 654
Experience.Flight Crew.Last 90 Days : 120
Experience.Flight Crew.Type : 576

ASRS Report Number.Accession Number : 2011966
Analyst Callback : Completed

Events

Anomaly.ATC Issue : All Types
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Anomaly.Inflight Event / Encounter : Wake Vortex Encounter
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control

Assessments

Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

Student and Instructor conducting an IFR cross-country training flight to IWA on an IFR flight plan. Requested the RNAV 30R IWA and subsequently cleared for the approach from Phoenix Approach. During the procedure inbound from WOGMA to WUMIX at roughly 3000~ MSL, IWA Tower instructed Tanker "Heavy" to overfly us on the approach at 1000 ft. above. They then notified us that the tanker would be overflying and to be aware of its wake turbulence. The tanker overflew us by 1000~ ft. and was then cleared to descend, and that the Cessna behind was 1/2 mile back. They would begin their descent, and IWA Tower would notify us that he was descending and to be aware of wake turbulence. As quick as them saying that, our plane was thrown into a hard 60+ degree uncontrollable left turn followed by several uncontrollable seconds stuck in the wake of the tanker. The wake and the abruptness would knock our aircraft's G1000 AHRS system out momentarily until we were eventually able to level out and recover from the upset. The AHRS system would come back, and we would go on to land with no other issues and complete the flight.

Callback: 1

Reporter stated the encounter was quite severe and potentially dangerous.

Synopsis

C172 Instructor Pilot reported wake turbulence from a military tanker overflying their aircraft resulted in an upset.

ACN: 2011565 *(5 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 0001-0600

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Nav In Use.Localizer/Glideslope/ILS : RNAV 23
Flight Phase : Initial Approach
Flight Phase : Final Approach
Route In Use : Direct

Component

Aircraft Component : GPS & Other Satellite Navigation
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2011565
Human Factors : Troubleshooting
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification

Result.Air Traffic Control : Provided Assistance
Result.Aircraft : Equipment Problem Dissipated

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Primary Problem : Ambiguous

Narrative: 1

Proceeding to IAF (ZAMUV) as per ATC clearance for RNAV 23 approach. GPS coverage momentarily was lost, ATC acknowledged and said previous aircraft had experienced exactly the same issue as coverage loss for the same fix (ZAMVU) at exactly the same geographical position. ATC vectored the flight to intercept the final approach course. ATC also said they would log and report the loss. Suggestion - Monitoring GPS COVERAGE as it may become inadequate. GPS loss, could be a satellite issue at a specific position in a given period of time that is not supposed to be occurring for that time.

Synopsis

Pilot flying reported a GPS malfunction or failure at the IAF, ZAMUV on the RNAV 23. ATC told the pilot that previous aircraft had experienced exactly the same issue at the same location.

ACN: 2011432 *(6 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : MSO.Airport
State Reference : MT
Altitude.MSL.Single Value : 8800

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.TRACON : GEG
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Final Approach
Route In Use : Visual Approach
Route In Use : Vectors
Airspace.Class E : GEG

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 701
Experience.Flight Crew.Last 90 Days : 46
Experience.Flight Crew.Type : 701
ASRS Report Number.Accession Number : 2011432
Human Factors : Workload
Human Factors : Confusion
Human Factors : Time Pressure

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Person : Flight Crew

When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

We were vectored off of the descent and told to expect a visual approach to Runway 30 into MSO behind an Air Carrier Y flight. Rather than clear us for the RNAV visual or the RNP approach, Spokane Approach wanted to give us vectors. He vectored us to a base leg that was 7.5 miles from the end of the runway in significant terrain, left us at 8800 ft. (5,600 ft. AGL) and cleared us for the visual. I slowed and configured the plane as fast as I could but could not descend fast enough to achieve a stabilized approach by 1,000 feet so I initiated a go-around. These unsafe vectors have happened to me several times in the past going into MSO. Approach puts pilots in precarious positions and then clears them for the visual approach expecting the pilots to fix the situation that Approach created.

Synopsis

An Air Carrier pilot reported GEG TRACON vectored them to base leg for a Visual Approach to MSO at a position and altitude that prevented them from flying a stabilized approach. Reporter states this is a recurring issue at this airport.

ACN: 2010745 *(7 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 2000

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Corporate
Make Model Name : Medium Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Route In Use.Other
Airspace.Class C : ZZZ

Person

Location Of Person.Facility : ZZZ.TRACON
Reporter Organization : Government
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 13
ASRS Report Number.Accession Number : 2010745
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Distraction
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Aircraft X was cleared for the RNAV Runway XX approach starting at ZZZZZ at or above 2500 ft. The aircraft descended to 2400 ft. and I issued them the altimeter and told them to check their altitude. The pilot asked to verify a descent clearance to 2000 ft. I responded negative that they were cleared to 2500 ft. Upon hearing this the aircraft climbed back to the assigned altitude of 2500 ft. The MVA in the area is 2300 ft. and the aircraft descended to 2000 ft. for around 2 miles. I checked the audio and 2500 ft. was issued and read back by the pilot.

Synopsis

A TRACON Controller reported an aircraft descended below their assigned altitude at the Initial Approach Fix and flew below the Minimum Vectoring Altitude.

ACN: 2009903 *(8 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : AMA.TRACON
State Reference : TX
Relative Position.Angle.Radial : 270
Relative Position.Distance.Nautical Miles : 5
Altitude.MSL.Single Value : 5400

Environment

Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : AMA
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Initial Approach
Route In Use : Direct
Airspace.Class C : AMA

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2009903
Human Factors : Troubleshooting
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Track / Heading : All Types

Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Air Traffic Control
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Chart Or Publication
Primary Problem : Airspace Structure

Narrative: 1

On arrival to AMA, PF (Pilot Flying) requested the RNP Z 22. Approach Control cleared us to fly the approach with the initial fix ZATRO. PF had FMS loaded with the initial fix PULBE. PF had PM (Pilot Monitoring) request initial fix PULBE. ATC then cleared us initial fix TELVE. Similar sounding and we couldn't decipher the difference between "TELVE" and "PULBE" over the radio and proceeded to initial fix PULBE. ATC queried us approximately five miles before PULBE and indicated we weren't heading to TELVE. That's when the miscommunication was discovered, and ATC allowed us to continue the approach via PULBE. The rest of approach and landing were uneventful. RNAV/RNP Approaches should not have similar sounding initial fixes.

Synopsis

Air carrier Captain reported similar sounding fixes on the AMA RNP Z 22 approach, PULBE and TELVE, which caused a clearance and heading deviation.

ACN: 2009800 *(9 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US

Environment

Flight Conditions : VMC
Light : Dawn

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Fractional
Make Model Name : EMB-505 / Phenom 300
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Mission : Ferry / Re-Positioning
Flight Phase : Descent
Airspace.Class B : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
ASRS Report Number.Accession Number : 2009800
Human Factors : Confusion
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Returned To Clearance

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

Short flight from ZZZ1 to ZZZ. Both airports were departing/landing to the North. There was a non-convective weather cell with precipitation, just West of both airports. 100 OVC, 10 SM in the general area, with reduced visibility near the precipitation cell. We departed Runway XXL at ZZZ1 with a right downwind vector towards ZZZ. Departure took place after sunrise, all terrain was visible and identifiable. 6 NM from ZZZ we reported field in sight and were cleared visual approach XYL via right downwind. Leveling at 4000 pattern altitude on downwind, the Captain and I decided that due to surrounding terrain, a right pattern may not be doable without triggering warnings and requested vectors for the RNAV visual XYL. ATC advised that we were under MVA, issued a low altitude alert, and we climbed uneventfully to the assigned altitude. Few minutes later, ATC cleared us for the "RNAV XYL approach", told us that ZZZ Tower just opened and handed us off. On TWR/CTAF frequency, ATC told us that ZZZ Tower will be closed for another 4.5 minutes, but continued to communicate with us. Shortly after, Tower Controller advised us "for informational purposes" that approach told them that we were cleared RNAV-B approach, but were instead flying RNAV visual XYL (different lateral track). We advised Tower Controller that we actually requested the RNAV visual, which we in fact did, and continued to uneventful landing XYL. On our landing rollout, ZZZ Tower opened, and class D airspace went into effect. It appears that both us and Approach Controller experienced expectation bias with respect to the approach clearance, and ultimately miscommunicated. As a flight crew, we briefed and expected to fly the RNAV visual XYL inbound, but never ruled out the traffic pattern, despite high terrain nearby. When ATC cleared us for the visual, right traffic, we followed that instruction, even though that was the inferior plan. Per ZZZ [informational safety bulletin], most of our Terrain Avoidance Warning System (TAWS) events occur when attempting to maneuver in the pattern, in close proximity to surrounding terrain. I suggest including instructions into ZZZ, pages recommending a straight in approach via the RNAV visual, and discouraging the right downwind Runway XY, due to potentially unstable approach and a TAWS event triggered by the 4174 ft. obstacle. Additionally, I suggest part-time ATCT Controllers refrain from providing instructions to/communicating with aircraft on CTAF, as it created some confusion regarding whether the Tower was already open and if we should expect ATC services. Regarding the approach clearance miscommunication, we should have queried the Controller for the full clearance phraseology, as "Cleared RNAV XYL" was ambiguous. Lastly, it was a XA00 LCL show to ferry the airplane to ZZZ into position for next morning departure, we were undoubtedly less alert due to operating during the window of circadian low. If we positioned the aircraft the evening prior, we could have avoided that.

Synopsis

EMB-505 flight crew reported receiving a low altitude alert on approach and confusion regarding an approach clearance.

ACN: 2009309 *(10 of 50)*

Time / Day

Date : 202306

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 1
Altitude.MSL.Single Value : 1700

Environment

Flight Conditions : VMC
Weather Elements / Visibility : Haze / Smoke
Weather Elements / Visibility.Visibility : 7
Light : Daylight
Ceiling.Single Value : 12000

Aircraft : 1

Reference : X
ATC / Advisory.CTAF : ZZZ
Aircraft Operator : FBO
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Training
Flight Phase : Takeoff / Launch
Airspace.Class G : ZZZ

Aircraft : 2

Reference : Y
ATC / Advisory.CTAF : ZZZ
Aircraft Operator : Personal
Make Model Name : PA-28 Cherokee/Archer/Dakota/Pillan/Warrior
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Mission : Training
Flight Phase : Initial Approach
Airspace.Class G : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Commercial

Experience.Flight Crew.Total : 580
Experience.Flight Crew.Last 90 Days : 60
Experience.Flight Crew.Type : 540
ASRS Report Number.Accession Number : 2009309
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Miss Distance.Horizontal : 200
Miss Distance.Vertical : 200
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Had just departed runway XX @ ZZZ. 3-4 other airplanes in the pattern properly making traffic calls. After a touch and go landing we made an "upwind of runway XX" call. I noticed on our ADS-B-IN system, an aircraft with a head on trajectory about 3 miles South, but due to the haze, did not have the aircraft in sight. I advised my student to turn crosswind and made the call to CTAF "on crosswind for runway XX". There were two other aircraft doing simulated instrument approaches. Piper Archer decided to practice a RNAV XY, circle to land. I did not hear a circling or joining downwind call from the Archer. My ADSB indicated this was the aircraft inbound circling, and I was vigilantly visually searching for this aircraft as we were climbing. At about 500 feet laterally, I saw we were on an imminent collision path with the Archer. I took the controls from my student and pitched up significantly to avoid collision. We passed above at about 200 feet. I then asked on CTAF why they did not make a call about joining the downwind on a straight in and expressed how dangerous the situation was. Their response was that they had made an approach call some 8 miles out and "were on a checkride and had to circle within 1.3 miles of the airport". We promptly left the area.

Synopsis

Flight instructor with student reported taking evasive action to avoid a near midair collision in the traffic pattern at a non-towered airport.

ACN: 2009152 *(11 of 50)*

Time / Day

Date : 202306

Place

Locale Reference.ATC Facility : ZOA.ARTCC
State Reference : CA
Altitude.MSL.Single Value : 28000

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Nav In Use.Localizer/Glideslope/ILS : RNAV
Flight Phase : Descent
Route In Use.STAR : DYAMD 5
Airspace.Class B : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 2170
Experience.Flight Crew.Last 90 Days : 220
Experience.Flight Crew.Type : 955
ASRS Report Number.Accession Number : 2009152
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Human-Machine Interface
Human Factors : Time Pressure
Human Factors : Training / Qualification
Human Factors : Workload
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 24930
Experience.Flight Crew.Last 90 Days : 163
Experience.Flight Crew.Type : 511
ASRS Report Number.Accession Number : 2009113
Human Factors : Workload
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface
Human Factors : Communication Breakdown
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

We were at FL280 and just given the clearance to slow to 250 and them 7,000 ft. My head was down looking at the DYAMD5 Arrival and then I hear the Captain turn off the Autopilot and slightly pitch down. The shocker activated for about 1 sec. I immediately looked up and noticed we were high and our speed was about 240 and increasing. The Flight Mode Annunciator (FMA) was in ALT. Before I looked down it was in VNAV path. ATC told us to slow down and then start the decent, putting us just past the glide slope and put the plane into ALT. We had 250 bugged but the plane continued to descend. Captain followed the correct procedure and we got on path. Speed Deviation, Stick shaker, Uncommanded / Unintended State or Loss of Control.

Narrative: 2

Approaching the top of descent (T/D) [less than 5 miles] for the planned RNAV arrival ATC gave us the clearance to descent via the DYAMD 5 expect maintain 250 kts. I change the

speed to 250 kts. in the descent page to give the FMC something to work with but while the computer was recalculating, the T/D was moved behind us and now we are 2,500 ft. too high for the path. The Mode Control Panel was set to 7,000 ft. as described in the RNAV arrival and use the speed brake to slow down and get down. But the Flight Director (FD) was giving me a pitch up and at first I thought, ok we are high but the computer is looking at the speed past DYAMD and those were still at 280 kts. so I ask the First Officer (FO) to change those speeds to 250 kts. and have a correct path. During that time the speed drop to 230 kts. and for a split second gave us a stick shaker. I quickly disconnected the Autopilot to get back to 250 kts. and worked with the speed brake to get back on the path once the computer recalculated the correct path at 250 kts. and once the FMA was back on VNAV PTH, I press the Autopilot switch. The FMA didn't go to VNAV ALT but was showing VNAV SPD then VNAV PTH. The rest was uneventful. Speed Deviation, Stick shaker, Uncommanded / Unintended State or Loss of Control.

Synopsis

Air carrier flight crew reported a momentary loss of speed resulting in a stick shaker event. The pilots stated there was a heavy workload at the time and an unfamiliar FMC required programming change for the First Officer.

ACN: 2008891 *(12 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 9900

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A319
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Nav In Use.Localizer/Glideslope/ILS : XXL
Flight Phase : Initial Approach
Route In Use : Visual Approach
Route In Use : Direct
Route In Use.STAR : ZZZZZ
Airspace.Class C : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2008891
Human Factors : Distraction
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 2008564
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Distraction
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Air Traffic Control
Detector.Person : Air Traffic Control
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Weather
Primary Problem : Ambiguous

Narrative: 1

As we were descending on the ZZZZZ RNAV arrival, ZZZ Approach advised us that ZZZ airport would be changing from landing South to landing North and to expect the visual approach to Runway XXR. Shortly thereafter, we were given a left turn off of the arrival, which established us on a right base to Runway XXR. We were vectored directly through cumulous build ups and this made installing the runway and verifying the approach challenging through the turbulence. Time was also a factor because the vector was close to the final approach. As we were established on base, ZZZ advised us that the airport was at 3 o'clock and 20 miles, so I asked the First Officer to inform ZZZ that we were IMC and in and out of the cloud bases. ZZZ then cleared us for the approach and asked us to maintain 11,000 ft. until established. I armed the approach, but the autopilot did not capture the course due to either being too close to the approach course or over it. At approximately the same time we encountered visual conditions, so I disconnected the autopilot and made a right turn back to the airport and final approach course. We transitioned to the visual approach and began descending for the next final approach course fix, ZZZZZ1, which had a crossing altitude of 9,900 ft. ZZZ advised us that we

were showing a low altitude alert. Although we were visual, we stopped the descent to ensure that we were not missing anything. We had no visual or oral GPWS indications as well as visual conditions of our course and the airport. We verified that we were clear of all terrain and continued the approach visually. This, coupled with a tailwind at altitude, left us high over ZZZZZ1 and the remainder of the approach. I slowed and configured the aircraft with gear, flap, and speed brakes. ZZZ switched us to ZZZ Tower. ZZZ Tower cleared us to land and we requested S-turns on final to lose altitude. We performed an S-turn to the West and returned to the final course still too high to make a stabilized approach and landing. At this point we performed a go around and returned to the airport for an uneventful visual approach and landing, backed up by the same RNAV/GPS X XXR approach. After we were cleared for the approach, I armed the approach and all functions were normal. The autopilot intercepted and followed the vertical and lateral guidance. As we returned to the airport and while on downwind for Runway XXR, ZZZ Tower advised us of a possible pilot deviation. We were advised to call the ZZZ Controller upon landing. After arriving at the gate, I called and spoke with the ZZZ Controller as requested. A short vector from the arrival to the final course. The approach set up was a 90 degree intercept to the final approach course. A tail wind on the final approach course as well as turbulence from a vector through cumulus cloud bases on the base course. We were also given a late clearance for the approach. I have thought about this quite a bit and I believe that the best course of action would have been to ask for a delaying vector to ensure that we were set and ready for the approach. I also believe this would have given ATC a better opportunity to set us up for the approach with something like a 30 degree intercept to the final course instead of the 90 degree intercept we were given. This is paramount in mountainous terrain.

Narrative: 2

During arrival into ZZZ, and while descending on the ZZZZZ arrival, we were told that they are switching to Runway XXR from YYL, as originally planned. Then gave us a quick left turn, which put us a beam final. This followed by a right turn to intercept the final, we could see the airport by then. We were asked to maintain 11,000 ft. Until intercept the final, the aircraft didn't intercept the final as we flew through it, disconnecting the autopilot and headed for ZZZZZ1, and began descending, again the airport was very clear to us. Began descending to get to ZZZZZ1, because we were high, as a result we went around, and did the same arrival again followed by landing. This was a very tight approach with last minute runway changes. We should have refused the arrival and ask for more space.

Synopsis

A319 flight crew reported a CFIT advisory from ATC. The pilots reported they were given a late runway change, in a mountainous area, turbulent conditions, encountering a tailwind and given a ninety degree turn to final. The approach became unstable and the crew stated they executed a missed approach.

ACN: 2008088 *(13 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : DEN.Airport
State Reference : CO
Altitude.MSL.Single Value : 12000

Environment

Flight Conditions : Mixed
Weather Elements / Visibility.Visibility : 10
Light : Night

Aircraft

Reference : X
ATC / Advisory.TRACON : D01
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Flight Phase : Descent
Airspace.Class B : D01

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Air Traffic Control : Approach
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 8000
ASRS Report Number.Accession Number : 2008088
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Confusion
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

We were on the TBARR 3 Arrival to Runway 7 in DEN. Keep in mind we were all set up for the TBARR Runway 7 transition and approach. Around the TBARR intersection, I heard DEN Approach changing the runways to a south flow for those in front of us on the arrival, and as always, they wait until the last second and expect everyone to be able to comply. VERY FRUSTRATING, and it happens all the time here in DEN. We had not been given the new runway, so I began asking if we would be getting [Runway] 16L as well, since now we were approaching MNARK, which is the branch point for going to Runway 7 or going to Runway 16L. It was at this time, after asking, that they confirmed the arrival and runway change. We were now almost on top of MNARK. We start scrambling to reprogram the FMC along with re-brief the arrival and approach, since we are now supposed to go to EOLUS rather than SUMTT. Because of the scramble to reprogram the FMC and brief, the VNAV disconnected. The aircraft continued to descend to somewhere around 11,000 ft. to 12,000 ft., at which time, I told the FO (First Officer), pilot flying. We descended too far and climb back up to 15,000 ft., which is the minimum at EOLUS. I then told the Approach Controller of the error and that we were climbing back to 15,000 ft., at which time, he indicated something to the effect of, "That's OK, it has been that kind of night and we can stay at 12,000 ft., then comply with the restrictions at CLFFF for the RNAV to 16L." Simply put, we were low on the arrival and missed the EOLUS crossing restriction of 15,000 ft. to 17,000 ft. What is frustrating is the fact that this never should have happened in the first place. I understand, had the change happened out by BBRRO or LIFTE, but NOT essentially at the branch point MNARK. The winds were calm and DEN should have never changed our runway at that point. Just let us continue and land on Runway 7 and start changing the arrivals and runways for aircraft way back on the arrival. I would understand if the winds had shifted dramatically but the winds were essentially calm. Let us continue to Runway 7 and have aircraft 30, 40, 50 NM behind us change arrivals and runways. But changing our entire arrival and approach at the last second or when you are a couple of miles from a branch point is setting us up to fail no matter what. And this kind of thing happens ALL THE TIME here in DEN for some reason.

Synopsis

Air carrier Captain reported descending below a minimum altitude during arrival to DEN after ATC issued a last minute change of landing runways.

ACN: 2007673 *(14 of 50)*

Time / Day

Date : 202306

Place

Locale Reference.Airport : SFO.Airport
State Reference : CA

Environment

Flight Conditions : VMC

Aircraft : 1

Reference : X
ATC / Advisory.Tower : SFO
Aircraft Operator : Air Carrier
Make Model Name : Airbus Industrie Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Flight Phase : Final Approach
Airspace.Class B : SFO

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : SFO
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Crew Size.Number Of Crew : 1
Flight Plan : IFR
Nav In Use : FMS Or FMC
Flight Phase : Final Approach
Airspace.Class B : SFO

Component

Aircraft Component : FMS/FMC
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Last 90 Days : 142

Experience.Flight Crew.Type : 2084
ASRS Report Number.Accession Number : 2007673
Human Factors : Confusion

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Conflict : NMAC
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Other / Unknown
Anomaly.No Specific Anomaly Occurred : Unwanted Situation
Detector.Person : Flight Crew
Miss Distance.Horizontal : 100
Miss Distance.Vertical : 0
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Airport
Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Chart Or Publication
Primary Problem : Aircraft

Narrative: 1

This is the second time I have been the pilot monitoring for the 28L Tip Toe visual approach. For the second time, the aircraft overshot 28L final and tracked the inbound course lined up almost halfway in between runways 28L and 28R. Had I not had the aircraft in front of us in visual contact and the aircraft flying 1/4 mile in front of us, it would have resulted in a near mid-air collision. I have also been the pilot monitoring on the FMS Bridge Visual to 28R while another aircraft was flying the RNAV Visual to 28L. That aircraft also crossed centerline and came within 100 ft. of a mid-air collision. I have never had this happen while flying the Tip Toe and intercepting the localizer course - only while intercepting the RNAV course. This RNAV approach is a safety threat and I will no longer fly it or allow my First Officer to fly it.

Synopsis

Air carrier Captain reported the aircraft overshot final as it tracked the inbound course lined up almost halfway in between SFO runways 28L and 28R during the RNAV approach. This led to a potential NMAC with the aircraft ahead.

ACN: 2007504 *(15 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Flight Conditions : VMC
Light : Night

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B737 Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Landing
Route In Use : Visual Approach
Airspace.Class B : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Air Traffic Control : Local
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 1397
Experience.Flight Crew.Last 90 Days : 228
Experience.Flight Crew.Type : 1397
ASRS Report Number.Accession Number : 2007504
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Confusion
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier
Function.Air Traffic Control : Local
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 284
Experience.Flight Crew.Last 90 Days : 93
Experience.Flight Crew.Type : 284
ASRS Report Number.Accession Number : 2007668
Human Factors : Training / Qualification
Human Factors : Situational Awareness
Human Factors : Confusion
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Ground Event / Encounter : Loss Of Aircraft Control
Anomaly.Ground Event / Encounter : Ground Strike - Aircraft
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

During a visual approach, and on short final, the PF (Pilot Flying) started to drift above the glideslope. At 3 white and 1 red indicators on the PAPI, the PF vocalized high and correcting. At approximately 75 ft. the descent rate slowed, the aircraft continued to drift above the glideslope and a long landing was looking probable. The PF continued to vocalize correcting. Once the aircraft was outside the touchdown zone and a long landing was evident, the PM (Pilot Monitoring) called for a go around. At the same time a call for go around was initiated, the PF had reduced the thrust levers to idle. As the PF initiated the go around, the Main Landing Gear momentarily touched the runway. During the pitch up and engine spool up, the PM felt a bump indicating a possible tailstrike. ATC gave an initial heading and altitude to climb to, as well as a new runway assignment. The PF loaded the ILS for the new runway and sent for landing data since the runway was significantly shorter. During the vectors to intercept, the PM vocalized that his side was not receiving the signal from the ILS frequency. The PF said his side was receiving the signal. ATC gave a vector to intercept, and again, the PM vocalized that the signal was not being received

on his side. The aircraft passed through the LOC course and ATC gave a new heading to intercept. The PF acknowledged he was not receiving the signal and the PM loaded the RNAV approach to the runway to provided course and vertical guidance. Once the approach was loaded, the second approach was successful. After arriving at the gate, the PM conducted a post-flight walk-around and discovered damage to the tail stinger.

Narrative: 2

[At] 500 ft., aircraft was stable. At approximately 100 ft. AGL, I noticed that the aircraft was above the glide path and PASI (3 White/1 Red). I announced such and that I was correcting. As I retarded the throttles at approximately 20 ft., the aircraft continued to "float" down the runway. Just as the Aircraft finally touched down, the FO (First Officer) called for a Go-Around just as the "Long Landing" aural announced. Initial application of approx 7 to 11 degree, with a transition to 15 degree pitch attitude was applied. As the engines spooled and thrust increased, the Aircraft pitch up, causing the tail-strike in conjunction with the strut compression. Normal Go-Around procedures commenced, followed by vectors to Runway XXR. Normal non-eventful landing. Evidence of tail-strike was discovered on post-flight. Electronic Logbook report and Chief Pilot contacted.

Synopsis

B737 flight crew reported an unstabilized approach resulted in a go-around as the aircraft touched down on the runway. As the aircraft performed the go around, the First Officer felt a bump indicative of a tail strike. The aircraft landed and upon post flight inspection damage was discovered to the tail stinger.

ACN: 2006592 *(16 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Relative Position.Angle.Radial : 048
Altitude.MSL.Single Value : 3325

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.CTAF : ZZZ
Aircraft Operator : FBO
Make Model Name : PA-28 Cherokee/Archer/Dakota/Pillan/Warrior
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Training
Flight Phase : Initial Approach
Airspace.Class E : ZZZ

Aircraft : 2

Reference : Y
ATC / Advisory.CTAF : ZZZ
Make Model Name : Beechcraft / Beech Aircraft Corp Undifferentiated or Other Model
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : None
Flight Phase : Cruise
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Instructor
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Commercial
Experience.Flight Crew.Total : 664
Experience.Flight Crew.Last 90 Days : 227
Experience.Flight Crew.Type : 664
ASRS Report Number.Accession Number : 2006592

Human Factors : Workload
Human Factors : Time Pressure

Events

Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Flight Crew
Miss Distance.Horizontal : 0
Miss Distance.Vertical : 75
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

My student and I were inbound from ZZZ1 on the RNAV X practice approach into ZZZ, as we were following glide slope I had caught traffic off our right side to the south and our traffic system popped up with an aircraft with no call sign or tail number and no altitude reporting in that sector. I had taken controls from my student and pulled back on the yolk to climb and Aircraft Y had flown directly under us crossing through the approach path. The pilot of the other aircraft was not on CTAF for ZZZ or on the practice area frequency and made no calls he/she was flying through the path. Information was found about altitude separation off the online service flight radar.

Synopsis

Flight Instructor reported a NMAC during landing training when an aircraft flew across the landing path. The Instructor took evasive action to avoid a collision.

ACN: 2006118 *(17 of 50)*

Time / Day

Date : 202306
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : AMA.Airport
State Reference : TX
Altitude.MSL.Single Value : 5200

Aircraft

Reference : X
ATC / Advisory.Tower : AMA
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class C : AMA

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Type : 3300
ASRS Report Number.Accession Number : 2006118
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Type : 1600
ASRS Report Number.Accession Number : 2006119

Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Crossing Restriction Not Met
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Returned To Clearance

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

On approach to Runway 4 in AMA. Approach offered visual Runway 4. We did not have airport in site. We asked for the full RNAV approach instead of the visual. Due to unfamiliarity with the airport and nighttime conditions. We were then given vectors and Approach asked us to turn base at the final approach fix. I said unable as this did not seem to be a safe option with a newer First Officer (FO) flying I asked for the full RNAV. We were given downwind X past the final approach fix. And to descend to 5,200 ft. We were turned base at the initial fix I noticed the aircraft getting slow and informed the pilot monitoring we needed flaps 9. I informed him to increase speed slightly. I became focused on the airspeed and did not notice him starting to descend at the IF below 5,200 ft. At approximately 4,900 ft. Tower informed us that we were too low at which point I looked at altitude and took the controls to increase altitude and airspeed. Then turned off Autopilot and I returned the plane to 5,200 ft. as we were still not at the final approach fix yet. I then called for gear down and flaps 22 approximately 1.5 miles from the final approach fix. And flaps 45 slightly under a mile from final approach fix as the plane had slowed below 155 kts. After plane was stable and flaps 45 I returned controls to the FO and continued monitoring. We were then given clearance to land by the Tower and landed without incident. I became fixated on the airspeed as we had gotten slow during part of the approach. We were still with speed limits but I still felt it was to slow for my liking. I will make sure to keep my scan up and not get fixated on one thing. If I had not been fixated on speed I would have noticed the early descent.

Narrative: 2

On approach for Runway 4 we were given headings to intercept at the FAF. We asked immediately to be given vectors to the IF point since it was getting dark and the airport was not familiar. We received a different heading and were told to decent to 5,200 ft. As soon as we received our clearance for the RNAV 4 I pressed the NAV after turning to intercept the approach. While the localizer was intercepted I noticed that the Vertical Path Indicator (VPI) was below and therefore I started my descent to ensure that we are not too high. As soon as the aircraft descended the VPI jumped back up in position, and the Tower informed us that we are too low. Captain took control of the aircraft and went back

up to 5,200 ft. while disconnecting the Autopilot and getting back on the glide path since the airport had been visible. The weather was calm and visibility was 10 SM. Captain requested gear down, flaps 22, and flaps 45 landing checklist. After the approach was stable, the Captain gave control back to me and I finished landing the aircraft. I will make sure that I communicate if I see the VPI on RNAV approaches going below with the Captain prior to starting the descent as well as ensure that I double-check on the plate what altitudes I should be at while reaching fixes on the approach. I will also be more cognizant of my speed.

Synopsis

Air carrier flight crew reported an altitude alert from ATC while on approach to AMA airport.

ACN: 2005520 *(18 of 50)*

Time / Day

Date : 202306

Place

Locale Reference.ATC Facility : DEN.Tower
State Reference : CO

Environment

Flight Conditions : VMC

Aircraft : 1

Reference : X
ATC / Advisory.Tower : DEN
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use.Localizer/Glideslope/ILS : ILS 16L
Flight Phase : Final Approach
Route In Use : Visual Approach
Airspace.Class B : DEN

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : DEN
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Airspace.Class B : DEN

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 181
Experience.Flight Crew.Last 90 Days : 181
Experience.Flight Crew.Type : 181
ASRS Report Number.Accession Number : 2005520

Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Automation : Aircraft RA
Detector.Person : Flight Crew
When Detected : In-flight

Assessments

Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Manuals
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

On final approach to 16L visual, backed up by the ILS, Captain flying, Tower notified Aircraft X of traffic on the RNAV Z 16R. Aircraft X had the traffic in sight the whole time, as the traffic, an Aircraft Y, was abeam Aircraft X, Aircraft X received a TA. Traffic was still in sight and now slightly aft and higher than Aircraft X. Then Aircraft X received a RA with a climb indication while still seeing the other aircraft higher and slightly aft of Aircraft X. While maintaining sight and seeing the other aircraft higher, Captain continued the approach, aircraft were never in close proximity of each other.

Synopsis

Air carrier Captain received a TCAS RA on a visual approach from another air carrier maneuvering on a RNAV approach to the parallel runway. The Captain determined that he had the conflicting traffic in sight and did not follow the TCAS RA solution and continued the approach to landing.

ACN: 2004426 *(19 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : MMMX.Airport
State Reference : FO

Aircraft

Reference : X
ATC / Advisory.Center : MMFR
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Flight Phase : Descent

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2004426
Human Factors : Confusion

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Flight Crew

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Software and Automation
Primary Problem : Chart Or Publication

Narrative: 1

Flying into MEX we had a discrepancy between STAR crossing restrictions in the Jeppesen app and the FMS. We were flying the DARAN 2A Arrival (to land RNAV 5R). The chart/Jeppesen showed a restriction to cross fix DARAN between FL230 and FL210. The FMS had the crossing between FL280 and FL250. We caught it and verified we had in fact programmed the correct STAR. (The FMS restriction would be correct for the DARAN 2B Arrival.) Error in Jeppesen or FMC database. Verify with ATC the crossing restriction if needed.

Synopsis

Captain reported a conflict between the published altitude crossing restrictions and the aircraft's FMC database on the DARAN2A STAR into MMMX airport.

ACN: 2003890 *(20 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B737-800
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace.Class E : ZZZ

Component

Aircraft Component : Trailing Edge Flap
Aircraft Reference : X
Problem : Malfunctioning

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2003890
Human Factors : Troubleshooting

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer

Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2003903
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation / Discrepancy - Procedural : Maintenance
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Maintenance Action
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Landed As Precaution
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Primary Problem : Aircraft

Narrative: 1

On final preparing to land, I noticed that the flaps were stuck between 5-10 degrees. Executed a go-around. Executed QRH procedure. Attempted to lower flaps using the alternate flaps switch. First Officer (FO) reported an asymmetry developing. Flaps were at approximately 11 degrees. [Requested priority handling]. Requested the long Runway XXR. Landed uneventfully. Airport Rescue and Firefighting (ARFF) checked tires and brakes and we taxied back to our gate. This Aircraft X, has had 3 flap related malfunctions in the month alone. Company Maintenance has failed to repair this aircraft properly. QRH could also have a quicker reference for flap issues. Intuitively one would search for flaps. The procedure is labeled trailing edge flap disagree. Adding to the time to find the procedure. The aircraft has had repeated flap issues that maintenance needs to resolved before the aircraft re enters service.

Narrative: 2

While on the RNAV Z XXL approach we noticed flaps were not indicating 30 degrees when the flap handle was at 30. We executed a go around. While performing the go-around, moving the flap handle did not change the flap indicator. We requested runway heading and performed the QRH procedure. We attempted the alternate flap extension but noticed this was causing an asymmetric flap situation so we stopped the flaps at roughly 12 degrees. We [requested priority handling] and requested vectors back to XXR. Upon landing and exiting the runway Airport Rescue and Firefighting (ARFF) checked the tries and brakes for excessive heat. Taxied back to the gate. Aircraft X has had multiple flap related issues in the past months. This aircraft needs to be fixed. As the pilot monitoring I had a hard time finding the appropriate checklist for this situation. Quick link to FLAPS would have been helpful vs trying to locate trailing edge devices. Aircraft being thoroughly inspected when a persistence maintenance problem exist.

Synopsis

B737 flight crew reported trailing edge flaps failed to extend on final approach. The flight crew performed a go-around to troubleshoot and use alternate method for flap extension. The flaps then suffered a flap asymmetry condition, resulting in the flight crew receiving vector and making a precautionary landing at destination airport.

ACN: 2003684 *(21 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Regional Jet 900 (CRJ900)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Final Approach

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2003684
Human Factors : Workload
Human Factors : Time Pressure

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem

Assessments

Contributing Factors / Situations : Chart Or Publication
Primary Problem : Chart Or Publication

Narrative: 1

We were flying Aircraft X ZZZ1 - ZZZ. ZZZ was using RNAV XX approach. We did one approach and ended up high and unstable so we initiated a go-around. The second time flying the approach I hand flew more of it and we compensated on being high and were a bit lower on this approach. Near the end of this approach we received a low altitude alert from ATC and corrected our path up a little. My First Officer (FO) was calling out altitudes and it appeared we were hitting the altitudes that were recommended. We were clear of all obstacles. This approach is not designed to meet stabilized criteria at all, and especially for the CRJ-900 is not built to help with our avionics capabilities. I have flown this approach less than 5 times. I think the cause could have been an overcompensation on the second approach, but we were clear of obstacles and according to my FO we were hitting the recommended altitudes while I was looking outside to line up with the runway. I think this new approach is overly complicated and not designed to handle stabilized criteria in our manual. Also, the avionics capabilities and how the CRJ flies do not conform to help us fly this approach. Evidence is already in the fact that we cannot fly the recommended lateral path or abide by the speed restrictions on the approach plate. I think this approach should not be given to CRJs, and needs to be redesigned, or it needs to be turned back into a fully visual approach and ATC should be using a visual approach. This approach does not help us meet stabilized criteria for an instrument approach. Evidence for this is already in our Company pages that we cannot follow the lateral path or meet the speed requirements for the missed approach.

Synopsis

CRJ Captain reported a CFIT event during an unstable approach which was followed by a safe approach and landing. The Captain added that the approach for aircraft type should be modified for the specific model.

ACN: 2003557 *(22 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : JFK.Tower
State Reference : NY
Altitude.MSL.Single Value : 1300

Aircraft : 1

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Configuration (UAS) : Multi-Rotor
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport
Flying In / Near / Over (UAS) : Aircraft / UAS

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2003557
Human Factors : Workload

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

While on the RNAV RNP 13L the First Officer (FO) spotted a black quadcopter at our same altitude of approximately 1,300 ft. and laterally 500 ft. at 9 o'clock position. I immediately notified tower of the drone location. After landing, the FO let tower know drone type and color.

Synopsis

Air carrier Captain reported the First Officer saw a UAS while they were on approach.

ACN: 2002089 *(23 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : GRR.TRACON
State Reference : MI
Altitude.MSL.Single Value : 2700

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Rain
Weather Elements / Visibility : Haze / Smoke
Weather Elements / Visibility : Fog
Weather Elements / Visibility : Turbulence
Weather Elements / Visibility.Visibility : 3
Ceiling.Single Value : 3500

Aircraft

Reference : X
ATC / Advisory.TRACON : GRR
Aircraft Operator : Personal
Make Model Name : Small Aircraft, Low Wing, 1 Eng, Fixed Gear
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Final Approach
Route In Use : Vectors

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 1360
Experience.Flight Crew.Last 90 Days : 10
Experience.Flight Crew.Type : 1360
ASRS Report Number.Accession Number : 2002089
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Weather
Primary Problem : Human Factors

Narrative: 1

I was in the final stages of my IFR flight from ZZZ to 3GM. I was making an RNAV approach to Runway 27 3GM. Conditions were heavy IFR with fog, clouds, rain and moderate turbulence. During the final phase of the approach the controller said that I had descended below the Minimum Vectoring Altitude during the approach by going down to 2,100 MSL versus the 2,700 minimum. I did reach this altitude but not intentionally but due to the turbulence and trying to maintain control of the aircraft. A contributing factor was that I was distracted by trying to locate my position on the chart because the controller gave me vectors to two approach fixes with similar names on the same approach. The fixes were named "FIVLO" the IAF, and "CIRBO" the FAF. I was having a difficult time understanding which fix he was referring to because of the heavy rain, transmission static and turbulence trying to read the chart. During the approach I did unintentionally descend to 2,100 MSL but did climb back to 2,700 MSL when I regained control of the conditions. As I finished the approach the controller advised me of the violation and gave me the phone number of Great Lakes Center to call. Immediately after landing I called and supplied my name, address and phone number and pilot certificate number to them. They said that I would be contacted if they needed any further information. I feel that having two approach fixes with very similar names, on the same approach should be reviewed and corrected as it definitely contributed to my accidental and unintentional violation.

Synopsis

Light aircraft pilot reported descending below Minimum Vectoring Altitude on approach to 3GM, citing clearance confusion and weather conditions as contributing.

ACN: 2002040 *(24 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 2000

Environment

Weather Elements / Visibility : Rain
Weather Elements / Visibility.Visibility : 4
Light : Daylight
Ceiling.Single Value : 700

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Corporate
Make Model Name : Citation V/Ultra/Encore (C560)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Flight Phase : Final Approach
Route In Use : Vectors
Route In Use.SID : ZZZZZ 4

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 19000
Experience.Flight Crew.Last 90 Days : 75
Experience.Flight Crew.Type : 4000
ASRS Report Number.Accession Number : 2002040
Human Factors : Workload
Human Factors : Time Pressure

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot

Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

We were being vectored for the RNAV (GPS) Y Runway XX at ZZZ, the second in command was flying. ATC had us on a 160 degree heading at 2000 ft. MSL and less than a mile from the final fix when we were cleared to intercept the approach and that we were cleared for the approach. The FMS failed to sequence properly and the Autopilot did not capture the approach course or the glide path. I then took the aircraft from the second in command (SIC) and was maneuvering the aircraft back on the approach course and glide path. The aircraft descended below glide path, the Tower advised us that we were to the right of course and that we were low on the approach. We advised the Tower that we were correcting for the deviations when Tower advised that they had a low altitude alert. At that point we had just as we broken out of the overcast when the Tower told us to go around. We were then vectored for the ILS and landed uneventfully. The take away this: 1. We should not have accepted the approach from the vector that ATC had given us in that we were to close for the aircraft systems to properly sequence on a RNAV approach. 2. I should have discontinued the approach and gone around earlier, but I felt that we were sufficiently on course. Once I broke out I had the runway environment and was in a position to continue the approach but we were instructed to go around and I felt it best to comply. Bottom line: I allowed myself to be in a situation where the approach became de-stabilized very quickly and I should have immediately discontinued the approach and initiated a go around. Secondly, with the vector we were getting I should have advised ATC that I would not accept the approach and requested another more appropriate vector. This is not the first time at ZZZ that ZZZ [Approach] has vectored me in this this and they do not seem to understand that, especially on an RNAV approach, appropriate the sequencing of the equipment is imperative and these close intercepts can be problematic.

Synopsis

C560 Captain reported an unstable approach condition due to a late ATC approach clearance. ATC directed a go-around and provided vectors for a subsequent approach which resulted in a safe landing.

ACN: 2001644 *(25 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : EMB ERJ 170/175 ER/LR
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Nav In Use.Localizer/Glideslope/ILS : RNAV RNP
Flight Phase : Initial Approach
Route In Use : Direct
Airspace.Class C : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 2001644
Human Factors : Distraction
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Human Factors : Workload
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Flying into ZZZ we were cleared for the RNAV Runway XXL. I was the pilot flying (PF) and having been cleared for the approach I armed approach mode and set the final approach fix altitude. Passing ZZZZZ the (IAP) the approach mode was active with RNP .30 and the aircraft was tracking the approach properly. As we approached ZZZZZ1 there was a yellow TCAS target to the North of our position and we had heard a C172 that had been cleared for the visual straight in. The First Officer (FO) was searching for the traffic but was unable to spot them, since the target was to our left and we were in VMC conditions I started searching outside as well. I had the LOC in the preview in case of an engine failure during missed approach to help navigate per company page XX-XX-XX. After passing ZZZZZ1 while searching for traffic I noticed the aircraft had not started the turn towards ZZZZZ2 and I saw then that the GPS approach was no longer active and the FMS had sequenced to green needles. I discontinued the approach and deselected approach mode, selected heading mode and set a turn towards the field. Flight Path Angle (FPA) was active and I leveled the aircraft by setting a flight path angle of zero and leveled at 8000 ft. We were outside of the final approach segment and had previously briefed that if we lost GPS navigation we would discontinue the RNP by turning to the field and either go around or request a visual approach if we were outside of the FAF and stabilized with the field in sight. I asked the FO to let ATC know we were off the RNAV and request a visual approach. The FO requested a vector for a visual approach and ATC gave us a heading and cleared us for a visual approach. I asked the FO to resequence the FMS with a straight in approach which we used to back up the visual to Runway XXL. We debriefed the approach after we shut down but had not realized that we were below a minimum vectoring altitude as we had leveled off above our next expected fix while turning towards the field. As pilot flying I should have maintained my concentration on the aircraft state as opposed to being distracted by the traffic. I was overconfident in my ability to maintain my scan while searching for traffic. Automation management was also a factor as I did not expect the FMS to sequence to green needles with the RNP active. Even in VMC conditions with terrain and the field insight it would have been most prudent to execute the full discontinue procedure and begin a climb to the missed approach altitude.

Synopsis

EMB-170/175 Captain reported becoming distracted by reported traffic and losing command of the RNAV RNP approach sequence. The conditions were VMC. The crew then asked for and was given a visual approach by ATC. Later the pilots realized they had busted the Minimum Vector Altitude.

ACN: 2001233 *(26 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 900

Environment

Flight Conditions : VMC
Weather Elements / Visibility : Haze / Smoke
Light : Night

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Personal
Make Model Name : PA-28 Cherokee/Archer/Dakota/Pillan/Warrior
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Final Approach
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Private
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 686
Experience.Flight Crew.Last 90 Days : 22
Experience.Flight Crew.Type : 392
ASRS Report Number.Accession Number : 2001233
Human Factors : Fatigue
Human Factors : Situational Awareness
Human Factors : Distraction

Events

Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight

Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Became Reoriented

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

At night, following a long day and a three-hour flight from the north, the weather at ZZZ was reported as OVC015 so I got an IFR clearance for the RNAV Runway XX approach. I was landing straight-in Runway XX. In the final segment leading to the missed approach point, the weather turned out to be fairly clear. I could see the ground and surrounding area. But I could not positively identify the airport, in part because it is offset from the final approach course. Because it was clear, I wasn't focused on the approach minimums and let myself get too low on approach, 400 ft. over the hills, when I should have been higher. I eventually identified the airport and landed uneventfully. But I was 400 - 500 ft. for three miles leading to the airport. I should have stayed above the approach minimums until I had the airport in sight and not started descending just because it turned out to be clear. If I had done a visual/VFR approach, I would have started higher and approached normally, but starting out on the RNAV approach left me lower than usual over the hills and I continued to descend without leveling off. I should have paid more attention to my altimeter and not relied on visual cues, which were leading me to descend lower than I should. Contributing factors were nighttime, fatigue, familiarity with the airport leading to complacency, and the desire to start descending soon so that I did not overshoot the airport. I should have accepted the risk of overshooting the airport and just stayed above minimums until I had the airport positively identified. I should also have used my digital tools better, iPad, to realize I was too low and to help identify the airport. I should also have remembered that this approach specifically notes that there are obstacles, hills, in the visual segment, so I should be extra careful to stay above minimums at night. In the future I will be more conscious that I should only descend below approach minimums when I have positively identified the airport, not just the surrounding area, and overall at night I will be more mindful of my altitude when landing.

Synopsis

PA28 pilot reported descending below the approach minimums during final approach due to night conditions, fatigue, and complacency, as well as not wanting to overshoot the airport.

ACN: 2000459 *(27 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 30000

Environment

Flight Conditions : IMC
Light : Night

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B737 Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Flight Phase : Cruise
Route In Use : Vectors
Airspace.Class A : ZZZ

Component

Aircraft Component : Oil Indicating System
Aircraft Reference : X
Problem : Malfunctioning

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 759
Experience.Flight Crew.Last 90 Days : 157
Experience.Flight Crew.Type : 759
ASRS Report Number.Accession Number : 2000459
Human Factors : Distraction
Human Factors : Situational Awareness
Human Factors : Troubleshooting
Human Factors : Confusion

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 346
Experience.Flight Crew.Last 90 Days : 200
Experience.Flight Crew.Type : 346
ASRS Report Number.Accession Number : 2000487
Human Factors : Situational Awareness
Human Factors : Distraction
Human Factors : Confusion
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.General : Maintenance Action
Result.Flight Crew : Landed As Precaution
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : MEL
Contributing Factors / Situations : Procedure
Primary Problem : Aircraft

Narrative: 1

This was the first leg of our 4 day trip. Commuted from ZZZ3 to ZZZ2, took the train to ZZZ1 and waited about 4 hours before my trip with First Officer (FO), Person A. The first leg, ZZZ1-ZZZ was scheduled to leave at XA00. The aircraft did not get towed over to gate until almost XB30 though it had been ready since the previous night. We were all slightly tired and rushed already. During our briefing it was mentioned that this aircraft had an MEL for keeping a watch on the oil for number 2 engine as previous flight consumed quite a bit and Maintenance could not find a leak, and therefore released the aircraft on a MEL requiring a close look before each flight. We also had a new hire jump seat observation flight, and were helping to explain a lot to him along the way. During the taxi out the flight attendants (FAs) (thankfully) reported to us that all the pilot meals smelled awful and were spoiled. We decided to deal with that later. Then came the final weights issue. Despite calling everyone we possibly could someone eventually figured out how ramp did not properly close out the weights. This resulted in further delaying our flight. Finally, we were airborne and on our way to ZZZ. The cruise portion became rather busy. We were

explaining a lot of things to our observation rider and Dispatch was sending us a number of updated TAFs about the deteriorating ZZZ weather conditions. In all honesty, I do not think any of us looked very much at the oil quantity # 2 during that flight. I saw it once during early cruise and it looked ok all things considered. The unfortunate reality is I see these various maintenance watch items too much and become a little numb to giving them enough attention they deserve which you will soon discover they do. Moving on... just as we were done briefing our arrival, and RNAV Z approach for XXR into ZZZ, we made our PAs, and let the FAs know to clean up a little early for a possible bumpy descent. The observer was asking about some VNAV items which I began to address and that is when we noticed the oil problems. My First Officer noticed it. The number 2 engine was showing 0 QTY. I quickly shifted into pre urgent mindset mode. We observed all other engine related items and agreed everything else at the moment was actually fairly normal. I asked Person A to see if there was a QRH item for LOW OIL QTY. He was able to find the correct checklist but since we did not have an actual engine failure, high temp or pressure in the red area the checklist did NOT provide much more guidance. A moment later ATC gave us the initial descent and it was then we were able to see a very significant drop in oil pressure with reduced thrust. I told Person A I was going to advise ATC and asked if he agreed which he did. I gave the flight controls to him and advised ZZZ Center. We were able to get priority handling and vectors for the approach. Even though we were set up for the RNAV Z, we discussed that the ILS would be a better choice if we were to have the engine quit or were forced to shut it down. Lacking anything but excessive oil pressure fluctuations, I decided that keeping it running was the better of two choices.... the risk of it getting so hot and possibly catching on fire, but also, the risks of shutting it down and doing a single engine approach down to practically minimums. Ultimately we thought it would be best to run it until something worse presented itself. After putting the gear down, I told Person A that if we were to lose the engine this low we would continue the approach, select Flaps 15, secure the engine if needed, and fly an appropriate single engine flap speed rather than doing a go around southeast in IFR conditions. We both agreed that was what we were going to do. I know other pilots would choose a different strategy but this was my pilot in command (PIC) safest decision at the moment and was agreed on with Person A as well. In the end, the engine gave us power all the way to the ground. Once we were clear of runway with our times, we shut down the number 2 and taxied in uneventfully.

Narrative: 2

Just prior to the top of descent on arrival into ZZZ, the Captain pointed out something on his FMC to the jump seater (JS). The JS was a new hire completing an observation flight. I looked down and noticed the solid white box around the right engine oil quantity. It was already reading 0. I notified the Captain and he asked me to check the QRC then QRH for the appropriate procedure. I noted there after checking I noted there was no procedure, but found a paragraph in the Flight Manual (FM) stating there was no non-normal checklist. We monitored the oil pressure and temperature as we continued our descent. We noted that the right oil pressure had begun to fluctuation. We continued to monitor until we saw the oil pressure flashed amber. At that point we advised ATC and got vectors to the ILS in ZZZ. During the vectors we reviewed the procedure for a red oil pressure light and discussed what we would do if we had to secure the engine. The controls were transferred to me while the Captain managed the situation. We made an uneventful landing at ZZZ and taxied to the gate on the left engine. We left the engine running during the descent to landing as it was providing thrust and not in the red for oil pressure yet. After landing, the Captain informed me that the oil pressure had intermittently fluctuated into the amber and red a couple times on final but elected to not distract me while landing was imminent.

Synopsis

Flight crew reported erratic oil pressure and quantity indications on number 2 engine during descent which had previously been reported and deferred per MEL. The flight crew continued to the destination after coordinating with ATC for an expedited arrival.

ACN: 2000236 *(28 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : U90.TRACON
State Reference : AZ
Altitude.MSL.Single Value : 4400

Environment

Flight Conditions : VMC
Light : Night

Aircraft

Reference : X
ATC / Advisory.TRACON : U90
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class E : U90

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 2000236
Human Factors : Situational Awareness

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Software and Automation
Primary Problem : Software and Automation

Narrative: 1

On approach to Runway 29R TUS RNAV Z between ATOGE and SAXIE ATC issued an altitude alert, we were at the final approach altitude of 4400 ft. about to intercept the GP to the Runway. We told ATC that we at 4400 ft. which is the correct altitude for the approach. IT was VMC conditions. We intercepted the PAPI glide path and continued to the runway normally. The aircraft was fully configured and on speed. It was confusing that Tower issued an altitude alert. We double check that we had the correct approach loaded, doubled check our altimeter, everything was correct. We never at any point descended below 4400 ft. before reaching the final approach fix. Possibly Tower thought we were on a visual approach? We were cleared the RNAV Z 29R approach from DINGO and followed the approach profile and altitudes per standard practices and company safety alert page for night landing which requires us to follow the profile and course of an IAP. Discussing with my First Officer (FO) during a debrief, best we could recall is that Tower said the MVA was 5000 ft. for our sector. We were on an instrument approach following the guidance in the profile to 4400 ft. which is the correct altitude on the approach place. we reviewed and de briefed every possibly cause. The best we could figure is that ATC got an alert on our flight path and called a low altitude alert. We never received a GPWS warning or alert. Aircraft was stable on profile and on speed, fully configured for normal safe landing.

Synopsis

Air carrier flight crew reported Low Altitude Alert from ATC on approach.

ACN: 1999866 *(29 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 350
Relative Position.Distance.Nautical Miles : 5

Environment

Flight Conditions : Mixed
Light : Daylight
Ceiling.Single Value : 800

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Personal
Make Model Name : Skylane 182/RG Turbo Skylane/RG
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Final Approach

Component

Aircraft Component : Navigational Equipment and Processing
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Private
Experience.Flight Crew.Total : 1200
Experience.Flight Crew.Last 90 Days : 5
Experience.Flight Crew.Type : 500
ASRS Report Number.Accession Number : 1999866
Human Factors : Human-Machine Interface

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

I was making an approach to ZZZ on RNAV XX when I realized the glide slope wasn't operating correctly, but dancing up and down. I incorrectly continued the approach using LPV minimums rather than LNAV minimums. The Tower called out a low altitude warning of 800 ft. By that time I was VMC, so I continued on course then used the VASI for vertical guidance. I later did the same thing making an approach to ZZZ1 using RNAV [Runway] Y, then landed downwind as the circling minimum was 1,200 ft. I believe an attitude of completing the mission overtook common sense and knowledge to use the more conservative (and legal) LNAV minimum descent altitudes. Knowledge of the terrain, having flown in the area for 30 years, contributed to my disregard for the importance of following the regulations.

Synopsis

C182 pilot reported they used the wrong approach minimums and went below minimum altitude on approach in IMC. Pilot continued to landing.

ACN: 1999417 *(30 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 8600

Environment

Flight Conditions : VMC
Light : Night

Aircraft

Reference : X
Aircraft Operator : Fractional
Make Model Name : Citation Excel (C560XL)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Ferry / Re-Positioning
Flight Phase : Initial Approach
Route In Use : Vectors

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1999417
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument

ASRS Report Number.Accession Number : 1999420
Human Factors : Situational Awareness
Human Factors : Confusion
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Overcame Equipment Problem
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

Descending into ZZZ 9,000 ft. was assigned. Before reaching 9,000 ft. we requested ZZZZZ on the VISUAL Runway XX backed up with RNAV X Runway XX. There was discussion with ATC what type of approach we were requesting. We made it clear we wanted the visual starting at ZZZZZ. We were given direct ZZZZZ for the visual. We dialed in 8,600 ft. to cross ZZZZZ. After flying at 8,600 ft. we were told by ATC he had a low altitude alert climb to 9,000 ft. I initiated a climb. Shortly thereafter we saw the field. Notified ATC and cancelled IFR. Flight landed without incident. As a crew we were focused on a mountain airport and the correct procedures. We reviewed feasibility and all the Company pages enroute. The arrival and approach briefs were thorough. We were ready for the approach in all respects. Our error came in both of us hearing ZZZZZ and VISUAL and believing we were cleared. We thought we were. That is why we agreed 8,600 ft. SET 8,600 ft. SEEN was correct and we went down. We were wanting to be at approach plate altitudes early as well as configured early. I think that is why our collective mindset was hearing cleared for the visual whereas ATC has the tapes that prove we were mistaken. I haven't made this particular mistake since flying cargo a million years ago. I will be more cognizant of setting the altitude alert in the future.

Narrative: 2

Upon descent into ZZZ we were cleared to 9,000 ft. and direct to ZZZ1, around 11,000 ft. we requested direct to ZZZZZ for the RNAV X XX. The controller questioned if we were still wanting the visual approach explaining that he'd have to reassign us higher which is where the first point of confusion began. We confirmed that we wanted the visual approach but

fly the RNAV per company recommendation, terrain avoidance, as well as to gain a better visual sight of the runway as the ZZZ track and our altitude wasn't giving us the best chance to see the runway. Upon getting clearance to ZZZZZ we proceeded down to 8,600 ft. in confusion thinking that we had a visual approach clearance and wanting to get lower and be configure earlier with the steeper approach, high altitude, and tail wind. Upon leveling at 8,600 ft. we gained visual of Runway XX, at the same moment ZZZ Center informed us of the low altitude alert as their bottom IFR altitude was 9,000 ft. We immediately cancelled IFR and proceeded to commence the Company XX visual. The entire time we were in visual conditions and ensured the we were not in any threat from terrain or traffic.

Synopsis

CE-560XLS flight crew reported descending below minimum altitude on approach. The flight crew followed ATC instructions and climbed back above minimum altitude and continued the approach to land uneventfully.

ACN: 1997277 *(31 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 6000

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Turbulence
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Personal
Make Model Name : SR22
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace.Class C : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Private
Experience.Flight Crew.Total : 594
Experience.Flight Crew.Last 90 Days : 28
Experience.Flight Crew.Type : 293
ASRS Report Number.Accession Number : 1997277
Human Factors : Physiological - Other

Events

Anomaly.Flight Deck / Cabin / Aircraft Event : Illness / Injury
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Automation : Air Traffic Control

Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Weather
Primary Problem : Human Factors

Narrative: 1

On Date I flew an IFR flight plan from ZZZ to ZZZ1. The preflight weather showed that it should be good to travel to ZZZ1, yet IFR, in the time frame I was planning, but I did have an alternate of ZZZ2 just in case. In route, south of ZZZ3 I noted on ADS-B that there was convective weather ahead around ZZZ3 and asked that I be deviated to the west to avoid (as it was moving East) and was told to wait until the next controller to make the request. I did and the next controller did help and allow me a west deviation and he thought that it was enough, but it was still into very convective conditions that in turn made me nauseous. Within 2 to 3 minutes I was feeling better and decided to continue the flight to ZZZ1. In hindsight, with the drop down in health, even for a short period, I should have asked ATC to allow me to deviate and fly east to the nearest reasonable airport with visual approach weather in order to land and know that I was recovered and was fit for flight, or wait for such. I was entering ZZZ1 airspace and the air was fairly convective and I was starting to feel nauseous again while flying the ILS to Runway XX approach. My wife was the only passenger in the plane and helped me with a jar to retch into. She mentioned that she did not know how a pilot can keep hands stable enough to program the avionics in turbulence. At a certain point on the approach while retching and hitting a spot of severe turbulence at the same time, my hand and arm unfortunately hit the Auto Pilot off button and pushed the yoke. I was in IMC. That put the aircraft in a bad attitude of turn and dive. It took me a bit (in my nauseous state) to level the wings and recover from losing altitude. ZZZ1 Approach asked if I had an autopilot issue, which I said I did (due to accidentally turning it off). ZZZ1 had me climb and vectored me to a second approach. I flew the vectors on autopilot at altitudes given but, and I think due to continued nausea and therefore not thinking 100%, I failed to "activate the approach" when I neared joining the localizer from vectors. When I noticed I was going through the localizer vector, Approach noticed as well quickly and initiated a third approach, asking me if I wanted a different one. I stated that I would take the RNAV XX approach, thinking that in my state flying the waypoints might be less taxing. That approach was flown without glitch. When I landed I was asked to call Tower. I did. I communicated what I have communicated here. They were very gracious and also sent a policeman/EMT to the airplane to make sure I was medically OK. I also believe my body was weak and thereby exacerbated the nausea as post the flight I seemed to fight off a bug in the two days following. I did feel that my IMSAFE was good before flight as I had no concerns with any of those issues/statements. I do now have nausea bands (pressure points) to wear when flying IFR just as a precaution. I wear them deep sea fishing with no issues.

Synopsis

SR-22 pilot reported momentary loss of aircraft control in IMC conditions after inadvertently turning off the autopilot. The pilot was dealing with nausea at the time of the event.

ACN: 1996431 *(32 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : SMO.Airport
State Reference : CA
Altitude.MSL.Single Value : 5000

Environment

Weather Elements / Visibility.Other

Aircraft

Reference : X
ATC / Advisory.TRACON : SCT
Aircraft Operator : Personal
Make Model Name : Small Transport, Low Wing, 2 Recip Eng
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Initial Approach
Route In Use : Direct
Route In Use : Vectors
Airspace.Class D : ZZZ

Component : 1

Aircraft Component : Autopilot
Aircraft Reference : X
Problem : Malfunctioning

Component : 2

Aircraft Component : GPS & Other Satellite Navigation
Aircraft Reference : X
Problem : Malfunctioning

Component : 3

Aircraft Component : Navigational Equipment and Processing
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot

Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 8000
Experience.Flight Crew.Last 90 Days : 25
Experience.Flight Crew.Type : 1500
ASRS Report Number.Accession Number : 1996431
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Distraction
Human Factors : Workload
Human Factors : Human-Machine Interface
Human Factors : Confusion
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Overrode Automation
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Human Factors
Primary Problem : Ambiguous

Narrative: 1

I descended 300 ft. below my assigned altitude. I was cleared to DARTS intersection, which is also the IF for the RNAV 21 approach into SMO and told to expect the RNAV 21 approach into SMO. I changed the next fix in my GNS 530 from DARTS in Enroute Mode to DARTS in the Approach Mode. A minute or so later, I noticed the CDI swing to the final approach course, which [was] about 120 degrees off the course I was on, and the aircraft, which was on autopilot, initiated a turn to the right. I had not yet reached DARTS, and still did not know why the airplane made a turn towards the next fix on the approach before it reached the fix I had input as Direct To. In any event, I decoupled the autopilot, rolled the airplane level, and was beginning to try to figure out where I was and what the box was doing, when ATC gave me a vector, a crossing altitude at and for DARTS - which my airplane had just turned away from for reasons unknown, and cleared me for the approach. I read it back, but was not sure where I was and was trying to fly the airplane and work the box, when I noticed I had descended 300 ft. below the assigned altitude. I immediately climbed back up, and at the same time ATC cleared me to a lower altitude, and then admonished me for having descended below the initial assigned altitude. I

acknowledged his admonition, but was still distracted trying to figure out how to get the box to reflect the approach and get the airplane on the approach. I finally figured it out and flew the rest of the approach uneventfully. Upon landing, after exiting the runway, Tower asked me if I had experienced any GPS anomalies, stating that they had had numerous complaints over the past several days about GPS issues on the approach. I replied in the affirmative. A contributing factor is how ATC works us on that approach. The crossing altitude at DARTS is supposed to be 4,200 ft. but they hold us higher, and the crossing altitude they give is usually much higher than that, as it was today, which sets us up for a "slam dunk" destabilized approach. Within seconds we get descents, approach clearance, and vectors, which result in a high work load at a critical time. It sets us up for the classic destabilized approach. Long story short, I am not sure what happened. I already have scheduled a sim session with a CFII to work on that approach to see if there is anything I did to cause the CDI swing, but I've been flying behind this box for a good 15 years, just had an IPC (Instrument Proficiency Check), and don't think I did anything incorrectly.

Synopsis

Small transport pilot reported an altitude deviation occurred while trying to reprogram the aircraft's autopilot that may have been potentially caused by a GPS anomaly. The aircraft's autopilot, which was set up for an RNAV approach, initiated a turn off course. As the pilot disconnected the autopilot and tried to determine the cause of the issue, the aircraft descended below the assigned altitude and the pilot was admonished by ATC. After landing, ATC stated that there had been numerous cases of GPS issues on the approach as of recent and asked if the pilot may have also experienced a GPS anomaly.

ACN: 1996278 *(33 of 50)*

Time / Day

Date : 202305
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : SUN.Airport
State Reference : ID
Altitude.MSL.Single Value : 12000

Environment

Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : S56
Aircraft Operator : Fractional
Make Model Name : Light Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Flight Phase : Final Approach
Airspace.Class D : SUN

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1996278
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Executed Go Around / Missed Approach

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Weather
Primary Problem : Human Factors

Narrative: 1

Due to heavy winds, pilots called go around. Radar services had been terminated, and visual approach and departure instructions were provided. Pilots continued climb and turned for visual departure from area while following missed approach of RNAV Y 31 approach and while communicating with tower. Upon change of frequency, departure ATC asked instructions given, and instructed climb to higher altitude, quoting terrain awareness. Pilots complied and continued in climb to 12,000 ft. Pilots were on heading 165 degrees while turning toward PRESN to await further instructions. ATC then communicated "proceed direct PRESN". A normal diversion as planned for alternate followed these events to ZZZ1. ATC notified crew to climb to higher altitude due to MEA in area. Heavy winds, gusts, and tail wind causing go around. Pilots complied and continued climb to 12,000 ft. and expedited through 10,900 ft. Better go around instructions from tower during visual.

Synopsis

Flight crew reported Low Altitude Alert from ATC following go-around due to high winds on approach to SUN airport.

ACN: 1995287 *(34 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : P50.TRACON
State Reference : AZ
Altitude.MSL.Single Value : 4000

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : P50
Aircraft Operator : Air Carrier
Make Model Name : Airbus Industrie Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class B : PHX

Aircraft : 2

Reference : Y
ATC / Advisory.TRACON : P50
Aircraft Operator : Air Carrier
Make Model Name : Boeing Company Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class B : PHX

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1995287
Human Factors : Situational Awareness
Analyst Callback : Attempted

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1995290

Events

Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : Wake Vortex Encounter
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Became Reoriented

Assessments

Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

We descended on the Eagle 6 RNAV arrival for Runway 26. The winds were from 330 @17 gust 28. We were following Aircraft Y and assigned 170 speed till the marker. We captured the LOC and were descending to capture the G/S from above. Descending through 4,000 ft, we encountered moderate turbulence from Aircraft Y and the winds. Ground speed mini was high and increasing. The PF (Pilot Flying) attempted to change the altitude preselect to a higher altitude, to prevent the aircraft from capturing the preselected altitude of 3,000 ft. Then mistakenly pulled altitude preselect knob (open climb) while in turbulence. PF disconnected the AP. Auto thrust was disconnected and thrust levers adjusted to idle. The airspeed was over VFE by approximately 3 kt. for 3 seconds. The aircraft was stable, on slope and speed, by 500 AGL. Perhaps different angle of intercept to localizer.

Narrative: 2

[Report narrative contained no additional information.]

Synopsis

Airbus flight crew reported encountering wake turbulence on approach to PHX in trail of a Boeing commercial jet that contributed to flight stability issues and a momentary flap overspeed.

ACN: 1994650 *(35 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : OMA.Airport
State Reference : NE
Altitude.MSL.Single Value : 2400

Aircraft

Reference : X
ATC / Advisory.TRACON : R90
Aircraft Operator : Fractional
Make Model Name : Medium Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Flight Phase : Descent
Airspace.Class C : R90

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1994650

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
ASRS Report Number.Accession Number : 1994651

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

Cleared direct airport then cleared visual approach Runway 14L. We had RNAV 14L Loaded as a backup to the visual approach. On cleared visual approach began descent from 5,000 ft. FAF was 2,400 ft. we descended to 2,400 ft. Passing 3,000 ft. ATC Tower said we were below vectoring altitude and to remain at 3,000 ft. We climbed back up to 3,000 ft. and continued with visual approach. We began our descent approx 14 miles from runway 5,000 ft. to 2,400 ft. with runway in sight. Confirm with ATC min vector altitude.

Narrative: 2

While on the arrival to OMA. Flight was at 5,000 ft. descending when approach cleared flight for the visual 14L at OMA. We were direct to FAF descending to 2,400 ft. since we backed up approach with RNAV 14L at OMA. When descending to 2,400 ft., approach called and said Aircraft X was below minimum vectoring at 3,000ft. Flight climbed to 3,000ft. and continued with approach with no other issues.

Synopsis

Flight crew reported Low Altitude Alert from ATC during approach procedure to OMA airport.

ACN: 1994282 *(36 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : LAS.Tower
State Reference : NV
Altitude.AGL.Single Value : 50

Environment

Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.Tower : LAS
Aircraft Operator : Air Carrier
Make Model Name : Boeing Company Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class B : LAS

Aircraft : 2

Reference : Y
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Final Approach

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 97
Experience.Flight Crew.Type : 7500
ASRS Report Number.Accession Number : 1994282
Analyst Callback : Attempted

Person : 2

Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Experience.Flight Crew.Last 90 Days : 224
Experience.Flight Crew.Type : 2958
ASRS Report Number.Accession Number : 1994243

Events

Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : Wake Vortex Encounter
Detector.Automation : Aircraft Other Automation
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

I was Captain and Pilot Flying on Aircraft X to LAS. We were following a Company aircraft on final to Runway 1R in LAS with approximately 3 miles separation. Company aircraft was following a business jet with approximately the same separation. As we descended using the RNAV approach, we began to experience light continuous chop, I assumed that it was a combination of wind, wake turbulence and heating off the ground. The approach was uneventful until the business jet missed [the] exit that was directed by Tower and rolled long, causing the rest of us to tighten up separation. The Company aircraft in front of us landed and cleared the runway as we approached 1500 ft or so. I had transitioned to visual and was using the PAPI as guidance, the aircraft was experiencing up drafts as well as gusts and perhaps wake turbulence. However, it was easily controlled with normal flight control inputs. Over the runway and inside of 100 ft there was the aural warning of "Don't Sink", everything appeared normal, and I continued. We didn't not go around nor did either one of us verbally verify the caution. The touchdown and roll out were normal and uneventful.

Narrative: 2

LAS changed runway on arrival due to gusty winds creating out of limit tailwind for previous runway. On final to Runway 1R, winds were gusty approximately 050 10 G 20. Approaching the runway, gusts and turbulence were pushing the aircraft above the PAPI glide slope. Captain (PF) was making corrections to resume glide path. Due to turbulence and the downward vector of the aircraft to resume glide path, the sink rate momentarily touched 1200 down and the GPWS "sink rate" caution sounded; this was approximately 100 ft AGL PF was already applying a correction. Neither Pilot called for a go-around (possibly due to startle factor) and the fact that a correction was already in progress. Aircraft touched down in the touchdown zone normally and turn off was made.

Synopsis

Air carrier Captain reported encountering gusty winds and wake turbulence from preceding aircraft on approach to LAS, resulting in a low altitude GPWS "Don't Sink" annunciation. Pilot continued to a normal landing.

ACN: 1994114 *(37 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : DWH.Tower
State Reference : TX
Altitude.MSL.Single Value : 1000

Environment

Weather Elements / Visibility : Turbulence
Weather Elements / Visibility.Visibility : 5
Light : Daylight
Ceiling.Single Value : 1000

Aircraft

Reference : X
ATC / Advisory.Tower : DWH
Aircraft Operator : Corporate
Make Model Name : Light Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Final Approach

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 25000
Experience.Flight Crew.Last 90 Days : 30
Experience.Flight Crew.Type : 350
ASRS Report Number.Accession Number : 1994114
Human Factors : Situational Awareness
Human Factors : Distraction

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Pilot Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 24000
Experience.Flight Crew.Last 90 Days : 30
Experience.Flight Crew.Type : 35
ASRS Report Number.Accession Number : 1993375
Human Factors : Situational Awareness
Human Factors : Distraction

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

I was PIC (Pilot In Command) flying to DWH. We were vectored to IAF, TUFFS and cleared for the RNAV GPS approach to Runway 17R at DWH. Weather was IFR at the field and was reported as 900 ft. broken, visibility 5 miles, and gusty cross winds. Approach progress was going smoothly with the autopilot engaged and SIC (Second In Command) flying the airplane. We were configuring and slowing to cross the final approach fix at Vref+10 kts and 1,800 ft. according to the approach plate. We crossed OILER intersection at 2,000 ft. and descended to cross the FAF CUBIR at 1,800 ft. After 1,800 ft. was captured by autopilot, I set in 1,000 ft. in the altitude window for our next crossing restriction. At some point after OILER, the autopilot disconnected on its own, either the control yoke was bumped hard enough to cause a disconnect, which occasionally happens caused by flight crew, or I gripped the control yoke too hard when using the Mic transmit button on the yoke and it disconnected, or autopilot sensed a problem and disconnected itself, I don't know. Aircraft starting descending to 1,000 ft. about 3 miles prior to FAF. I think at the same time, ATC was telling me to contact Tower. I never switched to Tower because of the situation in the cockpit. I realized what had happened to the autopilot, and SIC was trying to regain control of aircraft. The terrain warning went off and about at the same time ATC gave us a low altitude alert, asked us to check our altitude immediately, and climb to 2000 ft. We followed ATC instructions. We were in VFR conditions at that point and I could see the airport. I told ATC we had the airport and could continue visually. ATC said the field was still reporting IFR conditions and he could not give us a visual approach. ATC then vectored us for another RNAV Runway 17R approach that terminated with a full stop landing. No issues with autopilot during second approach. In hindsight, I should have been more proactive with monitoring the approach progress since I was the Monitoring Pilot and called for a go around immediately after the terrain warning, but everything happened so

quickly and before I could do anything, I was responding to ATC request for an identify on the transponder and complying with a climb to 2,000 ft. In conclusion, I failed to properly monitor aircraft situation and SIC flying. I have a toolbox full of resources from 30 years of CFIT training and flying with [air carriers] and should not have allowed the aircraft and SIC to get into that situation. I'm not pointing fingers except at myself. I described the events of our flight as best as I could recall. ATC did a great job with responding to our terrain alert situation.

Narrative: 2

Me and my Captain were flying a trip to David Wayne Hooks Airport. The whole trip was mostly IMC with scattered thunderstorms throughout the whole area. We were cleared for the RNAV Runway 17R approach at DWH. We flew over the IAF of TUFFS and then headed for the IF(OILER) to cross at 2,000 ft. and 210 kts max. Due to the weather, I started early to configure and prior to OILER, I was at flaps 7 and making the turn at 180 kts. In making the turn toward the FAF (CUBIR), I called for flaps 20 and was slowing to 150 kts and called for gear down. We started descending from 2,000 ft. to cross CUBIR at 1,800 ft. when the autopilot disconnected and my attention was diverted to what was happening. With the auto pilot malfunctioning, the Captain was troubleshooting the problem. I made the mistake of doing what I knew I shouldn't be doing by letting my attention be diverted from strictly flying the airplane. I descended below 1,800 ft. to 1,000 ft. and was stabilized with the runway in sight when ATC directed us to go around and climb to 2,000 ft. which we did. We received vectors and came back and executed the approach without any incidents. In conclusion, after [many] years of flying for [an air carrier] when flying the airplane, you must always fly the airplane and never allow yourself to be distracted when things malfunction. This is another lesson learned in my career not to be repeated.

Synopsis

Corporate Jet Flight Crew reported receiving a GPWS terrain alert and a low altitude warning from ATC on approach to DWH airport following unintended autopilot disconnect.

ACN: 1993952 *(38 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : LTBB.ARTCC
State Reference : FO

Environment

Flight Conditions : IMC

Aircraft

Reference : X
ATC / Advisory.Center : ZZZZ
Aircraft Operator : Air Carrier
Make Model Name : B767 Undifferentiated or Other Model
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : GPS
Nav In Use : FMS Or FMC
Nav In Use.Localizer/Glideslope/ILS : ILS
Flight Phase : Initial Approach
Route In Use.STAR : RNAV

Component

Aircraft Component : GPS & Other Satellite Navigation
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1993952
Human Factors : Workload
Human Factors : Situational Awareness

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
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Primary Problem : Ambiguous

Narrative: 1

GPS jamming during RNAV arrival. Jamming began while aircraft in a turn and had to wait our turn on the radio behind Company Airline who was experiencing the same issue. There is a remote possibility that an off course deviation occurred on the RNAV STAR due to the time it took to receive vectors. Flight terminated with ATC vectors to an ILS approach. Did not complete an AML entry per the FOM due to mistaking the "X" to be in the X column rather than Y column. GPS jamming from bad actors.

Synopsis

Air carrier Captain reported GPS jamming occurred while on an RNAV arrival into LTFM, Istanbul, Turkey. ATC gave the carrier vectors to a successful ILS landing.

ACN: 1993646 *(39 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 9000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A321
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Final Approach
Route In Use : Vectors

Component : 1

Aircraft Component : Cockpit Window
Aircraft Reference : X
Problem : Malfunctioning

Component : 2

Aircraft Component : Pitot-Static System
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1993646
Human Factors : Troubleshooting
Human Factors : Situational Awareness
Human Factors : Confusion

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Deviation - Speed : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Ground Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Maintenance Action
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Landed As Precaution
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Weather
Primary Problem : Aircraft

Narrative: 1

First Officer (FO) flying arrival and approach RNAVXXR. Storms had passed thru earlier and had left behind clouds, a little wind, and icing conditions on arrival. Wing & engine anti-ice were on. Flying through a cloud layer we both noticed a substance on the front windows. I thought at first it was the clouds and the low visibility associated with it. But the FO stated "what's on the windows?" We were at approximately 10,000 ft. MSL at this time and stabilized on the RNAV approach path. We were cleared for the approach and the FO could not get the aircraft to slow down. He attempted to go to vertical speed zero and we set the speed at 180 kts. but twice the power advanced for what appeared to be no reason. I suggested we put the gear down - we were at approximately 230-240 kts. Putting the gear down did not help. We now were pretty high for the approach so I asked Tower for an S-turn. He gave us a climb to 9,000 ft. - the controller never stated the word "go-around" but in essence that was what he was giving us. The FO advanced the power to TOGA and stated such and I stated "TOGA set" then he went to climb and since we never had the flaps out we went straight to the gear and brought them up. Since the Autopilot was off at the time, the FO started the go-around manually and as I was talking with ATC and slightly heads down reloading the approach the FO stated at least once that he could not get the Autopilot back on. I heard him say a few minutes later that he got it back on. We requested and received the ILS XXL. Came around and flew the aircraft normally to a normal landing. The entire time this film was caked on the front windows. The side windows were clear. We could make out the runway but it was blurry. Landed normally and as I taxied off the runway I realized that the windows were slightly obscuring my view to taxi. This was in daylight hours - had it been at night I am not sure I could have taxied to the gate. Upon arriving at the gate and shutting the engines down, I opened my window and reached my hand out to touch whatever it was on the window. I had tried airborne once to use the wipers but they did not help. The best way I can describe the substance is a white powdery substance that would not come off on my hands but was caked onto the window. I felt the nose of the aircraft and I could feel it on there as well. The aircraft was staying the night in ZZZ so the FO was required to walk-around. I waited until he walked around and he came back and said he did not see anything

unusual. I called Maintenance and explained to them what we had - I told him I wasn't even sure how to write this up. He agreed with me that this was a highly unusual thing. The next morning I noticed the aircraft had been very delayed leaving ZZZ and we were scheduled to leave at the gate next to the aircraft. I also noticed in the on-line maintenance log that they had stated that "due to a sand storm they found the AOA was not moving freely". Upon arriving at the airport the agent told me that they flew in 6 mechanics on a private jet for that aircraft. When I was doing the walk-around I noticed them and went over and talked with them in detail to give them more of the story. They said the windows had been cleaned by the time they got there but there was still some residue and some on the aircraft itself. They also did not know what it was but were performing a complete flush of the system. The aircraft is back in service now. I am not sure what that substance was nor if it affected the aircraft in a way that made it impossible for us to slow it down. Never seen anything like it. Maybe the act of the go-around put everything "back in order"??? Just thought some sort of report other than writing it up in the logbook and talking in detail with maintenance should be sent. I would love to find out what the substance was and where it came from! I have nothing to add here from what I already wrote above.

Synopsis

A321 Captain reported engine thrust malfunctions caused an unstable approach. The flight crew elected to go-around and troubleshoot the issues. Both windscreens were observed to be clouded with an unknown material. Post flight revealed very fine sand was on the wind screens and the "AOA was not moving freely."

ACN: 1993416 *(40 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 2800

Environment

Flight Conditions : Marginal

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Personal
Make Model Name : Single Engine Turboprop Undifferentiated
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Final Approach
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location Of Person.Facility : ZZZ.ARTCC
Reporter Organization : Government
Function.Air Traffic Control : Enroute
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 4
ASRS Report Number.Accession Number : 1993416

Events

Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Air Traffic Control : Provided Assistance
Result.Air Traffic Control : Issued Advisory / Alert
Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Chart Or Publication

Narrative: 1

Aircraft X had weather and I read them the NOTAMs at ZZZ. Aircraft X requested the RNAV XX. I cleared the aircraft direct ZZZZZ. When they were in my airspace I instructed them to "cross ZZZZZ at or above 5,000 ft., cleared RNAV XX approach ZZZ." The aircraft proceeded to cross above 5,000 ft. then went direct ZZZZZ1, bypassing ZZZZZ2. Aircraft X then descended down to 2,800 ft. while not on a published segment of the approach. I noticed the aircraft was below 4,000 ft., the altitude between ZZZZZ and ZZZZZ2, and asked if they were established on the transition. Aircraft X said they were direct ZZZZZ1. I issued a low altitude alert and had them climb to 4,000 ft. Then I stated the MIA was 4,000 ft. and climbed them to 5,000 ft. because they were approaching a higher MIA. The approach was then cancelled and the aircraft was vectored back around for another approach. The aircraft was issued the possible pilot deviation statement.

Synopsis

Center Controller reported an aircraft conducting an RNAV approach flew off course and began to descend to an altitude while not on a published segment of the approach. The controller issued a low altitude alert and then climbed the aircraft to be above the minimum IFR altitude.

ACN: 1993285 *(41 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B737-800
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class B : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1993285
Human Factors : Communication Breakdown
Human Factors : Distraction
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Confusion
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1991374
Human Factors : Workload
Human Factors : Time Pressure
Human Factors : Situational Awareness
Human Factors : Distraction
Human Factors : Confusion
Human Factors : Communication Breakdown
Human Factors : Human-Machine Interface
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

RJ in front of us slowed early and we had 40 kts. of overtake. We had to hurry and get fully configured and workload was high. After we passed ZZZZZ we forgot to put the MAP altitude in the altitude window due to the high workload. When we hit ZZZZZ1 the Flight Director (FD) directed a level off. We continued the approach visually and recognized we were getting low and leveled off. Due to the conflicting info from the FD, I switched to mental math to calculate the appropriate AGL for my descent while the Captain was trying to troubleshoot the FD so I could have accurate VNAV. At that point ZZZ Tower issued the low altitude alert and he told them correcting. I immediately leveled off as my VSI had increased a little more than the rule of thumb of GSx5 allowed. When we could see the PAPI we were slightly high and corrected and made an uneventful landing. Being more aware of the FAF and explicitly briefing it and directing the pilot monitoring (PM) to set the MAP altitude would have been key. Earlier configuration while keeping speed up would have allowed better workload management in terms of bleeding overtake. Continuing, in my opinion, was the right call as the workload at that moment to execute a go around would have caused confusion. Better configuration management. In that heavy airspace, configuring earlier than normal and keeping the thrust up to maintain speed is acceptable instead of trying to fly cleaner and faster longer. Better energy management. This is mainly an internal pilot flying thing for me to work on as someone who is still relatively new to the jet.

Narrative: 2

We set up for the ZZZZZ.4 arrival and the RNAV (GPS) X Runway XX approach. The First Officer (FO) (flying pilot (FP) and myself (pilot monitoring (PM) briefed the arrival and approach. The ZZZZZ.4 arrival was uneventful and eventually we were cleared for the

RNAV GPS X Runway XX approach. We planned to have the aircraft fully configured by ZZZZZ1 which we were doing. As we were approaching ZZZZZ getting configured ZZZ Tower informed us the regional jet (RJ) in front of us had slowed down and we had a 40 kt. overtake on the RJ. We quickly finished configuring and slowing the aircraft approaching ZZZZZ1. Because we were distracted by the RJ slowing so early and us having to quickly configure and slow our aircraft we forgot to set in the missed approach (MAP) altitude passing ZZZZZ and before arriving at the MAP altitude. At ZZZZZ2 the Flight Director (FD) commanded a level off which surprised us initially. The FO/FP asked what was happening and I told him that we forgot to set the MAP altitude. I told him to continue flying the lateral portion of the approach visually and I would give him rates of descent to fly. I told him to initially fly a 750 (ft. per minute) FPM rate of descent (ROD). He started a ROD greater than that causing us to get low in altitude as we were making the turn to line up with the extended runway centerline after ZZZZZ2. I could see this developing from my previous experience flying this approach and told him to level off which he finally did. Approximately in the area of the ZZZZZ3 waypoint ZZZ Tower issued us a low altitude alert and to check our altitude. I replied to them that we were "correcting." As we came around on the turn to final approach we were slightly high and I told the FO to start a ROD of about 750 FPM and fly the PAPI to the runway which he did to an uneventful touch down and landing. Not emphasizing in the briefing the high event fate/occurrences on this approach caused by crews forgetting to set the MAP altitude after passing ZZZZZ2. I read it but failed to prominently mention it to the FO/FP. Not monitoring the spacing with the aircraft in front of us by using the TCAS display. Even though this is not necessarily legal to do or use it would have been a useful tool for our situational awareness (SA). Instead of not going around (GA) relying on my previous lengthy experience flying this approach to talk the FO through it rather than going around. My experience would help in a situation like this but the proper thing to have done in this situation would have been to GA when ZZZ Tower gave us the low altitude alert. Not giving a very thorough briefing about the MAP and what events could trigger us to perform the MAP. Even though I had read the note on the company pages about the high rate of events, that described our event perfectly, neither of us mentioned nor emphasized that possible error. That should have been a high priority part of our briefing. In hind sight we should have performed a go around (GA) with the low altitude alert. I was concerned about the very high workload for a GA from that approach and from my previous 30 years of experience performing approaches into Runway XX I felt that it was safer to continue the approach while talking the FO through the final turn to final approach. A better approach would have been to very thoroughly brief the MAP and what events would trigger us to perform a MAP.

Synopsis

Flight Crew reported the Flight Director commanded them to level off while conducting an RNAV approach due to failure to set the missed approach altitude. The crew continued the approach visually and became unstable resulting in a low altitude alert from the tower.

ACN: 1993174 *(42 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 700

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A320
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Nav In Use.Localizer/Glideslope/ILS : RNAV
Flight Phase : Final Approach
Airspace.Class C : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 85
Experience.Flight Crew.Type : 694
ASRS Report Number.Accession Number : 1993174
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 34.87
Experience.Flight Crew.Type : 34.87
ASRS Report Number.Accession Number : 1993207
Human Factors : Situational Awareness

Events

Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Became Reoriented

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Weather
Primary Problem : Ambiguous

Narrative: 1

ZZZ to ZZZ1. Descent brief noted the terrain in vicinity of the airport and points near final for the RNAV (GPS) XX. Winds were 280 at 13G20. First Officer (FO) was flying the approach. Vectors were to a left downwind, base and final. Configuration and checklists were as briefed. Approach mode was armed and the managed/managed V/DEV "brick" was captured. The FO's approach was stabilized and he clicked off the autopilot and auto thrust at approximately 1,500 feet AGL. The gusty conditions made it a challenging approach, and at approximately 900 feet MSL I felt a slight sink due to the gusty winds. I glanced inside, noted the V/DEV was slightly above the horizon and then looked outside to see our PAPI indicators transitioning from 2 red/two white to three red. I verbally instructed the FO to level off and regain the two red and two white PAPIs. As he was accomplishing this, we heard/perceived a "terrain ahead" Enhanced Ground Proximity Warning System (EGPWS) caution call out. My previous verbal instruction had him accomplishing the first step from the FM of adjusting the flight path. As I analyzed the situation for a possible go around or escape maneuver, it quickly resolved, we regained two red/two white PAPI indications and landed. We debriefed the flight, specifically talking about the terrain notification verbiage and I briefed approach techniques as the FO is inexperienced. I received a call from the FOQA gatekeeper and we debriefed the flight. He had additional information and his data showed us receiving a "too low terrain" warning message but no "pull up" command. The FO and I both do not recall hearing a "too low terrain" nor "pull up" command, which would have triggered us to accomplish the terrain escape maneuver.

Narrative: 2

On the RNAV XX approach into ZZZ, at approximately a 2-4 mile final, a GPWS "Too Low Terrain" alert was annunciated. Auto pilot was off and as best as I can recall, the autothrust was off by that point. Upon hearing the GPWS, I shallowed out the descent and established 2 red, 2 white on the PAPI to continue the approach to land (the approach

plate notes VGSI and RNAV glidepath not coincident). It was nighttime VMC with gusty winds. Captain and I debriefed that the vertical deviation brick on the approach was centered with minor deviations throughout the approach past the final approach fix. No excessive descent rate was indicated. No indication on the navigation display or Primary Flight Display indicated that terrain closure rate was excessive. We discussed that the approach plate indicates an elevation of 510 feet along the final approach course approximately 1-3 miles from the runway and a likely cause of the GPWS annunciation. We also debriefed that had the GPWS annunciated "Terrain, Pull Up" an immediate escape maneuver would have been required. Given the fact it was nighttime, and a terrain alert was annunciated, I should have performed a go-around regardless of vertical deviation scale indications. At the time of submitting this report, Captain and I have both debriefed with an FOQA gate keeper discussing the events of the approach and agreed a safety report was warranted. Additionally, we both agree that in hindsight, a safety report was warranted immediately following the flight.

Synopsis

A320 flight crew reported receiving an EGPWS terrain warning while on an RNAV approach in windy conditions. The First Officer, per the Captain, was inexperienced and the aircraft briefly went below the glide-path. A normal landing was accomplished.

ACN: 1992100 *(43 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : SMO.Airport
State Reference : CA
Altitude.MSL.Single Value : 1500

Environment

Flight Conditions : IMC
Weather Elements / Visibility : Rain
Weather Elements / Visibility : Haze / Smoke
Weather Elements / Visibility.Visibility : 6
Light : Night
Ceiling.Single Value : 1200

Aircraft

Reference : X
ATC / Advisory.Tower : SMO
Aircraft Operator : Personal
Make Model Name : Small Aircraft, Low Wing, 1 Eng, Fixed Gear
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Final Approach
Route In Use : Vectors
Route In Use.Airway : V186
Airspace.Class D : SMO

Component : 1

Aircraft Component : PFD
Aircraft Reference : X
Problem : Malfunctioning

Component : 2

Aircraft Component : Navigational Equipment and Processing
Aircraft Reference : X
Problem : Malfunctioning

Component : 3

Aircraft Component : GPS & Other Satellite Navigation
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Private
Experience.Flight Crew.Total : 262
Experience.Flight Crew.Last 90 Days : 12
Experience.Flight Crew.Type : 183
ASRS Report Number.Accession Number : 1992100
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Human Factors : Confusion

Events

Anomaly.Aircraft Equipment Problem : Critical
Detector.Automation : Aircraft Other Automation
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

I was flying as pilot in command on an IFR flight plan with another IFR-rated pilot from ZZZ to Santa Monica SMO where I am based. The plane I was flying is Aircraft X with [manufacturer] avionics, which I am very familiar with and earned my PPL and IFR ratings in Aircraft X airplanes. The ceiling was 1,200 ft. AGL but ASOS was reporting scattered at 800 ft. AGL as well. We were on descent using the RNAV 21 approach and LPV minimums of 440 ft. MSL as well as an autopilot coupled approach. We were in solid IMC around 1,500 ft. MSL when we passed MIPTE, which is 3.3 NM 033 degrees from Runway 21. In solid IMC and a stable approach, the moment we passed through MIPTE we received a "TAWS (Terrain Avoidance and Warning System) Not Available" audible annunciation. At this moment we lost synthetic vision on the PFD (Primary Flight Display) and the vertical glide path. Quickly, we realized we could still fly the LNAV minimums to 685 ft. MSL. However, a few seconds later I realized the CDI (Course Deviation Indicator) showed GPS LNAV but there was no HSI (Horizontal Situation Indicator) at all. This didn't make sense so I looked at the autopilot mode area on the PFD area and noticed I was no longer in NAV/APR Mode but was instead in ROL/PIT Mode. I realized this meant I was in fact no longer tracking any reference and was simply holding wings level and pitch, which maintained my descent. This entire situation took 10 seconds and at the end of it I realized it was very dangerous, we were still in IMC. I audibly said to my copilot, "I think we need to go missed," and right as my hand went to the throttle we broke through the ceiling and the airport was in front of us. Neither of us wanted to go back into the clouds. We were slightly south of where we were used to and that correlates to being blown south in a ROL Control Mode as the winds were from the northwest. Additionally, our TAWS came back as we broke through the ceiling too. At no time did we get a GPS annunciation

or any annunciation indicating actual loss of navigation aid. TAWS was for awareness only and we didn't need it to properly and safely fly the approach. We landed uneventfully. In retrospect I should have gone missed immediately. I did not however, realize I had lost GPS or navigation functionality. The only annunciation was the loss of TAWS which I didn't care about and a clear disappearance of the glide path indicator. For a majority of this situation I believed I had lateral navigation. My familiarity with [manufacturer] avionics is quite high but I was not familiar with warning annunciations for loss of TAWS and GPS. I assumed a loss of navigation references would have a less benign annunciation. Studying the [manufacturer] Pilot's Guide afterwards has led me to realize there are several annunciations where loss of GPS would provide a benign sounding TAWS warning. Looking at SD card data logs from the plane. Quite literally at MIPTE the GPS lost 3DDIFF resolution and went to 3D Mode. This corresponds with a loss of WAAS. This lasted for two seconds before WAAS and 3DDIFF was restored. I suspect this is why I never got a GPS warning as I did not actually use GPS. However, I am still perplexed as to why lateral navigation was not available. My GPS altitude jumped 60 ft. in one second during the anomaly per logs, which could explain the plane's reaction.

Synopsis

Small aircraft pilot flying reported losing TAWS and other navigational aids while descending into the clouds in solid IMC while landing at the destination airport. As the aircraft broke out of the clouds slightly south of intended position the navigational aids returned. The pilot decided to continue the approach and landing instead of performing a go-around.

ACN: 1990756 *(44 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZZ.Airport
State Reference : FO
Altitude.MSL.Single Value : 3000

Environment

Flight Conditions : VMC
Weather Elements / Visibility : Cloudy
Light : Night

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B737 Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Flight Phase : Final Approach
Airspace.Class A : ZZZ

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 562
Experience.Flight Crew.Last 90 Days : 126
Experience.Flight Crew.Type : 562
ASRS Report Number.Accession Number : 1990756
Human Factors : Troubleshooting
Human Factors : Confusion
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 5396
Experience.Flight Crew.Last 90 Days : 64
Experience.Flight Crew.Type : 602
ASRS Report Number.Accession Number : 1990734
Human Factors : Situational Awareness
Human Factors : Fatigue
Human Factors : Troubleshooting

Events

Anomaly.Ground Event / Encounter : Ground Equipment Issue
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Anomaly.Inflight Event / Encounter : Unstabilized Approach
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Became Reoriented

Assessments

Contributing Factors / Situations : Airport
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Primary Problem : Environment - Non Weather Related

Narrative: 1

At approximately 25 minutes prior to the scheduled departure of Aircraft X ZZZZ1-ZZZZ, I initiated contact with the Dispatcher in an effort to accommodate more payload without adjusting the fuel that had already been loaded on the aircraft. The Dispatcher was able to accommodate approximately 600 pounds more fuel. The flight departed ZZZZ1 approximately 30 minutes late due to passenger and loading complications. The flight departed and climbed to the cruising altitude uneventfully. The FO and I had already discussed the possibility of an overweight landing in ZZZZ and were actively monitoring fuel burn/ weight of the aircraft to ensure a landing under the structural limit. Upon reaching the cruising altitude of FL310, I applied speed brakes to increase the fuel burn to ensure we would not land over weight. I had the First Officer (FO) request our cruise clearance to ZZZZ via CPDLC with ZZZ [Center] shortly after reaching our cruise altitude since we had not received it yet and our cruise segment of the flight was short. As we approached the top of descent, I had the FO call ZZZ ARINC to request the cruise clearance to ZZZZ since we still had not received one via CPDLC. After making the request with ZZZ ARINC, we finally received the cruise clearance to ZZZZ via CPDLC and immediately initiated a descent. At this point we were well above the descent path, and I discussed the measures I would take (configure early) to correct to the descent path in addition to the full speed brakes that had been deployed at cruise altitude. Approaching the final approach fix (ZZZZZ) on the RNAV X approach, fully configured with the landing checklist complete, we were visual with the runway, but were still too high on the path. I disconnected the Autopilot and auto throttles to take over manually. I decided that we were still too high and told the FO I would initiate a 360 degree turn and re-intercept the final approach course. During the descending turn, we entered in and out of clouds in the pitch-black night and I became disoriented. The aircraft exceeded 45 degrees of bank momentarily and the airspeed decayed below VREF speed. I initiated an upset recovery to return the aircraft to the desired state. I followed the upset recovery with a go-around

procedure to clean up the aircraft. Once the go-around was complete, I reengaged the Autopilot and auto throttles and called for the after-takeoff checklist. We set up the FMC with a direct to ZZZZZ1 to commence the RNAV X approach again. After configuring the aircraft and completing the landing checklist, we realized there was no VNAV glide path from the FAF to Runway X. The PAPIs were also out of service for Runway X; so we had no glide path guidance. We were visual with the runway, and the FO and I agreed it was the best course of action to continue the approach. The FO backed me up with 300:1 guidance to ensure we remained on a safe glide path. The landing and taxi-in were uneventful.

Narrative: 2

Flight from ZZZZ to ZZZZ departed approximately 30+ minutes late due to coordination with Dispatch/load planning in an attempt to accommodate more payload. I mention this because had we departed on time, we would have arrived at sunset, versus arriving at night. I was the PM for this leg. We leveled off at FL310 and attempted to obtain our cruise clearance for descent. Eventually the clearance was received via radio approximately 10 minutes after our initial request and well beyond our VNAV computed descent point. The Pilot flying (PF) attempted to recapture VNAV path via a combination of speed brake, and early extension of the landing gear and flaps; the autopilot and auto throttles were disconnected once the runway was clearly visible. Roughly a few miles prior to the FAF the airport and runway environment were clearly visible. Still short of the FAF, the PF elected to accomplish a 360 turn versus continuing a steep descent close in to the airport. During the maneuver the PF was mainly outside and I was mainly inside giving guidance via heading select and calling out altitudes. 180 degrees into the turn the PF had rolled wings level and began a slight turn back in the other direction. I continued to try and guide him in the direction of the initial turn as well as call out altitudes and speeds. At one point we did get 5-10 kts. slow. The aircraft got one "bank angle" alert. It was at this point that the PF realized we were in an Undesired Aircraft State (UAS). They stated and accomplished the procedures for an upset recovery, followed shortly by a called go-around. At this time the aircraft was still going 180 degrees to the approach path. Autopilot and auto throttles were re-engaged and the aircraft was turned back onto the approach course via LNAV. After passing the FAF in VMC and the runway in sight, it was discovered that we had no vertical guidance to the runway. The PF discussed accomplishing another go around, but eventually elected to continue the approach and get the aircraft on the ground. PAPI/VASI at the airfield are inop. I provided the PF with distance from inside the FAF until touchdown. Aircraft landed uneventfully.

Synopsis

B737 flight crew reported an unstable approach at night with no vertical or ground guidance resulting in an unusual attitude situation. Flight crew regained aircraft control with upset recovery procedures.

ACN: 1990147 *(45 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Relative Position.Distance.Nautical Miles : 1
Altitude.MSL.Single Value : 2000

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : FBO
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Training
Flight Phase : Final Approach
Route In Use : Direct
Airspace.Class D : ZZZ

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : ZZZ
Aircraft Operator : FBO
Make Model Name : PA-28 Cherokee/Archer/Dakota/Pillan/Warrior
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Training
Flight Phase : Descent
Route In Use : Visual Approach
Airspace.Class D : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Instructor
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Flight Instructor

Experience.Flight Crew.Total : 910
Experience.Flight Crew.Last 90 Days : 240
Experience.Flight Crew.Type : 890
ASRS Report Number.Accession Number : 1990147
Human Factors : Communication Breakdown
Human Factors : Time Pressure
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Conflict : NMAC
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Flight Crew
Miss Distance.Horizontal : 150
Miss Distance.Vertical : 0
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

While working with an instrument student on the RNAV XX into ZZZ full stop, pattern traffic in the downwind was told to follow me in for landing (he was told he was #2 for landing). The PA-28 proceeded to turn base to final as me and my student were approaching the runway about 1 mile out from the straight in. As it was apparent the PA-28 was continuing directly towards my aircraft and wasn't making any sort of corrective action, I immediately took controls over from my student who was practicing the approach and proceeded to make a hard 45 degree bank to the right (away from the other plane) and head back away from the approach. I let tower know I had turned away to avoid a potential conflict and then was eventually directed to turn back for the runway. The PA-28 was told about a possible pilot deviation and was given a number from tower.

Synopsis

Flight Instructor with student reported a NMAC in the traffic pattern at a towered airport when another aircraft turned in front of them on final approach. The instructor took evasive action to avoid the other aircraft.

ACN: 1989621 *(46 of 50)*

Time / Day

Date : 202304
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.TRACON
State Reference : US
Altitude.MSL.Single Value : 3000

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Personal
Make Model Name : Small Aircraft, High Wing, 1 Eng, Retractable Gear
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Descent
Airspace.Class C : ZZZ

Person

Location Of Person.Facility : ZZZ.TRACON
Reporter Organization : Government
Function.Air Traffic Control : Approach
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 6
ASRS Report Number.Accession Number : 1989621
Human Factors : Communication Breakdown
Human Factors : Workload
Human Factors : Situational Awareness
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

Center called to send Aircraft X direct ZZZZZ for the RNAV XX into ZZZ. I approved that and they gave me control. I went to other aircraft on frequency to resolve possible conflicts. When Aircraft X checked in he was already below the MVA at 3,100 ft. descending to 3,000 ft. and I did not issue a climb. Next time I should ask center while we were on the line to stop his descent at 3,300 ft. Once he checked on I should've climbed him right away and given him the warning.

Synopsis

A TRACON Controller reported they accepted a handoff of an aircraft that descended to an altitude below the Minimum Vectoring Altitude.

ACN: 1989525 *(47 of 50)*

Time / Day

Date : 202303
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Relative Position.Angle.Radial : 110
Altitude.MSL.Single Value : 2400

Aircraft : 1

Reference : X
ATC / Advisory.CTAF : ZZZ
Aircraft Operator : FBO
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Mission : Training
Nav In Use : GPS
Flight Phase : Final Approach
Airspace.Class E : ZZZ

Aircraft : 2

Reference : Y
Make Model Name : Piper Aircraft Corp Undifferentiated or Other Model
Crew Size.Number Of Crew : 1
Flight Phase : Initial Approach
Airspace.Class E : ZZZ

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 310
Experience.Flight Crew.Last 90 Days : 63
Experience.Flight Crew.Type : 290
ASRS Report Number.Accession Number : 1989525
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Distraction

Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Conflict : NMAC
Detector.Person : Flight Crew
Miss Distance.Horizontal : 0
Miss Distance.Vertical : 500
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Aircraft X was established on final approach course for RNAV XX to circle to land Runway XY. All 8, 5, 3 mile calls regarding RNAV XX circle to land Runway XY were commenced by student under instructor provision. Flight instructor on board Aircraft X was primarily concerned with cirrus traffic appeared on the MFD. During visual traffic search, instructor noticed a plane who is not appearing on the MFD within the range of less than .5 NM. Instructor immediately took control over and commenced an emergency descend from 2400 ft. to 1900 ft. The other plane did not make any calls regarding its' intention until it made an "extended downwind" call on Left downwind leg for Runway XX (never made 45 degree entry call on the down wind.) Does not appeared to pay attention to its' 12'o clock for traffic watch since it never made any change after passing Aircraft X. The only reason the intruder plane did not hit Aircraft X appeared to be the emergency descent commenced by Aircraft X.

Synopsis

Flight Instructor reported a NMAC that required evasive action to avoid a collision while in the traffic pattern at a non-towered airport.

ACN: 1987305 *(48 of 50)*

Time / Day

Date : 202303
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : RNO.Airport
State Reference : NV

Environment

Flight Conditions : Marginal

Aircraft

Reference : X
ATC / Advisory.Tower : RNO
Aircraft Operator : Air Carrier
Make Model Name : Medium Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : GPS
Nav In Use : FMS Or FMC
Flight Phase : Landing
Airspace.Class C : RNO

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1987305
Human Factors : Human-Machine Interface

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1986975
Human Factors : Confusion
Human Factors : Distraction

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Ground Equipment Issue
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Overcame Equipment Problem
Result.Flight Crew : Overrode Automation
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Procedure
Primary Problem : ATC Equipment / Nav Facility / Buildings

Narrative: 1

While landing at RNO on the RNAV X for [Runway] 17L, we received a low altitude indication from Tower and were told the current altimeter setting. The aircraft was fully configured and established on the glidepath with the autopilot on with the altimeter setting of 29.72. When the low altitude alert was issued by ATC we were given a new setting of 29.71. As we were visual at the time we continued and prompted Ground what the warning was about. They informed that it was a constant issue on that approach while [at] the same time, the Tower Controller was issuing the same warning to Aircraft Y on final. Cause: probable faulty equipment. Fix equipment or issue a possible NOTAM noting the caution of low altitude alerts.

Narrative: 2

While conducting RNAV X [Runway] 17L at RNO and inside final approach fix with autopilot on, stable, and on glide path with 29.72 set in the aircraft according to current ATIS, Tower notified us of a low altitude alert and directed us to check altimeter setting, "29.71." We immediately scanned instruments and noted no errors, confirmed on glide path and correct altitude, and updated the altimeter from 29.72 to 29.71. We were VMC as well and detected no cause for concern. We completed the approach, cleared the runway and conducted appropriate flows and checklists. We heard Aircraft Y behind us get the same Low Altitude Alert from Tower. We followed up on frequency with Tower about our alert once the situation was appropriate and Tower requested we submit a report as they believed it to be erroneous as well and stated they had been having some problems with that approach. Suggestions - Review RNO RNAV X [Runway] 17L approach and equipment for errors.

Synopsis

Air carrier flight crew reported receiving a low altitude alert from RNO Tower while stable on approach procedure. Captain reported the Controller stated this is a known problem and believed it to be an erroneous alert.

ACN: 1984687 *(49 of 50)*

Time / Day

Date : 202303
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZMA.ARTCC
State Reference : FL
Relative Position.Angle.Radial : 359
Relative Position.Distance.Nautical Miles : .5
Altitude.MSL.Single Value : 30000

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Dusk
Ceiling.Single Value : 15000

Aircraft : 1

Reference : X
ATC / Advisory.CTAF : CHN
Aircraft Operator : FBO
Make Model Name : Small Aircraft, Low Wing, 1 Eng, Fixed Gear
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Training
Nav In Use.Localizer/Glideslope/ILS : RNAV
Flight Phase : Final Approach
Route In Use : Direct
Airspace.Class G : CHN

Aircraft : 2

Reference : Y
Make Model Name : Amateur/Home Built/Experimental
Crew Size.Number Of Crew : 1
Flight Phase : Final Approach
Airspace.Class G : CHN

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Corporate
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total : 350

Experience.Flight Crew.Last 90 Days : 90
Experience.Flight Crew.Type : 325
ASRS Report Number.Accession Number : 1984687
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Workload
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : Flight Crew
Miss Distance.Horizontal : 200
Miss Distance.Vertical : 10
Were Passengers Involved In Event : N
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

I was CFII on instructional flight IFR with a student on filed IFR flight plan doing the RNAV 36 into CHN touch and go. We were cleared for the approach and switched over to CTAF prior to IAF when field was in sight. We made appropriate non-towered radio calls communicating our position, distance and intentions. We heard 1 other call for traffic holding short 36 waiting for us to arrive, an aircraft of the same type as Aircraft Y. On short final around MDA approx. 400 feet I saw Aircraft Y making left traffic turning base and attempting to land. This was around XA00Z and dusk was setting in. At this time we had already placed our strobes, position and anti collision lights on as well as our landing lights. The traffic turning base in danger of hitting us was not making any radio calls and was not on ADS-B. I had to take controls from my student and aggressively dip below the path trajectory of the encroaching Aircraft Y to ensure safety. The aircraft holding short made radio calls to someone in the pattern telling them to turn their radio on and that they were cutting us off. We did a touch and go and departed the pattern to the north in the upwind. About 5 minutes later while still monitoring the CTAF we heard another aircraft having to go missed after another of the same type as Aircraft Y cut them off short final. That pilot advised them of the extreme danger that they were putting themselves and everyone else in risk of. That makes 2 close calls for aircraft on short final being cut off in less than 10 minutes! I am making this report because on Day 0 I was making another RNAV approach into CHN and a similar incident occurred where around dusk a same type aircraft not making radio calls and not on ADS-B cut me off on short final about 200 feet above TDZ and less than .5 miles away from the runway where I had to take evasive maneuvers and immediately go missed to avoid a sure mid air after the aircraft cut me off and dipped below my approach path. This almost seemed intentional both times. There is no possibly way these type aircraft do not see us on short final especially with the radio calls we are making. There appear to be at least 2-3 of these type aircraft in a group there maneuvering frequently. I hope there is something that can be looked into

because in the past 2 trips I have been there in less than a week these type of aircraft have almost caused 3 mid airs!

Synopsis

Flight Instructor with student reported a NMAC that required evasive action to avoid collision with an aircraft at a non-towered airport. The Instructor stated this is not the first encounter at this location due to no communication from the aircraft with other aircraft in the traffic pattern.

ACN: 1982744 *(50 of 50)*

Time / Day

Date : 202302
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 14000

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A319
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Flight Phase : Initial Approach

Component

Aircraft Component : FMS/FMC
Aircraft Reference : X
Problem : Improperly Operated

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 8726
Experience.Flight Crew.Last 90 Days : 103
Experience.Flight Crew.Type : 6149
ASRS Report Number.Accession Number : 1982744
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Workload
Human Factors : Distraction

Events

Anomaly.Deviation - Altitude : Excursion From Assigned Altitude
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Result.Flight Crew : Regained Aircraft Control
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Returned To Clearance

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Weather
Contributing Factors / Situations : Software and Automation
Primary Problem : Software and Automation

Narrative: 1

During arrival into ZZZ we requested the RNAV RNP Runway XX. We had followed the approach setup guide and were prepared for the approach, but it was the first time either of us had flown an RNP after being trained. We received the approach clearance late, just prior to ZZZZZ, and were instructed by ZZZ Approach to cross ZZZZZ at 14,000 ft., our altitude at the time. ZZZZZ's published altitude is 11,300 ft., so when I armed the approach, the aircraft immediately went to final approach and departed our FCU (Flight Control Unit) altitude of 14,000 ft., since we neglected to enter 14,000 ft. at ZZZZZ onto the MCDU (Multi-Function Control and Display Unit). I disconnected the autopilot and climbed the 100 ft. back to 14,000 ft. During this time, due to a strong crosswind, we had drifted right of course and were unable to resume the lateral path. I instructed the pilot monitoring to give me direct ZZZZZ and then attempted to engage the autopilot, but we were already past the lead turn point. I then manually flew the turn at ZZZZZ, inadvertently banking to nearly 45 degrees in an attempt to remain within the required lateral distance. Once we had resumed the lateral path past ZZZZZ, we engaged the autopilot, armed the approach, confirmed final approach, and began the descent. The remainder of the approach was uneventful.

Synopsis

A319 Captain reported the improper usage of the Multi-Function Control and Display Unit and a strong crosswind led to an altitude and course deviation while flying an RNAV RNP approach. The Captain disconnected the autopilot and hand-flew to re-intercept the lateral path and remain in the protected airspace.